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Paraji and Bidan in Rancaekek : integrated medicine for advanced partnerships among traditional birth attendants and community midwives in the Sunda region of West Java, Indonesia

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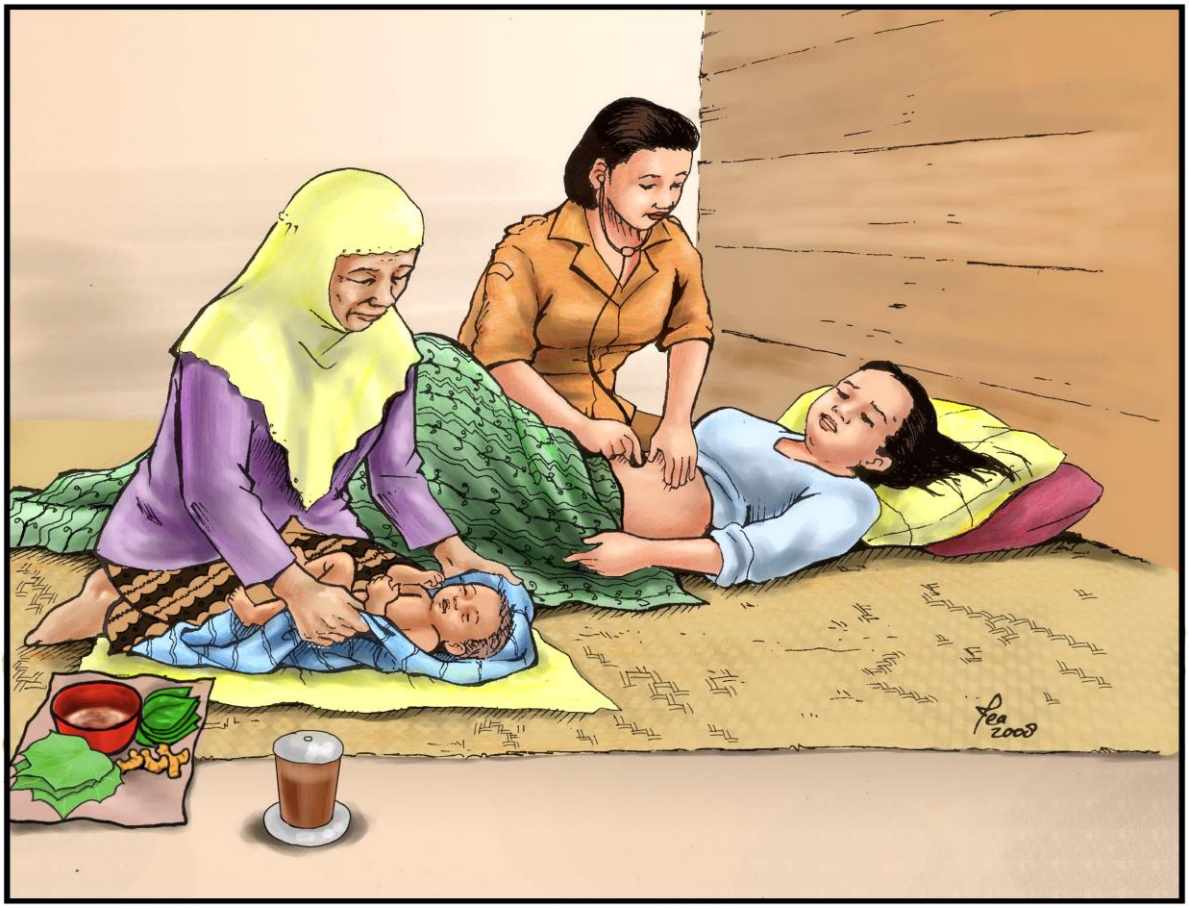

Prihatini Ambaretnani

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Integrated Medicine for Advanced Partnerships among Traditional Birth Attendants and Community Midwives in the Sunda Region of West Java, Indonesia

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Paraji and *Bidan* in Rancaekek:

Integrated Medicine for Advanced Partnerships among Traditional Birth Attendants and Community Midwives in the Sunda Region of West Java, Indonesia

Prihatini Ambaretnani

Leiden Ethnosystems and Development Program (LEAD) Studies No. 7
Leiden University, Leiden, The Netherlands

"Quality of care is of fundamental importance to the utilisation and effectiveness of women's health services. The approach to quality must look at the process of service delivery from the woman's perspective in her particular setting and not only from the point of view of health professionals."

Anna D. Alisjahbana (1993)

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This dissertation is dedicated to my beloved
mother and father, and to my attentive sister and brothers
who have always supported my enthusiasm for *savoir faire*.

Preface

Achieving 'Safe Motherhood' in West Java Province has proved to be difficult compared to advances made elsewhere in this field in Indonesia. To date, maternal and infant mortality rates remain high in Indonesia although several programmes have been introduced to help combat this problem. The causes of maternal as well as neonatal mortality and morbidity can best be tackled by taking a broader approach to include the social, cultural, geographical and economic factors into Maternal and Child Health which all contribute to the relatively high rates of maternal and infant deaths.

This dissertation on this critical subject is the result of my ongoing interest and desire to learn more about the role *paraji* (Traditional Birth Attendant - TBA) play as mediators in community health care for women. It is a topic which has intrigued me since I wrote my *Sarjana* (BA thesis) at the Department of Anthropology of Universitas Padjadjaran, Bandung, Indonesia. I embarked on the assessment of the synergy between the *National Programme for Family Planning* and the Traditional Birth Attendants (Ind. *dukun bayi*; Sd., *paraji*) at the community level, which Programme could join forces with the existent Indigenous Medical Knowledge Systems to assist women during pregnancy, labour and delivery. Although its objective was no to ridicule all indigenous wisdom and traditional practices, the Programme vision was that *paraji* (TBA) first had to be 'educated' in modern midwifery and made themselves familiar with the methodologies of reproductive health care, before they would be incorporated into national Maternal and Child Health (MCH) programmes. For example, traditionally, a woman's choice of herbal medicines and related natural materials to prevent pregnancy is regarded as a private family matter. In contrast, the National Government's current Family Planning slogan "*Dua Anak Lebih Baik*" ("two children are better") publicly urges couples to limit their family size to have no more than two children and to employ modern methods of contraception which require consultation of a modern health provider (*i.e.* a doctor or certified community midwife). Thus, in order to bridge the gap between such different approaches and in order to achieve the better results, Traditional Birth Attendants (*paraji*), who are responsible functionaries in reproductive health at the community level, should also become active in Family Planning programmes, functioning as mediators between local communities and national Family Planning institutions.

However, since the government policies remain rather ambivalent towards the integration of traditional and modern Maternal and Child Health (MCH) systems in Indonesia, the role of the *paraji* (TBA) filling a specific niche in reproductive health care in rural communities, has still to be acknowledged. While recognizing that pregnancy and parturition should be monitored by certified *Bidan* (Community Midwife - CMW) in order to reduce maternal and infant mortality, the Government of Indonesia is still unable to provide sufficient comprehensive Maternal and Child Health (MCH) facilities to serve the entire population, especially in remote areas. For this reason, the ability of *paraji* (TBA) to assist pregnant and perinatal women should be operationalized. As Alisjahbana (1993) states: "*Quality of care is a fundamental importance to the utilisation and effectiveness of women's health services. The approach to quality must look at the process of service delivery from the woman's perspective in her particular setting and not only from the point of view of health professionals*". When certified (CMW) are unavailable, or perhaps too costly for some local families, *paraji* (TBA) should be called in as equally skilled health workers to provide a safe option for pregnant and perinatal women living in remote areas.

Paraji (TBA) usually attribute their skills to indigenous knowledge passed down over many generations, sometimes through the completion of an apprenticeship. Often their

mission is revealed to them through a dream or an unexpected opportunity to observe a well known *paraji* preparing traditional herbal concoctions or assisting at child birth. Although *paraji* (TBA) have lately been taught the importance of hygiene and maintainance sterile conditions, especially during high-risk pregnancy, labour and delivery, they still frequently rely on practices of Ethnobotanical Knowledge Systems (EKS) for Maternal and Child Health (MCH) care. Undoubtedly, *paraji* (TBA) are very proficient in their knowledge of preparing and applying *jamu* concoctions, (herbal medicines) especially for women and children.

Since, large numbers of Indonesia's local people have only limited access to National Health Programmes which address women's health conditions, they have to rely upon traditional medical systems. Recognizing this potentially serious problem, Indonesia now participates in the 'Safe Motherhood Initiative' (SMI) and has posted thousands of trained *Bidan* (CMW) in villages across the country. Recently Indonesia also ratified and agreed to implement the *Millennium Development Goals* (MDG 2005). Two of its main goals are to ultimately achieve 'Health for All' and to reduce Maternal and Infant Mortality Rates.

As a contribution to this major objective, a special methodology has been developed at the *Leiden Ethnosystems and Development Programme* (LEAD) at Leiden University in The Netherlands to help study and analyse both in qualitative and quantitative terms the interactions between various factors most relevant to the utilisation of traditional and modern Maternal and Child Health (MCH) systems in Indonesia. It is my wish that the remarkable results derived from this study will help to contribute realistically to *'integration through advanced partnership'* of traditional and modern Maternal and Child Health (MCH) systems in Indonesia and beyond.

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Chapter I INTRODUCTION

Rancaekek is a sub-district (*Kecamatan*) of Kabupaten Bandung (Regency) located 24 km east from the city of Bandung, capital of West Java Province, Indonesia. The area chosen for this study is home to the Sundanese culture and located in the *Tatar* (region) *Sunda* used to be called *Parahyangan* (Place of the Gods). In the past, the Rancaekek countryside was well known for its cultivation of high-quality rice for the Bandung District. However, that was before the Provincial Government adopted its policy to develop Rancaekek into an industrial area, in particular that section of land extending along the main provincial road from West to Central Java. The most striking consequence of this transformation from agricultural to industrial area has been the marked growth of the population, largely due to the almost magnetic pull of factories on migrants to come, settle and find work in Rancaekek. Consequently, its population growth has been conspicuous as verdant rice fields have given way to housing settlements. Local inhabitants have had to relocate to neighbouring areas as the land once used to cultivate rice has decreased substantially.

As migrants flock to Rancaekek from different parts of Indonesia, the area has subsequently become more heavily populated by plural communities: thus a once primarily agricultural area has developed into an agricultural–industrial community with a multi-ethnic rather than Sundanese character. Although land available for agriculture has since become scarcer, farming communities still exist where peasants keep to their traditions, in stark contrast to the inhabitants of industrialised communities who seek a more modern way of life.

Similar to cultural pluralism, where two or more cultural systems in continuous contact adapt mutually to sustain distinctive ways of life, the effects of multi-cultural encounters are also reflected in the plural medical system. 'Medical pluralism' refers to the historically grounded co-existence of more than one medical system which seeks to maintain the community's health status in a more or less interconnected way (Slikkerveer 1990). This study focuses on the plural Maternal and Child Health (MCH) systems in Rancaekek and discusses its significance for human reproduction and Primary Health Care (PHC) in the community.

The Declaration of Alma Ata (1978) is rather explicit about which human values and principles should be pursued: *i.e*. social justice, the right to better health, community participation and solidarity (*cf*. Appendix I). The Declaration underscores that, in order to defend these basic values, fundamental changes must take place in the ways in which medical systems function: *i.e*. how they function and are implemented and integrated into existing medical systems and related sectors. Primary Health Care aimed at achieving 'Health for All' requires that medical systems "*Put people at the centre of health care*" (WHO 2008). In setting out its objectives, the World Health Organization (WHO 2008) reiterates that what the public reckons to be important is the idea that everyone can achieve a desirable way of life, both as individual and member of society. Such objectives are important parameters for the development of the health sector.

The 'Health for All' strategy requires that medical systems respond to the challenges which the changing world faces in terms of the growing demand of the population for improved health care. Such an approach necessitates a substantial reorientation toward the

ways in which medical systems function in today's society: which reforms have to be added in order to the agenda to bring about a positive change in Primary Health Care.

Maternal and Child Health (MCH), acknowledged universally as one of the most fundamental components of medical systems, is part of the 1978 Alma-Ata Declaration on Primary Health Care. During the Alma-Ata Conference, the WHO developed a new paradigm for its health-care strategies. From its very inception, WHO (1978: Declaration IX) has paid particular attention to Maternal and Child Health: "*Primary Health Care is essential health care made universally accessible to individuals and families in the community by means acceptable to them, through their full participation and at a cost that the community and country can afford. It forms an integral part, both of the country's medical system of which it is the nucleus and of the overall social and economic development of the community*".

The WHO Conference at Alma Ata in 1978 emphasizes the importance of organized community participation in which both the individual and the family unit can ultimately become self-reliant and take responsibility for their own health. In conclusion, the Conference's slogan re-affirms that health policies should aim towards "Health for All by the Year 2000". To ensure that the issue of Primary Health Care does not drift to the periphery and drop off the agenda, promotion, co-ordination and administrative support are underscored as an essential and integral part of a country's development, not only at community but also at intermediate and national levels. Primary Health Care should make full use of all available resources, thereby mobilising the entire community's human potential.

Primary Health Care, based on practical, scientific and socially acceptable methodologies, is a fundamental human right and should be made universally accessible and affordable to the public at large through active participation at individual, community and national levels. It is a vital component of any medical system which aims to manage a sustainable standard of good health for everyone. Primary Health Care is the main motor which drives the country's medical systems as well as the lens through which a community's overall social and economic development can be monitored. PHC facilities, *i.e*. the first step towards achieving good health care for everyone, provide the most important point of contact between the public, community and national medical systems.

More than thirty years later, WHO–SEARO (2009) redefines 'Health for All' as "*actively trying to attain good health or paying attention to self-care*". WHO's renewed strategy reiterates that properly functioning medical systems should provide the public with access to good health services, *i.e*. to public health organisations, institutions and resources. Thus, in 2008, a new definition for 'Health for All' was proposed at the Regional Conference in Jakarta (WHO–SEARO 2009): "*A stage of health development, whereby everyone has access to quality health-care or practices self-care protected by financial security so that no individual or family experiences catastrophic expenditure that may bring about impoverishment*".

In the South-East Asia Region (SEAR), with the exception of Sri Lanka and Thailand, Maternal Mortality Rates (MMR) is alarmingly high. SEAR's data represent 40% of the world's maternal deaths. MMRs vary from ca. 40 deaths per 100.000 women in Thailand to 515 deaths per 100.000 women in Nepal (WHO–SEARO 2004). In Indonesia, the MMR shows on average 307 deaths per 100.000 women, a figure which is still considerably high.

Pregnant and perinatal women die from such complications as haemorrhage, infection, high blood pressure, obstructed labour, unsafe abortion, and a range of diseases – such as malaria, hepatitis, rheumatic heart disease and diabetes – which present a greater threat during pregnancy but can be treated more cost-effectively in community or district hospitals where emergency obstetric services are available (WHO–SEARO 2000). In this context, one should recall that the Alma-Ata Declaration (1978) states that indigenous healers and birth attendants are found in most societies and that, once integrated into formal professionalized medical systems, such ethnomedical healers can become important allies in the struggle to improve health in their community. In its Regional Report on Self-Care, Indonesia presents its new PHC strategy '*Development and Implementation of Traditional Medicine for Self-Care*' which mirrors the country's growing interest in traditional medical systems (WHO–SEARO 2000). The conclusions contained within Indonesia's Regional Report strengthen the message conveyed in this study: the concept of integrating traditional (at the community level) and modern (at the national level) MCH systems through advanced partnerships. Farnsworth, Akerele, Bingel *et al.* (1985) state that ca. 80% of the world's population uses some kind of herbal medicine and that the majority of people living in developing countries still rely strongly on a traditional medical system. Therefore, as mentioned above, during the 1978 Conference, WHO had good reason to stress the paramount need for Primary Health Care for developing countries and re-define its 'Health for All' strategy as: "*essential health care made accessible at a cost that the country and community can afford*", based on the principles of equity, participation, appropriate technology, prevention, and an inter-sectoral approach to public health problems. In addition, Slikkerveer (2006) states that: "*Among the programmes which were implemented, the provision of essential drugs, the promotion of health and the collaboration with traditional healers and birth attendants open up new health policy options for making use of local resources, particularly traditional and herbal medicine*." Within Primary Health Care, the concept 'self-care' is basically understood as the translation of community participation into health-care development (WHO–SEAR 2009). Teaching 'self-care' at the community level means bringing knowledge to the public while never overlooking specific individual characteristics and conditions, helping the public learn how to choose between medical systems, in this case for Maternal and Child Health, and teaching the public how to formulate their goals for self-empowerment.

As a response to major global challenges and the call for a civil society, in 2005 the United Nations proposed the establishment of the 'Millennium Development Goals' (MDGs) with the objective to improve conditions for peoples living in developing countries at the start of the 21st century. The Millennium Development Goals – which underline the problems caused by poverty, poor primary education, maternal and child mortality, gender inequality, HIV/AIDS and other diseases – reflect global partnerships forged through a shared commitment to address the achievable proposals set during the world summits held in the 1990s (MDG Summit 2010). To reach the agreed upon time-bound Millennium Development Goals (MDG 2005) set for 2015, the world's participating countries and development institutions must work together, taking their shared responsibilities seriously.

The aim is to achieve the following eight goals by the year 2015 (*cf.* Appendix II for complete details):

(1) *Eradicate extreme poverty and hunger*: (Target 1.A) "Halve, between 1990 and 2015, the proportion people whose income is less than $1 a day." (Target 1.B) "Achieve full and productive employment and decent work for all, including women and young people." (Target 1.C) "Halve, between 1990 and 2015, the proportion of people who suffer from hunger."
(2) *Achieve universal primary education*: (Target 2.A) "Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling."
(3) *Promote gender equality and empower women*: (Target 3.A) Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015."
(4) *Reduce child mortality*: (Target 4.A) "Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate."
(5) *Improve maternal health*: (Target 5.A) "Reduce by three-quarters the maternal mortality ratio." (Target 5.B) "Achieve universal access to reproductive health."
(6) *Combat HIV/AIDS, malaria, and other diseases:* (Target 6.A) "Have halted by 2015 and begun to reverse the spread of HIV/AIDS." (Target 6.B) "Achieve, by 2015, universal access to treatment for HIV/AIDS for all those who need it." (Target 6.C) "Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases."
(7) *Ensure environmental sustainability*: (Target 7.A) "Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources." (Target 7.B) "Reduce biodiversity loss, achieving, by 2015, a significant reduction in rate of loss." (Target 7.C) "Halve, by 2015, the proportion of the population without access to safe drinking water and basic sanitation." (Target 7.D) "By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers."
(8) *Develop global partnerships for development:* (Target 8.A) "Develop further an open, rule-based, predictable, non-discriminatory trading and financial system." (Target 8.B) "Address the special needs of least developed countries." (Target 8.C) "Address the special needs of land-locked developing countries and small island developing States." (Target 8.D) "Deal comprehensively with the debt problems of developing countries." (Target 8.E) "In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries." (Target 8.F) "In cooperation with the private sector, make available benefits of new technologies, especially information and communications."

In 2005 the Asian Development Bank stressed that the Millennium Development Goals should become part and parcel of international development policies, centring on a common agenda to reduce poverty worldwide. The Asian Development Bank is dedicated to its vision of a poverty-free Asia–Pacific region and has defined specific targets and proposed indicators for measuring and monitoring progress towards poverty reduction. In 2005 the United Nations Development Programme (UNDP) urges poor countries to pledge better governance and invest in their people by providing improved health-care services

and education. Most developed countries have pledged to support the Millennium Development Goals (MDG 2005) through aid, debt relief and fair trade.

Indonesia has recently ratified the *Tujuan Pembangunan Milenium*, expressing its ongoing commitment to implement and monitor the Millennium Development Goals (MDG 2005)[1] aimed at the year 2015. These goals specifically target two challenges addressed in MCH programmes: Goal 4 (child mortality) and Goal 5 (maternal health). Both issues are being confronted head on by WHO's (1999) 'Safe Motherhood Initiative' (SMI), as well as being addressed by Indonesia's modern MCH programmes which specify the need for a skilled birth attendant during parturition (MDG 2005). In short, having ratified both the Millennium Development Goals (MDG 2005) and the 'Safe Motherhood Initiative' (SMI), the Indonesian Government demonstrates its commitment to achieve both goals by the year 2015.

This study seeks to provide data on how MCH programmes function at the community level in the Sunda region, in this case in the Rancaekek sub-district near Bandung, West Java, and to assess how self-care behaviour can be integrated into MCH systems through community participation.

1.1 Medical Social Sciences in Indonesia

1.1.1 Medical Anthropological and Sociological Studies

The medical social sciences have not yet fully developed as a multi-disciplinary field of inquiry in Indonesia. Sciortino (1999b) states that Indonesia's Government recognizes that the country's diversity, with its 17.000 islands and more than 300 ethnic groups with their specific customs and beliefs about health and disease, is one of the constraints affecting health promotion and education. The country's already precarious situation deteriorated further during the monetary crisis in 1997 when the Indonesian economy collapsed, rendering it a 'patient' of the International Monetary Fund (IMF) and deep concern for other international organisations. Such dire circumstances not only burden the limited resources allotted to health care but also undermine public health. As the quality of health care dropped and less use was made of family-planning facilities, poor nutrition in combination with poor hygiene aggravated by fewer visits to medical facilities led to an increase in the number of diseases and deaths. Later, after the economic crisis in 2008, the resulting global recession affected not only the economy of Indonesia but also those of other developing countries. As a consequence, more people have become economic migrants struggling to find new job opportunities, legal or not, elsewhere. Out of dire necessity people are often forced to travel far and wide, even abroad, to seek work where they might risk living under the threat of violence, abuse, and disease. Politics and unstable economies have reduced masses of people to a state of fear and left them to cope under often deplorable conditions.

Schefold (2001) states that, the sub-division of provinces into smaller administrative entities appears to guarantee the basic structure of socio-cultural unity in Indonesia. During the last decade there has been a shift away from the policy of centralisation as provinces demand more autonomy at local and regional levels. The desire for regional autonomy

reflects socio-cultural differentiation and clears the way for a decentralized system of governance[2]. The move towards regional autonomy will have both positive and negative effects on the next generation, especially with regard to women's reproductive health. Unfortunately it is still too early to assess the impact of decentralization on maternal and infant morbidity and mortality rates.

Sciortino (1999b) remarks that socio-cultural knowledge used to be largely ignored in medical science, a discipline which places more emphasis on biological and physical factors and takes less notice of a patient's socio-cultural background. Taking such a one-sided biomedical perspective has drastically influenced epidemiological research. For example, while medical science erroneously expected to eradicate major diseases, such as malaria and tuberculosis, worldwide by the end of the 20th century, new health hazards such as HIV/AIDS, diabetes mellitus, dengue fever and cardiovascular disease moved to the fore. In 2009, the WHO began focusing special attention on the deadly combination of tuberculosis and HIV/AIDS which threatens to cause more deaths throughout Asia, including Indonesia. In 2005, UNICEF has issued several communiqués warning about the increase in maternal morbidity and mortality as well as underscoring the fact that the unavailability of contraception will lead to an increase in unwanted pregnancies and unsafe abortions.

Failing to acknowledge the important role indigenous knowledge plays in health issues, medical social sciences tend to rely on socio-economic suppositions to explain changes in local patterns in Indonesia. Development of a conceptual framework would help broaden the perspectives of researchers in the medical social sciences. To isolate cogent methodological approaches, new theories and issues should be reviewed, both quantitatively and qualitatively. Taken alone, each approach has its pitfalls, but when applied concurrently to analyse human experience both approaches can yield complementary results: *e.g*. data from quantitative research can be supplemented – and vice versa – by in-depth descriptions from qualitative studies which might yield more empathetic, less general, yet more difficult to interpret information. To improve the quality of health care, with an eye to consumer needs, a qualitative approach should help determine which quantitative indicators will prove relevant. All the above emphasizes the need to employ an eclectic approach, borrowing ideas, concepts and methodologies from diverse scholarly disciplines. The focus of medical social science should be both trans- and interdisciplinary. Higginbotham, Freeman and Albrecht (1998) state that factors pertaining to health issues require in-depth assessment from the vantage point of related disciplines. Indeed, understanding inter-relationships between social and health sciences is imperative in order to achieve proper community health care.

Medical anthropological studies place considerable emphasis on the concept 'dual use', or how local populations use both traditional and modern medical systems. According to Colson and Selby (1974) and Foster (1958), the combined use of traditional and modern medical systems is prompted either by how people interpret the causes of disease traditionally or according to a population's diverse socio-demographic characteristics, sub-groups in particular. However, a plural approach opens the door to a wide variety of treatment options. Influenced by sociological theories on modernisation and socio-cultural change, Susser & Watson (1971) describe a number of studies on the role of modern

medicine in developing countries. This is analogous to the traditional approach in medical sociology which focuses on the patient and his/her disease and illness.

Foster & Anderson (1978: 7–8) explain that sociology and anthropology place emphasis on health and healing, issues about which most studies engage in explaining to health-care workers: "*how traditional beliefs and practices conflicted with western medical assumptions, how social factors influenced health care decisions and how health and disease are simply aspects of total culture patterns, which change only in the company of broader and more comprehensive socio-cultural changes*." Slikkerveer (1990) adds that over the years anthropologists have become increasingly involved in solving the organisational problems of health care and thus contribute more frequently to the establishment and implementation of community health programmes in general. Bibeau (1981: 358) specifies three levels where social sciences can contribute: "*i) information concerning local cultures, in order to make direct intervention possible, ii) additional information mainly for the benefit of epidemiological research in particular, and iii) data concerning factors and principles of local social ecology.*"

Re-assessment of the human dimension in the dichotomy between humans and plants is described by Slikkerveer (2006: 1) in the rediscovery of herbal medicine: "*the integration of traditional medicine in Primary Health Care, and the growing interest in many Western countries in complementary and alternative medicine (CAM)*". Furthermore, in light of the growing 'chemophobia' which cautions against the use of industrial pharmaceutical products and the global 'back-to-nature' movement, international organisations have been encouraged to introduce integrative strategies by welcoming the development and validation of herbal plants of Traditional Medicine (TM). Generally, the efficacy, variability and advantages of using indigenous remedies and practices are tested on the basis of Western scientific methodology. Slikkerveer (2006: 2) refers to: "*The specific field of ethnobotany as the multidisciplinary study of interactions between people and plants involving contributions from botany, ethnopharmacology and anthropology, as well as from ecology, economics and linguistics, builds on different methodologies developed to study and analyse these indigenous phenomena in a particular culture or community in a cross-cultural way.*"

In Indonesia, a number of universities have set up special departments and developed curricula well-grounded in the knowledge of traditional and herbal medicine. For instance, the Department of Pharmacology at Padjadjaran University offers lectures on *jamu*, cosmetics, natural pharmacy while Gadjah Mada University has also opened a Department of Biological Pharmacy. Slikkerveer (2006) draws our attention to a parallel development in the social sciences – in the interdisciplinary fields of medical anthropology, ethnomedicine and medical ethnobotany – directed towards refining new approaches to identify, document and analyze ethnomedical knowledge and practices, particularly on the topic of Medicinal, Aromatic and Cosmetic (MAC) plants.

Innovative wisdom in medical social science is needed to achieve sustainable developments for our future. While the efficacy of medicinal plants can be experimentally validated, *e.g.* by extraction, isolation and determination of plant morphology, the 'flies in the ointment' remain the sky-high costs and lengthy administrative procedures required to obtain official approval (Farnsworth *et al.* 1994). Slikkerveer (2003) explains that the specific field of Ethnobotany – the multidisciplinary study of interactions between people

and plants – encompasses contributions from botany, ethnopharmacology and anthropology and builds upon different methodologies developed to study and analyse indigenous phenomena in a particular culture or community in a specific way.

1.1.2 Pluralism in Maternal and Child Health Systems

Leslie (1978) states, that medical system employ categories of thought and attitudes common to a culture within a society and are, in general, inherently cultural and social. Medical systems define more clearly special aspects of a society's infrastructure, such as the division of labour. Leslie (1977: 9) defines the concept 'medical pluralism' as follows: "*... pluralistic structures with different kinds of practitioners and institutional norms*". Baer *et al.* (2003: 11) add that: "*Medical Pluralism flourishes in all class-divided societies and tends to mirror the wider sphere of class and social relationships. [...] In reality, plural medical systems may be described as dominative medical system to other medical systems*". In other words, the dominant medical system, which enjoys the support of the social elite, predominates over other medical systems.

Slikkerveer (1990) notes, that it is the realism in this approach which has captured scholarly interest. As with cultural pluralism, where two or more cultural systems in continuous contact over time have learned to maintain distinctive ways of life, medical pluralism also implies the existence of two or more medical systems within a community seeking ways to interconnect for the mutual benefit of public health. Press (1980) suggests that, to refer to a plural medical configuration, a society must generally have more than one paradigmatically differentiated medical system. However, a multiplicity of knowledge and perceptions about ill health, behaviour and use of various forms of health care could also be seen as medical pluralism. Press (1980: 47) summarizes that: "*our task must be determining the extent to which users of the particular medical configuration under study conceptually compartmentalize the various elements or integrate them into a coherent cognitive system*". His comment illustrates that a plural medical system can encourage members of a society to adopt a willingness to use multiple co-existing medical systems, referred to as 'healer shopping'.

The history of community health in Indonesia[3] is rooted in the early 17th century with the arrival of the *Verenigde Oost-Indische Compagnie* (VOC: Dutch East India Company) during Dutch Colonial Rule. Sciortino (1992) states that it was the Dutch Colonial Government which decided to fight disease using a community health approach. For example, from 1927 to 1948, communities in Indonesia implemented health measures in their struggle to control smallpox (*Variola postural* or *cacar*) and cholera (*kolera*) epidemics were decimating the population. Notoatmodjo (2003) notes that, as early as 1807, under Governor-General Daendels, women were being trained to assist during childbirth, which can be construed as an effort to reduce maternal and infant mortality. Daendels' efforts could not be sustained because few people could teach midwifery at that time. The initiative was re-launched more than a century later in 1930 when Traditional Birth Attendants (TBA) was required to be registered. Such indigenous healers are known as *dukun bayi* (Ind.) or *paraji* (TBA) (Sd.)[4]. After Indonesia gained her independence, women were once again being taught midwifery in 1952. Today, two categories (traditional and modern) of MCH systems are found in Indonesian villages. The traditional medical

system relies on indigenous knowledge and self-medication therapies, including herbal remedies and massages, of (*paraji* (TBA)). In contrast, modern Maternal and Child Health is a formal professionalized system supported by local and regional governments and the National Ministry of Health. Cogently, a transitional medical system draws upon both modern medicine manufactured commercially by the pharmaceutical industry as well as *jamu* concoctions traditionally thought to be efficacious for a variety of physical complaints such as headache, back-pain, stiff muscles, rheumatism, and diarrhoea. While *jamu* is available to relieve a minor indisposition without undergoing a doctor's examination, this does not apply to conditions encountered during pregnancy and childbirth.

Generally, because there is little social distance between them, the Tradition Birth Attendant (*paraji*) and her client share an emotionally intimate bond. Often coming from the same community or a similar socio-cultural background, the *paraji* and her client can speak the same language and understand familiar symbols which refer to health matters. Pregnant and perinatal women can seek the help of a *paraji* any time of the day or night. The *paraji* is frequently present the day after childbirth, usually early in the morning, for the purpose of cleaning or massaging both mother and newborn. Never seeking payment for services rendered, a *paraji* will accept any fee, reward or gift presented by her client out of appreciation. She extends her services simply to help people benefit from her knowledge of Traditional Medicine.

Most traditional practices and rituals involve the use of herbal concoctions and manual or hands-on therapy; in the case of pregnant women, indigenous practices are strictly synchronized with the phases of pregnancy and continue throughout the 40-day period following childbirth, for both mother and infant. Slikkerveer (2006) explains that, in terms of a culturally determined body of indigenous knowledge, beliefs and practices, Traditional Medicine has provided the primarily plant-based foundation for many ethnomedical[5] systems which already existed long before the arrival of 'scientific' or 'cosmopolitan' medicine. Rubel & Hass (1996) add that ethnomedical research has made a significant contribution to our understanding of how knowledge of disease and illness influences health-seeking behaviour. Rivers (1924) states that ethnomedicine has contributed to the development of theories and methodologies in socio-cultural anthropology by pointing out the functional integration of components of health-care institutions within a community's culture, social organisation or political system. In an attempt to examine ethnomedical issues, investigating a community's culture holistically has helped delineate distinct differences between how groups conceptualize disease, its causes and cures, what role healers' play, and how thoughts about disease relate to cosmology and the use of Traditional Medicine. Although in West Java *paraji* are usually women, in some areas, such as Bali and Tanjungsari, a *paraji* or indigenous healer can also be a man. In 1992 WHO defined the *paraji* (TBA) as: "*... a person who assists the mother during childbirth and initially acquired her skills by delivering babies herself or through apprenticeship to other Birth Attendants*". Lefèber (1994) states: that the role of Traditional Birth Attendant is to help care for pregnant women before, during and after childbirth. As stated above, the activities of *paraji* are not only limited to assisting women during labour and delivery but also to providing basic care to pregnant women and healthy newborns. Moreover, the *paraji* often functions as health consultant for local families, not for just women. More

recently, *paraji* have been trained to help promote modern contraception for family planning and to identify and refer high-risk patients.

A Traditional Birth Attendant (*paraji*) will be summoned for consultation when a family member is feeling poorly. Usually she will massage her client's muscles and provide a herbal concoction for use either as ointment or drink. Sometimes the indigenous wisdom and emotional guidance of a *paraji* appear so all-encompassing that people come to believe that she possesses supernatural powers. Ultimately, the use of traditional medicines and practices during pregnancy, labour and delivery illustrates how highly local inhabitants value traditional medical systems. Unfortunately, since gaining their autonomy, several Indonesian provinces have adopted regulations, designed to help reduce maternal and infant mortality and morbidity, which thus prohibit *paraji* from assisting women during childbirth.

In this study, the *paraji* (TBA) is considered part of the ethnomedical system. Bodeker (1994: 98–99) states that: "*Traditional medical systems extend to an appreciation of both the material and non-material properties of plants, animals and minerals. Here, the term 'systems' is used to reflect the organized pattern of thought and practice – diagnostic, clinical and pharmacological – that shapes and maintains most bodies of traditional health knowledge. These are systems of knowledge that include concepts of both the sacred and the empirical: frameworks for understanding health and healing; assumptions of cosmos and causality, and taxonomies which address a perceived order in nature. They range from the cosmological to the particular in addressing the physiological make-up of individuals, their communities, and the specific categories of* materia medica *– plants, animals and minerals – used for therapeutic purposes to enhance health and well being. Food and medicine may not be separated into discrete categories.*"

How modern and traditional medical systems are seen to interact depends upon the epistemological issues involved. To date, dialectic approaches toward unification have found little response among political policy makers. Consequently, recent attempts to reconcile only the 'scientific' aspects of classical wisdom with biomedicine have proven less successful. Unschuld (1992: 46) states: "*Similarly, attempts to restructure traditional conceptual systems to match biomedicine standards have failed as traditional heterogeneity seems as yet incompatible with Western monoparadigmatic medical science*."

Maintaining balance is a fundamental concept in ethnomedical systems. The inextricable interconnectedness between mind and body, people and their environment, man and his universe is a harmony which should not be knocked out of balance. In the case of traditional Maternal and Child Health (MCH) systems, the *paraji* strives to help maintain the natural balance between a woman and the fruit of her womb, during and after pregnancy, within the ever-widening circles of mind, environment and cosmos. For this reason, herbal medicine is viewed as both a cultural heritage and biodynamic substance. The pharmacological potential of plants contributes to but also transcends the cultural meaning given to herbal remedies by people who use them to prevent or cure disease and to promote good health. Ethnomedicine, ethnobiology and ethnopharmacology are directly related to medical anthropology; they are instruments with which an attempt is made to comprehend the dynamic relationships at work in the environment affecting human health – here with particular regard to mothers and their infants during and after pregnancy.

1.2 West Java: Challenges of Maternal and Infant Mortality

In 2001, the Indonesian Government began implementing its policy to decentralize; thus matters concerning income and development became the responsibility of each individual province. Before 2001, all health programmes followed policies drawn up by the National Ministry of Health; however, during the last decade, autonomous Provincial Health Offices have been free to choose independently which health programmes are necessary to address particular health issues in their specific regions. However, the National Ministry of Health maintains its task as central policy maker for formal health programmes in Indonesia. Nevertheless, each regency and city is now autonomous, with the power to regulate its own income and expenditures and to implement necessary strategies. The West Java Health Office, for example, is expected to propose its own specific public health strategy for the province. The Human Development Index (HDI)[6] is one important indicator of the level of welfare in West Java for which Prayudha (2003) lists three factors: (a) life expectancy, (b) index of (continuing) education, and (c) development of a strong community. In 1996 (before the 1997 economic crisis), the Human Development Index (HDI) for West Java was 68.2%; however, by 1999 the level had dropped to 64.5%. More specifically, the Infant Mortality Rate (IMR) has the greatest impact on average life expectancy (64.3 years). In 1999, the Poverty Index showed one of the highest rates (26.9%) for West Java: 22.4% of the population had no access to health care, 62.1% had no access to clean water, and 27.2% of 'children under five' were malnourished. Prayudha (2003) explicitly states that access to health care is a major problem which must be addressed. Several reasons why people do not visit the *Puskesmas* (Community Health Centre) are the following: (1) geography – the price of transportation can actually exceed the cost of a health-centre consultation; (2) perceptions – people feel they must wait too long for treatment, find public health care disappointing, and are hesitant to use certain procedures; (3) attitude – health-care providers, even if present, may appear unfriendly.

In an attempt to reduce Maternal (MMR) and Infant (IMR) Mortality Rates, the Indonesian Government has created a policy stating that newly graduated Community Midwives (BDD: *Bidan di Desa*) should be allocated to communities to replace *paraji (TBA)*. The task of professionalized *bidan* is to follow the *paraji*'s example and establish closer contacts with women in the community where they provide MCH services but to use a modern biomedical approach when assisting pregnant and perinatal women to ensure better hygienic conditions and safer outcomes. The introduction of *bidan* could backfire however due to two major social drawbacks: (1) relatively young *bidan* compare unfavourably with the generally older *paraji* and (2) *bidan* are frequently unmarried women. In the past, the public was somewhat inclined to show more respect for *paraji*, given their seniority; however, to some extent, this problem has been surmounted with the passage of time. In the research setting Rancaekek, *bidan* are being more readily accepted by the community as they adopt some traditional practices from *paraji, e.g.* how they communicate and pay home visits. West Java Province has the highest MMR in Indonesia. The most recent (2008) MMR for Bandung Region is 262 deaths per 100.000, while the IMR is 32 deaths per 1.000; while in the year of 2008, the estimation of West Java MMR is

278 per 100.000 compare to Indonesia's MMR is 226 per 100.000 and IMR is 26.9 per 1000 (Publichealth's Blog 2010).

Maternal Mortality Rates are affected by the young age (64% <18 years) at which girls marry in West Java as well as by the four following 'Too ...' conditions (*Empat Terlalu*): (1) 'too young' (< 20 years) for childbirth; (2) 'too old' (>35 years) for childbirth; (3) 'too frequent' births; and (4) 'too brief' (<3 years) an interval between deliveries. According to the National Bureau of Statistic (BPS 2003), the MMR in West Java was 321 deaths per 100.000 live births. In plain terms, 3.126 women die every year due to childbirth 260 women every month; 52–54 every week; 7–8 every day, and 1 woman every 3 hours (*Pikiran Rakyat* 11/6/2006: 14). In four districts, 60 women died during childbirth: 25 were attended by a *paraji*; 24 by a *bidan*; and 11 by doctors. In five districts in West Java, 64 women died during childbirth: 30 died in hospital, 12 in *Puskesmas* (Community Health Centre), 7 in *Polindes* (Community Birthing Home), 3 in a *paraji's* house, and 7 elsewhere (perhaps at home). Haemorrhage is one of the most immediate causes of death in parturient women, followed by infections and pre-clampsia (*Pikiran Rakyat* 2006). Haemorrhage is often the result of poor nutrition, anaemia, a high-risk pregnancy or having too many children (too frequent deliveries). Other factors relate to three types of delay: (1) delay in identifying danger signs during pregnancy, which impedes decision making and referral at the household level (perhaps due to finances); (2) delay after referral in reaching a health centre and/or hospital due to lack of transportation and/or geographical distance; (3) delay after reaching a health centre in being given immediate treatment, due to an insufficient number of skilled midwives, equipment or other shortages.

Generally speaking, although people living in the Rancaekek sub-district visit *Puskesmas* when feeling unwell, they still commonly prefer to use herbal medicine (*jamu*) to prevent illness. The public is accustomed to buying *jamu* from local vendors or at the market. Javanese women often sell home-made *jamu gendong*, wandering from door to door or to other locations seeking people who need their herbal concoctions. In addition to home-made *jamu*, they also sell packaged industrially produced *jamu*. Traditional *jamu* is prepared by individuals knowledgeable in the use of herbal medicine, for example, *jamu* for women during pregnancy or childbirth.

Ambaretnani (2002) lists the following medical systems similar to those in Rancaekek and Arjasari: (1) the modern medical system provided by the National Development of Health Policy; (2) the traditional medical system arising from within a local culture which provides MCH services during pregnancy, labour and delivery; (3) the modern medical system provided by the *Badan Koordinasi Keluarga Berencana Nasional* (BKKBN: 'National Family Planning Board') since 1989 in an endeavour to reduce Maternal and Infant Mortality Rates.

1.2.1 Maternal and Child Health Policies

The Alma-Ata Declaration was announced at the end of the 1978 International Conference on Primary Health Care (PHC). Its slogan "Health for All" has since found wide acceptance. The Alma-Ata Declaration recognizes Primary Health Care as the axis around which a country's medical system revolves and an important component of overall socio-economic development. Its objective is to provide the public with accessible, affordable

Primary Health Care at both local and national levels. Maternal and Child Health (MCH) policies expressed in the 'Safe Motherhood Initiative' (SMI) aim to provide greater awareness of the challenges involved in reducing maternal mortality. Campbell *et al.* (1997) state that the aim of these programmes is to improve first-referral-level hospitals and ways to make referral more effective, with regard to components of 'Information, Education and Communication' as well as to provisions for community-based family planning and obstetrics. However, WHO (1999) points out that measuring changes and the results of the 'Safe Motherhood Initiative' (SMI) is itself a challenge. To reduce maternal, foetal and neonatal mortality, it is essential that a skilled birth attendant be present, especially during complicated deliveries, to provide vital obstetric and neonatal care. Building a strong reproductive health-care infrastructure not only places demands on but also contributes to a solid equitable system of overall health care (*cf.* Graham 2002). Nachbar *et al*. (1998) point out that the causes of maternal mortality interconnect at different levels, *e.g*. involving poverty and gender inequity at one level and the effects of specific cultural beliefs and practices at another level. Malnutrition and direct biomedical problems, such as complications during labour and delivery, are indirect contributors to maternal mortality. The concept 'Safe Motherhood' includes not only the mother but also her newborn – as well as anyone whose decisions might influence whether a mother and her infant survive and thrive: *e.g.* family members, indigenous healers and/or staff employed by formal health-care facilities.

Various programmes have been implemented in order to reduce Maternal and Infant Mortality Rates in Indonesia: *e.g*. 'Safe Motherhood Initiative' since 1991; '*Bidan di Desa*' (BDD: certified community-based midwives) since 1998; *Gerakan Sayang Ibu* (GSI: 'Mother's Friendly Movement') since 1996; 'Integrated Reproductive Health Framework of Service' since 1997; the '60–60–60 Guideline' (60% births attended by a skilled midwife; 60% MCH services; and 60% high-risk pregnancy saved); and most recently '*Bidan Delima*' since 2005. Despite such efforts, Maternal and Infant Mortality Rates remain high. Recently, a new programme called '*Desa Siaga*'[7] ('Village Alerts': *Kepmenkes* No. 564/SK/VIII/2006) has been introduced throughout Indonesia. 'Village Alerts' is not limited to Maternal and Child Health and addresses multiple health issues by providing a solid wall of defence to help combat epidemics. Despite all such efforts, reducing Maternal and Infant Mortality Rates in West Java will demand even greater attention.

As for modern midwifery, the '*Bidan di Desa*' (BDD) Programme stationed 55.000 *Bidan* (CMW) in villages throughout Indonesia in 1998. After first receiving a general education in nursing, women could follow a 1-year Maternal and Child Health (MCH) training programme. However, training participants during such a short time span to become fully expert, responsible and accepted providers of MCH care proved difficult in rural areas where locals rely heavily on their own traditional systems of medicine. Assessment of the '*Bidan di Desa*' Programme shows that *bidan* were insufficiently pro-active from the start.

As outsiders in the communities where they were stationed, *bidan* were unforthcoming which affected their working relationship with the *paraji*. In contrast, *paraji* and their clients often share similar roots in a familiar socio-cultural environment. For this reason, *paraji* can more easily forge sustainable bonds with clients, their families and the

community at large where they are respected because of their seniority: *i.e.* the majority of *paraji* are older, post-menopausal women.

1.2.2 Maternal and Infant Mortality Rates in West Java

During the early 1990s, in an ongoing effort to improve public health, the Indonesian Government turned its attention to the challenges of Maternal and Child Health (MCH). Convinced that the extremely high Maternal (MMR) and Infant (IMR) Mortality Rates are exacerbated by the practices of 'unskilled' Traditional Birth Attendants (*paraji*), the National Minister of Health decided to reduce gradually the number of 'less reliable' indigenous healers while, at the same time, stepping up introduction of certified professionalized *bidan* (CMW) into rural areas. It was assumed that once the *Bidan di Desa* (BDD) Programme gained ground, 'unskilled' *paraji* would automatically fall from grace as indigenous healers. In reality, the Government's expectations failed to take into account the public's general high regard for indigenous healers. Therefore, it is of little surprise to find a resurgence of interest in ethnomedical systems, *e.g*. *paraji* in Rancaekek, where one might otherwise have expected to find a fully functional modern medical system for Maternal and Child Health. Faced with this dilemma, the Indonesian Government has changed its strategy and now advocates the policy of 'collaboration through partnership' between *paraji* and *bidan*.

Although West Java Province, with its specific character, shares a border with Jakarta, the capital city of Indonesia, it's MMR (333 deaths per 100.000) and IMR (55 deaths per 1.000) are considered high. In 2000, WHO–South-East Asia Regional Organisation (WHO–SEARO) selected the Rancaekek sub-district in which to launch the pilot project 'Making Pregnancy Safer' (MPS). Regular meetings are still conducted to manage a sustainable foundation for the proposed model for advanced partnerships between *paraji* and *bidan* to overcome 'competition' between traditional and modern medical systems for Maternal and Child Health.

In 1999/2000, West Java Health Office defines 'partnership' as: "*a cooperation process between traditional birth attendances with community midwives to do the advocacy for women since pregnancy (perinatal), period of delivery and post-natal/post-partum care, have been able to experience a safe and clean delivery by pregnant women*". The intended result, stated herein, is to monitor and protect women's health during the process of reproduction. The creation of partnerships between *paraji* (TBA) and *bidan* (CMW) aims at enhancing opportunities for improved MCH services in the community.

As Alisjahbana (1993) explains, training a *paraji* to recognize the dangers of high-risk labour and delivery, to maintain hygienic conditions during parturition, and to provide adequate care for women and their newborns aims at avoiding various undesirable outcomes of childbirth that occur when attended by indigenous healers. Although *paraji* are not permitted to provide curative care, such as giving injections and immunisation, they are being trained to improve standards of hygiene, to educate women about the need for improved nutrition during pregnancy, to provide information about weaning an infant, to motivate women to think about family planning, and to keep records of births and perinatal deaths. At the end of the training, each *paraji* (TBA) is tested and then provided with a basic UNICEF midwifery ('*dukun*') kit.

1.3 New Perspective on Integrated Medicine

In the field of medical anthropology, socio-cultural studies have generated a wider interest in medicine from a pluralistic perspective. There has been a tremendous surge in research on plural medical systems, especially cross-cultural comparisons between different medical systems in developing countries. Slikkerveer (1990: 16) states that: "*As the holistic study of medical knowledge and practices within a particular socio-cultural context has led to a new ethnomedical approach in the medical social sciences, promising research has developed into a theoretical framework, distinct the biomedical paradigm*". During the course of their development, medical social sciences, such as medical anthropology and medical sociology, have published a range of definitions for 'medical system' and 'integrated medicine' which reflect their differing perspectives and orientations. According to Glick (1967: 32), a medical system is: "*... a patterned set of ideas and practices having to do with illness*" whereas Dunn (1976: 135) states that a system of health-care delivery is: "*... the pattern of social institutions and cultural traditions that evolves from deliberate behaviour to enhance health, whether or not the outcome of particular items of behaviour is ill health*". These concepts accept the view that every community has its own medical system, which has developed over time and inter-relates with other medical systems in the surrounding area. Ernst (2005) states clearly that health care incorporates selective elements of Complementary and Alternative Medicine (CAM) into a comprehensive treatment. In addition, Ernst points out that health and healing, rather than disease and treatment, take pride of place, an attitude which views patients holistically, *i.e.* as having minds and spirits as well as physical bodies. Here integrated medicine refers to the incorporation of elements of Complementary and Alternative Medicine (CAM) into routine health care.

Values expressed during the Alma-Ata Conference in 1978 are not always easily translated into effective medical systems. WHO (2008: 13–15) states that: "*All too often, the PHC movement has oversimplified its message, resulting in one size fits all recipes, adapted to different contexts and problems. As a result, national and global health authorities have at times seen PHC not as one health-care delivery program among many, providing poor care for poor people. [...] At the same time, PHC reforms, and PHC movement that promotes them, have to be more responsive to social change and rising expectations that come with the development and modernisation. People all over the world are becoming more vocal about health as an integral part of how they and their families go about their everyday lives, and about the way their society deals with health and health care. The necessary reorientation of medical systems has to be based on sound scientific evidence and on rational management of uncertainty, but it should also integrate what people expect of health and health care for themselves, their families and their society*". Primary Health Care (PHC), as described earlier, is an essential human right that should be made available to the general public in a manner considered acceptable and with everyone's full participation, at a cost which both communities and country can afford. The Alma-Ata Conference (1978) emphasizes the importance of fully organized participation leading towards ultimate self-reliance, with each individual, family or community assuming more responsibility for improved health.

The term 'integrated medicine', coined by the medical social sciences, is a rather recent concept. An integrative approach examines not only a patient's physical complaints but also administers to his/her complete well-being – *i.e.* to the individual's mind, body and soul. An integrative approach, focusing on health and healing, sheds light on areas where community health programmes are needed. Using integrated medical methodology, one can better address problematic issues concerning health and healing as well as provide communities with additional knowledge on modern techniques, treatments and how to educate the public about the importance of improved self-care – physically, emotionally, psychologically and spiritually. Cohen (2000) states that: '*Integrative medicine or integrative health care are to describe a system of medicine that integrates conventional care with complementary and alternative medicine and seeks to provide safe, effective, and appropriate care in the best interest of the patient".*

The following sections will describe the development of integrated medicine and its implications for MCH systems in developing countries, in particular West Java Province. Special attention will be paid to the design of an explanatory model for utilisation of MCH systems. The following sections will discuss traditional and modern medical systems before moving on to integration through advanced partnerships.

1.3.1 Traditional Medicine

Plural medical systems in developing countries include both traditional and modern medicine. As Noe (2006: 1) states: "*Traditional medicine refers to the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, used in the maintenance of health and in the prevention, diagnosis, improvement or treatment of physical and mental illness*". Traditional Medicine includes a wide variety of therapies and practices which vary between countries and even between regions within a country. The diversity of practices found in traditional systems is best illustrated by the number of *dukun* active in Java listed by Geertz (1960: 86): "dukun bayi *(midwives)*, dukun pijet *(masseurs);* dukun prewangan *(mediums);* dukun calak *(circumcisers);* dukun wiwit *(harvest ritual specialists);* dukun temanten *(wedding specialists);* dukun petungan *(experts in numerical divination);* dukun sihir *(sorcerers);* dukun susuk *(specialists who cure by inserting golden needles under the skin);* dukun japa *(curers who rely on spells);* dukun jampi *(curers who employ herbs and other native medicines);* dukun siwer *(specialists in preventing natural misfortune – keeping rain away when one is having a big feast, preventing plates from being broken at the feast, and others);* dukun tiban *(curers whose powers are temporary and the result of their having been entered by a 'spirit')*". Normally a particular individual will possess one such special power although he/she might also possess other 'gifts'. For example, in addition to her chief skill in assisting pregnant women and delivering babies, a *dukun bayi* or *paraji* (TBA) is also a masseuse and expert healer with extensive knowledge of herbals and other native remedies. It is also the *dukun bayi* or *paraji* who is responsible for performing the necessary rites and chanting requisite spells for specific stages during and after pregnancy.

From time immemorial, indigenous healers have practiced Traditional Medicine in their direct surroundings. Over many generations, indigenous or Traditional Medicine has

maintained its popularity around the world. Since the 1990s, the demand for Traditional Medicine has increased in both developed and developing countries. In poorer countries, more than one-third of the population lacks access to government-provided Primary Health Care (PHC). Therefore, once proven to be safe and effective, Traditional Medicine (TM) and Complementary and Alternative Medicine (CAM) could provide important means for improving the health of a large part of the population. To reach such improvement effectively, traditional and modern medical systems should be integrated to provide better treatment and adequate follow-up of patients (WHO 2009). Ethnomedicine embraces the sum of indigenous knowledge, skills and practices rooted in the ancient traditions, beliefs and experiences of a particular culture. Traditional Medicine is used to maintain or improve health as well as to prevent, diagnose and treat physical disease and mental illness (WHO 2000a). Friction occurs when almost invariably stereotypes the traditional medical systems as being contra-indicative to and basically different from dominant systems of modern medicine.

Wolffers (1990: 6) points out that: "*WHO would have done better to engage the expertise of a medical anthropologist to present a definition of medical traditions which goes beyond a biased opinion*". WHO and its Member States (2002–2005) support the use of Traditional Medicine for health care. Their collaborative strategy is:

- To integrate Traditional Medicine into national medical systems, working in collaboration with national policies to regulate products, practices and providers to ensure quality health care;
- To ensure the quality, safety and efficacy of products and practices, based on available evidence;
- To acknowledge access to Traditional Medicine as part of Primary Health Care, and to safeguard the preservation of traditional knowledge and its resources;
- To ensure patient safety by upgrading the skills and knowledge of traditional medical providers.

As already stated, Traditional Medicine (TM) has been part of the human experience throughout history, while alternative or holistic medicine is a contemporary expression for healing practices which have evolved over many centuries. Traditional Medicine and the use of herbal remedies is often the only option for obtaining basic health care for the majority of people in most developing countries, especially in rural areas. In contrast, the attraction of in industrialized countries, Complementary and Alternative Medicine (CAM) derives from the remarkable variety of healing practices discovered among indigenous peoples untrained in the ways of modern physicians, nurses or related health-care practitioners (Stieg 2005). Although scientific testing has provided limited evidence about the safety and efficacy of Traditional Medicine and practices, some evidence now suggests that acupuncture, particular herbal remedies and manual therapies (*e.g.* massage) may prove effective under certain conditions.

Medicinal herbal materials are both cultivated and collected from wild plant populations. The expanding herbal market poses a mounting danger in that it could lead to over-harvesting of plants and threaten biodiversity. Poorly managed collection and cultivation practices could result in the extinction of endangered plant species and

destruction of natural resources. If traditional natural medicine is to remain sustainable, an effort must be made to protect plant populations as well as knowledge about their use for medicinal purposes. While many people believe that herbal or traditional remedies are harmless by their very nature, Traditional Medicine can prove dangerous if used unwisely, *e.g.* sometimes in conjunction with other drugs. Better education, training and communication skills are important assets for health-care providers to increase patient awareness about the safety of such traditional medicines.

1.3.2 Modern Medicine

Traditional and modern medical systems have their roots in differing philosophies and cultural settings. While Traditional Medicine has developed over time within the boundaries of a particular indigenous culture, modern medicine has evolved in the 'West' and spread to 'non-Western' countries. During the 20th century, medical science discovered increasingly more about the causes and symptoms of disease and about the control and treatment of illness caused by infectious vectors such as viruses and bacteria in particular. As cosmopolitan biomedicine advanced with rapid strides, it was usually quick to replace Traditional Medicine. Today modern medical systems offer methodologies to inform, educate and train people to become health practitioners.

Modern medical science includes the applied health sciences, biomedical research and medical technology, all of which aim to help diagnose disease and medicate illness. Therapy generally refers to medication and surgical procedures. Health practitioners or doctors diagnose a patient's symptoms using clinical observation to determine the ailment. Interaction between a doctor and his/her patient begins with a review of the patient's medical history, followed by an interview and physical examination. To obtain more detailed information about a patient's specific symptoms, a doctor might order clinical tests (such as a biopsy) or prescribe pharmaceutical drugs or other therapies.

Traditional and modern medical systems follow different roads of inquiry when confronting health issues related to illness and disease. In this context, Kleinman (1995), a noted medical anthropologist, distinguishes disease from illness: while 'disease' refers to abnormalities in the structure and/or function of organs and organ systems, 'illness' refers to a person's perceptions and experiences of certain socially less valued states including, but not limited to, disease. Disease refers to biological conditions, upon which modern medicine generally focuses to diagnose and treat the underlying cause. In contrast, illness refers not only to a sick physical body but also takes into account an individual's social, psychological and spiritual state. Some critics of modern medicine believe that humanity has paid a heavy price in its enthusiasm to understand disease. The art of healing has been lost through our failure to view the individual holistically.

1.3.3 Advent of Integrated Medicine

Integrated medicine has a broader connotation and mission, focusing on health and healing rather than on disease and treatment. Integrated medicine is not simply a synonym for 'complementary medicine' or what might be used above and beyond any conventional treatment. When following a holistic approach, a doctor will observe how a patient's mind,

body and spirit function before addressing health issues. Therefore the doctor will not only search for signs of disease but also pay close attention to what the patient says about his/her daily lifestyle: *e.g*. dietary problems, work, exercise, hygiene, quality of sleep, and relationship with people and the environment.

Conventional medicine has grown reliant on expensive, and often ineffective, technology to help resolve health problems. In man's eagerness to embrace modernity, especially in the field of medicine, he has often neglected simple holistic interventions such as adjusting the diet or learning how to relax. Although alternative medical systems can prove invaluable, people still need guidance in selecting which therapeutic option to choose, especially since some conventional approaches have been shown to be relatively ineffectual or even harmful.

Under the policies endorsed by the World Health Organisation, some form of integration of modern and traditional medicine needs to be attempted in order to achieve optimal coverage of health care needs (Stepan 1983). Because an integrative approach officially acknowledges and brings together traditional and modern systems of medicine, it thereby provides Complementary and Alternative Medicine (CAM) a place in all areas of health care as well as inclusion in national drug policies (WHO 2000–2005). Alternative health-care providers and products are registered, regulated and made available at hospitals and clinics (both public and private). Now officially recognized, treatment using traditional or Complementary and Alternative Medicine can be reimbursed by health insurance. In countries such as China, the Democratic People's Republic of Korea, the Republic of Korea, and Vietnam, relevant research is being carried out and the public educated about traditional or Complementary and Alternative Medicine. Alisjahbana (1995) developed an integrated village maternity service to improve referral patterns in a rural area in Tanjungsari, West Java. Indonesia's Regional Report (WHO–SEARO 2009) explains the growing interest in Traditional Medicine in the context of self-care for which it is frequently used. This is exemplified by the concept *Taman Obat Keluarga* (TOGA: 'Medical Family Garden') on the cultivation of medicinal plants in household gardens, a 'Family Welfare Empowerment' Programme (PKK: *Pembinaan Kesejahteraan Keluarga*) introduced in 1987 by the Minister of Internal Affairs.

In summary, a new integrative model of health care based on both conventional and alternative medicine has recently been developed. Integrated medicine recognizes the human body's potential to heal naturally and emphasizes the importance of practitioner–patient interaction to foster this ability. The integrative model confirms health and healing and reaffirms that lifestyle as well as psychosocial and spiritual matters affect one's quality of health. Therapeutic modalities, whether conventional or alternative, require that patients play a pivotal role in taking responsibility for their own health and well-being through self-care. Therefore, higher-level institutions should educate the public on the importance of self-empowerment as well as provide accessible, affordable medical systems, whether for conventional or alternative medicine.

1.4 Aim and Objectives of the Study

1.4.1 General Aim of the Study

The general aim of this study is to contribute to the knowledge and understanding about the relationship between traditional and modern Maternal and Child Health (MCH) systems, as represented by their practitioners, *i.e. paraji* (TBA) and *bidan* (CMW). This study analyzes how existing MCH systems function in a community where two different types of health care are accessible. To this end, the behaviours of pregnant and perinatal women are studied to learn how they utilize the MCH services in their community. Previous studies show that the way in which women make use of community MCH services is influenced by different factors: *i.e.* socio-demographic, psycho-social, perceived pregnancy, enabling, institutional, and intervening factors which affect utilisation of traditional and/or modern MCH systems.

This study, inspired by results emerging from the 'Making Pregnancy Safer' Programme (MPS) conducted by WHOCC–PMC in collaboration with WHO–SEARO in 2001–2002, is based on longitudinal qualitative fieldwork which began in 1999. Research continued in 2005 at which time qualitative data was collected. In 2006, these findings were applied to develop quantitative questionnaires for a household survey, using as representative sample 150 households in which women had delivered a live offspring during the 12-month period prior to the actual household survey. A total of 127 women had completed their pregnancy and given birth, while 23 respondents were still pregnant at the time of writing. The population surveyed in the field was drawn from 798 households in the sub-district Rancaekek, a semi-urban community located on the periphery of Bandung and Sumedang. Because the study concentrates on the use of plural Maternal and Child Health (MCH) systems, steps taken by the women between confirmation of pregnancy and labour and delivery had to be traced retrospectively. In this case, data from only 127 respondents contributed to the analysis. This study describes patterns of behaviour for pregnant and perinatal women and the utilisation of existing MCH systems in their community. It is expected that growing awareness of the wisdom and knowledge inherent in ethnomedical traditions will help create 'advanced partnerships through integration' between traditional and modern MCH systems in the research setting.

1.4.2 Specific Objectives

The following six objectives form the basis for this study:

(1) To describe briefly Indonesia, as both research setting and developing country in South-East Asia, and the Sunda Region of West Java Province where research has been carried out;

(2) To describe health and healing in Indonesia, including both traditional and modern medical systems, with a focus on Maternal and Child Health. In particular, the

changing roles of *paraji*/*dukun bayi* (TBA) and *bidan* (CMW) are described within the context of the Indonesian Government's current MCH policies;

(3) To describe the community of Rancaekek as the locality where both the qualitative and quantitative surveys are carried out. In addition to describe the Rancaekek community itself: *e.g.* details about the study population and sample survey as well as an overview of the local MCH system and related knowledge about the use of Medicinal, Aromatic and Cosmetic (MAC) plants.

(4) To describe plural MCH systems in the research setting, including the roles of *paraji* (TBA) and *bidan* (CMW) during pregnancy, labour and delivery as well as the MCH utilisation behaviour of pregnant women in their choice of health care.

(5) To present behavioural patterns and interpret results for the utilisation of a plural MCH system by pregnant women in the sample survey in Rancaekek, implementing bivariate analysis, multivariate analysis and multiple regression analysis.

(6) To formulate recommendations, based on research findings, on how to strengthen and sustain advanced partnerships and collaboration between *paraji* (TBA) and *bidan* (CMW) with regard to their shared interest in improving MCH in the community.

1.4.3 Structure and Arrangement of the Dissertation

In order to meet the general aim and specific objectives of this study, the structure and organization of this dissertation has been divided into nine chapters as follows.

Chapter I presents a general overview of applied medical anthropological and sociological theories about plural medical systems, placing special emphasis on Maternal and Child Health (MCH) in the study area Rancaekek. Policies pertaining to Maternal and Child Health, particularly in West Java Province, are described and integrated medicine introduced as a new perspective in Primary Health Care (PHC). Furthermore, the general aim and specific objectives of this study are to develop an integrative model for Maternal and Child Health based on community participation.

Chapter II provides a theoretical framework for the purpose of developing medical anthropological and sociological theories on the concept of medical pluralism and the integration of traditional and modern MCH systems, based on the assumption that various factors influence the utilisation of MCH systems. The discussion on objectives already introduced in Chapter I is continued.

Chapter III describes research methodology as well as the analytical model: more specifically, the research design, selection of the research setting and respondents and case studies are complemented with methodological decisions made during the household surveys. The types of analyses applied in this study, and their expected outcomes, are presented.

Chapter IV gives a general overview of the research setting in Indonesia, focusing on West Java Province in particular. This chapter reviews Indonesia's geography, demographics and health conditions in terms of crude birth rates, total fertility rates, socio-

economic conditions, poverty level, education, and public health which correspond to some of the major issues addressed in this study.

Chapter V discusses health and healing in Indonesia, including traditional and modern medicine, the development of Primary Health Care (PHC), and integration of the roles of *paraji* (TBA) and *bidan* (CMW) through advanced partnerships.

Chapter VI describes the infrastructure and demographics of the Rancaekek community, the study population and selection of five sample villages, medicinal plants and the traditional MCH system.

Chapter VII presents a qualitative overview of women's behaviour during pregnancy, labour and delivery in the research setting as well as provides patterns for utilisation of plural Maternal and Child Health.

Chapter VIII first discusses the use of bivariate analysis to obtain behavioural patterns for the utilisation of MCH systems, followed by the application of multivariate analysis to study correlations between various utilisation factors.

Chapter IX discusses the research findings and draws not only conclusions but also puts forward theoretical and practical implications for social and ethnomedicine as interdisciplinary studies.

Notes

1. The Millennium Development Summit, held in September 2000, drew up eight number agreements in Millennium Development Goals (MDG) to be achieved by the year 2015. The Indonesian Government and 188 other Member States have ratified the UN Millennium Declaration.
2. Since 1999, with the issuance of Regulation No. 32, Indonesian provinces have been granted regional autonomy to write their own policies.
3. Their neglect to include indigenous healers in the research plan was the main objection expressed during evaluation of the *Werkgemeenschap Zuid-Oost Azië* (a Dutch agency for scientific research in South-East Asia), as if it is a *must* for medical anthropology invariably to involve Traditional Medicine, notwithstanding the focus of the subject chosen (Sciortino 1992).
4. *Paraji*, or *peraji*, is a Sundanese term for a 'helper' whose motivation is chiefly social. She never takes into account whether her clients can afford to pay for her services. In Sundanese, *paraji* used to be called *indung beurang* (*indung* = mother, *beurang* = day). It is a vocation with a profound significance: *i.e.* the *paraji* is the individual who receives the baby directly from the dark place (mother's womb) during delivery and ushers it into the light. According to Tiarsa (*Pikiran Rakyat* 2006: 26), there are two kinds of *paraji* in Sundanese: (1) a delivery assistant and (2) a circumciser for Muslim males (*paraji sunat* or *bengkong*; generally a man). Other familiar regional terms for *paraji* are *dukun bayi* (Ind. and Javanese), *bidan* (Malay), *bideun* (Aceh). Alfian (1977) relates that, in the past, the role of *bideun* included performing rituals in the family for a pregnant woman. Sometimes a ritual was conducted by a *teungku ineung* (woman who teaches recitation of the Holy Qur'ān). Nowadays, rituals are performed by a grandmother or senior female member of the *gampong* (village). The aim of such rituals is to ensure a safe pregnancy and childbirth. *Bideun* inherit the magical lore (*kedukunan*) required to attend to pregnancy and childbirth from their mothers or grandmothers. The main tools of their trade are *teumen* (bamboo knives), *kunyit* (turmeric or curcuma) and *sirih* (betel leaves). Generally, a *bideun* has several professions besides helping pregnant and parturient women,

namely she is also a *meurajah obat aneuk-aneuk* (prepares herbal concoctions for children) and a *teungku ineung* (lays out the body of the deceased, especially women).

5. Ethnomedicine encompasses "*those beliefs and practices relating to disease which are the products of indigenous cultural development and not explicitly derived from the conceptual framework of modern medicine*" (Hughes 1968: 88). Ethnomedicine can be applied more broadly to refer to 'culturally oriented studies of illness'. The task of an ethnomedical investigator is to explain "*an illness – its genesis, mechanism, descriptive features, treatment, and resolution – as an event having cultural significance*" (Fabrega 1974: 39–43).
6. In 2006 West Java Province accelerated the launch of programmes by introducing a competition to reach the target (80 by the year 2010) set by *Program Pendanaan Kompetisi–Indeks Pembangunan Manusia* (PPK–IPM: Human Development Index or HDI). The PPK–IPM Programme encourages health development in a particular region. The Bandung region recently initiated a number of activities, such as *Perilaku Hidup Bersih dan Sehat* (PHBS: 'Clean and Healthy Life Behaviour'), in anticipation of a prospective lag in good-quality health services in communities located in underdeveloped, remote areas.
7. '*Desa Siaga*' ('Alert Village') resembles a movement or neighbourhood participation to improve Maternal and Child Health (MCH) and lower maternal and child morbidity and mortality rates. The aim of '*Desa Siaga*' is to stimulate the public to take responsibility for improved health in their community.

Chapter II THEORETICAL ORIENTATION

Chapter II reviews the theoretical orientation of medical social sciences towards medical pluralism in Maternal and Child Health (MCH) as mentioned in the Chapter I. Important studies on health-care utilisation behaviour, carried out worldwide, are discussed below in order to show how this topic has attracted so many scholars in the recent past. Although pregnancy is not formally recognised as an illness, the dependency experienced by pregnant women during childbirth somewhat resembles that of patients undergoing health treatment for their symptoms.[1] Therefore, the discussion will seek to contribute to existing knowledge, on one hand, while expanding our understanding about the relationship between pregnancy and parturition and MCH utilisation behaviour in a rural community, on the other hand. The model for medical pluralism which includes traditional, transitional and modern medical systems is used to describe Maternal and Child Health in Rancaekek. Traditional and modern MCH systems are represented by *paraji* (TBA) and *bidan* (CMW), respectively, while the transitional medical system remains under-represented in Maternal and Child Health. Currently, the Indonesian Ministry of Health is promoting integration between different MCH systems in order to develop better community health services across the country. For example, in 2002, the Indonesian Government drafted Amendment UUD 1945, Paragraph 33, and Articles 1–3, which entrusts the implementation of social insurance for everyone while Paragraph 34, Article 2, guarantees that: "*The country develops social assurance for all citizens and empowers poor communities appropriate to human dignity*".

The utilisation of MCH services by pregnant women and their families is known to be influenced by various factors: *e.g.* socio-demographic, psycho-social, perceived pregnancy, and enabling. Moreover, Maternal and Child Health as an organisation also affects how medical systems are perceived by the clients seeking health care.

2.1 Concept of Medical Pluralism

Medical systems develop from practices and traditions to which peoples from various socio-cultural backgrounds (Leslie 1978) attach importance. For example, such medical systems include healing methodologies employed by ordinary folk or indigenous healers. Foster and Andersen (1978: 39) state that: "*The major institutions of every culture are related to each other and fulfill specific functions in relation to each other. Each institution is essential to the normal functioning of the culture in which it is found and each, in turn, draws on the others for its own continued existence. Medical institutions are no exception. … In short, medical systems cannot be understood solely in terms of themselves; only when they are seen as parts of total cultural patterns can they fully appreciated. [...] medical systems are integral parts of cultures is to view them at a basic, but fairly obvious level. But medical systems are parts of cultures at a more abstract level, in that content and form they reflect patterns and values that are less obvious*".

Medical systems can be conveniently classified by referring to their geographical and cultural settings (Dunn 1976: 135): "*Thus there are local medical systems, a category which can accommodate most systems of 'primitive' or 'folk' medicine; regional medical*

systems, such as Ayurvedic, Unani, and Chinese medicine; and the cosmopolitan medical system (often referred to as 'modern', 'scientific', or 'Western' medicine).[2] Furthermore, Dunn (1976) continues that local and regional systems are almost invariably indigenous, traditional, and normally intracultural; the traditionalism of the local system tends to be popular and non-scholarly. The modern (cosmopolitan) medical system is a transplant in most parts of the world, in the sense that it arose in the 'West' and retains 'traditional' elements which betray its regional origins. Dunn (1976: 136) also points out for the 'modern' or 'scientific' medical system which: "*... if we accept a broad definition of science it can be readily demonstrated that scientific elements are present in local and regional medical systems*".

Leslie (1980: 191) observes that: "*All medical systems can then be conceived of as pluralistic structures in which cosmopolitan medicine is one component in competitive and complementary relationship to numerous 'alternative' therapies*". This reference can be interpreted for multiple medical systems in a community, each with its own concepts of disease and illness among patients and their families, multiple categories of healers and health workers, and multiple choices for therapy. The interest of medical anthropology is in the socio-cultural context of 'alternative' medicine practiced within a community. The definition of ethnomedical systems is rather different from that for biomedical systems; Hughes (1968: 88) states that: "*... those beliefs and practices relating to disease which are the products of indigenous cultural development and not explicitly derived from the conceptual framework of modern medicine*".

Healing methodologies differ between specific medical systems, *e.g.* ethnobotanical knowledge systems (EKS) for traditional remedies and modern biomedical techniques. Many medicinal plants used in traditional medical systems are now recognized as having specific and beneficial pharmacological effects. During the 20th century, the scope of pharmacological research has been extended into the area of traditional herbal remedies and their properties. Doctors, anthropologists and medical anthropologists use the concept 'popular' or 'folk' medicine to describe the origins of traditional medical systems as well as to describe the health practices of ethnic peoples around the world, placing particular emphasis on their ethnobotanical knowledge systems (EKS). Furthermore, studying the rituals surrounding therapies has helped demarcate the cultural limits of biomedicine (Comelles 1996). The concept 'folk medicine' has been adopted by medical anthropologists to help differentiate 'magical' practices. Using such concepts, medical systems could be shown to be a specific product of each ethnic group's cultural heritage. Moreover, in this way, scientific biomedicine could also be seen as a medical system and therefore be studied as a product of culture. Meanwhile, medical anthropologists are gaining a much more sophisticated awareness of the problems posed by cultural representations and social practices related to health, disease and medical care which are now understood as being universal but with very diverse local forms articulated in transactional processes.

2.1.1 Medical Pluralism and Health-Care Utilisation

Medical systems are basically complex because indigenous knowledge and practices were already existent long before the introduction of modern medicine into socio-cultural life in developing countries. Historically, developing countries have experienced an ongoing

process of acculturation, where people have encountered differing types of medical systems due to the earlier migration of peoples through regions such as India, Arabia and China[3]. Later, in the 1800s, a more cosmopolitan Western medical system was introduced into Indonesia as part of Dutch Colonial Rule established by the end of the 19th century. Currently, medical systems in developing countries show characteristics found in different traditional, transitional, and modern medical systems which have developed from within the country and overlap both in theory and practice. As Slikkerveer (1990: 58) notes: "*Medical traditions have tended to develop along the same lines as the historical processes of acculturation and transculturation between the various major cultures in the Third World*".[4] Similarly, the classical study of comparative cultural systems by Redfield (1956) shows that such a complex medical system may be: "*... comprised of little and great traditions which have interacted in the past and which are still interacting today*". Landy (1977: 512) notes that: "*These concepts divide phenomena in different ways but they all predicate the pluralistic character of these medical systems*". In addition, Landy describes that: "*The medical systems of all complex societies are socially and culturally pluralistic, but the professionalisation of cosmopolitan medicine, which has progressed rapidly in this century, is an effort to reduce the degree and to govern the nature of medical pluralism*".

Some of the related methodological complications basically refer to the difficulty that certain Western scientists experience in understanding local knowledge systems, in particular the value of belief systems as part of the indigenous 'knowledge–practice–belief' complex, regarding the own systems of indigenous peoples (Wells 1995). The prolonged ignorance, indifference and incapability of Western scientists to come to grips with the largely invisible socio-cultural phenomena which eventually prove most relevant to the complex process of health and healing find their roots in the initially negative attitudes predominant during the colonial period towards indigenous peoples and their systems of medical knowledge, perceptions and practices which over generations have managed to cope with a variety of diseases in a particular culture area (Slikkerveer 2003). Afterwards in their pioneering study in East Africa, Buschkens & Slikkerveer (1980: 10–11) demonstrate that the population's accessibility to health services has specific gaps or various kinds of 'distances', such as geographical, economic, social and cultural.

- 'Geographical distance' refers to the largely unwarranted physical distance which must be covered to reach a particular health service, based on what members of the public consider the norm. King (1966: 2–7) defines: "*The average number of outpatient attendances per person per year fall precipitously the greater the distance that separates the patient's home from the modern health institution*".

- 'Economic distance' is a function of people's inability to pay direct fees for health services or their considering such fees too costly; the concept also refers to the inability of many people, who believe themselves ill, to bear the loss of income if they need be away from work (*e.g.* as farm labourer) for extended periods of time.

- 'Socio-cultural distance' refers *e.g.* to people's negative recollections of past experiences at a health institution and their generally failure to grasp the complicated administrative procedures or treatment processes to which they were subjected.

Fink (1969) states that: "*The under-utilisation of health facilities was initially measured more especially through analyses of the data contained in the available patient records, or the so called 'patient studies'* ". Such studies enable investigators to ascertain whether a given medical service is performing below or above capacity in terms of staff : patient ratio, as well as to establish the principal characteristics of the target group. Furthermore, Bushkens & Slikkerveer (1980) show that this approach provides insufficient insight into the pattern of health-care utilisation in the population towards which the health service is aimed as a whole. To gain better insight into the process of health-care utilisation, it is necessary to conduct research among the population itself by means of household surveys; for instance, in a so-called community-based study, survey questionnaires about illness behaviour are put to the relevant population. This research strategy enables the identification of weak spots in health care and helps explain why a certain proportion of the population fails to make use of services offered or turns to alternative medical systems in case of illness.

In this study, the concepts 'traditional' as well as 'indigenous' and 'modern' are used to describe the differences between two Maternal and Child Health (MCH) systems within the community. Indigenous communities, *i.e.* peoples and nations, are social units which share an historical continuity with pre-invasion and pre-colonial societies within their contiguous surroundings and consider themselves distinct from other social groups now prevailing there. At present, indigenous communities form non-dominant sectors of society which are determined to preserve, develop and transmit to future generations their ancestral land and ethnic identity, all of which anchors their continued existence as peoples, in accordance with their particular cultural patterns, social institutions and legal systems (*cf.* UN–ECOSOC 1980). 'Traditional' refers to the way in which knowledge is acquired and put to use, not to information which has become out of date or obsolete. In other words, the social process of learning and sharing knowledge, which is unique to each indigenous culture, lies at the very heart of its 'traditionality'. Much 'traditional' knowledge is actually quiet new, but it has a social connotation and legal character entirely unlike any other form of knowledge. Posey and Dutfield (1997) state that traditional livelihood systems are constantly adapting to changing social, economic and environmental conditions. These are dynamic and – no matter the change – embrace principles of sustainability. In referring to pluralistic medical configurations, Slikkerveer (2001) defines these systems as follows:

(a) 'Traditional' system is one governed by local perceptions, practices and beliefs which have evolved over a long time span in a particular culture or region;
(b) 'Transitional' system is a system where drug vendors are the final link in the sales chain, acting almost as sales representatives for the pharmaceutical industry which is finding lucrative markets in developing countries;
(c) 'Modern' medical system is one governed by biomedical opposed to ethnomedical paradigms.

The three medical systems described above exist independently, virtually side by side. Although transitional health care is officially linked to the modern medical system, and obtains most of its drugs from the modern pharmaceutical industry, there is no evidence

that they are adequately integrated. As far as the ethnomedical system is concerned, the Indonesian Ministry of Health's Regulation No. 1076/Menkes/SK/VII/2003 (Depkes 2003: 28) employs the following classification: (1) skilled indigenous healers: *pijat urut* (massage*), patah tulang* (broken bones), *sunat* (circumcision), *dukun bayi* (Traditional Birth Attendant), *pijat refleksi* (reflection massage*), akupresuris* (acupressurist), *akupunturis* (acupuncturist), *kiropraksi* (chiropractor), and others; (2) indigenous healers using herbal concoctions: *jamu* (person who gives health care by preparing ingredients from plants, animals, minerals, and others), *gurah* (person who provides health care by preparing solutions from the bark of the *sengguguh* tree to cure breathing problems), *shinshe* (Chinese healers), *tabib* (Indian healers), homeopathy, aromatherapies using essential oils extracted from plants, and others; (3) indigenous healers with a religious approach; and (4) indigenous healers with a supernatural tint: *tenaga dalam or prana* (bio-energy or inner power), paranormal using the sixth sense in curing, *reiky master* (Japanese bio-energy), *Qigong (*Chinese bio-energy), *kebatinan* (related to spiritualism), etc.

With regard to Maternal and Child Health (MCH), the ethnomedical system is represented by *paraji (*TBA) while the modern biomedical system is represented *bidan* (CMW). Burke (1993) points to the antithetical types of 'traditional' and 'modern' societies: hierarchy in a traditional society is based on ascription and low social mobility in contrast to hierarchy in a modern society which is based on achievement and high social mobility. The mode of antithesis is characterised by attitudes, for instance differences in attitudes towards change. In a traditional society, where change is slow, people are often unaware that adjustment has occurred. In contrast, in a modern society, change is rapid and continuous. Traditional society is naturally religious, superstitious, and more overtly irrational, in comparison to modern society which is considerably secular, rational and scientific. In reality, Slikkerveer (2003) states that: "… *a valuable aspect of traditional knowledge should be understood, respected and synthesized with global knowledge in a balanced, humane way*". Moreover, Adimihardja (2007) mentions that, in fact like modern societies, traditional cultures contain innovative and creative elements, which illustrates that they too are dynamic. However, a traditional culture is not 'isolated' or 'immune' to contact with other cultures and can develop through cultural exchange in this global world. Traditional cultures should be interpreted as ongoing phenomena with a diversity of ideas, innovations and organisations. Moreover, Yanagi (2007) uses the analogy of the 'human organ' which must be alive in order to grow and develop into a physical body. Finally, Slikkerveer (2007) refers to the synergy between all interactive components of human society and plural medical systems.

2.1.2 Traditional Medical System

The WHO has recognized Traditional Medicine since 1978 as a means to achieve basic health for the world's total population. In this same year, an International Conference held in Alma Ata endorsed the Declaration on Primary Health Care (PHC) which introduces the concept of a primary or basic health care which is applicable in a variety of health systems, including Traditional Medicine used by more than 85% of the world's population. In 1978 WHO's motto 'Health for All by the Year 2000' launched a set of strategies aimed at providing basic health care worldwide during the following decades.

Kyomya (1994: 87) says that: "*historically, traditional medical systems and the use of traditional plant materials may be deemed to have started soon after the appearance of mankind*". Then down through the ages and in all indigenous societies, the use of local natural resources and indigenous beliefs coalesced to create what is now well known as traditional medical systems. Such systems are rooted in cultural experience and religious beliefs, such as animism, spiritualism, shamanism, and divination. Strategies used in traditional medical systems include the application of herbal medicines and manual therapies, such as massage, acupuncture, and acupressure, and mind therapy such as meditation. The value of plant resources for healing is based on unique systems of belief which address the concepts health, disease, diagnosis, and treatment. Traditional knowledge of medicines and practices, dating back many centuries, represents a rich cultural heritage common to many societies which modern Ministries of Health sometimes ignore or fail to recognize.

In 1976, WHO defined Traditional Medicine as: "*a total of all knowledge and practices, whether explicable or not, used in diagnosing, preventing or eliminating a physical, mental or social disequilibrium which rely exclusively on past experience and observation handed down from generation to generation*". Later WHO (2000a) states that Traditional Medicine, which is based on suppositions, beliefs and experiences indigenous to different cultures, is being adopted by other populations (outside indigenous cultures) and often labelled Complementary and Alternative Medicine (CAM). Traditional Medicine (TM) includes herbal preparations and products which contain parts of medicinal plants with active ingredients.

The field of medical anthropology studies the interaction between various medical systems and society. Bodeker (1994: 98) argues that: "*the term 'traditional medicine' or 'traditional system of health care' refers to the long-standing indigenous systems of health care found in developing countries and among indigenous populations. The paradigms of these traditional medical systems view humanity as being intimately linked with the wider dimensions of nature*". In addition, Bodeker (1994: 98) refers to the WHO conceptualisation of Traditional Medicine as: "*one of the surest means to achieve total health care coverage of the world population, using acceptable, safe, and economically feasible methods*". According to Good & Kimani (1980: 303), Traditional Medicine is also recognized as: '*ethnomedicine*', '*folk-medicine*' or '*native medicine*'.

Generally the indigenous healer holds a respectable position in the community because of his/her expertise in applying Traditional Medicine. In many communities, indigenous healers are specialized in the use of various techniques, such as bone fixing, assisting childbirth, circumcision, calling upon supernatural powers, etc. Because their wisdom and knowledge about healing represents a rich cultural heritage, the role of indigenous healer leaves a lasting imprint on their place in a community. Initially the indigenous healer was envisioned as a mediator between the human and spirit worlds because of their ability to cure sick members in the community. Many people still believe that a indigenous healer in trance is possessed by a spirit. However, most indigenous healers acquired their abilities through personal experience and/or from wisdom knowledge passed down from generation to generation by family members or senior healers.

In most developing countries, where 80% of the population is dependent on Traditional Medicine for their basic health needs, the use of traditional medical systems continues, or is

even increasing. In recent years, the West has renewed its interest in exploring traditional and herbal remedies to treat, in particular, chronic diseases such as diabetes, mental disorders and HIV/AIDS. Traditional Medicine differs from cosmopolitan or modern Western medicine in terms of its underlying cultural and historical contexts. In 1977 WHO declared that: "*all medicine is modern in so far as it is satisfactorily directed towards the common goal of providing health care, despite the setting in time, place and culture*". This dichotomy between 'traditional' and 'modern' is also a cultural construct related to a country's socio-political dynamics. Traditional Medicine, in this case, is clearly intertwined with a community's system of beliefs.

In summary, the character, practices and products of Traditional Medicine vary between societies, depending on their social and cultural heritage, religiosity and political identity. Traditional Medicines are found in all societies throughout history and before modern science was introduced into local societies during Western colonial rule at the beginning of the 19th century. Traditional Medicines embrace cultural perceptions of health and definitions of illness, beliefs or causes, and appropriate preventive and curative practices. Indigenous practitioners not only treat illness but also advise individuals about good health in order to safeguard the well-being of the entire community. Traditional beliefs and practices develop not in isolation but as part of integrated social institutions within cultural systems. Consequently, they are multi-functional and often resist change, even when the cultural tradition itself is no longer practiced.

2.1.3 Transitional Medical System

Today medical systems throughout the world are pluralistic. Indigenous therapeutic traditions and imported cosmopolitan Western medical practices are intertwined and co-exist at every level of society (Janzen 1978). Moreover Janzen (1978: 37–38) says that: "*The therapy managers in individual cases move back and forth between specialists and activities of both systems. Yet, the beliefs and practices constituting these systems rest upon different premises. For most people translation from one to the other is difficult, and individuals usually manipulate them separately rather than synthesize them*".

'Transitional' is a concept which refers to an intermediate medical model, the origin of which is rooted in commercial pharmaceutical which exists alongside traditional and modern medical systems.[5] In his article entitled "Rural Health Development in Ethiopia, Problems of Utilization of Traditional Healers", Slikkerveer (1990) presents a model for the plural medical system (see Figure 2.2) which can be applied in almost every developing or developed country around the world. More frequently the plural medical model is part and parcel of a changing society.

Figure 2.1. Some samples of transitional medicines for backache and rheumatism found in the market and sold by drug vendors
Source: Household Survey (2005)

The transitional medical system, with its roots in commercial pharmaceutical drugs, is a phenomenon similarly found in Asia, Western Europe and the United States (Slikkerveer 1982; Buschkens and Slikkerveer 1982). Ayalew (1979) points out that the transitional medical system provides health care which includes elements from both modern and traditional systems while being virtually beyond the control of either. Before Ayalew, Taylor (1977: 288) describes a corresponding type of system in Punjab as: "… *an underground system of health care that provides the bulk of medical treatment for the people in India*". In addition, Taylor (1977: 288) reminds us that: "*The greatest hazard is the tendency of such pseudo-indigenous practitioners to use the most powerful drugs possible in order to achieve quick results*". Furthermore, Buschkens and Slikkerveer (1982: 53) stress that those types of systems for health care can be observed in most developing countries. "*The pillars of these systems are persons who make a living by supplying modern and often also traditional medicines to the population on a commercial basis. They practice almost exclusively curative medicine. They generally have minimal modern medical training, so that their diagnoses can be qualified as extremely dubious by the standards of modern medicine [...] these persons generally live among the people as drug-sellers or travel from village to village with their wares. There is little social distance between them and the people. Thus they are usually fairly well acquainted with the people's medical practices, so that they are able to prescribe traditional remedies as well*" (Buschkens and Slikkerveer 1982: 53).

Practitioners of transitional medicine belong to neither the traditional nor modern system. Slikkerveer (1990: 211) explains that: "*They are often laymen with scant knowledge either of traditional or cosmopolitan medicine who sells pills, capsules, medicinal drinks and injections in shops or as they travel to markets throughout the country. Their practices are often illegal and contravene regulations concerning making up*

and dispensing prescriptions, but in many developing countries where facilities are scarce, it is virtually impossible to prohibit these being sold".

Plural Medical System	Traditional Medical System	Local medical (sub)system of Cushitic medicine Regional medical (sub)system of Arabic medicine Regional medical (sub)system of Amharic medicine
	Transitional Medical System	Medical system of commercial pharmaceutical medicine
	Modern Medical System	Medical system of cosmopolitan medicine

Figure 2.2 Model of a plural medical system in Eastern Ethiopia (Slikkerveer 1990)

Transitional practitioners are not easily identified by researchers but more commonly reveal themselves through what they relate during interviews about transitional medicine. One social group which frequently turns to transitional therapies comprises low-income labour workers who know from experience that such strength-enhancing products are cheap and effective for the rapid healing of their muscles. In recent years, many types of drugs and cosmetics smuggled into Indonesia from China are being sold by small vendors in the marketplace. Thanks to today's technology, such vendors can advertise their wares not only in print but also on the Internet. Such 'medicines' are usually food supplements and sex-enhancing remedies; the cosmetics are lipsticks, facial foundations and powders, and bleaches for lightening the skin.

2.1.4 Modern Medical System

Leslie (1976) explains that modern medical systems include those elements of scientific biomedicine which originated in Europe at the end of the Middle Ages and eventually developed into today's cosmopolitan system of medicine. Citizendium Medical Encyclopedia illustrates that: "… *medicine is practiced within the medical system, which is a legal, credentialing and financing framework, established by a particular culture or government. The characteristics of a health care system have significant effect on the way medical care is delivered*". Most countries provide health care through implementation of a compulsory system, with either social or government health insurance for the poor (ASKESKIN: *Asuransi Kesehatan*). Health-care services may be provided by state-owned hospitals or private medical practices and clinics.

Medical health care is classified as primary, secondary and tertiary. 'Primary' Health Care (PHC) is provided by physicians or other health professionals with whom patients first make contact when seeking medical treatment, *i.e.* in a physician's private clinic, health centre, or other nearby locality. Primary Health Care involves prevention and treatment of acute and chronic illnesses as well as health education for both men and women of all ages. 'Secondary' health care is provided by specialised doctors in private practices, hospitals, or health centres after a patient has been diagnosed and/or treated then referred by a PHC provider. Referrals are generally patients who must undergo specialised

procedures (*e.g.* surgery, physical therapy, high-risk childbirth, laboratory and diagnostic tests such as endoscopy) which can only be carried out in a hospital, out-patient clinic, emergency room, intensive-care unit, etc. 'Tertiary' health care is provided at specialised hospitals or regional centres equipped with diagnostic and treatment facilities (*e.g.* trauma units, advanced neonatology services, etc.) which are generally unavailable at local hospitals. Utilisation of modern medical systems is dependent on what the public has learned through various sources such as leaflets, newspapers and magazines as well as nowadays also through radio, television and the Internet.

The doctor–patient relationship, which forms the basis upon which modern medical systems rely, can be understood from various perspectives, such as anatomy, physiology, pathology, and psychology. Ideally, a physician should view the patient holistically, although such an approach is not inherent to modern medical systems. After familiarising himself with the patient's history and conducting an examination, the physician will make a diagnosis based on the patient's symptoms and propose a treatment for the suspected disorder. In this respect, the physician resembles a human biologist who interprets the human condition in terms of 'normality'. During diagnosis, the physician should evaluate the patient not as an 'ambulatory medical problem' but rather in terms of potential 'good health' before determining to what degree s/he deviates from 'normality'. Using such an approach, it is of vital importance that the physician takes into account the patient's social and cultural background (*e.g.* family, work, stress, beliefs).

Creating a high-quality doctor–patient relationship, based on mutual respect and trust, is invaluable for all parties concerned. In this way, the patient will feel more confident to pinpoint clearly and concisely which conditions adversely affect his health and well-being. In turn, the physician will be better able, in the time allotted, to make an accurate diagnose and clearly inform the patient about the possible choices for treating the problem. During the last 30 years, patients in the West were increasingly afforded more autonomy in decision making, in terms of social empowerment to take economic measures. As physicians gradually gained more respect, they were increasingly entrusted with prescribing drugs as public health measure. Such a concentration of power has both advantages and drawbacks for certain types of patient. During the last 25 years, as the cost of medical care has soared, government health insurance (ASKESKIN) must today cover health-care costs for members of disadvantaged communities.

Although Andersen and Newman's model includes patient-related factors, Slikkerveer's (1990) model proves to be more suitable for community-based research on the utilisation of traditional and modern Maternal and Child Health in a plural medical system. Slikkerveer's model has the capacity to help determine dependent factors – in this case MCH utilisation – employing correlations between such independent factors as background characteristics of respondents. His model also allows incorporation of two independent factors: 'institutional' (*e.g.* local government and NGO) and 'intervening' (all MCH programmes in the research area shown to be instrumental).

2.2 Research on Maternal and Child Health Utilisation

Maternal and Child Health (MCH) systems are an important part of Primary Health Care (PHC) endorsed during the Alma-Ata Conference in 1978. The proposed PHC model illustrates the need for a comprehensive health strategy which not only provides health services but also addresses underlying social, economic and political causes of poor health. The global strategy aimed at 'Health for All' represents the formalised beginning of a social model for health, with Primary Health Care as its basis. The Declaration of Alma Ata (1978) defines Primary Health Care as: "… *essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's medical system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national medical system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process*".

In 1998, WHO adopted 'Health for All in the 21st Century' and, several years later, promised to prolong its main strategy 'Health for All' to ensure the continuing development of necessary policies beyond the year 2000. Primary Health Care has been reformed in order to accomplishment the following four goals (WHO 2008: xvi):

(1) Universal coverage reforms – to ensure that medical systems contribute to health equity, social justice and abolish exclusion, primarily by moving towards universal access and social health protection;
(2) Service delivery reforms – to re-organize health services such as Primary Health Care around people's needs and expectations, in order to empower them socially and make them more responsive to their changing world while obtaining better outcomes;
(3) Public policy reforms – to secure healthier communities by integrating public actions with Primary Health Care (PHC) and by pursuing healthier public policies across sectors;
(4) Leadership reforms – to replace disproportionate reliance on command and control, on one hand, and laissez-faire state disengagement, on the other hand, by inclusive, participatory, negotiation-based leadership necessary for coping with the complexity of contemporary medical systems.

Although the role of Traditional Medicine has been accepted in Primary Health Care, synergy remains imperfect in the day-to-day reality of the plural medical system. As indicated, Primary Health Care is in need of reform in order to reach the aspired level of community health for all. Families can be empowered to make choices relevant to their particular health issues. For example, joint discussions between an expectant mother and the staff at a health facility might cause her make plans should an eventual emergency arise during childbirth. Other relevant topics might include where to give birth and how to

provide for other children and run the household during childbirth. Discussion might turn to topics such as how to cover medical expenses, how to arrange for transport to a health facility, and where to obtain medical supplies, as well as how to identify a compatible blood donor in case of haemorrhage. Community MCH programmes are being implemented in countries as far afield as Egypt, Guatemala, Indonesia, The Netherlands and the United Republic of Tanzania (WHO 2008) to empower people to start taking part in decision-making processes related to health issues such as pregnancy. To achieve a successful outcome, empowerment strategies which rely strongly on direct relationships between the public and community health workers must be embedded in the community's social infrastructure.

When a woman initially experiences symptoms such as nausea, vomiting, and headache, she might suspect that she is pregnant. How she experiences and interprets such symptoms will influence her choice of MCH services in the community. A woman experiencing pregnancy for the first time might worry more about her condition than someone who has been pregnant before. A newly pregnant woman may seek information from more experienced friends or family members. Slikkerveer (1990: 63) states that: "… *the utilisation of health care has a number of special features which include the plural character of the services, the phenomenon of multiple utilisations ('healer shopping') and the extent of self-care*". Kaplan *et al.* (1993: 72) remind us that: "… *symptoms are subjective interpretations of experiences and may not be directly observed. Sign described characteristics of illness that can be observed by others. When people become ill they interpret their symptoms in an attempt to do something about them. Often people go to a search process in which to attempt to determine whether or not their symptoms are a matter of concern. Although the illness itself may be affected by biological conditions, pregnancy behaviour can be affected by variety of social circumstances*". Whether to use a particular medical system is a decision-making process which involves weighing a number of complex choices. For example, because social and financial conditions vary among households, one must carefully calculate the cost-effectiveness for different health-care services on offer. If a pregnant woman or her family has insurance, she can afford health care provided by a modern MCH facility. However, if she comes from a lower socio-economic background, her only alternative might be to choose a traditional medical system, in spite of having social security.

2.2.1 Utilisation of the Traditional Maternal and Child Health System

Although pregnancy is not considered an illness, how a woman experiences pregnancy will, to a large extent, depend on her biological and psychological make-up. While some women suffer no side effects, other pregnant women will continue feeling poorly during the first stage of pregnancy and most likely consult friends and family to learn how to alleviate the situation. Although an expectant mother usually knows where to seek health care, her decision will ultimately depend on the household's socio-economic status (SES) as well as on the family's particular beliefs and customs. Her choice of Maternal and Child Health (MCH) system will mirror not only her own preference but also that of her husband and senior female family members. A pregnant woman and members of her family will be all too aware that choosing a *bidan* (CMW) might drain the household budget whereas a *paraji*

(TBA) will charge no fee for her services. Another determinant is the influence of senior women (*e.g*. mother, mother-in-law) in the household who once put themselves in the trustworthy care of a *paraji*.

Alisjahbana (1993) draws attention to the fact that, in contrast to India, training *paraji* in the use of modern technology has not impacted the perinatal mortality rate in Indonesia. Births assisted by *paraji* have increased from 3–4 to 12 each month. Alisjahbana's research on traditional knowledge, attitudes and practices shows that most *paraji* are women aged 31–75 years who are usually married or widowed; ca. 50% of the indigenous healers have never received formal schooling. *paraji* (TBA) are frequently consulted for matters concerning illness (93%), death (83%), and fortune telling (10%). They also prepare *jamu* (herbal concoctions), especially for treating post-partum women. Wolffers (1990) states that: "*Traditional medical practitioners and birth attendants are found in most countries. They are often members of the local community, culture and traditions, and continue to have high social standing in many places, exerting considerable influence on local health practices. With the support of the formal medical system, these indigenous practitioners can become important allies in organizing efforts to improve the health of the community*".

Traditional Medicine is considered less expensive, more readily available and culturally acceptable compared to modern pharmaceuticals. Interestingly, although the WHO has set up a special department for Traditional Medicine, the organisation has never made its position clear. When discussing medical pluralism, use of terms such as 'traditional' *vs.* 'modern' or 'indigenous' *vs.* 'Western' is unavoidable, and every medical system has its own adherents and users. The use of indigenous medicine in a pluralistic society refers to herbals, home remedies, or industrially produced and packaged *jamu* concoctions, as in Indonesia. In 1983, WHO decided to promote the use of Traditional Medicine, taking into account local practices and various types of indigenous healers and birth attendants, to create a healthy and economically productive society for all peoples.

Slikkerveer (2003) reminds us that: "*Medicinal plant and herbs have always played a major role in the development of medicine and public health in both Western and non-Western countries, as reflected in the historical process of culture contacts which goes back to the pre-Renaissance times of the great European explorations of the non-Western world. [...] After initial fascination for traditional medicinal plants as potential resources for the Western* materia medica*, the interest declined after the accumulating 'scientific' discoveries of germ theory, antibiotics and advanced medical technologies which were made since the late 19th century*". Later some people became disenchanted with biomedicine and its prospects for the future, not only because of certain side effects. Because natural resources threatened to become scarce in developing countries, prices were forced up to exorbitant levels. At the same time, debates flared up regarding the possible integration of traditional and modern medical systems because alternative therapies appeared less costly. Slikkerveer (2003) explains how herbal medicine differs from modern pharmaceuticals. Herbal medicines are usually made from whole plants or parts thereof including bark, seeds, leaves, fruits, roots or stems. They are processed and administered as pills or capsules, teas or tinctures. This recent reorientation confirms the general view that, compared to modern pharmaceuticals and cosmetics, herbal concoctions have the advantage of being less expensive, derived from locally available plant resources, and less complicated to produce and distribute. Moreover, such natural mixtures are relatively safe

in terms of having fewer side effects, compared to remedies produced from a single isolated substance.

2.2.2 Utilisation of the Transitional Maternal and Child Health System

In a transitional medical system, 'specialists' and their practices belong to neither a traditional nor cosmopolitan system. Slikkerveer (1990: 211) states that: "… *the practitioners of transitional medical system are often laymen with scant knowledge either of traditional or cosmopolitan medicine who sells pills, capsules, medicinal drinks and injections in shops or as they travel to markets throughout the country*". Transitional medical systems are sporadic and unstructured. Important points which must be considered here refer to one of the driving forces behind transitional medicine: *e.g.* intermediaries who seek commercial profit, who are fascinated by the pharmaceutical industry and its financial markets, and who prefer to move outside the limits of government control. The public must therefore weigh up the benefits of high-priced drugs and health services against word-of-mouth endorsement of transitional medicine. The social group which most frequently chooses transitional products is composed of manual labour workers (*e.g.* tricycles drivers (*tukang becak*), street sweepers, construction workers) and market merchants who suffer from common ailments like stiff muscles, back pain, rheumatism, headache, diarrhoea, etc.

In recent years, individual vendors have been spotted in Indonesia's larger cities selling remedies for sexual enhancement and complaints, especially for men. Such products, usually made in China, are advertised in newspapers and magazines, including information about whom to contact for 'direct delivery to your door'. Transitional medicine can be bought in the marketplace and small shops in the form of pills, capsules and *jamu* mixed with powerful drugs which impart a feeling of well-being. In particular, *jamu gendong* vendors sell both industrial *jamu* in sachets as well as bottled homemade concoctions. All respondents surveyed replied that such remedies might prove harmful for the user.

Regardless of their often blatant disregard for the principles and practices upheld by traditional and modern medical systems, data show that transitional practitioners are seen to be under-represented in Maternal and Child Health. A major concern is that, ignorant to the inherent dangers of some transitional remedies, an uneducated woman might unknowingly swallow pills for backache which could cut short her pregnancy or harm the developing foetus.

2.2.3 Utilisation of the Modern Maternal and Child Health System

In 2005, the 'Safe Motherhood Initiative' (SMI) defined reproductive health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters related to the reproductive system and its functions. Reproductive health therefore implies that people can have a satisfying and safe sex life and that they have the freedom to decide if, when and how often to have a child. Implicit here is that both men and women should have the right to make informed choices; to have access to safe, effective, affordable and acceptable methods for reproductive health and family planning; to choose how to regulate fertility legally; and to obtain adequate health care to prevent maternal and child morbidity and mortality.

In 1998 WHO compiled a comprehensive range of basic reproductive health-care services: *i.e*. for family planning (contraceptives, etc.); for abortion and treatment of post-abortion complications; for voluntary sterilization; for basic infertility problems; for management of sexually transmitted diseases (including HIV and specific cancers in the reproductive system; and for ante- and perinatal care and childbirth. In recent decades, some countries have made great progress in the area of maternal and reproductive health using selected programmes, while in other countries the availability of comprehensive and high-quality reproductive health services has yet to be realized. Family planning is the key to many success stories.

Indonesia has supported several efforts, such as the 'Safe Motherhood' programmes in 1988, to reduce the Maternal Mortality Rate (MMR). Many local communities, government agencies, and Non-Governmental Organisations (NGO) are now active participants with the backing of international organisations. Indonesia has successfully reduced its MMR from 450 deaths per 100.000 in 1985 to 334 deaths per 100.000 in 1997. Although the rate has significantly decreased, the national target of no more than 125 deaths per 100.000 by 2010 is still out of reach. This target is based on Indonesia's global commitment to the Millennium Development Goals (MDG) which aim to reduce the number of maternal deaths to one-third of the present number by 2015. The National Department of Health has established a long-term strategy to reduce Indonesia's MMR. In contrast, Koblinsky and Randolph (2003) show that the MMRs remain high in many countries and vary widely between regions. For example, for all of Africa, the total MMR is 1.000 deaths per 100.000, while MMRs measured in different sub-regions range from 1.300 deaths per 100.000 in Eastern Africa to 360 deaths per 100.000 in Southern Africa. Even in Europe, sub-regional differences are found: while for Eastern Europe the MMR is 50 deaths per 100.000, for other European sub-regions the average MMR is 13 deaths per 100.000. In recent years, there has been relatively little improvement in the reduction of maternal deaths worldwide, notwithstanding successes booked in a few countries such as Sri Lanka, Malaysia, China, Egypt, Honduras, and Tunisia. Moreover, Koblinsky and Randolph (2003) provide direct and indirect determinants for maternal mortality and presents what is known about the underlying determinants of maternal health. It is well established that five major complications are the chief determinants for more than 70% of maternal deaths: haemorrhage (25%), infection (15%), complications arising from unsafe abortion (13%), hypertension or pre-clampsia (12%), and obstructed labour (8%) – as well as other indirect (20%) and direct (8%) causes.

The above-mentioned complications can occur any time during pregnancy and childbirth, often without forewarning, and usually require immediate treatment at an emergency obstetric facility (*Safe Motherhood Technical Consultation Report* 1997). Indirect determinants are defined as pre-existing diseases or diseases which develop during pregnancy (not directly related to obstetric determinants) which are aggravated by the physiological effects of pregnancy. Principal indirect determinants in many settings include anaemia, malaria, hepatitis and diabetes. In addition to direct and indirect determinants, a range of underlying social, cultural, medical, and economic factors can have a profound effect on maternal health and, ultimately, on maternal mortality. Indirect and underlying determinants are best studied from a supply-and-demand perspective, organized into

pathways at different levels: at the individual–household–community level, at the medical system-related sector level, and at the government policy–action level.

Choosing which health-care service to use depends on a variety of different factors. Conceptual frameworks for understanding such choices have been presented clearly by several scholars. The conceptual framework provided by Anderson & Newman (1973) names three components ('predisposing', 'enabling' and 'level of illness' factors) which influence individual determinants for health-care utilisation. The first component, 'predisposing factors', is sub-divided into three categories of variables: demographic, social and belief. Demographic variables include age, sex, marital status, and past illnesses. Social variables include education, race and other personal characteristics. Belief variables include values, attitudes and knowledge. The second component, 'enabling factors', is sub-divided into two categories: personal resources, such as income, health insurance and access to medical care, and community resources. For example, some areas have large numbers of health providers relative to the size of the population while, in rural areas, there are too few doctors to treat the ill. The third component, 'level of illness factors', is often referred to as 'medical care need', which represents the degree of disability, symptoms experienced, and general state of health as perceived by the patient. It also includes a component for the evaluation of illness by a health-care provider.

Slikkerveer (1990) states that utilisation of medical services relates to a number of special features such as their plural character, the phenomenon of 'healer shopping' and the extent of self-care. He refers to the literature review by Van Etten (1976) who divides anthropological studies on illness behaviour and utilisation into several categories. The first category, covering research among peasant communities, focuses on the exclusive utilisation of local medicine by the rural population. The second category mainly concerns research on the dual use of traditional and modern medical systems. This category pertains to the research setting in Rancaekek where dual Maternal and Child Health (MCH) systems are provided in the community in tune with the social and economic needs of the users. Slikkerveer (1990) adds that several studies on the behaviouristic model of utilisation include an entire range of indicators, ending with the 'WHO model' used by Kohn & White (1976) which includes four blocks of factors: 'predisposing', 'enabling', 'perceived morbidity', and 'health-service system'.

As part of the latter study, comparative research has focused on the utilisation of modern medical systems in twelve areas in seven countries. Predisposing factors include certain social demographic variables (*e.g.* age, gender, marital status, level of education, etc.) while enabling factors include the cost of medical treatment, level of income, etc. Perceived morbidity is the most important determinant for utilisation behaviour in this model, while factors regarding how medical systems functions relate in particular to how the services are organised (Slikkerveer 1990). These types of research have important implications when formulating policies to improve health care in the regions studied.

2.3 Towards Integration of Traditional and Modern Maternal and Child Health Systems

Indonesia is one of the developing countries which still provide dual Maternal and Child Health (MCH) systems. This is also true for other developing countries where the majority of the population continues to use local herbal remedies for their basic health care. People are often reluctant to visit a health centre or consult a medical doctor because they are poor and cannot afford such services or because they are ashamed to speak with or be examined by a health provider. If possible, they try to avoid modern medical doctors and health services such as *Puskesmas* or hospitals and generally take drugs bought from a *warung* (small retailer) or *jamu* recommended by the local population. In this way the awareness is growing of how important Traditional Medicine remains in Indonesia. The WHO estimates that about 80% of the world's population uses some form of herbal remedy (Slikkerveer 2006).

Quah & Slikkerveer (2003) note that: "*Today, a large segment of the rural population in the tropics still remains deprived of adequate health care, which is often only partly based on the incorporation of traditional healing and midwifery. Mainly as a result of the continuing, artificial separation – and sometimes opposition – between biomedicine and ethnomedicine, the envisaged integration as the ultimate result of traditional medical systems negotiating successfully the challenges posed by science and technology is still facing several theoretical and methodological complications which need further study and analysis*". An alternative form of health care, integration of both modern and traditional medical systems in the community provides the advantage of being less costly and more available locally.

In response to the WHO Report in 2008, emphasis is shifting from concern for specific Maternal and Child Health to concern for the health of each member of the community, as the realisation increases that the health of future generations must be safeguarded through adequate health policies. Integration of Maternal and Child Health (MCH) systems is essential to improve health conditions throughout the country. While Traditional Birth Attendants (*paraji/dukun bayi*) still play a major role, today it is the formally educated *bidan* (CMW), assigned by the National Ministry of Health, who provide modern MCH services. Kroeger (1983) points out that: "*there exists a wider range of health services, both in quality and quantity, as well as in socio-economic conditions, such as family size, income, social networks*". Slikkerveer (1990) reiterates that an extremely important aspect when dispensing health care in developing countries is: "*the presence of several co-existing medical systems. The complex situation in a large number of Third World countries inhabited by regional or local population groups with separate medical traditions requires a specific research methodology in order to analyze concepts of illness and health within the appropriate socio-cultural context. Medical traditions have tended to develop along the same lines as the historical processes of acculturation and transculturation between the various major cultures in the Third World*".

Historically speaking, Indonesia with its thousands of islands has been inhabited by a diversity of ethnic peoples, each with their own social and cultural ways of living and particular indigenous medical systems, also for treating women and children in particular.

Throughout history, adventurous peoples (South Asian, Chinese, Portuguese, British, etc.) have been migrating, taking with them their own social and cultural customs and local knowledge and wisdom. Colonised for 350 years by the Dutch, Indonesia has since formally adopted modern European systems for health care, although Traditional Medicine is still practiced today.

Foster & Anderson (1978: 7) state that: "*Health workers in cross-cultural settings came to see far sooner that those working within their own cultures, and particularly those involved in clinical medicine, that health and disease are as much social and cultural phenomena as they are biological. They quickly realized that the health needs of developing countries could not be met simply by transplanting the health services of industrialized countries*". This statement cautions that local medical traditions cannot be surgically extracted from the community in which they have evolved and come to reflect the socio-cultural background of its people. Each component of a medical system has its own specific function within the community as well as its own devotees. Moreover, Foster & Anderson (1978: 37) state that: "*A health care system is a social institution that involves the interaction of a number of people, minimally the patient and the practitioner. The manifest function of health care system is to mobilize the resources of the patient, his family and his society to bring them to bear on his problem*".

In her research Alisjahbana (1993) describes three types of delay in dispensing skilled MCH services: *i.e.* delay at home (indecision about whether to seek help); delay in transporting a parturient woman to an adequate health facility; delay at the health facility in providing adequate care. Such delays, especially when faced with high-risk complications, tend to be blamed on the family's ignorance, financial straits or preference for a *paraji* (TBA) during childbirth.

Another important contribution to understanding illness behaviour is expressed by Suchman's model (1978: 81–84) which enumerates various stages of illness perception: "*When individuals perceive themselves as becoming sick they can pass through as many as five different response stages, depending upon their interpretation of their particular illness experience. These stages are (1) the symptom experience, (2) the assumption of the sick role, (3) medical care contact, (4) the dependent-patient role, and (5) recovery and rehabilitation".* Suchman (1978) elaborates further on the decision-making process and MCH utilisation behaviour which resembles the 'delay at home' described by Alisjahbana (1993). However, while Suchman (1978) excludes other members of the household, Alisjahbana (1993) notes their significance, including members of the extended family, in the decision-making process for utilisation of Maternal and Child Health. Which type of MCH system is selected will depend on knowledge, perception, demographics, economic factors, and availability of health services as well as on the husband's advice and persuasions of other senior family members (*e.g.* mother and mother-in-law). Stages in Suchman's (1978) model correlates with the stages of pregnancy. In Stage 1, the woman suspects that she is probably pregnant due to familiar signs such as delayed menstruation, expanding abdomen and morning sickness. In Stage 2, believing that she is pregnant, the woman begins to resemble someone suffering from an illness. In Stage 3, the woman makes preliminary contact with a medical system, while visiting a MCH facility for an examination. In Stage 4, after learning that she is indeed pregnant, the woman becomes dependent like a patient; now she must forego any heavy physical labour and ask for other

people's help until after giving birth. In Stage 5, immediately after parturition, the vulnerable mother and her newborn will begin a process of recovery during which time she will regain her strength and return to her normal activities.

The decision made by the National Ministry of Health to opt for the biomedical model in its health policies and programmes has resulted in a disregard for indigenous knowledge and practices. Collaboration between *paraji* (TBA) and *bidan* (CMW) requires that the *paraji* be educated and trained according to biomedical norms of hygiene and health. The threat remains that such efforts will be wasted should *paraji* return to their own traditional practices and knowledge systems. Furthermore, integrating *paraji* into a modern MCH system will not necessarily make them more appreciated. Sciortino (1995: 240–241) says that: "*physicians reject any cooperation with traditional healers, since they feel that these healers cannot be put on the same level with modern specialists. As physicians, they regard themselves higher in status than their traditional colleagues for two reasons. First, as public employees and representatives of the official medical system, they deserve more prestige. They are on the winning side, constantly receiving legitimacy from the national policy; second, they are arguing that dukun cannot compete with them as far as education is concerned*".

Moreover, in his study on whether government policies are capable of regulating traditional medical practices, Leslie (1980: 314–315) says that: "*the state policies concerning traditional medicine are largely negotiated and supervised by people trained in modern scientific medicine. The irrational element*[6] *in this situation derives from the fact that for more than a century the movement to professionalized modern scientific medicine has used the state to eliminate or drastically to curtail and subordinate other forms of practice. This movement has shaped the education of health professionals to an occupational perspective which distorts their comprehension of other systems*". Voorhoeve (1998: 47) elaborates upon how to eradicate traditional beliefs which are dangerous: "*To reduce the use of dangerous traditional practices several solutions are possible. A national programme of public health education may produce some results, but often, the belief in native medicine is very strong. Cooperation between traditional and Western medicine is the general policy of the World Health Organization, especially in Maternal and Child Health. However, this cooperation does not always reduce or correct traditional treatment. Sometimes cooperation with modern medicine may stimulate dangerous native treatments*".

In Rancaekek, Focus-Group Discussions (a qualitative technique) illustrate that *bidan* (CMW) consider people who seek the help of a *paraji* (TBA) to be 'primitive'. To eradicate stereotypical perceptions on both sides, mutual understanding should be encouraged through the sharing of interpersonal and intercultural experiences. While local knowledge about reproductive health and its practices have gained legitimacy over time through social and cultural acceptance in the community, the authenticity of modern Maternal and Child Health must in turn be acknowledged by the community in which it functions. However, in reality, balance is difficult to maintain. For example, during a difficult delivery when a pregnant woman desperately requires treatment at a modern obstetric facility, a *paraji* might perhaps continue to stroke her client's hand, telling her to be 'patient' and *pasrah* (accept her condition).

Physicians complain bitterly that pregnant women in need of biomedical treatment rely too long on indigenous healers before seeking further help at a *Puskesmas* (Community Health

Centre) or private biomedical practice. This situation places the guilt of delayed treatment directly upon the shoulders of *paraji*.

2.3.1 Three Delays when Seeking Care for Childbirth

Behaviour is best understood in terms of how an individual perceives his/her social environment (MacKian 2003: 7). Help- or health-seeking behaviour is one aspect of a medical system. Taking a decision with regard to one's health will first require weighing the potential risks or benefits of a particular choice, which will depend on one's actual environment, socio-cultural background and general view of life. Having a proper understanding of illness facilitates one's health-seeking behaviour and can reduce delay to diagnosis, improve treatment compliance and support health-promotion strategies in a variety of contexts.

This study demonstrates that, with regard to Maternal and Child Health, utilisation behaviour – or how one engages with a particular medical system – is affected by a variety of socio-economic variables such as gender, age, (women's) social status, access to MCH facilities and perceived quality of medical services. When attempting to explain patterns of behaviour and the factors involved, one should consider which obstacles pregnant and parturient women must overcome to contact MCH facilities in the community. A conceptual model should help clarify correlations between different factors and the behavioural process at the household level from the time a woman learns she is pregnant until after she has given birth (Slikkerveer 1990). With this approach, many variations in terminology tend to be categorised as perceptions, beliefs, or psycho-social, geographical, socio-economic, or institutional factors. While this is neither immediately apparent nor necessarily relevant to health-seeking behaviour during and after pregnancy, it is inherent to that process and must therefore be acknowledged.

"*Maternal health and health seeking behaviour of mothers have a huge impact not only on the lives of women, but also on the lives of their children*" (MacKian 2003: 12). Lash (2000) suggests that, in order to understand the complexities of how people make particular decisions or take actions, how and why they weigh options as they do, the attention should focus on "*reflexive communities*". This concept refers to the ways in which individuals behave, think and make decisions which, in turn, reflect their social position in a wider society at a particular time. Reflexive communities do not act solely on knowledge and processed information but rather reflect in a far more complex way in emotional, social and pragmatic behaviour. In order to understand how people make decisions and act upon them, with regard to health issues, it should be determined how they find and interpret their sources of information. Equally important is how they act upon underlying, unspoken, subconscious thoughts and feelings which fuel the cognitive process and its outcome.

Since the focus of this dissertation is on pregnant and perinatal women, some relevant factors concerning livelihood will affect a woman's capacity to seek health care: *e.g.* actual financial income, social status, life style, social networks, autonomy and liability. Such factors illustrate the complexity of decision-making processes which women face on a daily basis. WHO–SEARO (2000) states that each minute of every day one woman dies as a result of complications during pregnancy or childbirth, and eight newborns die because of

poorly managed pregnancies and deliveries. As stated above, women die from haemorrhage, infections, high blood pressure, oedema, obstructed labour, unsafe abortion and a range of diseases which are aggravated by pregnancy – such as malaria, hepatitis, rheumatic heart disease and diabetes. In addition, WHO–SEARO (2000) provides details underlying the medical causes of maternal mortality and disability, especially important when a pregnancy is complicated, which express a range of social, cultural, economic, and geographical factors which contribute to women's overall health and nutritional state before, during, and after pregnancy.

Therefore, to assure safer deliveries, a concerted effort must be made at the community level. Recall that, as mentioned in Section 2.3, WHO's three types of delays more or less parallel those reported in Alisjahbana's (1993) research: *i.e.* delay in deciding to seek help at the household level; delay in transporting a parturient woman to a nearby health facility; delay at the health facility in taking rapid and necessary treatment measures. Aside from placing blame on the family's poor education, meagre finances or preference for a traditional *paraji* to assist childbirth, Prayudha (2003) takes an inquisitive approach and asks the pivotal question: Why do people not visit *Puskesmas* (Community Health Centres)? Three reasons were put forward: (1) geographical distance – cost of transportation exceeds that for health services; (2) social distance – gap in knowledge and poor communication between health providers and clients; (3) unsatisfactory perception about health-centre providers – reflected in long delays, inadequate care, and so forth (*cf.* Section 1.2). Moreover, as already discussed above, some underlying reasons for the three types of delay open several avenues for enquiry. Belated identification of danger signs during pregnancy can point to the woman's lack of empowerment, to her inability to make her own decisions, to family members' ignorance of the risks pregnancy can bring or to their insufficient attention to the trials of labour. Moreover, although her family might recognize her precarious situation and wish to contact an appropriate obstetric facility, a shortage of money for transportation or the geographical distance might present a major obstacle – if roads and public transportation are even available. However, in hilly and mountainous areas where there are no roads, transporting a pregnant woman in labour means having to carry her by foot for hours to reach any health facility. There is thus a greater need for more community and financial support than for available transportation. Once a pregnant woman reaches a health facility, she might discover that its health care is mediocre. She might not receive appropriate treatment rapidly or the facility might be inadequately equipped with the necessary staff, equipment, medication, blood for transfusion, and so forth.

The criticisms voiced do not suggest that health providers are responsible for solving all of the community's health problems or that every health programme should consistently be implemented from one integrated point of delivery. Nevertheless, a Primary Health Care (PHC) team should be able to respond to the bulk of health issues in the community. When problems extend beyond their reach, other resources should be mobilised by referral. Moreover, the range of community self-help medical services on offer usually includes *paraji* (TBA) and modern certified *bidan* (CMW) as well as community-supported organisations such as volunteer health cadres, *Puskesmas* (Community Health Centre), *Polindes* (Village Maternity Home) and *Pustu* (Satellite Community Health Centre). One

need not relinquish one's own responsibility just because a PHC team is available to help navigate this complex environment.

The WHO Report (2008) points out that establishing a comprehensive integrated medical system in the community which can address the bulk of assorted health issues is more efficient than setting up separate services for select problems. One reason is partly because comprehensive health care leads to better understanding among the population and builds greater trust through mutual reinforcement. Medical systems which offer a comprehensive range of services increase uptake and coverage, *e.g.* preventive programmes, and help improve health outcomes. A comprehensive integrated system helps facilitate early detection of disease and prevent illness. Even in the absence of explicit demand, community health services should take the initiative, focusing on detection of disease and treatment modalities, preventive care to reduce the incidence of poor health, promotion of healthy behaviour, and on factors which affect public health. Moreover, pro-active volunteer teams or health cadres are an invaluable part of a medical system. As familiar faces in the community, they can lend support at public health facilities and, for many problems, are the only people in a position to address certain health problems effectively: *e.g.* pregnancy and early child development.

2.3.2 Use of Traditional Medicine in Maternal and Child Health Services

Implementation of modern Maternal and Child Health (MCH) is actually a natural step in the process of social and cultural change, as society moves away from local traditional systems. From the perspective of a modern MCH system, supported by the National Ministry of Health, modern methodologies have been permeating traditional medical systems and initiating changes in social and cultural lifestyles in correlation with medical systems in the community. Cultural contact with predominately cosmopolitan medical systems affects local traditions. In the case of traditional Maternal and Child Health, the role of *paraji* (TBA) as only care provider during and after pregnancy has been transformed into that of a mediator between traditional and modern MCH systems in the community. *paraji* are now expected to adopt a number of modern MCH methodologies such as hygiene.

Interestingly, some modern health-care providers continue to believe in the efficacy of *jamu*, *i.e.* traditional remedies the definition of which includes the sum total of knowledge, skills and practices based on theories, beliefs and experiences from the local community. *Jamu* is rooted in indigenous cross-cultural traditions formed as ethnic peoples migrated from place to place over centuries. Regardless of its efficacy, *jamu* (Traditional Medicine) is, in fact, used in Indonesia not only to maintain health but also to prevent, diagnose, improve or treat physical and mental illness. Its preventive function is the reason why communities still turn to Traditional Medicine. Sargent & Johnson (1996: 154) state that: "*By its very nature, ethnopharmacology uses some of the methods of bioscience, but neither its methodology nor its theoretical underpinnings form the basis of anthropological studies in the area. Anthropologists are not concerned with plant chemistry to judge whether some indigenous peoples 'got it right' (use pharmacologically active plants in a way that is consistent with the principles of biomedicine), but instead to ply the techniques of bioscience as one aspect of broad-based inquiry into plant use. [...] criteria that are*

applied in the selection of plants are complex include physical characteristics such as texture, taste, color, and smell; age and maturity; growing location; and physiologic action. All of these are qualities that affect or are affected by the chemical composition of plants. For many medical cultures, plant selection overlaps cognitive principles based in binary oppositions such as sweet–sour, hot–cold, or yin–yang. These reside in explanatory models that emphasize balance and proportion – more typically in the symbolic realm than the physical."

Much research on traditional medical systems puts forward the questions: how does a community classify illness, how do patients and healers experience and interpret illness, how do ethnomedical knowledge systems influence health-seeking behaviour, and how can we come to understand the efficacy of traditional healing methods. Furthermore, there are records on the nomenclature of indigenous plants – including their morphology, efficacy, and distinctive features – an on their use which reflect how people experience and interpret life in their environment.

Paraji (TBA) make use of traditional remedies when assisting pregnant and parturient women. Niehof (1992: 235) explains that: "*in Madura herbal cures are important to folk medicine. There are four domains where the use of herbal medicine is prominent: (a) for minor ailments; (b) for febrile skin diseases; (c) in the field of sex and eroticism; (d) during pregnancy and postpartum period*". Both Sunda and Madura illustrate several similarities in the use of herbal cures, especially for ante- and perinatal care.

2.3.3 Health Communication and Partnerships

In Indonesia, three health sectors are interconnected: *i.e*. Maternal and Child Health (MCH) services, the National Ministry of Health, and all the health policies implemented by Provincial Health Offices. Structurally, policies will be further implemented in sub-districts (*kecamatan*) and villages (*desa*) where community beliefs, values, knowledge, attitudes and practices are reflected in MCH systems. Communication, which means the transmission or exchange of information, is the key to understanding change: with regard to health issues, learning more about the reproductive process, changing attitudes about women's health during and after pregnancy, establishing norms for making pregnancy safer, and broadening the minds of local inhabitants to trust new ideas and aspirations for improved health behaviour. By spreading information to educate the public, communication can shake the foundations of existing values and social norms. According to *Healthy People 2010*, the Office of Disease Prevention and Health Promotion's definition (2008: 1) is: "… *health communication encompasses the study and use of communication strategies to inform and influence individual and community decisions that enhance health. It links the domains of communication and health and is increasingly recognized as a necessary element of efforts to improve personal and public health*".

Maternal and Child Health (MCH) systems include concepts such as safe pregnancy and childbirth as well as specific methodologies. However, in general, communication is invaluable not only to provide information helpful to pregnant women who must decide which MCH system to choose. On another level, communication helps increase awareness about how relatives and neighbours view the reproductive process and how their behaviours influence the decision-making process during pregnancy and childbirth. Rogers

(1973) says that originally communication was conceptualized as a simple one-way transmission of messages from a source to a receiver in order to bring about an intended effect, usually limited to expressing some point of view which in this case would be safe pregnancy and childbirth. In contrast, modern integrated information systems, in which the exchange of information is multi-directional, produce a consolidated record. Necessary information is accessible to authorized recipients in 'real time', *i.e.* at the point where service is provided. The functionality of multi-directional communication affects every aspect of Maternal and Child Health such as the community itself, traditional and modern practitioners, volunteer health-care cadres, as well as doctors and staff at *Posyandu* (Integrated Services Post) and *Puskesmas* (Community Health Centre).

Health literacy

The National Network of Libraries of Medicine (2008) defines health literacy in *Healthy People 2010* as: "*The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions*". Health literacy, which is differs according to context and setting, and is not necessarily related to years of education or general reading ability. Health is a concept not easily understood. Although an individual is well educated and trained to provide health care, s/he might prove to be marginally or inadequately literate in a health-care situation. Many health-care providers and policymakers remain largely unaware of the extent of this elusive problem. Health literacy relates to how clients grasp information and whether they take active steps to overcome health problems. Therefore it is essential that health providers develop strong communication skills.

The inability to read, understand and effectively follow basic medical instructions is one of the least recognized but most widespread health-care challenges to improve health outcomes and lower health-care costs. Health literacy also involves the ability to listen, speak and conceptualize knowledge. Buono (2008) states that low health literacy can affect any segment of a population, regardless of age, ethnicity, educational level and income, and cannot be detected by physical symptoms or examinations. Because health illiteracy is a hidden threat to health care, arising from various educational, social and cultural factors, it is important that diverse disciplines work together to eradicate this obstacle.

In Indonesia, the level of health literacy is reflected in the use of modern *vs.* traditional MCH systems. Generally, traditional Maternal and Child Health and the *paraji* attract less educated villagers who are illiterate to the ways of processing health-care information. National health-care policies and programmes should focus on ways to improve communication and increase health literacy about Maternal and Child Health in the community. Patients' verbal skills are equally important in a multi-directional communication system in which they must learn to articulate their concerns and describe their symptoms accurately. To do so, patients must learn to ask pertinent questions and understand oral advice about conditions and treatments. In an age of shared physician–patient responsibility in health care, patients must develop and actively make use of newly gained communicative skills.

Partnership[6]

Starting in 2003, the Partnership for Clear Health Communication (PCHC) Programme launched its first solution-based initiative, designed as an effective tool to improve health communication between patients and health-care providers. Discussions between patients and providers helped leading health-literacy experts to develop educational material. Three simple but essential questions were formulated which patients should repeatedly ask their health-care providers during every interaction and that health provider, in turn, should never fail to answer clearly and in depth. Monteiro (1998) views the concept 'partnership' in international health care as a nice word. When someone defines a mutual relationship as: '*we are partners'*, then, someone must question: '*but I am more partner than he (or she)'*.

Partnership can sound condescending when it is not based on equality. Lap (1998: 291) explains that: "*First of all, partnership means there is some sort of relationship in the case of development cooperation. Relationship is supposed to be more than just the transfer of financial and technical means or knowledge. It implies the sharing of common aims (and in a broader sense, the sharing of a vision) between donor and receiver, between North and South. It also implies common commitment or engagement to solve problems. In other words, partnership is not just the mere existence of a relationship surrounded by good intentions, but it says something about the quality of this relationship. These are a sense of mutual trust, equality and reciprocity*". Lap (1998) concludes that while partnership cannot be enforced (which would prove counterproductive), failing to strive towards partnership would mean surrendering oneself to the arrogance of power.

Table 2.1 Three Basic Models for the Physician–Patient Relationship

	Model	Role		Clinical Application	Model Prototype
		Physician	Patient		
1	Active-Passive	Treats patient	Recipient (unable) to respond	Anaesthesia, acute, trauma or coma, delirium, etc.	Parent-infant, Parent-child (adolescent)
2	Guidance-Cooperation	Instructs patient	Co-operator (obeys)	Acute infectious processes, etc	Adult-adult
3	Mutual Participation	Helps patient to help him/herself	Participant in 'partnership'	Most chronic illnesses	Psycho-analysis etc.

Source: Szasz & Hollander (1978)

Table 2.1 provides three models for the doctor–patient relationship. In the first model (Active–Passive), the doctor–patient relationship resembles that of a helpless infant and its parent. In the second model (Guidance–Cooperation), the patient demonstrates his/her willingness to 'cooperate' with the physician. In the third model (Mutual Cooperation), both the doctor and patient stand on level footing: "*Philosophically, this model is predicated on the postulate that equality among human beings is desirable. It is fundamental to the social structure of democracy and has played a crucial role in occidental civilization for more than two hundred years. Psychologically, mutually rests on complex processes of identification – which facilitate conceiving of others in terms of oneself – together with maintaining and tolerating the discrete individuality of the observer and the observed. It is crucial to this type of interaction that the participants (1) have*

approximately equal power, (2) be mutually interdependent (i.e. need each other), and (3) engage in activity that will be in some ways satisfying to both".

In their article "The Basic Models of the Doctor–Patient Relationship", Szasz & Hollander (1978: 102) provide three basic models for the physician–patient relationship as shown in Table 2.1. Although these three models are designed to examine a bilateral doctor–patient relationship, they can also be applied in Rancaekek to the more complex trilateral *bidan–paraji*–client relationship. Moreover, a simple model for the *paraji–bidan* relationship in Rancaekek shows that both traditional and modern MCH systems share the same objective – to make pregnancy safer for the benefit of both mother and her offspring. To make motherhood safer, one might actually need to look carefully at more diverse points of view among a variety of disciplines; however, the chief partnership is basically that between traditional and modern MCH systems. Jha & Hanson (2002) note, that in recent years, 'Close-to-Client' health care has been identified as the principal vehicle for addressing a number of determinants, such as maternal, foetal and neonatal mortality, which account for the higher mortality rates in developing countries[7].

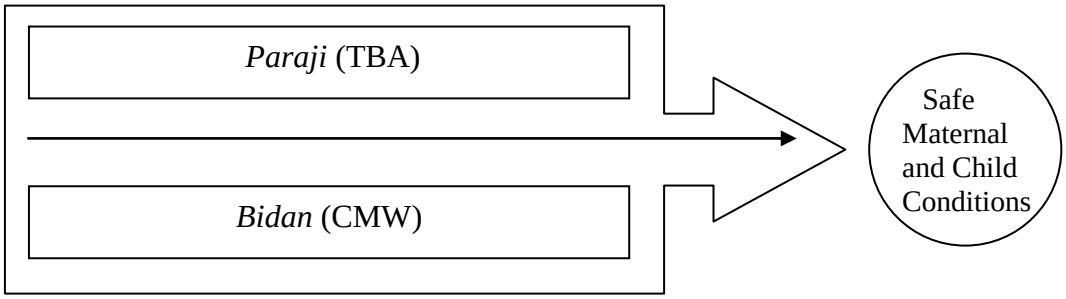


Figure 2.3 'Making Pregnancy Safer' approach (WHOCC–PMC–UNPAD) for safe reproduction through partnership
(Source: MPS 2001)

Figure 2.3 illustrates the real state of affairs in Rancaekek where both traditional and modern MCH systems share similar objectives but travel down different roads to achieve safe pregnancy and childbirth: *i.e*. the *bidan* by providing professional formalized care in health centres or private practice and the *paraji* by providing expert ethnomedical knowledge and practices in a family setting. Furthermore Jha (2002: 8) adds that: "*Since the risks for adverse birth outcomes are so high at the time of labour and delivery and in the immediate postpartum period, the quality of care at that time becomes the major focus. Reducing the significant burden of maternal, foetal, and neonatal mortality will require good-quality maternal and neonatal services along with effective referral systems*".

Sofoluwe (1985) state that: "… *the interest of redefinition of community health where in addition to physical, mental and social health, also include moral and spiritual health which recently take into account for all human being, the understanding of indigenous and traditional peoples' knowledge systems as to protect and maintain their natural and cultural heritage".* In her survey on traditional midwifery in Indonesia, Niehof (1992) finds that mediation has clearly failed in cases where the mother or child dies. *paraji* (TBA) have the responsible task of assisting during labour and delivery to bring a healthy newborn

into this world. In addition, Niehof (1992) adds: "*If she fails in this, the supernatural powers are regarded as having gotten the upper hand. It is important to note that in general in such cases the Traditional Birth Attendant (TBA) is not personally blamed. Failure is attributed not so much to any particular physical act or omission, as to an apparent incompatibility between the Traditional Birth Attendant, the supernatural powers and the client – in those particular circumstances and at that particular moment*".

Paraji (TBA) have extensive experience with and knowledge about indigenous processes: *i.e.* knowledge about the stages of pregnancy, about good foetal position, about women's physical and psychological perceptions during pregnancy. Therefore, a *paraji* will know: when to apply massage, what herbal medicines to prepare, which foodstuffs should be consumed or avoided, how to fend against evil forces since pregnancy weakens a woman's resistance. In countries with high Maternal (MMR) and Infant (IMR) Mortality Rates, it is usually an indigenous healer along with the pregnant woman's relatives who provide care for the post-natal woman and her baby, especially in rural areas. For example, from the 1960s to 1980s, China successfully reduced its MMRs and IMRs by employing 'barefoot doctors' who were well-trained indigenous healers.

Whether provided by traditional, modern or integrated medical systems, each individual in a community has the right to basic, accessible, acceptable and affordable health care. Primary Health Care (PHC) as focal point and pathway to higher levels of health care must ensure that local medical systems in the community meet the needs of its individuals. Two important components of Primary Health Care – community participation and health education – are essential if community health programmes are to be sustainable and affordable. Moreover, the public must become health literate and able to define its own specific needs. Only in this way can they become empowered as 'owners' of community projects and work towards sustainability.

Table 2.2 Models of Health Care during Labour and Delivery

Model	Birth Attendant	Delivery Location	Referral Capacity	MMR/Country (per 100.000)
1	Non-professional: often a community member with little or no medical training	Home	Referral and transportation needed for complicated cases	115 Rural China (1994) 120 Fortaleza, Brazil (1984)
2	Professional: often a physician, alternations and provide basic essential care	Home	Many barriers and may involve long distances	50 Malaysia (1970–1980) 7 The Netherlands (1983–1992)
3	Professional: often a physician, alternatively, a midwife	Health clinic or hospital with basic essential obstetric care	Referral and transportation needed for complicated cases	43 Malaysia (1980–1990) 30 Sri Lanka (1996)
4	Professional: most often a physician	Hospital with comprehensive essential obstetric care	Some barriers may involve long distances	9 United Kingdom 12 United States 114 Mexico City (1988)

Source: Adapted from Koblinsky, Campbel & Heichelheim (1999)

Koblinsky *et al*. (1999: 399–406) state that: "… *the essence of Primary Health Care and referral for labour and delivery is the presence of a skilled attendant backed up by good quality, readily accessible emergency care. The wide range in services and settings in countries for labour and delivery can be described in terms of four models of care, based on the type of caregiver and the setting in which delivery takes place*" (Table 2.2). Three of these four models are discussed along with the country's programme.

Model 1: *Labour and delivery at home with a non-professional attendant and referral for complicated cases*: Note that, in Table 2.2, no model for home delivery uses a non-professional attendant without referral for complicated cases.

Model 2: Labour and delivery at home with a professional attendant and referral for complicated cases: Deliveries at home and care of the newborn, usually by a midwife, is available in some developing countries, generally in rural areas. In countries where skilled birth attendants or midwives manage at least one-half of the deliveries, such as in Sri Lanka and South Africa, MMRs and IMRs are among the lowest in the developing world. Marthur, Damodar, Sharma & Jain (1979: 21) state that: "… *providing quality model 2 care involves the training component of birth attendants and provision of equipment. It also involves transportation and communication capacity for referrals. Provider and community attitudes that can be major barriers to the use of skilled birth attendants and other health care services need to be overcome*".

Model 3: Labour and delivery in hospital/clinic including basic essential care: Deliveries attended by skilled experienced birth attendants can gain further support when they take place in hospitals or clinics which provide basic essential obstetric and neonatal care. WHO (1996) states that: "*Model 3 services for the mother should include at least paren-teral medications (antibiotics, oxytocic drugs, and anticonvulsants) and manual removal of the placenta and other retained products in basic essential obstetric care services. However, in comprehensive essential obstetric care services, provision for surgical proce-dures, anesthesia, and blood transfusion in addition to the above should be included*".

Model 4: Labour and delivery in hospital/clinic with comprehensive essential care: Model 4 incorporates all of the services provided in Model 3, as well as anaesthesia, surgery (particularly Caesarean section and surgical repair such as vesico-vaginal tears), blood transfusion, and the ability to care for distressed or at-risk neonates. This most sophisticated model of care is available in some urban areas in developing countries, where MMRs and IMRs are low. In Rancaekek, *paraji* are considered 'helpers' who can apply their ethnomedical skills (midwifery) to help pregnant and perinatal women, *e.g*. perhaps for relaxation, and are always willing to accommodate the woman's family and children as well. According to Niehof (1992), the ability of *paraji* to communicate with the supernatural or spiritual world is part and parcel of indigenous midwifery. Niehof (1992: 12) goes on to say: "*It is hard to get a more specific definition of the supernatural powers involved. Traditional healers tend to keep silent on this subject, and the Traditional Birth Attendant is no exception. Traditional Birth Attendants in Islamic areas will only say that they request to God*".

Any attempt to achieve 'Safe Motherhood' should not overlook the importance of creating strong partnerships between a pregnant woman, members of her family, and community health practitioner as well as addressing essential issues such as community funding, health research and decision-making behaviour. Partnership implies the equal sharing of knowledge, resources and commitments in order to reach a common goal. In the case of Maternal and Child Health, mutual respect and transparency are essential. In Rancaekek where most *paraji* are trained in the use of modern MCH methodologies, the Regional Health Office evaluation has shown that the type of training is not conform traditional midwives' levels of education. Volunteer health-care cadres, appointed to mediate between MCH providers within the community, are accustomed to motivate pregnant women to seek help at *Puskesmas*. Because health cadres come from the same community and live alongside indigenous healers and their clients, they can successfully function as mediator between different medical systems and the public.

Following the Alma-Ata Declaration in 1978, which advocates using indigenous healers and practitioners in Primary Health Care, numerous studies were published and discussions held among experts in the field about how to integrate ethno- and biomedical systems. Young (1994: 62–66) delineates five types of relationships as follows:

(1) *Intolerant Orthodoxy [...] biomedicine has monopoly on health care and uses its power base to prevent alternative healing traditions from obtaining legal status. In societies in which biomedicine has this kind of power, it is referred to as orthodox system and all other systems are considered unorthodox. This type of intolerance usually did not eliminate indigenous healing traditions but simply forced them underground. [...] many indigenous healing traditions lost their positions of their 'structural superiority', but they did not necessarily loss their 'functional strength'. Although type 1 societies may be characterized by unofficial medical pluralism, relations between biomedicine and indigenous healing traditions are characterized by structural inequality and intolerance on the part of biomedical practitioners*."

(2) *"Tolerant Orthodoxy, in type 2, as in type 1, there is a single orthodox healing tradition, but many of its practitioners are tolerant of alternative traditions. In an attempt to provide culturally-appropriate health care, tolerant orthodox practitioners make an effort to understand the beliefs and behaviours of minority patients. It is important to note, however, that in societies characterized by tolerant orthodoxy, alternative healing traditions are not accorded legal status. Unofficial health care pluralism exists in practice, and may even be encouraged, but a single training and licensing of legally-recognized practitioners. In other words, despite its tolerance, biomedicine retains its position of structural superiority.*"

(3) "*Parallel Independent Traditions, rather than a single orthodox system, there are two or more traditions that legally recognized. Although patients have freedom of choice, there is little active collaboration among practitioners of the different traditions. Relations among practitioners of biomedicine and traditional medicine are generally characterized by indifference, and the choice of what kind of healer to utilize for a particular condition is*

left to the patient. In brief, type3 societies have official health care pluralism, but at least in term of interaction among health care practitioners, it is of passive type."

(4) "*Collaboration and Combination, in type 4, the practitioners of two or more legally recognized healing traditions engaged in active collaboration resulting in a combination of therapeutic techniques, or else the beliefs, practices and medicines of two or more traditions are combined by a single individual. A more active kind of collaboration is practiced in China where 'interdisciplinary' teams can consists of biomedical personnel, traditional Chinese medicine practitioners, and even personnel trained in one of the minority traditions such as Mongolian or Tibetan medicine. Type 4 includes a range of options which provide for active collaboration among practitioners of different healing traditions and/or combination of different therapeutic techniques and medicines within the same practice.*"

(5) "*Integration, in type 5, the goal is to synthesize the theory and practice of different healing traditions into a more comprehensive system. This goes beyond collaboration among practitioners from different traditions, or combining different techniques in a single practice.*"

To conclude the theoretical discussion, ethnomedical systems found in almost every society and culture will reflect how local people perceive health, how they define disease and illness, which beliefs underlie their patterns of behaviour and which preventive and curatives practices are appropriate and applicable to the situation. The indigenous healer's task is not only to provide traditional health care but also to function as mediator in the community.

Notes

1. A person who is ill occupies an admittedly exceptional position in society. To be ill means to suffer – in a twofold sense. To suffer means to be passive. The sick individual is cut off from active life to the extent that s/he is even unable to procure necessary food. The individual is literally helpless and dependent on the care of other individuals (Sigerist 1977: 389).
2. A dictionary definition of 'cosmopolitan' is "belonging to all or many parts of the world", rather than being limited or provincial in scope or bearing; involving peoples in all or many parts of the world (Dunn 1976: 135).
3. Alternative healing traditions can be aboriginal or ethnic in origin, such as Native healing, traditional Chinese medicine or Ayurvedic medicine in Canada. These are healing traditions which were once dominant in their original cultures but which are now considered unorthodox in other countries. Alternative healing can be base upon specific diagnostic or treatment procedures, some of which have always been considered unorthodox. Examples are homeopathy, iridology, therapeutic touch, and reflexology (Young, 1994: 68).
4. 'Transculturation' is used as a synonym for acculturation to refer to the process of cultural change resulting from contact between cultures. 'Acculturation' is the process by which culture is transmitted through ongoing first-hand contact between groups with different cultures, one often having a more highly developed civilization.

5. A review of socio-historical factors which influence medical systems highlights important processes such as cultural re-interpretation and indigenization which characterize what could be more appropriately described as ‘transitional’ medical systems. Changes in cultural forms, such as the acceptance of Western pharmaceuticals, may still rely on traditional cognitive frames of reference, suggesting eclecticism amid conservatism. Issues of theoretical and practical concern are outlined at the end of the article (Tan 1989).
6. Partnership with women involves mothers to recognize and realize the priority of maternal health problems and together with local health authorities create plans to minimize this problem.
7. In the ‘Close-to-Client’ model of Primary Health Care, relatively simple hospitals and health centres provide effective interventions against major causes of death and disability in poor populations. Health care in such settings, which can often be provided by non-physicians (nurses, midwives, community or village workers, and other paramedical staff) is complemented by a referral system which offers access when needed to higher level care (WHO 1994).

Chapter III METHODOLOGY AND ANALYTICAL MODEL

3.1. Research Methodology

The challenging results of the applied research project 'Making Pregnancy Safer' (MPS), conducted in 2001–2002 under the collaborative efforts of WHOCC–PMC and WHO–SEARO, in which this author participated, has been a motivation for this longitudinal field study, conducted in the same research setting of Rancaekek. The general approach applied in this study is descriptive analysis with a retrospective orientation which aims to achieve a deeper insight into Maternal and Child Health (MCH) systems in the community. This study documents the knowledge, practices and beliefs about pregnancy and childbirth upheld by traditional and modern MCH systems in Rancaekek. Furthermore, the study analyzes health-seeking behaviour at the household level and utilisation of MCH systems during and after pregnancy. Using quantitative household surveys, the present study collects pertinent data by applying two major complementary research methodologies: *i.e.* qualitative and quantitative approaches. The technique employed in the field is participatory observation whereby a researcher lives in the study area, the Rancaekek sub-district, for a certain period of time while simultaneously conducting interviews and holding discussions with various community representatives and key informants: *e.g. paraji* (TBA) and *bidan* (CMW), medical staff at *Posyandu* and *Puskesmas* as well as other MCH organisations. After discussing MCH issues, attention is directed to integrated medicine and advanced partnerships between *paraji* and *bidan* who represent traditional and modern MCH systems, respectively. Before one can fully understand how to integrate MCH systems in Rancaekek successfully, more information is needed about the alliances which have already been forged.

First, literature on the 'Safe Motherhood Initiative' (SMI) and its implementation in Indonesia, especially West Java, is reviewed. Pertinent information is gathered from the literature to help develop and set-up original fieldwork and to prepare guidelines for interviews and focus-group discussions. Quantitative questionnaires based on pre-survey findings are constructed for use in the household survey. Data are categorized according to four different stages: (1) selection of a research setting, (2) qualitative key informant interviews and focus-group discussions, (3) quantitative household survey, and (4) grouping of qualitative data to help make sense of multifaceted data collected during the second and third stages. Furthermore, after first being re-categorised, the data are entered into SPSS 15.0. Re-categorisation of data is necessary due to the diversity of answers, particularly to open-ended questions related to traditional knowledge, beliefs and behaviours of women during and after pregnancy.

3.1.1 Leiden Ethnosystems Approach

Hahn (1999: 13) explains that many aspects of human social life, such as beliefs and values, are subjective and thus difficult to measure quantitatively. However, such principles

and judgements can be studied by intensive observation to gain knowledge about *emic* perceptions and interpretations which appear subjective. The subjectivity of a research topic does not necessitate that the research methodology must also be subjective. During the 1970s, an *emic* approach was developed by the Department of Anthropology and Sociology of Non-Western Societies at the Institute of Cultural and Social Studies, Leiden University. In their Ethnosystems Approach, the concept '*emic*' opens new perspectives on socio-economic development in the Third World and departs from methodologies generally used in ethnoscience which seek to take into account local and regional systems of knowledge and practice within a more dynamic context of processes of development and change. Furthermore, by combining formal and empirical approaches, the 'ethnosystems' methodology is shown to increase understanding and help clarify the processes of interaction between local and global knowledge in several study settings in East Africa, Indonesia and the Mediterranean (*cf.* Leakey & Slikkerveer 1991; Adimihardja 1999; Slikkerveer & Lionis 1996; Adams & Slikkerveer 1996).

By implementing the Ethnosystems Approach, certain significant aspects of local knowledge systems have been documented, analysed and integrated into pluralistic forms of agro-ecology, comprehensive health care and integrated wildlife management. In addition, this methodology has facilitated the designing, assessment and successful implementation of an analytical model programmed for human behaviour in various research settings.This multivariate model, based on the concept 'ethnosystems', not only broadens our perspective on culture but also enables assessment of the cognitive and behavioural components of particular groups or communities as 'systems' in a rather *holistic* mode. More importantly, such a definition for ethnosystems further facilitates, in a more dynamic way, elaboration of the concept 'culture' as the result of historical processes in which not only acculturation and transculturation between different cultures has occurred – 'Great' *vs*. 'Little' traditions (Redfield 1956). For example, such a model could accommodate the previously mentioned analysis of processes of utilisation of traditional and modern MCH systems. Furthermore, the Ethnosystems Approach enables us to cross borders and assess interactions between local and (inter)national systems in a more balanced way. Slikkerveer (1996) notes that with the concept 'ethnosystems', within the historical processes of social and cultural change and technological innovation, not only the dynamic character of culture becomes noticeable but also the interaction between ethno- and cosmos systems then enables us to broaden our area of interest to include research on the behavioural component of innovation and development processes. In *Indigenous Knowledge Systems and Development*, Brokensha, Warren & Werner (1980) directed us down a most promising track towards, to a certain extent, a behaviouristic approach to innovation and development, in which individuals in ethnosystems act as primary source for "*development from below*". The 'Leiden Tradition' applies the Ethnosystems Approach to Structural Anthropology, namely with the concepts (1) Participants' View (PV), (2) Field of Ethnological Study (FES), and (3) Historical Dimension (HD).

(1) *Participants' View*

The decision to include a participant's or the target population's point of view when planning and implementing innovative and developmental processes has encouraged a new relativist perspective on other cultures and societies. When observing and describing a

socio-cultural system from a participant's perspective, the 'subjective' perceptions and attitudes of individuals coalesce into an 'objective' social system which represents an invaluable addition to research on ethnosystems – *i.e.* indigenous world view, perceptions, and decision-making systems. This approach links with the *emic*, in contrast to *etic*, view of cultures.

(2) *Field of Ethnological Study*
Early Structural Anthropologists, originally from the 'Leiden Tradition', developed the concept 'Field of Ethnological Study' (FES) or 'cultural area' during fieldwork in Indonesia (*cf.* Van Wouden 1935; De Josselin de Jong 1980; Schefold 1988), starting from a linguistic focus on the original *lingua franca* of Pasar Malay alongside a series of existent regional languages across the entire Archipelago. In the case of Indonesia, certain shared cultural features – such as kinship classifications, patterns of social organization, ornaments on bronze kettle-drums, patterns on woven cloth, and perceptions and practices in medical systems – are spread over a 'Field of Ethnological Study (FES).

(3) *Historical Dimension*
In analytical research, strict contemporary-oriented approaches fail to highlight the dynamics of developmental processes which transform proto-forms into present-day complex configurations, albeit in medicine, religion or agriculture. Particularly in structural research settings, such as the Horn of Africa, (pre)-historic analysis of past acculturation and migration has facilitated reconstruction of plural medical systems (Slikkerveer 1990). Similarly, processes leading to the 'Agricultural Revolution' and subsequent pre-Columbian, colonial and post-colonial complexes in indigenous and imported systems of agriculture and horticulture in this area are still under-documented. In sum, these aspects facilitate the study and analysis of other cultures and help define the new approach to ethnosystems in a broader sense and stimulate the recent re-appraisal of the 'cultural dimension of development' in international cooperative efforts.

3.1.2 Selection of the Research Setting

In social research, there are two distinct opinions regarding quantification which reflect underlying differences in perspective among scholarly disciplines as to methodology and interpretation of results. On one side of this 'qualitative–quantitative' divide, a number of social scientists regard qualitative research on concepts, values and the meaning of social and cultural life to be the fundamental basis of anthropological knowledge. Their primary goal is to describe coherently and explain or 'make sense' of collected data. In contrast, other social researchers are of the opinion that quantitative data and statistical analyses provide the foundation for anthropological knowledge, although qualitative studies also aim at 'making sense' of information. A third category of social scientists tries to bridge this qualitative–quantitative divide by employing both approaches in a complementary fashion where each method lends support for the other. Anthropologists studying health issues apparently understand systems of health outcomes far better from within social and cultural systems of medicine. This generally applies to qualitative research and health

professionals. Anthropological methodology provides relevant conceptual frameworks with which to obtain substantive knowledge and insights which are essential for genuinely multi- and interdisciplinary research, which extends beyond selective incorporation of specific methods to encompass research conceptualisation and theoretical synthesis (Slikkerveer 2003)

The model for quantitative research requires sampling, collection of impersonal data, and statistical analysis. Research using surveys usually draws a sample from a much larger population. By studying a properly selected and representative sample, social scientists can make accurate assumptions about the population as a whole. A sample is selected by randomizing procedures, such as tables of random numbers, explained in many statistics textbooks. In a random sample, each member of the population has an equal statistical chance of being chosen as representative for that population. Recent advances in statistical analysis have shed more light on cross-cultural comparisons, thus further enhancing the value of a quantitative approach in helping understand and predict variations in complex processes of interaction and human behaviour – including psychosocial determinants. In particular, one advanced technique for data analysis is the Statistical Package for the Social Sciences (SPSS).

Sociographical material is collected from existing literature and secondary data such as statistical sources and reports, complemented by field observations. With this approach one can obtain specific data on relationships between traditional and modern Maternal and Child Health (MCH) systems and its users in the community. Moreover Slikkerveer (1990) describes how, following this approach, one can enter the target group from different perspectives: (1) community-based and (2) institution-based. A community-based study uses an *emic* approach to the population of the community itself (*cf.* Leiden Tradition in Structural Anthropology). Using health interview surveys, data are collected on the background characteristics of the respondents and members of their families which help clarify what effects the decision-making process has on the utilization of MCH systems. In contrast, an institution-based study views existing MCH systems from within, using qualitative and quantitative methodology to gather data on different medical systems in order to better understand how each system functions to serve the public or specific groups therein.

An explanatory approach is followed to better understand indigenous plant taxonomies and herbals used by *paraji* (TBA) to treat pregnant and perinatal women and their newborns. Explanatory models emphasize balance and proportion, more typically in the symbolic rather than physical sphere. Explanatory research characteristically seeks to recognize and clarify a causal association between two or more phenomena which is substantively significant and meaningful. Such an approach tends to employ quantitative methods, normally a survey although descriptive and explanatory methods using case studies and observation are also possibilities. The explanatory method aims to give details and elaborate upon theories, to advance knowledge about underlying processes, to extend research into new areas of interest, and to present interpretations which might enrich one's thinking. Explaining qualitative research to health professionals is an essential step in gaining acceptance for these techniques, although qualitative findings are not always equally rated. Concerns about research standards and the need for certain types of evidence have resulted in recommendations that qualitative health research take measures to ensure

quality control, such as using multiple coding, purposive sampling, and software packages for text analysis. Imposing intrusive measures, however, may constrain the direction and content of qualitative studies and legitimize sub-standard research, as incorporating recommended procedures does not always enhance the quality of the empirical work or analysis. Results collected using the above-mentioned approaches are as follows:

(1) sociographical data on the community using a baseline survey;
(2) data concerning MCH systems in the community, using an institutional-based survey, *i.e*. traditional and modern MCH systems;
(3) taxonomies of indigenous plants (appearance, function, and so forth) which reflect how the public as well as *paraji* (TBA) experience and interpret their physical environment;
(4) data on the utilisation of MCH systems, completed by respondents in the household survey who reported being pregnant and giving birth within the 12-month period prior to the survey, including their contacts with the medical systems; data on background factors for individual respondents, grouped according to predisposing, enabling and perceived factors in the reproductive process, collected using the household survey.

This study describes the roles *paraji* (TBA) and *bidan* (CMW) play in Rancaekek and proposes the possibility for integrated medicine through advanced partnerships. To accomplish this task, a sample population of women was selected in the Rancaekek sub-district who were pregnant and had given birth to a live neonate during the prior 12 months. To ensure that each group reflecting a specific background (*e.g.* ethnic, educational, occupational, religious, socio-economic status, etc.) is represented equally in the sample, a decision was made to select villages according to the local government's categorisation: 'A' = well developed (*desa maju*), 'B' = moderately developed (*sedang*), and 'C' = less developed (*desa tertinggal*).

During multistage cluster sampling, stratification is included at each stage of the design to refine the selected sample. Babbie (2004: 212) points out that: "*Once the primary sampling units have been grouped according to the relevant, available stratification variables, either simple random or systematic sampling techniques can be used to select the sample. You might select a specified number of units from each group, or stratum, or you might arrange the stratified clusters in a continuous list and systematically sample that list*. *[...].. to extend that clusters are combined into homogenous strata, the sampling error at this stage will be reduced. The primary goal of stratification, as before, is homogeneity*".

During the first stage, based on the above, thirteen villages are chosen from among those in Rancaekek Sub-District: (1) Rancaekek Wetan (A); (2) Rancaekek Kulon (A); (3) Bojong Loa (A/B); (4) Tegal Sumedang (C); (5) Sangiang (C); (6) Bojongsalam (B); (7) Haurpugur (B/C); (8) Cangkuang (B); (9) Linggar (B); (10) Nanjung Mekar (B); (11) Sukamulya (B); (12) Sukamanah (B); and (13) Jelegong (A/B). Thereafter, five of these thirteen villages are selected as sample: Jelegong, Cangkuang, Haurpugur, Tegal Sumedang, and Sangiang (see Table 3.1). Tegal Sumedang and Sangiang are selected because their populations are smaller compared to the other villages and because their under-developed socio-economic status makes them eligible to receive additional MCH programmes: *i.e. Gerakan Sayang Ibu* (GSI: 'Mother's Friendly Movement') and another UNICEF programme. Cangkuang is located along the main road running from Bandung to

the east on the Island of Java, where most of the many garment factory workers are living within the research area. Jelegong is a village which provides housing for the lower middle class. On the opposite side of the road, all the villages are covered by the 'Making Pregnancy Safer' (MPS) Programme conducted by WHOCC–UNPAD in 2001–2002.

During the second stage, the study population is selected by categorizing all women who have been pregnant and given birth to a live neonate during the 12-month retrospective period. The group should be representative of women in the population lists (*cf.* see discussion on the census in Section 3.1.3). Interestingly, the total number of eligible women in each village is quiet high: 77 women in Jelegong; 49 in Cangkuang; 71 in Haurpugur; 50 in Tegal Sumedang; and 55 in Sangiang. By applying this specification, a properly selected, representative sample should be drawn from the population by taking into consideration that each member of the population has an equal statistical chance of being chosen as representative of the population. As Babbie (2004: 213–214) points out: "*Although the application of probability sampling involves some sophisticated use of statistics, the basic logic of probability sampling is not difficult to understand. If all member of a population were identical in all respects – all demographic characteristics, attitudes, experiences, behaviours, and so on – there would not be needed for careful sampling procedures. In this extreme case of perfect homogeneity, in fact, any single case would suffice as a sample to study characteristics of the whole population. [...] The fundamental idea behind probability sampling is this: to provide useful descriptions of the total population, a sample of individuals from a population must contain essentially the same variations that exist in the population*".[1]

Table 3.1 List of Villages (N=127) Selected for the Household Survey

Village	SES	MCH Programme Implemented	N	%
Jelegong	A/B	GSI	35	27.5
Cangkuang	B	UNICEF	19	15.0
Haurpugur	B/C	GSI	33	26.0
Tegal Sumedang	C	GSI	18	14.2
Sangiang	C	GSI	22	17.3
Total			127	100.0

Categories for village's socio-economic status (SES): A = highly developed (*maju*); B = moderately developed (*sedang*); and C = less developed (*tertinggal*).

GSI = *Gerakan Sayang Ibu* (GSI: 'Mother's Friendly Movement'), a MCH programme conducted in collaboration between the National Ministry of Health and Ministry of Women's Affairs

N = The specification that women in the sample survey be post-partum, *i.e.* have already given birth, guarantees that each woman has had the opportunity to contact MCH services during pregnancy, labour and delivery.

Table 3.1 shows the selected sample villages and number of respondents. The Rancaekek sub-district is made up of 169 *Rukun Warga* (RW: neighbourhoods) and 789 *Rukun Tetangga* (RT: hamlets). Each hamlet has about 30 households. Taking into account the size of the area, the total number of households in the sub-district, and the socio-economic status (SES) of the villages, five villages are selected for the household survey to enable

comparison and delineation of differences in the utilisation of traditional and modern MCH systems in Rancaekek. Data for poor and more prosperous villages differ, suggesting perhaps that villagers who enjoy greater socio-economical prosperity will make more frequent use of a modern MCH system.

3.1.3 Selection of Respondents in the Survey

After selecting the research area, respondents are chosen for the survey. The unit for analysis is women or mothers who have been pregnant and delivered live newborns during the 12-month period retrospective to the survey. Because women are not totally self-sufficient during pregnancy, labour and delivery, members of their households are also included (*e.g*. the husband and senior family members such as mother, father, mother-in-law, father-in-law, etc.) Sometimes available community MCH services are recommended by neighbours or individuals whom the family honours, such as: *ibu RT* (wife of the hamlet's leader), *ibu kader* (volunteer health cadre), *ibu PKK* (local woman's organization), *kiyai* (religious leader) and his wife, and so forth.

According to gender, relationships between members of a household are often hierarchical, in which women and men each have a certain status. Therefore, the husband's role should be taken into account during decision-making processes within a household. In her article, Postel-Coster (1992) points out that a husband's status as head and breadwinner will affect his wife's position in the household. Although pregnancy and childbirth are considered matters for women, when it comes to choosing which MCH services to choose for a pregnant wife, the family's finances or socio-economic status (SES) of the household will be an important determinant. In some cases, regardless of the issue of money, the household's religious background will influence their choice of MCH systems.

From dissimilar categories of villages in the Rancaekek sub-district individuals representing diverse social, cultural and economic backgrounds are selected randomly from each population in the above-mentioned villages. Because the sample population of retrospectively selected post-partum women in the clusters or villages differ greatly in size, it is appropriate to apply a modified sampling design called 'probability proportionate to size' (PPS) for the cluster populations[2]. Each cluster is selected proportionate to its size. Jelegong, with a population of 77 retrospectively selected post-partum women is said to represent 27.5% of the whole population of women with this specific characteristic. Thus, for a population sample comprising 127 respondents, Jelegong would have 27.5% x 127 = 35 respondents. This formula, based on a population sample of 127 respondents, is used to calculate the sizes of the other selected clusters: *i.e.* for Cangkuang 15% x 127 = 19 respondents; for Haurpugur 26% x 127 = 33 respondents; for Tegal Sumedang 14.2% x 127 = 18 respondents; and for Sangiang 17.3% x 127 = 22 respondents. In brief, each case is given weight equal to the inverse of its probability of selection.

For the survey, the household sample is drawn from 50% of the female population who were pregnant and gave birth during the 12-month retrospective period. During the time interval between census and survey, a number of pregnant women had already given birth. During the data entry process, 23 respondents who were still pregnant have not had the opportunity to complete the entire MCH-seeking cycle up through childbirth. Unable to report the full extent to which they used traditional and modern MCH systems, they are

disqualified as unsuitable for inclusion in the study. Therefore, only 127 of the original 150 respondents are entered in SPSS for data processing and analysis of the utilisation of MCH systems in Rancaekek. Finally, 127 women thus categorized are selected: (1) 35 respondents from Jelegong; (2) 19 from Cangkuang; (3) 33 from Haurpugur; (4) 18 from Tegal Sumedang; and (5) 22 from Sangiang (*cf.* Table 3.1). In this manner, it is probable that the sample group will mirror the population equally.

3.2 Comparative, Qualitative and Quantitative Surveys

A quantitative survey collects its data by way of structured questionnaires and then applies statistical analysis, using bivariate and multivariate analysis, to discover relationships among factors which influence the choice of Maternal and Child Health (MCH) systems in the community. For this retrospective study, as already explained above, the target population living in Rancaekek Sub-District provides a sample of 127 respondents who have been pregnant and delivered live neonates during the 12-month retrospective period.

The qualitative approach aims to discover important themes, categories, dimensions and inter-relationships between variables. The word 'qualitative' implies that emphasis is placed on processes and meanings which are not measured in terms of quantity, amount, intensity or frequency. It reflects the socially constructed nature of intimate relationships between researcher and the topic studied. The researcher seeks answers to explain how social experiences come about and acquire meaning. This approach is followed in the first stage of data collection before designing the quantitative structured questionnaires. Content analysis involves coding (or indexing) segments of text which refer to the various topics and categories. Subsequently segments of the same topic are sorted and compared across all interviews, focus-group discussions and observations with the aim to develop theoretical constructs from the data.[4]

3.2.1 Preparation for the Research Study

Preparatory work was carried out during the 'Making Pregnancy Safer' (MPS) Programme in 2001–2002 by WHOCC–PMC at Padjadjaran University. Use of the 'transitional' medical system is under-represented for Maternal and Child Health (MCH) in the research setting. Their findings became the baseline for this study's research proposal, specifically on traditional and modern MCH systems in the same area of Rancaekek.

During the preliminary study, the methodology used to collect information on local social, cultural and medical systems at the community level is as follows:

(1) Focus-Group Discussions: Two focus-group discussions are conducted between pregnant and post-partum women (with or without problems), their husbands, community leaders, modern *bidan* (CMW), volunteer health cadres and *paraji* (TBA) in order to collect information on social, cultural and MCH systems in Rancaekek.
(2) In-depth Interviews: These interviews are held to inquire how pregnant women, experienced mothers, husbands, volunteer health cadres, *paraji*, and *bidan* perceive traditional and modern medical systems.

Institutional-level information is used to gather data on availability, accessibility, affordability and acceptability for utilisation of MCH systems. Furthermore, support groups such as village leaders and social organisations are also targeted to obtain additional information on the social and cultural resources available in the area which could render pregnancy safer.

Data collected by WHOCC–Padjadjaran University on *paraji* and *bidan* in Rancaekek show that, with regard to Maternal and Child Health, in spite of the number of available modern *bidan*, it is the traditional *paraji* in whom the community places its trust. The women surveyed who have experienced pregnancy; labour and delivery also have formed opinions about both MCH systems. Finally, additional qualitative research using in-depth interviews and focus-group discussions is carried out. The findings are used to create the questionnaires.

During the month of Ramadan (September–October 2005) when Muslims fast and spend more time at home, seven enumerators – students or recent graduates from Padjadjaran University's Department of Anthropology, Faculty of Social and Political Sciences – visited villages and hamlets to interview households. This timeframe proved advantageous by making it less difficult to locate and interview respondents. However, two obstacles which had to be surmounted were the distances between houses and villages and the bad weather. Because it was the rainy season, some areas were flooded which made it difficult for vehicles to reach remote areas. Fortunately, the interviewers brought their own or could borrow motorbikes from local residents. However, the household lists did not include the issue of pregnancy so great patience was needed while preparing for selection of households and respondents since not every village kept comprehensive records on its inhabitants. Even local government offices often lacked comprehensive records. However, it has been our good fortune which, in August 2005, a household census was being held in all the sub-districts (*kecamatan)* in Indonesia for the *Keluarga Miskin* Programme[3] to register impoverished households. Interestingly, the census included the category 'pregnancy' for each household registered: if and when a member of the family had been pregnant. Thus, after making a long and tiring effort, a selection of respondents – pregnant and post-partum women – was extracted from the huge lists of the *kecamatan* household survey. Using random sampling, 150 respondents who were pregnant during the retrospective period are selected; however, by the time of the field survey, 23 of these women had not yet given birth.

The questionnaires were first tested several times during focus-group discussions and individual in-depth interviews. After re-adjustment and fine-tuning for actual situations in the community, they were used to collect data in the field. Each household interview took approximately 2 hours. The questionnaire begins with general questions about the household's composition and background characteristics of all its members. Then, questions are asked which relate to a number of predisposing factors: *i.e.* psycho-social, socio-demographic, and perceptions on pregnancy. A respondent's health-seeking behaviour was traced by noting the 'external' contacts each had made during the 12-month retrospective period with comprehensive MCH providers, also registering data on cost of treatment and locality. One section of the questionnaire focuses on opinions and knowledge about perceptions, values, beliefs, ideas, and practices which affect a woman's MCH utilisation

during pregnancy, labour and delivery. Questions regarding enabling factors are interesting in their perspective, assuming that MCH utilisation is closely related to the household's socio-economic situation. Finally, the questionnaire turns to this study's main objective, *i.e.* the utilisation of traditional and/or modern MCH systems in the Rancaekek community.

It was decided to employ a 12-month retrospective orientation because most studies conduct retrospective analyses to establish the behaviour of people who have already sought and received medical help (in this case from MCH facilities). Although it is sometimes difficult for respondents to recall correctly details of their behaviour during pregnancy, a 12-month retrospective period appears to be a suitable timescale when researching behavioural aspects such as decision-making processes during pregnancy, labour and delivery.

Paraji (TBA) often prepare herbal concoctions for their clients, in this case pregnant, perinatal and post-partum women. Preparation of *jamu* requires the expertise which indigenous healers possess. It is a component in the field of ethnomedical knowledge systems and traditional herbal medicine which should be explored in more detail. To learn more about the use of herbals in *jamu* preparations, a list of medicinal plants and their characteristics is registered during group discussions in Rancaekek where *paraji* present numerous aromatic herbal plants and explain their functions. These discussions are documented as hand-written records, tape recordings and photographs. Several plants have been identified as well as their use in *jamu* preparations.

3.2.2 Qualitative Study

Lambert (1996: 358–361) explains why anthropology is able to contribute useful insights into health research. Qualitative methods are now commonly employed in research on socio-cultural dimensions of disease, illness and health care. Such methods derive from several social sciences; however, concepts and knowledge belonging to other disciplines have often remained under-used. Anthropology's potential to contribute is based on the ability of its methodologies to compare particular societies empirically. In health issues anthropology commonly relates to the social and cultural dimensions of health, behaviour, and treatment. Qualitative methodology is specific to behavioural sciences like anthropology, but many determinants, such as a household's socio-economic situation, call for quantitative measurement. As a response to concerns about the standard of qualitative research, attention has begun to focus on the methodologies employed. Applying qualitative methodologies, researchers aim to obtain an in-depth understanding of and reasons behind various aspects of human behaviour. Qualitative research investigates the 'why' and 'how' of decision making, not the 'what', 'where' and 'when'. Samples are small and focused rather than large and random. Qualitative approaches help categorise data into patterns based on reported results. Qualitative research typically relies on four methods for gathering information: participation in the setting, observation, in-depth interviews, and analysis of information. Kuhn (1961: 162) concludes that: "*large amounts of qualitative work have usually been prerequisite to fruitful quantification in the physical sciences*". Qualitative methodologies are frequently applied to gain a general sense of phenomena and to form theories which can be tested using additional quantitative research. Qualitative approaches offer the advantage of being able to generate many detailed and

valid processes through the perspective of participants. Both qualitative and quantitative methodologies can be applied concurrently to yield complementary insights. For instance, in the social sciences, qualitative methodologies help clarify our understanding of concepts such as intentionality and illustrate how an individual or groups of individuals think, behave and determine what is meaningful.

In this study, a qualitative approach is taken during preliminary research through the 'Making Pregnancy Safer' (MPS) Programme mentioned above. These findings became the baseline for preparation of this study's research proposal, in the same study area Rancaekek. Through direct observation of how traditional and modern MCH systems function and focus-group discussions, many interesting results have emerged. Later a proposal for a study on *paraji* (TBA) and *bidan* (CMW) was drawn up for further research. In-depth interviews are carried out while collecting data for the preparation of quantitative questionnaires and after the household survey to clarify quantitative numerical findings.

During field research, women were encountered who presented a higher risk for labour and delivery; they were therefore referred to a health centre. A special technique is used to collect data and obtain detailed information from the viewpoint of local people who have witnessed, experienced and interpreted certain events as being the cause of a particular outcome: *e.g.* a mother's death or survival. According to Iskandar and Hull (1996), qualitative techniques demand a specifically *emic* approach and perspective for data analysis. The technique is an anthropological attempt to study local concepts of health and illness. Compared to other qualitative methodologies, Iskandar and Hull (1996: 3) explain that: "*(1) Concentration on a dramatic shared event; (2) Non-judgmental depth interviews of a limited number of witnesses who have clear and specific roles in the event, to establish their personal recollection and interpretation of the causes of the event; (3) On the basis of analysis of the various 'truths' obtained from the witnesses, and supporting information collected from a variety of sources, the analyst develops an 'external' evaluation of the evidence, to draw conclusions with direct policy relevance*". In this study, however, the Ethnosystems Approach is used as a more appropriate research methodology to encapsulate local knowledge, beliefs and practices related to Maternal and Child Health. Complete interviews are recorded accurately, avoiding leading questions; individuals who collect data must be certain that the respondents do not overlook answers to major issues. Instead this policy-oriented approach to research is an attempt to understand the variety of perceptions held by people around the delivery mother at risk during the decision-making process to prevent maternal mortality. Individuals who play a leading role during the decision-making process should be questioned in depth to understand their decisions relating to the case. Such people are the husband who is directly related to the pregnant woman at risk, female members of the family, as well as the *paraji* (TBA) or *bidan* (CMW) involved. Data on referral of women who experienced complicated deliveries are included in the survey, with Step 5 for labour and delivery distributed according to the type of MCH system sought to obtain obstetric treatment (see Chapter VII).

3.2.3 Quantitative Study

Quantitative methodologies are used in research carried out for natural and social sciences. The term 'quantitative' in contrast to 'qualitative' research is most often used in the social

sciences as being complementary to qualitative research. Quantitative methodologies include research techniques applied to gather data dealing with numbers and measureable items. Statistics, tables and graphs are frequently employed to present the results obtained using quantitative techniques. The objective of quantitative research is to develop and apply theories and hypotheses pertaining to natural phenomena. The process of measurement is central to quantitative research because it provides the fundamental link between empirical observation and mathematical expression of quantitative relationships.

In the social sciences, particularly in sociology, social anthropology and psychology, the use of one or other methodology concurrently has become a matter of balance. Today, the tendency is to employ eclectic approaches. While quantitative methodologies might be applicable within a global qualitative framework, qualitative methods might be used to understand the meaning of numbers obtained from quantitative techniques. Using quantitative methods, it is possible to give precise and testable expressions to qualitative suppositions. Concurrent application of quantitative and qualitative methodologies is often referred to as 'mixed-methods research'. Quantitative studies emphasize the measurement and analysis of causal relationships between variables, not processes. Quantitative research using statistical methods typically begins with the collection of data based on a theory or hypothesis, followed by the application of descriptive or inferential statistical methods. Causal relationships are studied by manipulating factors thought to influence the phenomena under study while controlling other variables relevant to the experimental outcomes.

With regard to determinant models, Slikkerveer (1990: 52) states that: "*Determinant models of health care utilisation are based on the systems approach to the use of health care and, unlike the pre-dominantly qualitative approach of phase diagrams, classify number of blocks of variables of constantly increasing numbers of patients*". Furthermore, Kohn and White (1976) developed a 'WHO model' using four blocks of factors: 'predisposing', 'enabling', 'perceived morbidity' and 'health-service system'.

Chapter III describes the analysis of quantitative data collected during the survey of 150 household in the Rancaekek sub-district, Bandung District, West Java Province, between September and October 2005. The quantitative survey follows qualitative research in 2000 on the role of *paraji* (TBA) and *bidan* (CMW) in Maternal and Child Health (MCH) in Rancaekek and illustrates the significance of indigenous healers. This study presents various steps in the quantitative approach used to analyze correlations between blocks in the 'conceptual model' to uncover behavioural patterns for the utilisation of MCH systems in Rancaekek. Bivariate and multivariate analyses help construct an 'analytical' model. All components are inter-complementary and, at the end of the study, will illustrate the 'big picture' by providing a full package of information on the community.

3.3 Construction of the Conceptual Model

3.3.1 Multivariate Model for Utilisation of Maternal and Child Health Systems

The multivariate model developed by Slikkerveer (1990) facilitates the description and explanation of how an individual or social system changes over time. Tuma (1984: 7) states

that: "*theoretical developments in social movements have also begun to emphasize dynamics. […] collective violence is not an aberration but a natural by-product of social organization whose forms change as the distribution of power changes. Forces which challenge and perhaps overturn the existing order can arise even when a system is apparently stable. Such shifts place theoretical emphasis squarely on dynamics. [...] interest in explaining how and why social actors and social systems change overtime seem to be gaining momentum. What some view of disarray in contemporary sociology may partly reflect the pluralism and struggle involved in moving from questions and arguments about static relationships to the interrelated forces for change*".

3.3.2 Conceptualisation of the Analytical Model

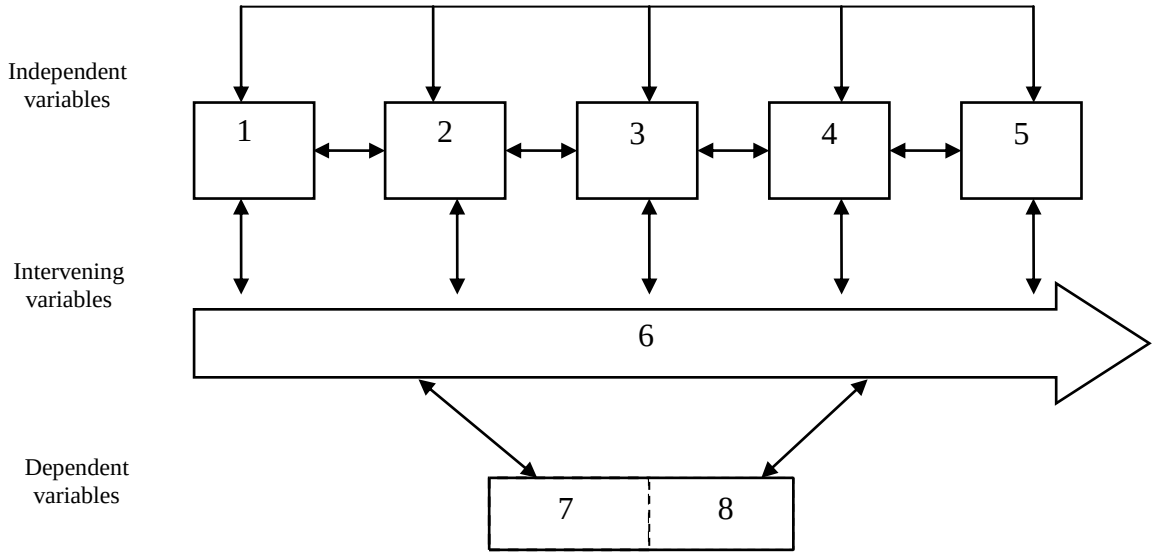


Figure 3.1 Conceptual model of the analysis correlations between independent, intervening, and dependent variables and utilisation of traditional and modern Maternal and Child Health systems in Rancaekek.
(Source: Slikkerveer 1990; Agung 2005, Leurs 2009, Amar 2010).

The primary objective is to develop, apply or combine conceptual tools in order to construct a comprehensive general overview, a theoretical synthesis or an integrative framework. The theoretical model developed may also include conceptual frameworks for analysis of particular problems and should be based on continuities between models (Klein 2007: 39). The analytical model identifies factors which inter-relate with the decision-making process at the household level in the research setting. It is divided into 'individual' and 'system' levels. The individual level consists of independent factors, namely predisposing, enabling, and perceived pregnancy/delivery factors.

The conceptual model (see Figure 3.1) shows the correlation between and influence of different factors in the decision-making process at the household level for pregnant women

seeking help, after becoming pregnant through to post-delivery, from MCH services. It is a modified model from Slikkerveer (1990).

3.3.3 Blocks of Factors: Variables, Indicators, and Categories

The model represented in Figure 3.1 demarcates a series of factors which interact to varying degrees with the dependent variable 'utilisation'. It can be divided into a number of 'blocks' which comprise concepts, variables, indicators and response categories. The model in Figure 3.1 shows which factors have been divided into five blocks of variables in the analytical scheme as follows:

at the individual level:	
as independent variables:	predisposing factors: socio-demographic (1)
	predisposing factors: psycho-social (2)
	enabling factors (3)
	perceived pregnancy factors (4)
at the system level:	
as independent variables:	institutional factors (5)
as intervening variables:	intervening factors (6)
as dependent variables:	MCH utilisation factors (7,8)

The model's various blocks will factor in the analysis of MCH utilisation behaviour. In addition to the above-mentioned systems-level variables for plural Maternal and Child Health, the model also includes four types of individual-level variables: predisposing (socio-demographic, psycho-social), perceived pregnancy, and enabling factors. These factors, together with the accompanying concepts, variables, indicators, and response categories will now be defined and described separately within the context of the various blocks of the model. The multivariate model used in this study is constructed on eight categories or 'blocks' of factors, respectively:

Block 1 Predisposing factors (socio-demographic)
Block 2 Predisposing factors (psycho-social)
Block 3 Enabling factors (socio-economic status)
Block 4 Perceived factors (perceived pregnancy)
Block 5 Institutional factors (availability of MCH systems)
Block 6 Intervening factors (programmes introduced in the community)
Block 7 Utilisation of the traditional MCH system
Block 8 Utilisation of the modern MCH system

Block 1 and Block 2: Predisposing factors (socio-demographic, gender, and psycho-social)

(1) Socio-demographic (Table 3.2): including age, gender, education, ethnicity, religion, occupation, number of children, and last delivery.
(2) Gender: recorded but not used since the respondents in the survey are women at a reproductive age who have given birth during the 12-month retrospective period.

However, it cannot be denied that the role of other family members, especially the husband or older family members (mother, mother-in-law, father, father-in-law), affect the final decision-making process for health-seeking behaviour regarding the use of pregnancy and childbirth services. Other factors are religion and ethnicity which have both been recorded in the survey, although the majority of the respondents are Muslim and their ethnicity is Sundanese.

Table 3.2 Block 1: Predisposing Factors: Concepts, Variables, Indicators, and Categories

Concept	Variable	Indicator	Category
Socio-demographic Characteristics at the Individual level	Type of Village	Level of MCH condition	Name of the villages: Jelegong; Haurpugur, Cangkuang, Sangiang, Tegal Sumedang
	Age	Number of years	11–20; 21–30; 31–40; >40
	Education of Women	Type of school	No education; Elementary School; Junior High School; Senior High School; University
	Education of Husbands	Type of school	No education; Elementary School; Junior High School; Senior High School; University
	Occupation of Women	Type of work	Housewife; Peasant; Factory Labourer; Small Enterprise
	Occupation of Husbands	Type of work	Unemployed; Peasant; Factory Labourer; Employee; Retired
	Number of Children	Number of Children	1–2; 3–4; >5

(3) Psycho-social (Table 3.3): knowledge, expectations and beliefs. 'Knowledge' includes perceptions of pregnancy, childbirth and danger signs; while 'expectations' refers to local delivery practices and 'beliefs' about predestination. Knowledge will be operationalised in: general knowledge about human reproduction, perception of pregnancy, and knowledge about the danger signs when giving birth.

Slikkerveer (1990) defines perceived morbidity as: "*the observation and interpretation of symptoms of illness which initiate the decision making process of seeking and obtaining medical help. This subjective picture may conform to the objective picture according to medical standards but need not necessarily do so*". In the case of pregnancy, which is not considered an illness, the definition still can be applied by modifying the symptoms of illness into knowledge of danger signs during pregnancy, labour and delivery. The perception of pregnancy and childbirth is influenced by social and cultural factors, such as a community's beliefs, values, norms, mythology, taboos and cosmology.

Table 3.3 Block 2: Predisposing Factors: Concepts, Variables, Indicators, and Categories

Concept	Variable	Indicator	Category
Psycho-social Characteristics at the Individual level	Knowledge of Pregnancy	Level of knowledge	Little knowledge; Average knowledge; Much knowledge
	Knowledge of High-Risk Pregnancy	Level of knowledge	Little knowledge; Average knowledge; Much knowledge
	Knowledge of Miscarriage	Level of knowledge	Little knowledge; Average knowledge; Much knowledge
	Opinion about TBA's Skill	Level of opinion	No opinion; Negative opinion; Between negative and positive opinion; Positive opinion
	Opinion about Midwife's Skill	Level of opinion	No opinion; Negative opinion; Between negative and positive opinion; Positive opinion
	Health-Seeking Behaviour during Pregnancy	Participation of women in decision making	Little input; Average input; Much input
	Health-Seeking Behaviour during Delivery	Participation of women in decision making	Little input; Average input; Much input
	Belief in Pregnancy Rituals	Level of belief	Little belief in; Average belief in; Much belief in
	Belief in Taboos during Pregnancy	Level of belief	Little belief in; Average belief in; Much belief in

Block 3: Enabling factors

The enabling factor socio-economic status (SES) refers to a household's financial situation, such as family income and costs of ante- and perinatal services. The questions relate to family income, socio-economic status (SES), and occupations of the household head and his wife. The quantitative questionnaire is designed to include various related indicators: *i.e*. family income, family expenses, ownership (housing, land, livestock, vehicles, and electronics) and household budget. This is subjected to factor analysis in order to obtain the overall socio-economic status (SES) of the household with regard to a family's capacity to

afford MCH services. Table 3.4 presents the composition of enabling factors in Block 4 in terms of variable, indicator and response category in the model.

Table 3.4 Block 3: Enabling Factor: Concepts, Variables, Indicators, and Categories

Concept	Variable	Indicator	Category
Socio-economic Characteristics at the Individual level	Socio-Economic Status (SES)	Level of SES	Poor; Average; Well to do

Block 4: Perception of pregnancy and delivery

These factors are difficult to quantify because they are less overtly tangible. In the questionnaire, perceptions of pregnancy and childbirth were operationalised by the question: what kind of experiences did the woman perceive during and after pregnancy, including delivery. Table 3.5 shows the composition of perception of pregnancy factors in Block 3 in terms of variables, indicators and response category of the model at the individual level.

Table 3.5 Block 4: Perceived Factors: Concepts, Variables, Indicators, and Categories

Concept	Variable	Indicator	Category
Perceived	Perception of Pregnancy Experiences during Pregnancy	Level of perception	Low perception; Average perception; High perception

Block 5: Institutional factors

The institutional factors include the availability of traditional and modern MCH services, the general public's accessibility to health facilities, the ability to finance the cost of MCH services, and the acceptability of the community. This represents the geographical accessibility of MCH facilities. Table 3.6 shows the composition of institutional factors in Block 5 in terms of variable, indicator and response category at the systems level.

Table 3.6 Block 5: Institutional Factors: Concepts, Variables, Indicators, and Categories

Concept	Variable	Indicator	Category
Geographical Accessibility	Geographical distance Traditional MCH care	Level of distance	Near; Average; Far
	Geographical distance to modern MCH care	Level of distance	Near; Average; Far

Block 6: Intervening factors

The intervening factors represent several programmes introduced by the Government, NGOs, or various foreign aid programmes as outside forces intervening in MCH systems at the community level. Such external intervening factors are 'agents of change' in the community which affect the community's health-care systems and influence the utilisation of MCH systems at the individual level. Such factors can stimulate a change in behaviour towards MCH utilisation in the study area.

Several Maternal and Child Health programmes introduced in Rancaekek are *Gerakan Sayang Ibu* (GSI), *Pos Pelayanan Terpadu* (*Posyandu*), *Jaring Pengaman Sosial* (JPS), *Bidan Delima* (professionalized private midwives), *Gerakan Pita Putih* (MNH), *Keluarga Miskin* (GAKIN), *Ambulans Desa* (Village Ambulance), *Menjamin Persalinan Sehat* (MPS), etc. Table 3.7 shows the composition of intervening factors in Block 6 in term of variables, indicators, and categories of the system level.

Table 3.7 Block 6: Intervening Factors: Concepts, Variables, Indicators, and Categories

Concept	Variable	Indicator	Category
Intervening characteristics at the individual level	Impact of MCH Programmes through Participation	Level of impact	Some impact; Average impact; Much impact

Block 7 and block 8: Dependent factors for utilisation of traditional and modern MCH systems

These factors in the model include two related categories of characteristics, resulting from the dynamic interaction between independent (predisposing, enabling, and institutional) and intervening variables, representing a reflection of the variance in reported utilisation of MCH systems. The dependent factors have been sub-divided into two categories occurring within the study area: the traditional MCH system represented by *paraji*; and the modern MCH system represented by *bidan* (in both *Puskesmas* and private facilities). The dependent factors in Block 7 (Table 3.8) and Block 8 (Table 3.9) will provide the overall patterns of MCH utilisation in the study area as reported by respondents' pregnant 12-months retrospectively.

Table 3.8 Block 7: Dependent Factors for Traditional Maternal and Child Health: Concepts, Variables, Indicators, and Response Categories

Concept	Variable	Indicator	Category
Dependent characteristic of traditional MCH system at Individual level	Utilisation of Traditional MCH system	Level of use of traditional MCH system	Little use; Average use; Much use

Table 3.9 Block 8: Dependent Factors for Modern Maternal and Child Health: Concepts, Variables, Indicators, and Response Categories

Concept	Variable	Indicator	Category
Dependent characteristic of modern MCH system at Individual level	Utilisation of Modern MCH system	Level of use of modern MCH system	Little use; Average use; Much use

In the final analysis, the dependent variables for utilisation of traditional and modern MCH systems will be combined to substantiate the concept of MCH utilisation behaviour.

Notes

1. Weighting refers to assigning different weights to cases which were selected for a sample with different probabilities in selection. In the simplest scenario, each case is given a weight equal to the inverse of its probability of selection. When all cases have the same chance of selection, no weighting is necessary (Babbie 2004).
2. PPS (Probability Proportionate to Size). This refers to a type of multistage cluster sample in which clusters are selected, not with equal probabilities but with probabilities proportionate to their sizes – as measured by the number of units to be sub-sampled (Babbie 2004: 213).
3. Programmes for impoverished households (*keluarga miskin*) are due to the increasing price of gasoline; the Indonesian Government tends to give subsidies to poor families, by taking door-to-door household census.
4. The focus-group discussions illustrate the flexibility and richness of the qualitative method. The method can be easily used to complement quantitative work by providing detailed descriptions about the perspectives of focus-group participants. Furthermore, focus groups can be used to examine the meanings and group processes involving participants' experiences and what is being studied. The focus-group method is ideal for illustrating the current tensions and controversies characterizing qualitative methodology (Denzin and Ryan 2007).

Chapter IV RESEARCH SETTING: INDONESIA & THE SUNDA REGION

Chapter IV discusses the demographic and socio-economic conditions in Indonesia with special reference to West Java Province, the setting for this research. First, a description is presented of Indonesia's geography and climate before the country's economic state of affairs, its ecosystem, and more importantly its population is discussed. With regard to population, specific attention is directed to the Crude Birth Rate, total fertility rate, first age when women marry, socio-economic conditions and poverty level, educational background and level of health, particularly for mother and infant. To construct a comprehensive overview, data are used which are issued by the Central Bureau of Statistics and various government institutions such as the West Java Health Office, the National Ministry of Health and the National Demographic and Family Planning Board (BKKBN), supplemented by data from several other sources.

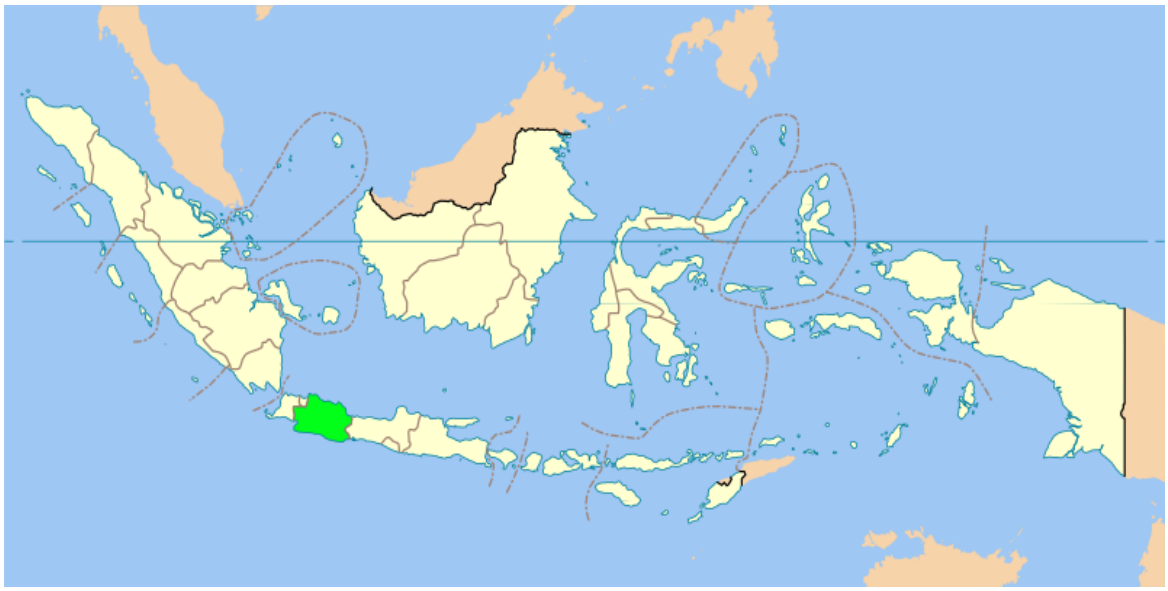
Indonesia is a complex and culturally diversified nation, best illustrated by the presence of more than 300 ethnic groups which each speak their own language and sometimes practice their own religion. The national motto "Unity in Diversity" (*Bhineka Tunggal Ika*)[1] appropriately reflects the country's complexity, although one must admit that Indonesia's multifaceted society often experiences an undertone of social unease rather than harmonious unity.

4.1 Indonesia

4.1.1 Geography and Climate

Indonesia is an archipelago located between 6º08' North and 11º15' South Latitude and between 94º45' West and 141º05' East Longitude. As a predominantly maritime country, Indonesia's total sea area is ca. 736.000 million square kilometres (including an Exclusive Economic Zone) or 81% of the country's total area which creates the second longest coastline in the world after Canada. Situated between Australia and the South-East Asia mainland, Indonesia's 13.667 islands are spread out along the Equator. The distance measured from west to east is 5.110 km and from north to south 1.888 km, covering a total of 1.928.600 km^2. Indonesia is spread across more than 1.86 million square kilometres of land and is famous for its numerous rivers and active volcanoes. During the rainy season, Indonesia's rivers continually overflow their banks, flooding the surrounding areas. Volcanic eruptions pose an ongoing threat to Indonesia. For example, when Mount Merapi (Central Java) erupted in 2006, it was widely reported in the media and the largest eruption to date was in 2010. Indonesia is situated on the Asia and Australia Fault which explains the heightened possibility of earthquakes, like those occurring in Morotai, Ternate and Manado in May 2003, in Yogyakarta in May 2006, in West Sumatra in March 2007. When an earthquake or volcanic eruption results in a high-energy tsunami, as occurred in Aceh in December 2004 and in Mentawai in October 2010, coastal areas can also be devastated.

To address various troubles, the Central Government decided to structure Indonesia's far-flung and diverse areas into 36 provinces which are further sub-divided into 349 districts, 91 municipalities, 5.277 sub-districts, and 69.858 villages (BPS 2007). In 1999 the National Parliament approved Law 22 on the administrative decentralisation of the Republic of Indonesia, to be implemented as experiment between 2001 and 2004. In particular, the provinces Aceh, Jakarta, Yogyakarta, Papua, and West Papua have been granted greater legislative dispensations and a higher degree of regional autonomy. For example, in 2001, the Aceh Provincial Government was granted broad Special Autonomy, in the face of public resentments, which has allowed the creation of an independent system of civil and criminal law, based on the Sharīah (Islamic law). Yogyakarta was granted the status of Special Region in recognition of its central role in supporting the Republicans during Indonesia's Revolution. Papua, formerly known as Irian Jaya, was granted Special Autonomy in 2001 and the capital Jakarta became a special region.



Map 4.1 Indonesian Archipelago
Source: Wikipedia

As a tropical, equatorial country with the second largest tropical rainforest area in the world, Indonesia plays an important role in the world's geographical climate structure. The archipelago which covers more sea area than any other country has a tremendous impact on global climate change and is crucial for absorbing greenhouse gases which cause global warming. Therefore, Indonesia's has great potential to be a prime participant in international attempts to mitigate greenhouse gas emissions.

4.1.2 Population

In 2010, the total population of Indonesia numbered 237.641.326 people (BPS 2010), making it the fourth most populous country in the world, after China, India and the United

States of America. The population growth rate[2] has decreased sharply since 1980 from 1.97% per annum between 1980 and 1990 to 1.49% per annum between 1990 and 2000. The growth rate dropped again between 2000 and 2004 at the rate of 1.43% per annum; from 2008 to 2010 the rate has been 1.12%. Indonesia's increase in population does not tally with an even population distribution by region, either by province or by island. The country's population is concentrated on the island of Java. According to Population Census 2000 and Population Data 2004, ca. 59% of the total population lives in Java: more than 18% live in West Java, 15% in Central Java, and 17% in East Java. Meanwhile, Maluku and West Papua which make up 24% of the total area of Indonesia are inhabited by only 2% of the population. Up until 2004, these statistics continued to indicate an uneven population distribution and concentration of natural resources in Java.

The population density in Java has remained exceptionally high, *i.e.* ca. 1.071 people/km^2 in 2010. In Jakarta, the capital city of Indonesia, the population density is 13.177 people/km^2. Bali is the most densely populated province outside Java with 603 people/km^2 in contrast to Papua with only 7 people/km^2. In 2008, the sex ratio in Indonesia is higher than 100, which means that men outnumber women. Provinces which have a low sex ratio (<100) are North Sumatra, West Sumatra, Central Java, Yogyakarta, East Java, West Nusa Tenggara, East Nusa Tenggara, and South Sulawesi. Provinces with ratios lower than 100 have a highly mobile population illustrated by patterns of migration and origins of migrants.

The national language of Indonesia is officially spoken by nearly every Indonesian citizen. It was originally a lingua franca[3] for most of the region, including present-day Malaysia, and is therefore closely related to Malay. Indonesian was first promoted by nationalists in the 1920s and declared the official language when the country gained its independence in 1945. Most Indonesians speak at least one of the several hundred local languages (*bahasa daerah*) as their first language. Religious freedom is stipulated in the Indonesian Constitution although the Government only officially recognizes six religions: Islam, Protestantism, Roman Catholicism, Hinduism, Buddhism and Confucianism. Although it is not an Islamic state, Indonesia has the world's most populous Muslim majority, with ca. 86.1% of Indonesians declaring themselves to be Muslim. Although they are minority religions, Hinduism and Buddhism remain defining influences in Indonesian culture. Islam was first adopted by the Indonesians in Northern Sumatra during the 13th century, almost certainly through the influence of traders, and by the 16th century it had become the dominant religion. Roman Catholicism was brought to Indonesia by early Portuguese colonists and missionaries, while the presence of Protestant denominations is largely the result of Dutch Calvinist and Lutheran missionary activities during the colonial period.

4.1.3 Economy

In 2007, the estimated Gross Domestic Product (GDP) of Indonesia was US$408 billion, and the estimated nominal GDP per capita was US$1.812 (2005). This was followed by industry (40.7%) and agriculture (14.0%). Agriculture employs more people than other sectors, accounting for 44.3% of the 95 million strong workforces, followed by the service sector (36.9%) and industry (18.8%). Major industries include petroleum and natural gas,

textiles, apparel and mining. Major agricultural products include palm oil, rice, tea, coffee, spices, and rubber. Indonesia was the country hardest hit by the South-East Asian financial crisis in 1997–1998. Following the global economic crisis which began in 2008, Indonesia's National Currency, the Rupiah, has yet to stabilize, and economic recovery has been slow. Political instability since 1998, slow economic reform and corruption at all levels of government and business have contributed to the unpredictable nature of the recovery. GDP growth exceeded 5% in both 2004 and 2005, and the forecast is for a further increase. However, this growth rate is not sufficient to significantly impact either unemployment or the stagnant wage growth. Increases in fuel and rice prices have exacerbated poverty levels. As of 2006, an estimated 17.8% of the population lives below the poverty line, 49.0% of the population subsists on less than 2US$ per day, and the unemployment rate is at 9.75%.

4.1.4 Environment

Indonesia has only two seasons: the dry and the wet. During the dry season (June to September), Indonesia's climate is affected by continental air masses from Australian. The rainy season (December to March) is affected by Asia Continental and Pacific Ocean air masses. As masses of air pass over the ocean surface, they pick up a great deal of moisture which is then precipitated as rain. Climatic conditions alternate every six months, with transitional periods in April to May and October to November separating the two seasons. Both temperature and humidity in Indonesia are influenced by the altitude. The average temperature ranges from 19ºC to 32ºC.

Indonesia has ratified the United Nations Framework Convention on Climate Change (UNFCCC – Law No. 6/year 1994). The ultimate objective of the UNF Convention is to achieve stabilisation of greenhouse gas concentrations in the atmosphere at a level which would prevent dangerous anthropogenic interference in the climate system. Therefore, Indonesia has agreed to ratify every clause in the law. Climate change might contribute to fluctuations in the composition of the global atmosphere and natural climate variability which is observed over comparable time periods. The adverse effects of climate change are affecting the physical environment or biota and are having a significantly harmful impact on the composition, resilience or productivity of natural and managed ecosystems or the operation of social economic systems or on human health and welfare. Increase in greenhouse gas concentrations in the atmosphere is the most logical explanation for changes in the climate. The greenhouse gases are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrocarbon (HC), per fluorocarbon (PFC), and sulphur hexafluoride (SF_6). Moreover, any chemical substance structurally related to these greenhouse gases is also classified as such. Increased emission of greenhouse gases into the atmosphere is thought to be one of the contributors of global warming which leads to climate change.

Forests cover ca. 60% of the country. In Sumatra and Kalimantan, forests consist of predominantly Asian species. However, forests in more densely populated Java have largely been cleared away to make room for human habitation and agriculture. Sulawesi, Nusa Tenggara, and Maluku – having long been separated from the continental landmasses – have developed their own unique flora and fauna. Measured in terms of geological

periods, until fairly recently Papua was part of the Australian landmass; therefore it is home to a unique fauna and flora closely related to those native to Australia, including over 600 bird species. Eighty thousands kilometers (50.000 mi) of the Indonesian coastline are surrounded by tropical seas which contribute to the high level of biodiversity in the country. Indonesia has a diverse range of sea and coastal ecosystems, including beaches, sand dunes, estuaries, mangroves, coral reefs, sea grass beds, coastal mudflats, tidal flats, algal beds and small island ecosystems. The British naturalist, Alfred Wallace drew a line dividing the distribution of Asian and Australasian species in Indonesia, now known as the Wallace Line. It runs roughly north–south along the edge of the Sunda shelf, between Kalimantan and Sulawesi, and along the deep Lombok Strait, between Lombok and Bali. West of the Wallace Line, the flora and fauna are more characteristically Asian; moving east from Lombok, they become increasingly Australian. In his book *The Malay Archipelago*, published in 1869, Wallace describes numerous species unique to the surrounding area, which is now termed Wallacea.

Indonesia's large population and rapid industrialisation present serious environmental dilemmas, which are often given a low priority due to the country's high poverty levels and weak under-resourced governance. Issues include large-scale deforestation (much of it illegal) and related wildfires causing dense smog over parts of Western Indonesia, Malaysia and Singapore; over-exploitation of marine resources; and environmental problems associated with rapid urbanisation and economic development, including air pollution, traffic congestion, garbage management, and reliable water and waste water services.

4.2 Sunda Region in West Java

4.2.1 Sunda Region

Tatar Sunda, or Sunda region, on the island of Java stretches from the Bogor and Sukabumi Regencies in the west to the Kuningan and Banjar Regencies in the east. Rugged mountains rise up in the central and southern areas of the Sunda region. Today the flat fertile lowlands to the north are the largest rice-producing area in Indonesia. Historically, the largest Sundanese kingdom was Padjadjaran, a Hindu kingdom whose seat was in the eastern part of the Sunda. Unlike the Javanese kingdoms, whose historical monuments (*candi*, 'temples') are still scattered around their heartland, the Sundanese kingdoms created few religious monuments to leave to later generations. During the 15th and 16th centuries, Islam began to spread among the Sundanese people. After the fall of the Hindu Sunda Kingdom and establishment of the Sultanates of Banten and Cirebon in coastal West Java, the spread of Islam accelerated. Today most Sundanese are Muslims.

Mountainous inland Sunda was thickly forested and sparsely populated until the 19th century when Dutch colonial exploitation opened up much of the interior for coffee, tea, and quinine plantations. Thus as the highlands became the new frontier, a changing way of life furthered strengthened the individualistic Sundanese mindset (Setiawan 2010). The island of Java is home to several distinct ethnicities. The Sundanese population (35.5 million) in West Java Province is Indonesia's second-largest ethnic group after the Javanese who inhabit the central and eastern parts of the island. Although both populations

live in relatively close proximity on Java, the Sundanese and Javanese belong to distinctly different ethnic groups. Traditionally, the Sundanese lived in small isolated hamlets and engaged in dry-field farming. For this reason, the Sundanese society had a less rigid social hierarchy and a more independent manner.

The Sundanese language (*Basa Sunda*) is spoken by ca. 27 million people or 15% of the Indonesian population. It includes several types of dialects, each conventionally described according to the location where it is spoken: Banten, Bogor, Priangan, Ciamis, Kuningan, and Cirebon. Priangan extends over most of Sundaland (*Tatar Sunda*) and is the dialect most widely spoken and taught in elementary and junior-high schools (equivalent to 9th grade) in West Java and Banten Provinces. The word *priangan* is derived from the Sanskrit word *hiang* or *hyang*, which means 'god' (Noorduyn & Teeuw 1999). It is one of several derivatives of *parahiyangan*: other derivatives are *parahiang, parahyangan, parahiangan, parayangan*, *priyangan*, and *prayangan*. During the Dutch Colonial Era, Europeans adapted the name 'Priangan' into 'Preanger'.

The dialect spoken by the reclusive Baduy tribal people is considered archetypical for Sundanese used before the concept of language stratification was adopted to denote rank and respect, as demonstrated (and influenced) by Javanese. Some of the most refined Sundanese dialects – considered to resemble the language's original form – are those spoken in Ciamis, Tasikmalaya, Garut, Bandung, Sumedang, Sukabumi, and Cianjur. The Cianjur dialect is thought to be the most refined example of the Sundanese language. The Banten and Cirebon dialects spoken along the northern coast are less refined. Some of the most distinct dialects are spoken in Banten, Bogor, Priangan, and Cirebon. In Central Java, Sundanese is also spoken in some areas of the Cilacap and Brebes regions.

4.2.2 Language, Kinship and Rituals in Rancaekek

Sundanese Language

The sub-district (*Kecamatan*) Rancaekek is located in Bandung District (*Kabupaten*) where the local inhabitants living in the western part of the island of Java are Sundanese. The Sunda culture is plural with several variants. The main Sunda cultures are: (1) Sunda Buhun or Sunda Wiwitan, which exclusively protects the indigenous life, found in Sukabumi and Pandeglang; (2) Sunda Parahyangan, covering areas which historically were influenced by the Javanese Kingdom Mataram-Sultan Agung, starting from Cianjur, Bandung, Sumedang, Garut, Tasikmalaya, and Ciamis; (3) Sunda Pakaleran which covers the Karawang and Subang (Sumardjo 2003).

The language spoken by the local population is Sundanese, and everyone living in the Sunda area will understand and speak it, if only for daily use. In the recent past, the Sundanese language has been recognized as mother tongue or first language (*basa indung*, Sd.; *bahasa ibu*, Ind.) of the Sundanese society. Geographically, Sundanese is spoken by almost all indigenous communities in the West Java and Banten Provinces, except in Indramayu, Cirebon and some parts of Serang. The second language spoken in Rancaekek is Bahasa Indonesia, usually used during formal meetings and at school. Ultimately, *basa Sunda* incorporates a moral code, or *undak usuk basa*, which means that when two or more people converse together, each should consider his/her own position relative to the other individual(s). Djajasudarma (2007) says that recently *basa Sunda* has been changing, and

preserving culture in various ways. For example, *basa Sunda* absorbs many words from other languages and dialects which express the dynamics of life and preservation of the ecosystem. During a formal meeting, or at school, the spoken language is a blend of Bahasa Indonesia and Sundanese. When people gather to discuss something in the office, they will speak Sundanese. In contrast, during a formal meeting, they will begin speaking Bahasa Indonesia but later shift to *basa Sunda* unconsciously. When migrants speaking different mother tongues come to Rancaekek and enter the Sundanese community, they will learn and try to speak Sundanese with the locals. This phenomenon is common in regions including Rancaekek where Sundanese is the local language.

Kinship

As Sumardjo (2003) relates, as part of the Bandung Regency, Rancaekek's cultural background is inclusively comprised of Sunda Parahyangan. The kinship system is characterized by the basic family unit. The nuclear family plays a dominant role in the structure, composition and background of each respondent's household in Rancaekek. Interestingly, some households include the extended family (Table 6.21), while others are comprised of several nuclear families because, when a daughter marries, the couple will usually live together with the wife's family. In contrast, few wives live together with their husbands' family. As a consequence, grandchildren will also grow up living in the maternal household until they have accrued sufficient income to rent or buy a house (even on credit).

The system of kinship (*baraya*, Sd.) in Sundanese culture is bilateral, meaning that each individual claims descent through both the female and male lineages, emphasising both sides equally (Winick 1970). Recently, under the influence of Islam, patriarchy has come to influence the Sundanese system of kinship, although in daily life the indigenous kinship system is respected. *Dulur* is a kinship term which defines blood relationships. *Dulur teges* indicates brothers and sisters who are born from one father and mother, while *dulur pet ku hinis* means brothers and sisters who are born from the same mother.

Rituals

Hidding (1948) points out that life in Sundanese society is like a circle. Therefore, *tali paranti* is like a cord, one end of which will meet the other end at the knot. Knots are not only found when both ends meet but also along the cord itself. Such knots represent rituals or *rites de passage* which should be performed during stages of one's life. The first in a series of rites is performed at conception, at 4 and 7 months gestation, at birth, 40 days after parturition, each birthday, at circumcision, marriage, birth of one's own children, death (after 3, 7 and 40 days, after 1 and 2 years, and after 1.000 days) as well as any other rite of passage along the 'cord of life'. *Tali paranti* is a valuable tradition passed down through generations by one's ancestors which must be upheld and respected by the Sundanese people in order to achieve life's objectives. In addition, Rikin (1994) has said that *tali paranti* are not only rites performed during one's life cycle but, in principle, it is the flow of life itself from the first early stirrings of existence in the womb until the silence of death.

4.2.3 West Java Province

The area of West Java covers 34.816.96 km^2 or 13.443 mi^2, ca. 27.13% of the islands of Java and Madura, or ca. 1.8% of all Indonesian territory. Geographically, West Java is situated between 5º50' and 7º50' South Latitude and 104º48' and 108º48' East Latitude, bordered in the west by Banten Province, in the east by Central Java Province, in the south by the Indonesian Ocean, and in the north by the Java Sea.

Three dams or water reservoirs have been constructed in West Java: Jatiluhur, Saguling, and Cirata. Jatiluhur has become a centre for water tourism, while the Institute of Ecology, Padjadjaran University, introduced aquaculture at the end of 1992 at Saguling and Cirata. Fish cage aquaculture and other support systems in and around the Saguling and Cirata reservoirs employ 7.527 people. At the end of 1996, total aquaculture production was 24.496 metric tons of fish, which exceeded by 20% the total tonnage of fish estimated to be consumed in Bandung District (population est. 3 million). In 1996, the total gross revenue from fish was more than US$24 million, over twice the estimated annual revenue (US$10.4 million adjusted for inflation in 1996) from the 5.783 ha of rice lands lost to the reservoirs by the dams (Institute of Ecology-Padjadjaran University 2000).

Costa-Pierce & Soemarwoto (1998) state that the co-operative Institute of Ecology, Padjadjaran University-Bandung, Indonesia and the International Centre for Living Aquatic Resources Management (ICLARM, Manila, The Philippines) project in the highlands of West Java was initiated to investigate the feasibility of developing cage aquaculture for local population resettlements from hydropower dam constructions. Indonesia was chosen for the project because of the urgent necessity to develop alternative resettlement schemes for the transmigration programme which had caused such social and environmental upheavals and cost so much money. The use of floating cages brought a proposal to resettle 3.000 of the 40.000 local families, since floating cage aquaculture was considered compatible with the engineering forecasts of the dam operations and draw downs.

West Java has a tropical climate with ca. 161 mm rain measured weekly. The climate supports the rich soil composed of volcanic sediments. Because several rivers irrigate the soil, most areas are used for agriculture. Bandung is the capital city of West Java Province which is divided into 25 districts (*kabupaten*) and nine municipalities (*kotamadya*) co-ordinated into five areas:

(1) The Bogor area has three districts and three municipalities: Bogor District, Bogor Municipality, Depok Municipality, Sukabumi District, Sukabumi Municipality, and Cianjur District.
(2) The Purwakarta area has four districts and one municipality: Subang District, Purwakarta District, Bekasi District, Bekasi Municipality, and Karawang District.
(3) The Cirebon area has four districts and one municipality: Cirebon District, Cirebon Municipality, Indramayu District, Majalengka District, and Kuningan District.
(4) The East Priangan area has four districts and one municipality: Ciamis District, Banjar District, Tasikmalaya District, Tasikmalaya Municipality, and Sumedang District.
(5) The West Java area has two districts and two municipalities: Bandung District, Bandung Municipality, Garut District and Cimahi Municipality.

4.2.4 Population in West Java

The total population in West Java increased from 35.723.563 inhabitants in 2000 to 43.021.826 inhabitants (50.59% male; 49.41% female) in 2005 (JABAR, BPS 2010), with a population growth rate of 9.57% (*Suseda Propinsi Jawa Barat* 2004). The density ratio has increased steadily: from 798 people per km^2 in 1980; to 972 people per km^2 in 2000; to 1.085 people per km^2 in 2003; and 1.111 people per km^2 in 2004. The population is not evenly distributed throughout every area of West Java. Populations are more densely concentrated in the Bandung, Bogor, Bekasi, Cirebon, and Depok Municipalities where cities are the centres of industry and higher education, attracting migrant workers like a magnet from various localities in Indonesia.

Table 4.1 Composition of Population in West Java, Based on Age in 1990 and 2000–2004

Age Category	1990	2000	2001	2002	2003	2004
Young (0–14 years)	37.0	30.7	30.3	30.2	28.7	30.1
Productive (15–64 years)	59.1	64.7	65.4	65.6	67.0	65.6
Old age (≥65 years)	3.8	4.6	4.3	4.2	4.3	4.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: West Java Centre of Statistic Body

The majority of the ethnic groups who live in West Java are Sundanese (74%), Javanese (11%), Betawi (5%), and Cirebonese (5%). The remainder is varied and includes Batak, Manadonese, Ambonese, Balinese and others. The religions of the population encompass Islam (96.5%), Protestant (1.2%), Roman Catholic (0.7%), Buddhism (0.2%) and Hinduism (0.1%).

4.2.5 Age at First Marriage for Women

In 2004 a definite trend was recognized regarding the increase in the age of women at first marriage[4]. Today, more women are marrying after the age of seventeen which indicates that people in society are choosing to marry later. Percentages of women first married at a young age still vary between villages and cities. Bekasi Municipality has the lowest (0.85%) and Cianjur District the highest (4.68%) percentage of women marrying at a young age. In 2003, 22.22% of women in West Java Province married at a young age. Saud (2006) attributes the high Maternal (MMR) and Infant (IMR) Mortality Rates in West Java to the large percentage (64%) of women who first marry at a very young age, namely before the age of eighteen. Table 4.2 shows the comparison of MMR of Indonesia and West Java. MMR in West Java is considered high comparing to the other provinces and also the national figure of MMR in Indonesia.

Coverage provided by the Family Planning Programme has decreased from 839.413 (85.82%) in 2004 to 807.554 (79.94%) in 2005. Additional reasons mentioned by Saud (2006) are: (1) the Government's allocation of funds for the Family Planning Programme

was overdue; and (2) more economically disadvantaged households now have to pay for Family Planning services, although the BKKBN offers free contraception for members of deprived households. Recently, the Family Planning Programme in Indonesia is revitalised to control the acceleration of population growth rate in Indonesia which is now 1.49% from 2000-2010 (BPS 2010). The motto of Family Planning Programme recently is '*dua anak lebih baik*' (two children are better).

Table 4.2 Maternal Mortality Rate by year of Indonesia in compare with West Java

Year	Indonesia (per 100.000)	West Java (per 100.000)
1985	450[2]	n.a.
1992	420[2]	n.a.
1995	373[2]	n.a.
1997	334[2]	n.a.
1999*	516	na
2000*	n.a.	600[3]
2002	373	390
2003	307[1]	321
2004	n.a.	308[4]
2005	262[1]	301[4]
2006	253[1]	294[4]
2007	228[1]	285[4]
2008	226	278[4]

*Monetary crisis in Indonesia (1998-2000)
n.a. = not available
Sources: 1. Indonesia Country Profile (2008), Center for Data and Information, Ministry of Health, Republic of Indonesia.
2. WHO (1998) Improve Access to Maternal Health Services, Geneva.
3. West Java Family Planning Coordinator (2002).
4. West Java (2000-2008) Projection MMR per 100.000.

The age of marriage for women in rural Sundanese culture is still very young. Once a girl reaches her menarche (10–12 years), the local Sundanese believe that the girl is ready for the process of reproduction, and is therefore ready to marry. A young girl will marry a young boy who has been chosen out of mutual understanding between their respective parents or a married man. Sundanese parents will feel ashamed if their daughter is still single when she reaches the age of twenty. The local Sundanese term for a girl who marries late is *perawan jomblo* (old virgin). The divorce rate in Sundanese rural areas is also quite high.

Although the Government is attempting to eradicate younger marriages by passing a law which sets the minimum age for marriage at 16 years for a girl, in actual fact the responsibility for the implementation has shifted from the secular authorities to the religious official in charge of marriage in the village (*lebe*). Although the person

authorizing the marriage is aware that the statutory age for a first marriage is 16 years, he readily acquiesces if the family requests otherwise since he is also the member of the same community.

Table 4.3 Female Population in West Java in Percentage Aged 10 Years and Older, Based on Age when First Married

Age First Married (in years)	1996	1997	1998	1999	2000	2003	2004
15	39.60	35.10	36.14	34.55	34.80	29.34	
15–19	30.04	31.72	29.49	29.66	14.90	29.37	2.71
20–24	26.71	29.54	30.02	31.23	14.70	35.62	13.30
≥ 25	3.65	3.64	4.36	4.57	35.60	5.67	83.99
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Susenas 1996–2000 and 2003–2004

Medical data show that a young, physically immature girl is not ready for reproduction and certainly not for pregnancy. During adolescence, there is a strong possibility that girls will fall victim to anaemia, their hips will still be too narrow for childbirth and psychologically they are not ready to have a baby. Consequently pregnancy, labour and delivery are high-risk factors for girls still so young.

4.2.6 Socio-Economic Conditions

The average income per capita[5] in West Java has shown a tendency to increase, by an average of 15.28% per annum between 1999 and 2000. In 1995, the figure was Rp 1.935.092; by 1998 the income per capita had risen to Rp 3.776.311. During the economic crisis, the income per capita declined. Later, in 1999, the income per capita again accelerated to Rp 3.798.084. This upward trend continued, reaching Rp 4.378.541 in 2000 and Rp 7.880.887 by 2004.

Economic growth in West Java also reflects a similar increase. The average economic growth from 1993 to 1996 reached 8.43%, However, while Indonesia remained in the grip of the monetary crisis (1997–1999), the economy showed a negative growth, averaging a minus 18,74%. In 1999, the economy gradually began showing signs of renewed growth and rose to 3.42%; by 2001–2002 growth reached as high as 3.93%. In 2004, 25.74% of the population was estimated to be poor. Most impoverished people live in rural villages. The health profile of West Java's districts and municipalities shows that only four districts still have economically backward or less developed villages: Indramayu, Sumedang, Majalengka and Cirebon. Indramayu District has the highest percentage of economically deprived villages (32.58%).

4.2.7 Education

The main indicator for education is one's ability to read and write[6]. The Human Development Index (HDI) in West Java shows that the number of literate individuals is increasing yearly, from 84.95% in 1990 to 93.19% in 2001, reaching 95.3% in 2004. The level of education is an indicator for formal public education. The call for compulsory basic education has prioritized various aspects such as *beasiswa* (fellowship) through the attainment of a free education certificate, the development of the teacher's professionalism, curriculum development, and the building of infrastructure.

Table 4.4 Educational Level (in percent) of the Population in West Java, Aged 10 Years and Older

Level of Education	1990	1995	2000	2001	2002	2003	2004
Never attended school	13.64	8.27	6.79	6.84	6.22	5.69	5.07
Elementary School (not completed)	32.69	27.23	25.78	24.26	22.78	21.67	21.66
Elementary School	34.52	37.37	39.30	39.08	39.12	39.56	38.00
Junior High School	9.08	11.81	11.87	13.68	14.53	15.09	16.77
Senior High School	8.72	12.86	12.94	13.30	14.00	11.16	11.94
University	1.35	2.46	3.95	2.84	3.35	2.71	2.62

Sources: Sensus 1990, Supas 1995, Susenas 1999, Sensus 2000, Suseda 2001–2004

Notes

1. This is a quotation from an Old Javanese poem, the *kakawin Sutasoma*, written by *Mpu Tantular* during the Majapahit Kingdom sometime in the 14th century. The main content of the statement is: 'Unity in Diversity'. Although Indonesia consists of many ethnic groups, religions, races, arts, *adat*, languages, and others, they are still bonded into one country and one nation and belong to one fatherland. Unified by same flag, the same national anthem, the same currency, the same language and a host of other factors.
2. Population growth in the province of West Java will affect the dependency ratio of the three main factors: the sex ratio in the year 2004 was 1.02 (meaning that for every 100 females, there are 102 males). On the other hand, the increase in productive age, the ratio which imposes responsibility on West Java, is 1.00.
3. Lingua franca is a language used by people with different mother tongues in order to communicate. Any language could conceivably serve as a lingua franca between two groups, no matter what sort of language it is. Lingua Franca is a purely *functionally defined* term, the linguistic structure of the language involved plays no role. A synonym for lingua franca is "vehicular language". Whereas a *vernacular* language is used as a native language in a single-speaker community, a *vehicular* language transcends the boundaries of its original community and is used as a second language for communication between communities. For example, English is a vernacular in England, but is used as a vehicular language (*lingua franca*) in The Philippines.

4. The first-marriage age for woman has a huge influence on the risks during birth. The younger the age at first marriage, the higher the risk for mother and infant, because physically and mentally a very young girl is not ready to become a mother. The case is similar for older pregnant woman for whom age will likewise influence the risks during pregnancy and childbirth. The ideal age for a woman's best reproductive period is between 20 and 30 years.
5. Income per-capita is calculated by dividing the Product Domestic Regional Bruto (PDRB) by population in the middle of the year. Although the income per-capita is increasing, the rate of Rp (*Rupiah*) to the US Dollar is decreasing, which means that rich in Rp does not mean 'rich'.
6. Ability to read and write (AMH: *Angka Melek Huruf*, literacy rate) is the percentage of the population aged 10 years and older who can read and write roman or other scripts such as Arabic for reading the Holy Qur'ān.

Chapter V HEALTH AND HEALING IN INDONESIA

5.1 Traditional Medicine

Ethnomedicine has been in use for thousands of years – with major contributions being added along the way by indigenous healers who employ plant, animal and mineral-based remedies and spiritual practices – and today has become of particular importance for health providers of Primary Health Care (PHC) at the community level. WHO explains that Traditional Medicine refers to health practices, approaches, knowledge and beliefs incorporating manual techniques and practices, applied alone or in combination, to prevent and diagnose disease, treat illness and maintain physical and spiritual well-being. Traditional (indigenous or folk) medicine describes medical knowledge systems, which have developed over centuries within various societies before the era of cosmopolitan biomedicine. The concept 'folk medicine' was taken up by medical anthropologists to differentiate 'magical practices'. Using these concepts, medical systems could be considered the specific product of an ethnicity's cultural history. Micozzi (2006: 11) states that: "*With medical traditions that have been encoded and carried as knowledge in different cultures for many years, it is possible to study the adaptiveness and adaptive value of such practices*".

Young (1983) explains some aspects of Traditional Medicine in the following ways: medical traditions are distinctive mixtures of ideas, practices, skills, equipment and *materia medica*; a medical system is equivalent to the social and economic order in which one or more medical traditions are used to produce and distribute health services and outcomes in a particular community or region; a plural medical system is one which incorporates more than a single medical tradition; and, a medical sector refers to the segment of a medical system which is dominated by a particular medical tradition.

5.1.1 History of Traditional Medicine

Traditional Medicine refers to ancient culture-related medical practices which existed in human societies before the application of modern science to human health care. The practice of Traditional Medicine varies widely in keeping with the societal and cultural heritage of a specific community. Each society has its own narrative to tell about its particular remedies and practices which coalesce over time into a collective medical system. Members of a community can find themselves in a situation where they can subscribe to a wide range of therapies, practices, explanations, knowledge and belief constructs. Foster (1983: 17) points out that: "*... it is of primary importance to the members of every group to try to maintain their health and to restore to health those who fall ill*". Moreover, he adds that every human community has developed its own medical system: *i.e.* "*the pattern of social institutions and cultural traditions that evolves from deliberate behaviour to enhance health*". Micozzi (2006: 11) tells us, as did Frazer, that historically: "*At the end of nineteenth century, European interpretations regarded traditional medical*

practices as myth, superstition, or magic (and sometimes madness)". In 1920, social scientists began describing the meaning of traditional medical practices: "*... if traditional societies, through plant domestication and agriculture learn to obtain nutrients (foods) from the environment in which they live, they may also learn to obtain medicines from their environments and to develop therapeutic techniques to provide medical care*" (Micozzi 2006: 11). According to Foster (1983: 18–19) the causality concepts of Traditional Medicine in ethnomedical accounts described as 'magical' or 'supernatural' include the following:

(1) angry deities who punish wrongdoers, for example, those who violate taboos;
(2) ancestors and other ghosts who feel they have been too soon forgotten or otherwise not recognized;
(3) sorcerers and witches, working for hire or personal reasons;
(4) loss of the soul, following a bad fright that jars it loose from the body or as the consequence of the work of a sorcerer or supernatural spirit;
(5) spirit possession or the intrusion of an object into the body;
(6) loss of the basic body equilibrium, usually because of the entry of excessive heat or cold into the body;
(7) the evil eye.

This category is called 'personalistic', in that assault is directed against a single person as the result of the will power of a human or supernatural agent or creature. The antithesis of 'personalistic' is 'naturalistic', where disease and illness are explained in impersonal, systemic terms. For example, the intrusion of heat and cold or their loss from the body upsets its basic equilibrium, such as: 'yin' and 'yang' in Chinese medicine. In additional, Foster (1983: 19) states that: "*Personalistic explanations appear to predominate (although not to the exclusion of naturalistic explanations) in the traditional systems of such vast areas as Africa, preconquest America, Oceania and indigenous Siberia. They also underlie the more complex systems of contemporary China, South Asia, and Latin America*". In contrast, naturalistic explanations predominate in humeral pathology, Ayurveda, Unani, and traditional Chinese medicine. The classification system of illness is very much dependent on the classifier or the community itself. The community does not choose between the systems but creates and maintains different medical systems based on their knowledge gained through experience. A community's conceptualisation of health and healing is not restricted to a single system only; it has developed local theories about disease and categorisations which affect health and healing practices and illness behaviour.

Health care in a society is characterised by a plural medical system which stresses the interaction between behaviour and socio-cultural structure and places the system in its historical and geographical context, thereby encapsulating the dynamics inherent in a medical system (Dunn 1976). Such medical systems which are part of a community or ethnicity, studied as ethnomedicine, have come to mean the health maintenance system of any society. Health ethnographies encompass beliefs, knowledge, and values in relation to health and healing systems within a community. It also includes the roles of healers, patients or clients, and family members and techniques such as the use of herbal medicine, specialists, symbolic and interpersonal components of the experience of illness.

In Traditional Medicine, knowledge, beliefs and practices regarding illness and how to heal the sick form a complex study in human behaviour, and their inter-relationship makes it possible to assess the rather complicated utilisation of medicinal plants and the need to cure illness through trial and error. The complex of knowledge, beliefs, and practices is incorporated in the Ethnobotanical Knowledge Systems (EKS) as part of Traditional Medicine in a specific community. Ethnobotanical Knowledge Systems focus on the botanical knowledge of local communities framed in their own *emic* classifications according to cultural principles, specifically plants used as herbal home remedies by community members for health and healing purposes. As mentioned in Chapter I, Slikkerveer (2006) points out that the study of interactions between people and plants involve contributions from botany, ethnopharmacology and anthropology, as well as from ecology, economics and linguistics. Such multidisciplinary approaches developed different methodologies and analyse indigenous phenomena in a particular culture or community in a cross-cultural way. In addition, Bodeker (1997) discusses that traditional medical knowledge includes both sacred and empirical concepts, frameworks for understanding health and healing, assumptions about the cosmos and causality, and taxonomies which address a perceived order in nature. Traditional medical systems extend to and appreciate both material and non-material properties of plants, animals and minerals. The term 'systems' is used to reflect the organized pattern of thought and practice which builds and maintains the body of knowledge in Traditional Medicine.

Traditional Medicine covers a wide variety of therapies and practices which differ from country to country and region to region. In some countries, such remedies are referred to as 'alternative' (*cf.* Geertz's 1960: 86) listing of specialized indigenous healers or *dukuns*[1] in Section 1.3.3 (Traditional Medicine).

Those knowledge, beliefs and practices relating to diseases which are the products of indigenous cultural development are not explicitly derived from the conceptual framework of modern medicine. The inspiring culture of the ancient times had a rich collection of medicine, some elements of which, with the development of modern medicine, declined while others were preserved and handed down to future generations. A few elements were further developed and spread far and wide. Traditional Medicine has made a great contribution to the welfare of all peoples around the world.

5.1.2 Use of Herbal Medicine (*Jamu*)

Medicinal plants and herbs have always played a major role globally in the development of medicine and public health, especially in developing countries. Around the world diverse plants, both wild and cultivated, are being used for various purposes (Amar 2010: 54). Medicinal Aromatic Cosmetic (MAC) plants belong to the category of plants most promising in health care, the properties of which make them suitable for either promoting better health or preventing disease and treating illness. Many MAC plants also have nutritional value. Importantly, plants used to prevent disease or improve health are more likely to be used on a long-term basis because, from a philosophical point of view, their usage implies that one is striving to lead a healthy way of life. One should note that the distinction between both categories of plants is not always obvious nor perhaps do people even take such differences into account when using them (Amar 2010: 54). Because many

MAC and nutritional plants can be used simultaneously for health purposes, Slikkerveer (2003) states, that they are regarded as being the most important link to human health. Moreover, plants are also used in life-cycle rituals in which they symbolise the hopes and dreams of the people who are applying them to obtain positive results.

Looking more closely at *jamu*, significant medicinal components can be observed which are obtained from the leaves, roots, bark, flowers and stems of higher plants[3] as well as from the minerals and fungi usually found in tropical forests. *Jamu* is largely produced in the form of pills, powders, tea, tonics, topical oils and ointments. Remedies, usually made up of three or more ingredients, are used to treat almost every kind of disease as well as to manage conditions such as infertility and even depression. *Jamu* is very popular for maintaining general good health and for the benefit of one's appearance.

Obviously, traditional herbal remedies play an important role in the health care of millions of people in developing countries. For instance, Gollin (1993) states that approximately 80% of Indonesians, from all socio-economic levels and ethnicities, daily take some form of *jamu* which are available in pharmacies, department stores, street stalls as well as from *jamu gendong* vendors. Moreover, many people concoct their own home-made *jamu* from medicinal plants cultivated in home gardens.

As early as 1775, the botanist Rumphius studied herbal medicine (*jamu*) in Indonesia and published a book about it entitled *Herbaria Amboinesis*. Another scientific study on *jamu* was also carried out by a researcher at the Centre for Herbal Medicine in Bogor Botanical Gardens. The first seminar on *jamu* was held in Solo in 1940, followed by the establishment of Indonesia's *Jamu* Committee in 1944. Each ethnicity in Indonesia has its own recipes, preference for ingredients (*e.g*. leaves, stalk, bark, roots, rhizomes, fruit and flowers) and application in Traditional Medicine. Herbal preparations vary, depending on the user's needs. Afdhal & Welsch (1991: 149) state that: "*... some herbal medicines have long been part of the public domain, that is, general knowledge in their respective communities. Others, particularly more elaborate mixtures and concoctions have traditionally been regarded as privately own knowledge, secret heirlooms passed on by the families of* dukun*'s, the royal courts and nobility, or by ordinary citizens*". Traditional Indonesian societies probably tended to admit *jamu* as one branch of healing. The recipes for such Traditional medicines, derived from MAC plants, have been passed down through generations from early ancestors and are local remedies obtained directly from natural materials available in Indonesia, processed in a simple manner based on experience. Tilaar (1985: 1) states that some *jamu*: "… *emphasize the traditional medical philosophy of Javanese or Indonesian health care*". In addition, Soedibyo (1984) states that: "… jamu *is the mysterious secrets of the royal courts of Central Java*". Because *jamu* is made from the above-mentioned natural components, it often has a bitter taste, thus making it necessary to add honey and/or lemon before consumption.

Slikkerveer (2003) describes the role which Traditional Medicine has come to play in the provision of integrated health care to the community: "*Particularly in developing countries where limited resources continue to hamper the equal distribution of scarce modern health care, the potential of less costly and locally available alternative forms of widely used indigenous medical knowledge and practices to contribute to Primary Health Care delivery is now recognized*". Niehof (1991: 237), when speaking about Madurese folk medicine, says that: "*For a person afflicted with illness or misfortune, there are several*

options open in order to regain the state of balance. Home remedies are the first alternative to turn to, unless there is acute danger which calls for more drastic action. Home remedies include herbal drinks, ointments, purgatives, fumigation, bathing, massaging, cupping, and the like. Sometimes it is sufficient to follow dietary restriction".

Figure 5.1 Woman selling *Jamu Gendong* door to door.
(Source: Field Study 2009)

The preparation of *jamu*, perhaps unknown by many Indonesians although they like consuming it, is the responsibility and specialisation of certain people: *e.g.* indigenous healers, door-to-door *jamu gendong* vendors[2] and manufacturers of industrial *jamu* in bulk. *Jamu* is made from a mixture of ingredients or herbals, pulverized, boiled and reduced to form a concoction (*ramuan*). The herbal nature of *jamu* appears to be closely related to the liquid remedies sold by door-to-door vendors, specific trademark products sold by street merchants, and home-made concoctions made by indigenous healers such as *paraji* (TBA). There are thousands of *jamu* sellers roaming Indonesia from door to door selling a glass full of freshly made herbal medicine. *Jamu* vendors also offer ready-made concoctions produced by specialised *jamu* manufacturers.

Today, one can easily purchase *jamu* packaged as powder, pills, capsules, tonics, oil and ointments. *Jamu* is claimed to be beneficial in treating a wide variety of ailments, from fatigue and headache to HIV/AIDS. It also strengthens the body and helps keep it in good shape, cleanses the blood, helps avoid *masuk angin* (not feeling well) and makes the skin smooth and gives it a fairer complexion. *Jamu* consumers come from every level of society, from rural villages to large cities. Not all Indonesians like to consume *jamu* because of its bitter taste but, because it is readily available and comparatively inexpensive compared to pharmaceuticals and industrial products, *jamu* is more frequently sought out by the public.

Jamu is usually consumed in liquid form but can also be applied topically as ointment on the skin or forehead. Traditional techniques for preparing *jamu* entail cutting, grinding and boiling. Popular traditional tools are the clay pot and grater still found in many households. Slikkerveer & Slikkerveer (1995) explain that *Tanaman Obat Keluarga*[3] (TOGA), as part of the National Family Welfare Programme, encourages each neighbourhood to plant a garden for growing medicinal plants to supply to residents who are in need of treatment. Maintaining a garden also helps keep alive and pass down to younger generations' invaluable traditions as part of ethnobotanical knowledge systems (EKS). Among the common herbs used in *jamu* prescriptions are: *jahe* (ginger – *Zingiber officinale*), *asem Jawa* (turmeric – *Curcuma domestica*), *kumis kucing* (*Orthosiphon aristatus*), *bengle* (*panglay – Zingiber bevifalium*), *kayu secang* (*Caesalpinia sappan hinn*), *brotowali* (*Tiospora rumpii boerl*), *kayu manis* (cinnamon – *Gijeyzahyza glabra*), and *alang-alang* (*Gramineae*).

According to Hargono (2008), the history of *jamu* began long ago in Indonesia when ancestors used plants for nutrition and their curative properties. The oldest historical document dates from 772, *i.e.* a carved relief about medicine at the Borobudur temple. Carvings have also been found in Prambanan, Panataran, and Tegalwangi temples. In 991–1016, recipes for medicinal preparations using plant extracts were written on *Tal* (palm) leaves, called *Lontar Usada* in Bali. In South Sulawesi, written recipes called *Lontarak Pabbura* have also been unearthed. In Java, recipes were written on *Rontal* (*Ron*: leaves). Several documents have been translated into Indonesian and other foreign languages, such as the translation of *Lontar Usada* in Dr. Wolfgang Weck's book entitled *Heilkunde und Wolkstum auf Bali* (*Medical Science and Behaviour in Bali*). Before World War II, Dr. R. Goris frequently wrote about Balinese medicine for journals published in both Indonesia and other foreign countries. Before Indonesia gained her independence, the Dutchmen Kloppenburg and Wijk gathered data about medicinal plants and published their findings in several books, *e.g.* two entitled *Indische Planten en Haar Geneeskraacht* (*Indonesian Plants and Their Medicinal Powers*) and *Martha's Indische Kruiden Recepten Boek* (*Martha's Indonesian Herbal Receipt Book*). In addition, Hargono (2008) tells us that, in the era of Indonesian Kingdoms, *e.g.* at the Surakarta Royal Palace, in 1858 knowledge about natural medicinal preparations was documented and published in *Kawruh Bab Jampi Jawi* (*Knowledge of Javanese Herbs*). It describes the usage of 1734 herbs. At that time, plants were collected from the wild in the vicinity of people's living quarters. As medicinal plants became over-harvested and more difficult to find, people were forced to search farther afield, *e.g.* in forests. Because plants differ in quality, the idea arose to begin cultivating such plants in gardens.

In 1942–1945, during the Japanese occupation of Indonesia, the population's health suffered greatly due to undernourishment, because the Japanese Military Government was concerned exclusively with waging war and confiscated many resources and privately owned supplies and local products for their own use. Together with the shortage of materials for their basic needs, medicines were also unavailable for the Indonesians. At this time, traditional *jamu* was the only alternative medicine available to the public. Sastroamidjojo (1967: 1–20) states that: "*While recognizing the need for* jamu *to treat serious illnesses such as malaria, dysentery, tuberculosis and pneumonia, few physicians had more than a vague idea of which plants to use, in what proportions they should be*

mixed with other ingredients, or in what doses they should be prescribed. Even for less serious conditions, such as scabies, worms, septic sores and fever, few of these doctors who were born and raised in Indonesia could confidently prescribe medications made from indigenous plants because of their limited experience and information".

The Japanese occupation of Indonesia created a shortage in, among other things, pharmaceuticals; when Indonesian doctors were forced to find substitutes, they turned to *jamu* recipes obtained from a number of sources. The Japanese authorities, urging that research on *jamu* be coordinated, completed lists of dosages and usages, the findings of which were published in the magazine *Asia Raya*. In short, the Japanese occupation and Indonesia Revolution (1945–1949) were simultaneously associated with dynamic attitudes and practices in the Indonesian medical community towards herbal medicines. However, after independence when imported pharmaceuticals became available, Indonesian physicians abandoned *jamu* in favour of modern medicine.

5.2 Modern Medicine

5.2.1 Introduction of Western Medicine

During the 350-year Dutch Colonial Rule in the Indonesian Archipelago, Western therapies were increasingly circulated throughout the islands by way of the Dutch East India Company (VOC), trading between The Netherlands and the East Indies. In 1804 smallpox was widespread in the Archipelago; therefore, the Dutch Government provided preventive health services for the public by introducing smallpox vaccination programmes. Hydrick (1942: 1) mentions that a public health service (*Dienst voor de Volksgezondheid*) was established in 1925 to improve general public health. Koesoebjono (1993) points out that, before 1925, only Dutch and European communities in Indonesia were provided with health care. While they were allowed to use military hospitals in 79 towns, the local Indonesians had to rely on care provided by public hospitals and small clinics set up in only a few towns. Data provided by Indonesia's National Health Department (*Departemen Kesehatan Republik Indonesia* 1978) show that, until 1880, the few hospitals available to the general public were located in Batavia, Semarang, Surabaya, Bandung and several other towns, as well as polyclinics for ambulatory treatment (only for out-patient care). Not all clinics were in use, however, because a permit to continue services was only granted if the clinic achieved a minimum of five daily visits. Koesoebjono (1993) furthermore states that, during the Dutch Colonial Era, the development of health care was influenced by three main factors: (1) the Dutch Government's policy, (2) health/medical science with its innovations and changing philosophy, and (3) increasing demands from native Indonesians, especially from local medical doctors who had graduated from medical schools in Java. Improvements in drainage, sanitation and the sewer system became and continue to be the foundation for the health infrastructure.

In coping with public health problems, during the Dutch Colonial Era health care was still imperfectly organized. Usually officials would procrastinate until some health concern became a full-blown issue, forcing the authorities to focus all their attention on the infection itself, while showing little concern for the public health conditions in Dutch East

Indies. Schoute (1937: 4) explains that: "*They were allowed, unlike surgeons in the Netherlands, to treat diseases. The company charged them 'with the execution of the art of healing in its full compass … both on board and on shore in India*". In addition, Sciortino (1995: 56) points out: "*Their primary concern was the health of the crew, and local people were only marginally and indirectly confronted with their activities*".

Sigerist (1990) indicates that, during the Dutch Colonial Era, modern medicine was not being introduced into a vacuum in the non-Western world. Long before the arrival of modern medicine, all human societies had developed their own methods for fighting disease, usually referred to as 'traditional'. Today, the majority of rural Third World populations still depend on Traditional Medicine. The introduction of modern medicine by colonial powers only benefitted the European colonists and a few local elite but did not improve the health of local populations. Voorhoeve (1966: 77) states that: "*Simultaneously, a vivid interest awoke in tropical countries, partly as a result of the liberal mercantilism. Western physicians started teaching their newly acquired medical science in Asiatic countries, e.g. in Indonesia in 1851, in Thailand in 1889. They found a favorable response among the well educated sons and daughters of the most advanced and well-to-do classes, the elite of the indigenous population*".

Slikkerveer (1982: 7) also tells us that: "*Post 1945, the European countries developed complex systems of health care planning and services. During the process of de-colonization in the fifties and sixties it became clear that in developing countries the health care services were not accessible to all. It was impossible to maintain the expensive health care system of the colonial powers. Only the rich urban elite groups could afford modern health care facilities; the vast majority of the rural population was not or hardly able to use it*". Bushkens (1982: 74) adds that: "*One of the great mistakes of the post-war era decolonization was the Third World's haste to imitate the welfare-state models of the former colonial powers without the support of a solid industrial basis. In the health sector most developing countries mistakenly opted for large centralized hospitals, costly drugs and sophisticated technologies*".

Biomedical health-care systems are closely linked to national policies pursued by the Central Government through the National Minister of Health who is the largest provider of integrated medical services which include general and basic health services and special programmes. Here 'general health services' refers to the network of general and specialised hospitals, health centres, and health stations. 'Basic health services' comprise a network of health centres and health stations at the community level. In the provinces, *Dinas Kesehatan Propinsi* (Provincial Health Departments) is the key administrative and technical units for the regions concerned. These departments are each responsible for planning, implementing and administrating the regional health services, under the auspices of the health policy laid down by the National Ministry of Health. The Provincial Medical Officer for Health (*Kepala Dinas Kesehatan Propinsi*) is assisted by staff usually numbering one or more health officers, public health nurses and sanitarians, pharmacists, and laboratory technicians.

5.2.2 Health-Care Services after Indonesia's Independence

Indonesia's health-care system has developed significantly over the past three decades. Koesoebjono (1993: 12–13) states that: "*As the world's archipelago, Indonesia is challenged by many health problems related to poor education, misinformation, and underutilisation of health services, which all contribute to the predominant health issues of inadequate environmental sanitation, unsafe water supplies, and population control*". In addition, she points out that, for a better understanding of the dynamics of health-care services in Indonesia, history should be studied from the Dutch Colonial Era up to the present time.

In 1926 a Division of Health Education was established, after the Rockefeller Foundation persuaded the Dutch Government that an educational approach was appropriate for Indonesian at that time. Koesoebjono (1993:14) states that: "… *the task of the health educators, who were called 'propagandists', was to make people aware of prevailing health problems. The methods used for this propaganda were the distribution of posters, printing media and film shows on health and hygiene, as well as demonstrations and visits people's homes*". Data provided by the *Departemen Kesehatan Republik Indonesia* (1978) show that, in 1932, education on hygiene broadened its scope to include quarantine, preventive health care and training of *paraji* (TBA) in order to reduce Infant Mortality Rates (IMR). Communities were made more aware of health issues through, *e.g.* training courses for school teachers and members of women's club. It is undeniable that the Dutch laid the foundation for modern health care in Indonesia.

Furthermore, *Departemen Kesehatan Republik Indonesia* (1978) records show that, from 1942 to 1945 during the Japanese occupation, health-care services had worsened substantially because of a lack of medical supplies and health facilities, most of which were confiscated for Japanese military use only. Public health deteriorated even further as a result of serious malnourishment. The Indonesians were forced to hand over 50% of their harvest to the Japanese military, although the Japanese never swapped food for clothing or health provisions. The mortality rate was very high, and many people suffered from oedema, particularly the *romusha*, *i.e.* the forced-labour road construction crews and plantation workers, all who laboured under the strict supervision of the Japanese Military Government. Supplies of imported goods, including clothing, pharmaceuticals, livestock, rice and other foodstuffs as well as personal possessions were confiscated by the Japanese Military Government, its officers and soldiers, without compensation. When the Japanese occupation ended, most Indonesians faced incredible shortages of food and other basic necessities. In short, for most Indonesians, the Japanese occupation was a period of hunger, sickness and want. Lack of medicines and health care led to the use of local herbal medicines or *jamu* to fulfil the need for medicine.

Ferzacca (2002) points out that, after independence in 1945, the development of health services gradually increased and health care became available for all Indonesians; however, medical doctors once again put *jamu* on the back shelf as they returned to the use of pharmaceuticals which they had studied at medical school. The struggle to modernise and become economically developed without becoming Western is an issue for medical pluralism in Indonesia. Additionally, Ferzacca (2002: 35–36) says that: "*Medical Pluralism for Suharto's New Order regime in Indonesia was a crucial element for a political*

organization based upon an ideology and pragmatics of development (*pembangunan*)". Foucault (1991) states that, regarding the development of health as well as science during the Dutch Colonial Era, the Indonesian population can be defined and managed as a "collective mass of phenomena" particularly in demographic terms of health and disease for target of intervention. With the Suharto regime (1966–1998), bio-medicine became an important means for development and nation building. Ferzacca (2002: 36) argues that: "*Scientific medicine becomes a significant feature of postcolonial forms of governmentality because of its technological, qualifying, and practical relations with many of the demographic measures that define the economy and health of a population. These measures, for example, rates of fertility, infant mortality, life expectancy, disease prevalence, among others, not only make up a population's profile, but are also the targets as well as the efficacious indices of the presence or lack thereof development*".

As Minister of Health during Soekarno's era, Leimena considered basic health care in its preliminary stage, recognized as the Bandung Plan (1951), as an historical concept adopted by WHO and redefined as Primary Health Care (PHC) through development of health service units as a functional organisation under the Sub-District Health Centres named ***Puskesmas*** (Community Health Centre) in 1969/1970. During Soeharto's rule, the development of community health was merged into the programme between 1969 and 1974. Then in 1990 ***Puskesmas*** were transformed into a functional health organisation which empowered communities to play a role. As district health organisation, ***Puskesmas*** have several functions: (1) the Regional Health Centre should provide for and manage local community health, supervise and prevent infectious diseases in the community, improve and sustain a healthy environment, and supervise public places; (2) it should provide and help sustain holistic, completely integrated medical services and care to the community at large, such as general medical treatment, dentistry, Maternal and Child Health (MCH) services, Family Planning, and information about nutrition and health management.

Java is the most density populated island in Indonesia accounting for ca. 59% of the country's total population. The imbalance in population distribution is caused by a total accumulation of policies to centralize all types of facilities on Java Island, such as: central government offices, universities, industry, tourism, and other services which have been established in Java. About 80% of the population lives in rural areas which presents specific dilemmas, one of which is the problem of health care. Public health – in both rural and urban areas – is insufficient for the entire population and still needs to be improved. This problem can be illustrated by the failure of many health programmes implemented one after the other. Future health programmes must focus more attention on reproductive health and MCH services.

The high Maternal (MMR) and Infant (IMR) Mortality Rates is one of the most important health issues in Indonesia where three conditions pose an obstacle in reaching the goals proposed in the Health Index. First, regarding a healthy environment, there is a general lack of awareness about hygiene and healthy lifestyles (*perilaku hidup bersih dan sehat*). Many diseases which are result from an unclean environment are on the increase, such as avian and swine influenza, dengue fever, malaria, tuberculosis, etc. In 2007, West Java surpassed the status of Papua when its rate of HIV/AIDS became the second highest in Indonesia. Second, the accessibility and quality of health care are important issues. Primary Health Care (PHC) still fails to meet the minimum standards. Basic health services are not

fully accessed, mostly by the poor, because doctors and health providers are not located equally across rural areas. In West Java, only 43.23% of the *bidan* (CMW) are posted in rural areas. Third, another obstacle is the sum total condition resulting from poverty. Government programmes assure the poor that they will receive health insurance (*asuransi kesehatan bagi masyarakat miskin* – ASKESKIN) for which the daily insurance premium is Rp 5.000 per person. Delayed payment by the Government to hospitals is causing bankruptcy. Empowerment is also an important means to stimulate improved health conditions, first by encouraging access and health services for the poor.

5.3 Primary Health-Care Development

5.3.1 Alma-Ata Declaration of 1978

The Alma-Ata Declaration (1978) proposed a Primary Health Care (PHC) model based on the need for comprehensive health-care strategies to cope with social, economic and political conditions and to develop and provide health services for all peoples around the world. The declaration adopted the 'Global Strategy for Health for All by the Year 2000' defined by WHO (1998: 2) as: "*the attainment by all the people of the world of a level of health that will permit them to lead a socially and economically productive life*". The Declaration of Alma Ata was clear about the values pursued: social justice and the right to better health for all, participation and solidarity. It implied that progress towards these values required fundamental changes in the way health-care systems are organized and relate to the potential of other sectors (*cf.* Appendix I).

The 'Global Strategy for Health for All' represents the formal beginnings of the social model of health with Primary Health Care as its means. Primary Health Care is defined in the declaration of Alma Ata (1978) as: "*essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's medical system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national medical system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process*".

Primary Health Care, initiated by the Alma-Ata Declaration, is the foundation within medical systems catering to the basic needs of the world's population. Furthermore, Primary Health Care is "*presented as a philosophy of health work as part of the 'overall social and economic development of the community*" (WHO 2005: 11). More than 30 years after the introduction of Primary Health Care, it becomes clear that expectations and broad support for Alma Ata's values have not always been easily translated and developed into actual medical systems, due to the oversimplified operational of the PHC movement, at national and global levels, by health authorities. Most policies see Primary Health Care not

as a set of reforms, as originally proposed, but rather as one health-care delivery programme among many, providing poor care for poor people (*cf*. WHO 2008).

"*The Primary Health Care values to achieve health for all require medical systems that 'Put people at the centre of health care'. What people consider desirable ways of living as individuals and what they expect for their societies – i.e. what people value – constitute important parameters for governing the health sector*" (WHO 2008: 12). Primary Health Care has remained the central focus for every country's debate on health issues because the PHC movement has attempted to provide rational, evidence-based and anticipatory responses to health needs and to social expectations. Achieving this requires trade-offs which must start by taking into account public "*expectations about health and health care*" and by ensuring that "*the community voice and choice decisively influence the way in which health services are designed and operate*" (WHO 2008: 12).

Primary Health Care should be effective for both individuals as well as communities. Effective means all of the following:

(a) care which is accessible and equitable – for all individuals and communities;
(b) community participation – where individuals and communities actively participate in taking decisions which affect health;
(c) health promotion – remembering that health care encompasses more than just physical and mental health, taking into account social, economic, environmental and spiritual factors;
(d) appropriate skills and technology – health care using appropriate technology based on a community's health needs; and
(e) inter-sectoral cooperation – working with other relevant sectors which influence the health of communities and individuals.

5.3.2 Primary Health Care in Indonesia

Prior to the Declaration of Alma Ata in 1978, regarding Primary Health Care (PHC), Indonesia had developed various forms of basic health care in several regions. In 1976, in about 200 communities, Community-Based Health Activities (CBHA) were being implemented. Since then, Primary Health Care has developed rapidly as expressed by various forms of Community-Based Health Activities (CBHA), one of which is the *Posyandu* (Integrated Service Post). This activity covers five major programmes, *i.e.* Maternal and Child Health (MCH), improvement of nutrition, immunisation, family planning, and prevention of diarrhoea. In addition to the *Posyandu*, *Polindes* (*Pondok Bersalin Desa*) or birthing huts and village maternity homes are managed by *bidan* (CMW) in collaboration with *paraji* (TBA) as a way to bring MCH services into the community. However, the CBHA Programme went into decline during the 1997–1998 monetary crisis, which resulted in a multifaceted crisis requiring a total reform of many aspects of life, including the health sector.

Indonesia's move from centralisation to a policy of decentralisation overwhelms most aspects of development, including the health sector, and has totally changed how systems develop. Its implications are felt when trying to set priorities in each district. Many local

governments are more concerned about taking curative rather than promotive and preventive measures. Subsequently, the Indonesian Ministry of Health has to revive and reformulate its central priority for Primary Health Care: (i) to activate and empower communities for a healthy life; (ii) to improve the public accessibility to good quality health services; (iii) to improve systems of evaluation, monitoring, and health information; and (iv) to increase health financing. The strategies (i) and (ii) are mostly related to Primary Health Care, indicating the important role it plays in the development of health care in Indonesia (*Departemen Kesehatan Republik Indonesia* 2007). The implementation of Primary Health Care in Indonesia is mainly through *Puskesmas* (Community Health Centres) and organisations under its authority such as: mobile health centres and many types of Community-Based Health Activities such as *Polindes* (village maternity home) and health posts at the village level; *Posyandu* (Integrated Services Post) at the sub-village level.

Since launching the 'Safe Motherhood Initiative' (SMI) in 1987, considerable efforts have been exerted to reduce the Maternal Mortality Rate in Indonesia. The National Health Ministry has become more responsive to the coverage of maternal health and has improved and increased the flow of information to help reduce maternal morbidity and mortality. In the future, the Ministry of Health will have to develop effective and affordable programmes to achieve reduction of the Maternal Mortality Rate. The Indonesian Ministry of Health is committed to improving maternal health services; primarily by enhancing the number of skilled birth attendants either at health-centre facilities or at home.

Human reproduction is a human right. Consequently, every individual has the right to safe and healthy reproduction. In 1994, the International Conference in Population and Development (ICPD) in Cairo defined the reproductive process as follows:

(1) Every sexual activity should not be under compulsion and be safe from infection;
(2) Every pregnancy should be planned; and
(3) Every delivery should be healthy and safe for mother and baby.

Maternal and infant mortality, as well as maternal morbidity, resulting from inadequate antenatal, perinatal and/or post-partum care still remain a major problem in Indonesia. In poor countries, ca. 25–50% of women's deaths at a reproductive age can be attributed to complications during pregnancy, labour and delivery. Death during childbirth is the greatest obstacle for women during stages of reproduction. WHO (2003) estimates that every year more than 585.000 women die during pregnancy or childbirth worldwide. More than 50% of the deaths can be avoided by using available low-cost health technologies, such as: changing a community's perception towards skilled birth attendants (*bidan*) for maternal health services. Based on actual conditions, the Ministry of Health implemented its policies by developing ongoing programmes to alter public behaviour and make people more aware of the possibility of high-risk pregnancy and childbirth, especially in rural areas.

Historically, in Indonesia, to reduce the maternal and neo-natal death levels, in 1952 under the auspices of WHO and UNICEF a programme called *Balai Kesejahteraan Ibu dan Anak* (BKIA: 'Bureau for Mother and Child Welfare') was set up in each Indonesian

province. The BKIA Programme included formal training for midwives and paramedics to provide better care for mothers during pregnancy, labour and delivery and to promote special care for infants and children. The BKIA Programme also provided health education for women, vaccinations and simple services which a medic could carry out.

An attempt to integrate traditional and modern Maternal and Child Health (MCH) in Indonesia began before the country gained its independence, which occasionally becomes obvious in the chronological listing of MCH programmes. Norms regarding traditional knowledge and practices are in contrast with the ethos of modern science, rendering problematic the integration of both traditional and modern systems at different levels. It is clear that, epistemologically, the option to integrate is still largely constrained by the cognitive heterogeneity among different medical systems, despite recent attempts to adapt and transform the underlying local and global knowledge systems (Slikkerveer 2003). Hydrick (1942: 53) notes that, in 1937, training of *paraji* (TBA) began in Purwokerto. "*The Health Service plan is to supply more and more well-trained midwives who will go to rural areas and take up private practice. To help the people temporarily and to bridge this period, the Services use these hygiene-centres and the services of the midwives who are in charge of the centers to teach* doekoens *the elements of hygiene*". In 1950, the 'Organisation for Public Food Supplies' (LMK: *Lembaga Makanan Rakyat*) was established to encourage people to consume healthy food with the still famous slogan: "*Empat Sehat, Lima Sempurna*" ("Four is Healthy, and Five is Perfect"). The slogan teaches that a healthy diet must consist of four essential components: carbohydrates, proteins, fats, vitamins, supplemented by the fifth component milk for calcium intake. Specifically, the objective of the National Ministry of Health is to increase the nutritional health of both mother and child for the purpose of the child's development and mother's survival. Such welfare programmes require the participation of all members of the community. According to the *Orde Lama* ('Old Order' or social political system under Soekarno), the best way to increase the health of both mother and child is "from people to people" (*dari rakyat untuk rakyat*). The motto: "from people to people" became a formal policy for almost all of Soekarno's developmental programmes.

Since the Soeharto Era, beginning in 1965, the paradigm of health approaches has changed. Previous policies were insufficient to achieve welfare for the Indonesian people. Therefore, the 'Family Planning Programme' (*Program Keluarga Berencana*) was set up to reduce the number of childbirths by using the slogan "*Norma Keluarga Kecil Bahagia Sejahtera*" (NKKBS: "Norm for Small Happy Family Welfare"). The Family Planning Programme, which was rejected by the *Orde Lama* Government, was only applied by a NGO 'Association for Indonesian Family Planning' (PKBI: *Perkumpulan Keluarga Berencana Indonesia*). However, in 1965, the Family Planning Programme became an integral part of Indonesia's national development.

Djajanegara (1991) states in the First Five-Year Plan (*Rencana Pembangunan Lima Tahun I*) that the objective of the Family Planning Programme was to increase the health status and welfare of mother, child, family and nation alike. All activities and health programmes were to be firmly integrated into Community Health Centres, namely the *Puskesmas* (*Pusat Kesehatan Masyarakat*) or health facilities in outreach located in every sub-district (*kecamatan*). However, not all rural populations have been able to make use of such services. Geographical, social and cultural distances between *Puskesmas* and the local

communities are part of the reason. Adding to the problem, in the Third Five-Year Plan (*Repelita III*, 1979–1984), the idea was put forward to stimulate the public's participation in the implementation of activities to prevent disease and promote health under the PHC strategy introduced by the National Government. The concept initiated the idea of *kader kesehatan* (volunteer health worker) as the key to improved conditions affecting public health. The idea was justified as follows: health volunteers selected from within a community will understand the health conditions for their particular community. Health volunteers must function as mediators between the *Puskesmas* and community, to persuade resisting community members to use health-care facilities and to accept willingly health programmes for the prevention of disease and promotion of improved health.

Programmes aimed at stimulating public participation continued to become the main policy of Fourth Five-Year Plan (*Repelita IV*, 1984–1989). By embedding a health sector in village organisations like 'Rural Community Resilience Institution' (LKMD: *Lembaga Ketahanan Masyarakat Desa*) and the sub-section of 'Family Welfare Empowerment' (PKK: *Pembinaan Kesejahteraan Keluarga*), the health volunteer is expected to take social programmes designed by the Health Department to the public. In the conceptual framework, special emphasis is placed on the *Posyandu* (Integrated Services Post), the prime activities of which are expected to be carried out with the support of paramedics serving the community, specifically women and children. 'Health Care for Mother and Child' (KIA) was designed separately and then introduced and integrated simultaneously into the community as one package.

In 1989 a policy, namely the *Bidan di Desa* (BDD) Programme, for placing *bidan* (CMW) in rural areas was implemented. *Bidan* would become the key to managing problems related to pregnancy, delivery and post-partum care. As part of the *Repelita* Plan, the Department of Health decided to distribute 18.900 *bidan* into rural areas across Indonesia. Then in 1995/1996, an additional 5.285 *bidan* were located in West Java, meaning that 90% of the rural areas were provided with certified midwives. Data from the West Java Health Office shows that, in 2000, 5.513 *bidan* had already been positioned in West Java (Profile West Java Health Office, 2000). The placement of *bidan* in rural areas was strengthened by Presidential Decree No. 23 in 1994 when *bidan* became non-permanent government officers by appointment (Agenda of Community Midwives).

In 1999 WHO, with the support of international organisations such as UNFPA, UNICEF and the World Bank, promoted the 'Making Pregnancy Safer' (MPS) Programme to help eradicate factors often responsible for maternal deaths. WHO emphasises the global need for all governments and societies to take the following steps: focus more attention on the accessibility of essential obstetric facilities through 'Safe Motherhood' programmes as a priority for national and international development; set up standardised national recommendations for maternal and neonatal health care; develop systems which guarantee implementation of basic health treatment; reconstruct access to maternal and neonatal health and family planning in public or private sectors; promote maternal and neonatal health care and fertility control at household and community levels, and improve monitoring systems in Maternal and Child Health.

The main causes of maternal death in Indonesia are: post-partum haemorrhages generally because the placenta remains in the womb, infection, pre-clampsia, prolonged labour, and complications during abortion. Maternal deaths usually occur during delivery;

this situation could actually be improved by carrying out routine examinations and giving advice on the intake of good nutrition during pregnancy. A high-risk pregnancy can often be detected during the third-stage examination by a skilled health provider. A pregnant woman who visits an antenatal care facility will be examined by a Community Midwife (*bidan*) for body weight and general health, prescribed iron tablets, given TT immunization, and a consultation.

The 'Making Pregnancy Safer' (MPS) target implemented in Indonesia is to decrease the MMR to 225 deaths per 100.000; however, at the end of 2000, the MMR had only dropped to 334 deaths per 100.000. Then, on 12 October 2000, the President of the Republic of Indonesia together with the Department of Health and General Directorate of WHO signed an agreement for the "*National Movement for Safe Pregnancy as a development strategy in national health to reach Health for All in Indonesia by the year 2010* [*Gerakan Nasional Kehamilan yang Aman sebagai Strategi Pembangunan Kesehatan Nasional menuju Indonesia Sehat 2010*]". The follow-up is a national strategy for making pregnancy safer. Pambudi (2003) describes that: before the implementation of the 'Making Pregnancy Safer' (MPS) Programme, WHO had conducted a 'Safe Motherhood Assessment' with the following results:

(1) Haemorrhage happens ten times more often during delivery, generally during stage III of delivery rather than during pregnancy.
(2) The quality of antenatal care is still poor; *paraji* (TBA) find it difficult to pinpoint women at high risk so there is no foolproof guarantee that high-risk pregnancies will be detected at an early stage.
(3) Not every referral hospital at the district level has staff and the necessary equipment, included blood transfusions, to cope with obstetric and neonatal emergencies.
(4) Maternal mortality is closely related to an inadequately functioning referral system, within the community and health facilities.
(5) Factors which influence maternal death are: (a) the health status of a woman and her readiness for pregnancy; (b) the number of antenatal examinations; (c) the delivery and immediate post-partum care.

Only few health facilities in rural areas can operate properly for emergency obstetric and neonatal care. An effort has been made to establish birthing homes or *Polindes* (*Pondok Bersalin Desa* – village maternity home)[4] as a community-based programme for obstetric and neonatal care by Community Midwives (*bidan di desa*). *Polindes* are newly built or community houses which have a spare room for obstetric and neonatal services at the village level, especially in remote areas. However, only 50% of all villages in Indonesia are covered and not all function successfully.

The 'top-down' method during government intervention may influence and divided the behaviour of the community towards pregnancy into three groups. (1) One group will use only the traditional medical system for every stage of pregnancy up to childbirth. (2) A second group will use a combination (plural) of medical systems; they will go to a modern medical system for antenatal care but, after being assured that their pregnancy appears to pose no risk, will prefer to use a traditional medical system. (3) A third group will choose to use a completely modern medical system for every stage of pregnancy and childbirth.

Unfortunately, the group which turns to the traditional medical system for every stage of pregnancy comprises the rural poor. In a study carried out in villages in Bale Endah Sub-District, Bandung, West Java, on the use of Misoprostol (*Pas Bayi*) to reduce haemorrhage, Ambaretnani & Sitaresmi (2003) show that *Bidan* (CMW) and *paraji* (TBA) in these villages share their responsibility equally. Since *paraji* are not permitted to give injections, Misoprostol[5] tablets provide them with an acceptable alternative when faced with an unexpected haemorrhage during delivery. The group which is used plural – combined traditional and modern – services for pregnancy, delivery, and post-partum care are still larger than that which only uses modern MCH services. This fact illustrates the important role *paraji* play in rural settings.

Bernstein & Miller (2002) point out that, for the best ante- and perinatal care, the birth attendant should be a health provider trained to deal with the four main causes of death in mothers and infants: (1) *too young* when getting pregnant; (2) *too late* to identify high-risk pregnancies which causes delays in deciding to seek medical care; (3) *too late* transporting the mother to obtain treatment at a health facility; (4) *too many* childbirths as well as unplanned pregnancies. Although more than 80% of pregnant women aged 15–49 years have received antenatal care at least once during pregnancy, according to the 1994 Demographic Survey on Health in Indonesia (SDKI), only 43.2% of all childbirths have been attended by skilled health providers. Koblinsky, Morgem and Anderson (1997) state that: in fact, among the 130 million childbirths each year in developing countries, only 50% are assisted by a skilled health provider.

One policy addressing the ongoing shortage (until 2007) of *bidan* (CMW) in remote areas in Sukabumi District recognizes that *paraji* (TBA) must continue practicing midwifery out of necessity. *Pikiran Rakyat* (2007: 1) notes that while Sukabumi District needs 113 *bidan* to provide MCH services, it would take at least 3 years to train a *paraji.* The policy is to train *paraji* in order to fill the gaps at MCH facilities in the area. In contrast, Sumedang District has adopted a policy of integrated MCH care through partnerships where *bidan* and *paraji* collaborate to deal with the high rate of maternal and infant deaths. Even sanctions will be imposed on *bidan* and *paraji* if a woman gives birth without their collaborative help. Unfortunately, according to the newspaper *Pikiran Rakyat* (2007), *paraji* are losing their ability to assist at deliveries because, within partnerships, Government policies only recognize the *bidan* as skilled representative of modern MCH care, capable of assisting parturient women.

Niehof (1992: 168) states that: "… *the ongoing debate on the Traditional Birth Attendant has to do with both potential roles an agent of change, and her performance as a midwife. She is required to give up harmful practices – with all the debate about what is or is not harmful with this entails. Given the comparatively high infant mortality in Indonesia – about 14% (Hull 1981:107) of which is almost certainly due to septic traditional practices at birth – and given the high level of maternal mortality, the medical establishment's concern about Traditional Birth Attendant treatment of babies and mothers is legitimate. I am not disputing that there is a cause for concern, but I do question the effectiveness of policies based on an ambivalent attitude, which is prepared to use the Traditional Birth Attendant because she is needed, while rejecting her in her traditional role. An alternative approach should take as its point of departure the essence of the role of the Traditional Birth Attendant, mediation*". In addition, Niehof points to the definition of

mediation:[6] "… *a course of action by which an actor, here called 'mediator', tries to establish communication between two parties who are unable to communicate satisfactorily in a direct way. This communication can take several forms. The importance of the mediator depends on the respective parties' need for communication. The results of the mediation will depend on the mediator's personal qualities and social position, as well as on the culturally and socially defined requirements with respect to the mediating role concerned and the circumstances in which mediation takes place*". While Landy (1977: 468–469) shows that: "*... the traditional curers within the context of change resulting from culture contact and from internal evolutionary change effects on the curers role of the contest between indigenous systems of medicine and the Western medical systems. Adaptation of the curing role under acculturation and change in a series of selected societies is considered and a typology is derived of the curer's role as 'adaptive', 'attenuated', or 'emergent'* ". In the case of Indonesia, *paraji* (TBA) fulfil diverse roles as indigenous healers, depending on Government policies and MCH programmes implemented in the respective areas.

5.4 Role of Traditional Birth Attendants in Indonesia

Traditional Maternal and Child Health (MCH) systems can be found in every community throughout the world. Traditional Birth Attendants (TBA: *paraji/dukun bayi*) are key figures in rural areas, providing services for pregnant, peri- and post-natal women (until 40 days after birth). *paraji* have gained wisdom and expertise through experience and from knowledge handed down from senior indigenous healers, such as: mother, grandmother, or other elder woman in her social environment. The types of services provided by *paraji* range from traditional antenatal examination, massage, consultation, preparation of herbal or traditional medicines, as well as performing rituals. Their traditional practices during labour and delivery must be supported by a national health provider, or Community Midwife (*bidan*), who has more knowledge about ante- and perinatal reproductive process and who must also dig deeply to discover what she knows about medicinal plants for use during pregnancy and childbirth. Massage and herbal remedies are part of a *paraji*'s repertoire to manage ante- and perinatal problems.

5.4.1 *Paraji* (Traditional Birth Attendant)

The *paraji* (TBA) is an indigenous midwife. She is usually an older woman who speaks the same language as the community in which she practices. She is illiterate (for the Latin alphabet, although she might read Arabic) and less likely to speak Indonesian. She practices midwifery as a part-time occupation. The socio-economic status of a *paraji* or *dukun bayi* is usually poor, since her main occupation might be agricultural labour worker under a landlord who pays low wages. Alisjahbana (1993) explains that becoming a *paraji* does not require any formal training; knowledge is gained through assisting and observing the senior birth attendant – maybe her mother, grandmother, relative, or neighbour. Usually these women are mediators par excellence. In addition, Niehof (1992) informs us that they have a culturally defined mediatory role in helping women become mothers and in assisting infants enter this world. Niehof (1992: 167) states that: "… *by enlisting the traditional birth*

attendant's help in reaching rural women in order to persuade them to participate in modern mother-and-child health and family-planning programs, the traditional birth attendant is effectively assigned another mediatory role – a new and sometimes unwanted role. A traditional birth attendant is a person who assists the mother during childbirth and initially acquired her skills by delivering babies herself or through apprenticeship to other traditional birth attendants. Further, a traditional birth attendant is usually a mature woman who has given birth to live children. She is a member of the community she serves. Though often illiterate, she speaks the language and not only understands but is an integral part of the religious and cultural system. Traditional birth attendants are generally wise, intelligent women who have been chosen by the women in their family or village for their practical approach and experience. Many traditional birth attendants have dynamic personalities and are accepted as figures of authority in the community. Traditional birth attendants are private practitioners who negotiate their own compensation with clients. Sometimes they receive payment in the form of cash or gifts; usually their compensation includes favored status in the community".

To reduce Maternal (MMR) and Infant (IMR) Mortality Rates, the National Department of Health through Provincial Health Offices conducted several training courses for *paraji* to improve their knowledge about pregnancy, labour and delivery, especially how to detect a high-risk pregnancy, how to refer a difficult delivery should it occur, and how to handle the umbilical cord hygienically. A *paraji* who has been trained in modern biomedical practices is given a '*Dukun Kit*'[7]. *Paraji* are seen as being part of an extended family in the community because of their role in guarding the household's health. When a *paraji* has successfully assisted a pregnant woman (*cocok*), then that client's daughter and grand-daughter will also probably decide to use the same traditional system when they become pregnant. There is trust involved in maintaining a good relationship between client and *paraji* who not only assists during childbirth but also performs rituals during pregnancy and post-partum care.

Pregnancy

A woman will probably suspect that she is pregnant when she notices a delayed menstruation and/or other usual symptoms such as vomiting, nausea, change in appetite, and aversion to certain foods. Although unusual, several husbands of respondents began complaining about the same symptoms experienced during their wife's pregnancy, such as difficulty in consuming certain foods, aversion to the odour of specific foods, craving for unusual foodstuffs like sour-tasting or out-of-season fruit. Not every woman recognises her own signs of pregnancy. Some women only discover their condition after first consulting with a *paraji*. In Sundanese culture, during her early stage of pregnancy a woman is not considered to be fully pregnant, although her pregnancy has been officially confirmed by a traditional *paraji* or community-employed *bidan*. The local belief is that pregnancy only becomes a fact after an expectant woman has experienced a trembling sensation in her abdomen at ca. 4 months.

Usually a midwife's work begins when a woman stops menstruating at ca. 2 weeks to 2–3 months (first stage of pregnancy). Usually a woman will confirm her pregnancy by visiting a *bidan* or *paraji*. A more educated or financially secure woman will test herself using a pregnancy pack ('Sensitive' or 'Lotus' brand) which can be bought from a

drugstore. After confirming that she is pregnant, she will visit a *bidan* or medical doctor at a *Puskesmas* for a further check-up.

Paraji (TBA) usually attain their status through personal experience or by putting to practice indigenous knowledge systems handed down through generations of indigenous healers who have gone before. Some indigenous healers receive knowledge through dreams, personal experiences, informal instruction from a senior *paraji*, or when asked by chance to help deliver a baby when no one else is available. Alisjahbana (1993) tells us that a *paraji* often learns from her own observation and experience while assisting at a birth. A *paraji*'s practices will include such techniques as massaging a pregnant woman's abdomen to adjust the foetal position and giving advice about nutrition. She is also thought to be able to predict the gender of the foetus from the shape of the woman's belly: a round belly indicates a girl and a pointed belly suggests a boy.

The household survey shows that certain behaviours and types of food are still considered taboo in the community. Several activities are taboo for the following reasons: if one sits in a doorway, then labour and delivery will be difficult; if the expectant father drapes an item around his neck, then the umbilical cord will choke the baby; if one eats from a small plate, then the foetus will remain small enough not to complicate delivery. Pregnant women living in certain areas in Rancaekek used to carry a sharp object such as a nail, small knife or tiny scissors as amulet to ward off evil spirits. Husbands must also avoid certain activities, such as slaughtering animals, attending cock fights and arguing with his spouse, to avoid disrupting foetal development. In particular, slaughtering an animal will cause the baby's body to be abnormal.

Consuming the following foodstuffs is taboo during pregnancy. Eating/drinking ice will cause an enlarged foetus. Foods to avoid are (a) those with a fishy smell, (b) those with a high protein content: for example, egg (*endog*), fish (*lauk*), eel (*belut*), type of snail found in rice fields (*tutut*), shrimp (*udang*), and (c) those fruits like pineapple (*ganas*, *Ananas comosus*), papaya (*gedang*, *Carica papaya* L.), cucumber (*bonteng*, *Cucumis sativus L.*), banana (*pisang ambon*, *Musaceae*), durian *(kadu*, *Durio zibethnus*), jack-fruit (*nangka*, *Artocarpus heterophyllus*), avocado (*alpuket*), sweet potato (*hui*, *Ipmoea batatas poir*), *taleus* (*Colocasia giganteum Hook)*, young coconut and its milk, *salak* (*Salacca zalacca*), and all sour-tasting fruits.

Paraji (TBA) also suggest which foods are nutritious and how to care for the breasts during and after pregnancy. Pregnant woman are advised to eat green leafy vegetables to stimulate the production of breast milk. When the woman's pregnancy reaches about the eighth month, she will be advised to walk frequently to facilitate delivery. She must consume half-raw egg yolks from *ayam kampung* (local chicken) to strengthen her body for labour and delivery, drink coconut milk to assure that the baby's skin will be clear, and take one spoonful of coconut oil every morning to facilitate delivery.

The most significant moment occurs during the second stage of pregnancy when movement of the foetus is felt for the first time. According to Muslim tradition, a ceremony must be held at this time to celebration the belief which the baby's soul has been blown into its body by Allāh (God) at ca. 4 months gestation. At the celebration a group of women (and sometimes men) from a group of *pengajian* will pray for blessings and read verses from *sūrah Yusuf* from the Holy Qur'ān with the hope that the baby will be as good looking

and wise as Prophet Muḥammad. This ceremony is held repeatedly for each new pregnancy.

Figure 5.2 Four trained *paraji* or *dukun bayi* (seated) and two *bidan* standing during a monthly meeting at *Puskesmas* Nanjung Mekar
(Source: Field Study 2006)

Generally, community members who perform this ritual at 4 months will not take part in the 7-month ceremony, according to the beliefs of Islam. The 7-month ceremony relates to indigenous beliefs about this stage of pregnancy when, based on several facts, a premature birth can occur. During the ceremony held at 4 months, a *paraji* (TBA) is present but plays no part, because the ritual is performed by a Muslim religious leader. Albeit while the *paraji* is probably also a Muslim; she is not considered as a religious leader. Her course of action is now focused on strengthening the baby. During the first stage or trimester (0–3 months) of pregnancy, it is the mother who requires more attention.

During a first pregnancy, more rituals are conducted to provide psychological support for the woman entering a new stage in her life cycle. At 7 months, the pregnancy reaches another turning point and attention now becomes focused on the approaching delivery. Traditionally, at 7 months, the pregnancy is considered mature enough for the foetus to survive while, at 8 months, the pregnancy will briefly revert to a 'weaker' state. The exact time to deliver a mature infant is at 9 months. Many people in the community believe that a *paraji* has spiritual powers to conduct rituals for a safe pregnancy and childbirth. Her position within the ceremony is as intermediary between the pregnant woman and the world of supernatural beings. On a suitable day a *nujuh bulan* 7-month ritual is held during which the *paraji* will make the required preparations to celebrate the woman's first

pregnancy. The expectant mother is bathed with water from seven springs, perfumed by petals from seven types of fragrant flowers. The number '7' obviously represents the 7th month of pregnancy. The pregnant woman wears a 'batik sarong' while being bathed by seven older women. Then the *paraji* drops slippery items symbolic for an easy birth into the woman's sarong (one at a time): an egg, an eel, etc.

Figure 5.3 *Paraji* or *dukun bayi* estimating the stage of pregnancy by palpating the abdomen of a pregnant woman in Rancaekek.
(Source: Field Study 2006)

Bathing is symbolic for purification of the expectant mother and her baby. After the bath, the *paraji* will help the woman change her sarong and *kebaya* (traditional blouse) seven times (seven sets of batik clothing and *kebaya*). Each time she dons a set of clothing, each woman in attendance will criticise what she is wearing. After changing clothes six times, she will finally be complimented for choosing the seventh outfit which suits her. Thereafter, she must 'sell' *rujak* to her guests who will buy it using fake coins made from 'broken' tiles. Tasty *rujak* indicates that the infant will be a girl, and *vice versa*. At the same time, however, the husband must cut a yellow coconut in half to predict the baby's gender. Before ultrasonography became available, opposite sides of a yellow coconut were decorated with *wayang* puppet figures: *Arjuna* (male) represents a boy and *Subadra* (female) a girl.

An indigenous healer is famous for her patience and tolerance when encouraging a woman both physically and emotionally during labour and delivery. Formerly childbirth took place either at home or in the *paraji*'s house. A member of the expectant woman's family invites the *paraji* to assist during delivery along with other family members or neighbours. Her role during the trials of labour and delivery is as birth attendant, companion, and caretaker for the woman in pain. At the same time she helps calm the

husband and makes arrangements for actual childbirth. Usually a family member helps her calm the parturient woman and lends a helping hand when the *paraji* needs something from the house such as boiling water, batik cloth/sarong or sweet tea. Giving birth at home is favoured by women because they can remain in their familiar environment, surrounded by trustworthy family and friends who offer support and psychological reassurance. The *paraji* uses simple tools such as: scissors, cotton, alcohol, and bettadine. Her perceptions about cleanliness and sterility are based on local knowledge which often differs from the modern concept 'clean and sterile'. When a *paraji* washes her hands with a mixture of water and bettadine, she is still touching an unsterile object.

Paraji (TBA) can generally recognize the danger signs during pregnancy, labour and delivery because most have been enrolled in at least one training course supervised by doctors and *bidan* (CMW) at a *Puskesmas*. Training provides information about how to assist during parturition, what to do if a pregnancy becomes complicated, and where to turn for referral. During the household survey, each *paraji* concurred that, if a problem arises during delivery, she must refer the parturient woman to a modern health provider or *bidan*. Each *paraji* also practices under the supervision of a *bidan* and must report in a birthing journal which measures she has taken for each and every pregnancy. The supervisor, who is a *bidan*, will be the one to whom she turns in case of an emergency. The traditional *paraji* or *dukun bayi* is also responsible for transporting a pregnant woman to a *Puskesmas* if the *bidan* is not available at her private clinic. Naturally, the indigenous healer will be accompanied by a health volunteer (*kader kesehatan*) during the referral, because the *paraji* is usually an older woman probably not fluent in Bahasa Indonesia.

Childbirth

Out of habit, during the third stage or trimester of pregnancy (7–9 months), an expectant woman will begin preparing herself for the moment labour begins by eating less salty food to avoid oedema and high blood pressure. Traditionally, as already mentioned, she will eat from a small plate so the foetus will not be too large at birth, swallow a spoonful of coconut oil every morning for an easy delivery, remove the husk from a coconut shell, symbolic for the baby's head, because hair can cause severe pain, and so forth.

The *Paraji* (TBA) will be fetched when a pregnant woman signals that labour has begun. Sometimes the *paraji*'s house is quite far away, and it will take time to reach the parturient woman. However, regardless of the distance or time of day, the *paraji* will respond. During delivery, all family members remain outside the room where the woman is in labour. Relatives or neighbours will try to help in any way necessary, like bringing boiled water to sterilize the implements for delivery. The indigenous healer will always try to encourage the woman in labour, guiding her in how to control her breathing during contractions, and feeding her sweet tea to replenish her energy and calm her nerves. The *paraji* will avoid doing internal manipulations and try to deliver the baby more or less using the 'peaceful touch' of her hands. Generally, labour will take from 1 to 3 hours; a longer period of labour could signal a prolonged and difficult delivery. If this occurs, the *paraji* is expected to suggest referral to a Community Midwife (*bidan*); and if the delivery becomes uncontrollable and the baby cannot be expelled after several attempts, then the traditional *paraji* or will throw open all the windows and doors of the house as a symbol that the 'birthing door' is open for the newborn's arrival.

After delivery, the *paraji* will wait until the placenta is expelled from the womb. During this time she will clean the face, nose and mouth of the newborn to prevent it from swallowing amniotic fluid. After the placenta has been born, she will cut the umbilical cord using sterilized scissors, a razor blade or bamboo knife. The stump of the baby's naval will be tied with thread, disinfected with betadine, then bandaged using materials from her midwifery kit. A number of traditional *paraji* will use the *sirih* (*piper betle L*.) leaf to cover the baby's naval.

Later, the *paraji* will clean the newborn, wrap it tightly inside a small blanket (*di bedong*), and lay it to rest on the bed. After delivering the newborn and placenta, the mother will be massaged from head to toe and washed with lukewarm water before her waist and belly are wrapped tightly with *bebengkung* or *gurita* (a long piece of cloth). Because the placenta is understood to be the baby's sibling – they have shared the womb during pregnancy – it should be treated well. The *paraji* will place the placenta in a *pendil* (earthen bowl) *disamaraan* (spiced) with *santen* coconut milk (*Cocos nucifera Linn*.), sliced *bawang beureum* or shallot (*Allium cepa Linn*.), *koneng* or *kunyit* (turmeric, *Curcumae Domesticae Rhizoma*), sugar, salt, and tamarind. The bowl is then covered with white textile and tied with white cotton thread. The spices symbolize the sweet, salty, sour taste of life which the newborn will encounter in the future. A ritual party will be held, attended by family and neighbours, when the placenta is buried in the yard behind the house; during the next 40 nights, a member of the household will place a *cempor* (tiny kerosene lamp) above the placenta's cemetery.

Forty Days after Delivery

Between parturition and 40 days thereafter, the post-partum woman remains under the supervision of the *paraji* who will daily rub lotion (*pilis*) on the mother's forehead to improve her eyesight and relieve dizziness, and massage ointment (*tapel*) onto the skin of her abdomen to reduce stretch marks before wrapping the mother from belly to waist with a piece of *bebengkung* cloth. The wrapping will relieve stomach ache and also help firm a flabby belly. *Bobok* will be sprinkled on her arms and legs to relieve swelling, cramps, and fatigue as well as accelerate blood circulation.

Colostrums, or the mother's first breast milk, is not given to the baby because it is thought to be *cai susu bari* (spoilt milk); instead the newborn is fed water mixed with honey. The *paraji* will advise the mother to drink *jamu habis bersalin* (traditional concoction for post-partum women) prepared by the *paraji* or bought ready-made from the drugstore to quicken post-partum recovery and prevent illness. As Niehof (1992: 243) states that: "*… the baby is almost entirely dependent upon its mother's milk during the first months of its existence, the mother has to take care that her supply is sufficient and the milk is of good quality*". *Jamu* is also used to restore a woman's figure and, after 40 days, to help strengthen the new mother before she resumes her household and social duties, including sexual intercourse. During the final ceremony, usually led by a religious leader (*kiyai*), the infant's hair is cut and prayers said to Allāh.

5.4.2 Use of MAC Plants in Traditional Maternal and Child Health

Medicinal, Aromatic and Cosmetic (MAC) plants are recurrently used in traditional Maternal and Child Health (MCH), beginning when a woman confirms her pregnancy and must watch more carefully what types of food she should or should not eat. Traditionally, plants and fruits with a 'sharp' character should be avoided, such as: pineapples, chillies, jack-fruit, durian, etc.

As she reaches the end of her pregnancy, the woman is urged to take a spoon of coconut oil in order to have an easy (slippery) deliver. MAC plants are most often used after childbirth to help restore a woman's health, stamina and former figure. In particular, to eliminate the putrid odour of blood, for 40 days after parturition she will use parts of plants such as *seureuh* or betle leaves, *ketumbar* (*Coriandri Fructus*), *kunyit* (*Curcumae domesticae Rhizoma*), and *delima* (*Granati Pericarpium*).

In compliance with traditional Maternal and Child Health, the use of *jamu* is an important issue worthy of discussion. Herbal remedies can be prepared at home for personal use or bought from a *jamu gendong* vendor who makes concoctions at home and sells them door to door. Specific types of *jamu* can also be bought in shops which sell industrial products from factories such as Jamu Air Mancur, Nyonya Meneer and Jamu Djago. Traditional methods for preparing, pulverizing and boiling herbal ingredients (*jamu godok*) are still used in Javanese society. Popular traditional tools for making *jamu* can still be found in many Javanese houses: *i.e. lumpang* (small iron mortar), *pipisan* (grinder), *parut* (grater), *kuali* (clay pot), etc. The types of concoctions sold by *jamu gendong* vendors vary, depending on the knowledge and practices learned from their clients as consumer. At least basic *jamu* can be mixed together according to its function and taste: *e.g. kunir asem*, *cabe puyang*, *kunci suruh*, *beras kencur*, *pahitan* and *gula jawa*. The ethnic background of most *jamu gendong* vendors is Javanese who wear *kain-kebaya* (traditional dress) and carry a basket packed with bottles on their back. Some *jamu gendong* vendors sell *jamu* powder (sachet); therefore they also bring along a thermos bottle in which to dissolve the powder, sometimes mixed with lemon, honey, and the egg yolk from a local chicken (*telur ayam kampung*). The virtue of drinking *jamu* is usually to prevent disease and improve one's physical well-being.

Currently, one can easily buy modern ready-made *jamu* packaged as powders, pills, capsules, drink and ointments. Ready-made *jamu* preparations come in several forms: as sachets which first need to be dissolved in hot water before use, pills, and liquids. In principle, there are two types of *jamu*. The first type is used to maintain physical fitness and health; popular local *jamu* is *galian singset* (to slenderize and keep a woman's body fit) and s*ehat lelaki* (to keep a man's body healthy). The second type of *jamu* is to cure various kinds of disease. Moreover, there is also a special type of *jamu* created with the purpose to maintain a couple's harmonious sexual life. Some such popular products are: *sari rapet* which keeps a woman's sexual organs in good condition, and *kuat lelaki* (strong man) which is a similar product for men. The Javanese take great care of pregnant women during their antenatal and post-partum periods by producing specific types of *jamu*. There are also *jamu* concoctions for infants.

Hundreds of herbs suitable for *jamu* preparations are, among others: (1) spices such as *jahe* (ginger: *Zingiber Officinale*), *lempuyang* (*Zingiber Oronaticum*), *temu Lawak* (wild

ginger: *Curcuma Cautkeridza*), *kunyit* (turmeric: *Curcuma Domestica*), *kencur* (greater galingale: *Kaemferi Galanga*), *lengkuas* (ginger plant: *Elpina Galanga*), *bengle* or *panglay* (*Zingiber Bevifalium*); 2) leaves like: *secang* (*Caesalpinia Sappan Hinn*), *sambang dara* (*Rexco Ecaria Bicolar Hassk*), *brotowali* (*Tiospora Rumpii Boerl*), and *adas* (*Foeniculum Vulgare Mill*); (3) fruits like: *jeruk nipis* (calamondin: *Citrae Aurantifalia Sivingle*), *ceplukan* (*Physalic Angulata Him*), and *nyamplung* (*Calophylum Inaphyllu*); (4) bark like: *kayu manis* (cinnamon: *Gijeyzahyza Glabra*); (5) flowers like: *melati* (jasmin: *Jataninum Sunbac Ait*), and *alang-alang* (*Gramineae*) (www.JogloSemar). People continue consuming *jamu* due to its availability, low cost, and lack of side effects.

Afdhal and Welsch (1991: 149) point out: "*… how an indigenous Indonesian cottage industry emerged so rapidly from a relatively insignificant sector of the non-formal economy to become a powerful element in the Indonesian health care industry*". This development illustrates some of the complexities and paradoxes of pharmaceutical pluralism. Furthermore, they state that: "Jamu, *conceived as an indigenous element of Indonesian culture, has become an important symbol of national identity; much of its appeal lies in its association with Indonesian 'tradition'. At the same time, its ability to compete successfully on the national market is in large part due to its emulation of imported products. Modern processing, packaging and marketing are also part of the appeal of* jamu". The examples below describe the ready-made *jamu* packets for use after childbirth.

For internal use:
Jamu Bersalin I (10 sachets)
Although a number of *jamu* industries sell this kind of product, among the interesting examples for post-partum women are several concoctions (*jamu habis bersalin*) produced by Nyonya Meneer Jamu Factory. *Jamu habis bersalin* is prepared, using the time-honoured traditional Javanese process, to maintain and enhance the health and beauty of pregnant and/or post-partum women. This is an important restorative *jamu* for a body which has undergone extreme stress and contortions during pregnancy and childbirth. The Javanese people believe which, without effective post-partum care, a woman's body may not return to its former shape. *Jamu habis bersalin* can contain from 1 to 5 powders or pills for internal use as well as ointments for external application: *tapel sirih*, *tapel ratus*, *tapel sosok*, *pilis singgul*, *parem*, and *telon* oil. *Jamu* helps to purify the blood by washing out impurities. It refreshes and makes the body healthy, benefits lactation, and restores vigour after childbirth. Directions for use: Mix one sachet with 100 ml of lukewarm water, add a bit of salt and tamarind. The *jamu* must be taken 5 days after childbirth. Drink the contents of one sachet twice daily. Several ingredients are *ketumbar* (*Coriandri Fructus*), *jungrahab* (*Baeckeae Folium*), *lempuyang wangi* (*Zingiberis aromaticae Rhizoma*), *gliserin* (*Glycyrrhizae Radix*).

Jamu Bersalin II (20 sachets)
As a continuation of *Jamu Bersalin I*, this herbal mixture is effective in restoring the mother's health and vigour after childbirth. Directions for use: Mix one sachet with 100 ml of lukewarm water, add a bit of salt and tamarind. It drinks once daily for a period of 20 days.

Several ingredients are *kencur* (*Kaempferiae angustifoliae Rhizoma*), *kunyit* (*Curcumae domesticae Rhizoma*), *jungrahab* (*Baeckeae Folium*), and *gliserin* (*Glycyrrhizae Radix*).

Jamu Bersalin III (10 sachets)
This herbal mixture is a follow-up to *Jamu Bersalin II*. It helps restore the womb to its pre-pregnant state and refreshes and strengthens the body. Directions for use: Mix one sachet with 100 ml of lukewarm water, add a bit of salt and tamarind. It drinks once daily for a period of 10 days. Several ingredients are *lada* (*Piperis nigri Fructus*), *kemukus* (*Cubebae Fructus*), *majaan* (*Gallae*), and *ketumbar* (*Coriandri Fructus*).

Jamu Bersalin IV (5 sachets)
This herbal mixture is a continuance of *Jamu Bersalin III*. It helps slenderise, firm and rejuvenate the body, especially after childbirth. Directions for use: Mix one sachet with 100 ml of lukewarm water, add a bit of salt and tamarind. It drinks once daily for a period of 5 days. Several ingredients are *delima* (*Granati Pericarpium*), *kayu rapet* (*Parameriae Cortex*), *majaan* (*Gallae*), and *kencur* (*Kaempferiae angustifoliae Rhizoma*).

Jamu Bersalin V (5 sachets)
This herbal mixture is a continuation of *Jamu Bersalin IV*. It helps to reduce body fat and slenderises the body. Directions for use: Mix one sachet with 100 ml of lukewarm water, add a bit of salt and tamarind. It drinks once daily for a period of 5 days. Several ingredients are *jati belanda* (*Guazumae Folium*), *kayu secang* (*Sappan Lignum*), *kayu rapet* (*Parameriae Cortex*), and *delima* (*Granati Pericarpium*).

For external applications:
Pilis (10 sachets)
This ingredient relieves dizziness. It is good for health eyes after childbirth. Directions for use: Mix one sachet with a few drops of water. Rub on forehead every morning and afternoon after bathing. Ingredients: *jungrahab* (*Baeckeae Folium*), *bengle* (*Zingiberis purpurei Rhizoma*), *temugiring* (*Curcumae heyneanae Rhizoma*), *bunga cengkeh* (*Caryophylli Flos*), and *pulosari* (*Alyxiae Cortex*).

Tapel (10 sachets)
This herbal concoction is effective for women after childbirth. It relieves stomach ache and upset and helps firm flabby bellies. Directions for use: Mix one sachet with water, and then rub on the abdomen. Ingredients: *jungrahab* (*Baeckeae Folium*), *daun sirih* (*Piper Folium*), *temu kunci* (*Boesenbergiae Rhizoma*), *bengle* (*Zingiberis Rhizoma*), and *bunga cengkeh* (*Caryophylli Flos*).

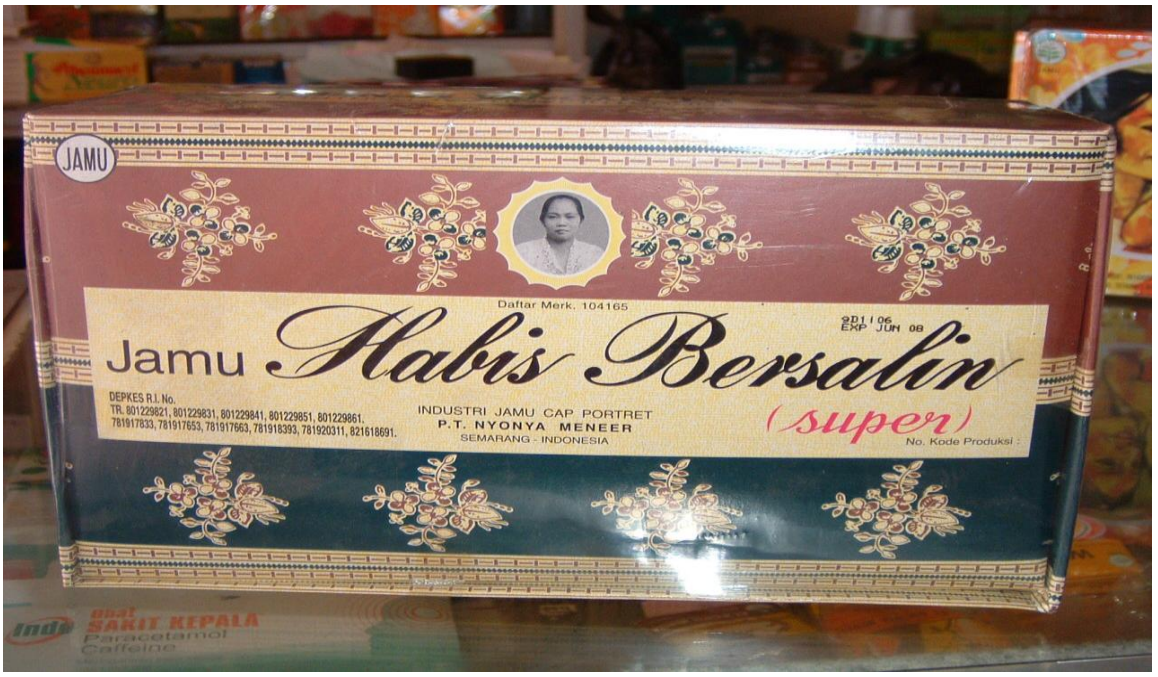


Figure 5.4 Industrial *Jamu* (*Jamu Habis Bersalin:* Cap *Potret, PT Nyonya Meneer*) for use after childbirth.
Source: Field Study (2007)

Bobok (5 pieces)
This ingredient relieves swelling, cramps, fatigue and helps to accelerate blood circulation. Directions for use: Mix one pill with a few drops of water (could be added to *gandapura* oil or lemongrass oil). Rub on feet or other painful parts of body. Ingredients: *bengle* (*Zingiberis Rhizoma*), *kayu sintok* (*Sintok Cortex*), *kencur* (*Kaempferiae Rhizoma*), *cabe jawa* (*Retrofracti Fructus*), *pala* (*Myristicae Semen*), and *tepung beras* or rice fluor (*Amylum Oryzae*).

Minyak Telon (1 bottle)
The oil will help warm the body relieve flatulence. Directions for use: Rub on the baby's stomach after bathing it. Ingredients: *minyak kayu putih* (*Oleum Cajuputi*), *minyak adas* (*Oleum Foeniculi*), and *minyak kelapa* (*Oleum Cocos*).

Moreover, various types of *Jamu Habis Bersalin* can also be bought as an ointment for external application, depending on the needs of post-partum women. Several ointments such *tapel sirih*, *tapel ratus* and *parem* are used together with a 'Javanese wrap' (*bengkung*) around the woman's abdomen and waist, consisting of *Tapel sirih*, *Tapel Ratus*, *Tapel Sosok*, and *Parem* below:

Tapel sirih: This ointment should be used 7 days after birth to expel 'winds' which may have become trapped within the womb during delivery. If the 'winds' are not expelled, it is may weaken the mother's health as well as cause her to look permanently bloated. This treatment ensures that her figure will quickly return to normal. Ingredients: *Litsiae Cortex*,

lempuyang wangi (*Zingiberis Rhizoma*), *daun sirih* (*Piperis betle Folium*), and *kencur* (*Kampferiae Rhizoma*).

Tapel Ratus: This ointment is used 30 days after childbirth. It slenderizes the stomach and smoothens the skin by reducing cellulite and stretch marks. Ingredients: *adas* (*Foeniculi Fructus*), *Saussureae Radix, kayu manis* (*Cinnamomi Fructus*), and *daun sembukan* (*Paederiae Folium*).

Tapel Sosok: This ointment is used 17 days after childbirth. Ingredients: *kayu cendana* (*Santali Lignum*), *bengle* (*Zingiberis Rhizoma*), *kayu manis* (*Cinnamomi Fructus*),and *daun sembukan* (*Paederiae Folium*).

Parem: This ointment has a soothing and curative effect when applied to swollen parts of the body. It relieves strained muscles and aids blood circulation. Ingredients: *minyak sere* (*Oleum Citronellae*), *kayu manis* (*Cinnamomi Fructus*), *kencur* (*Kaempferiae Rhizoma*), and *lempuyang wangi* (*Zingiberis Rhizoma*).

Unfortunately, indigenous knowledge about the herbal concoctions used by indigenous healers after childbirth is being forgotten since industrially produced *jamu habis bersalin* is broadly accepted by both indigenous healers and the community. Of late, *paraji* prepares her own herbal mixtures less frequently. If a woman cannot afford to buy ready-made products, then the *paraji* will help by preparing herbal concoctions. In Rancaekek *paraji* or *dukun bayi* describe about forty kinds of *jamu* (*jamu opat puluh macem*). The herbal remedies usually prepared by *paraji* are *kunyit-asem, beras kencur* which also include leaves from *suerueh* or *sirih* (betle leaves) boiled, soaked, or used raw for cleaning a woman's genitals post-partum. An indigenous healer's knowledge about herbals helps her explain and give advice on breast feeding, cleansing the blood, maternal and infant health, harmful foodstuffs to be avoided by both mother and infant.

5.5 Introduction of *Bidan* (Community Midwives)

5.5.1 *Bidan di Desa* (Community Midwives)

Health care in Indonesia includes both modern and traditional medical systems. Muzaham (1995) has stated that medical science is a discipline in which science is based on intellectual and scientific experimentation to explain causality, where diagnosis of disease means examining the history of the illness and the patient's medical record. Although both medical systems can play a part in the treatment of disease, their basic concepts differ greatly. Kalangie (1994) states that: "… *the type of illness, perceptions and treatments are diverse from one to other social groups*". The efficacy of treatments using medical and non-medical science can be judged by how they solve health problems and whether people are satisfied with the specific approach used. People accustomed to relying on Traditional Medicine will not easily switch to medical science methodologies because of a great difference in perceptions regarding social systems, culture, psychology, and economy.

Transformation of time-honoured knowledge systems is not as straightforward as simply changing skills. Time is required before new ideas, concepts and technology become part and parcel of people's lives. Foster (1973) mentions at least three obstacles blocking the way to implementation of planned programmes: *i.e.* (1) cultural barrier, (2) social barrier, and (3) psychological barrier. Learning to accept a modern medical system and then becoming willing to integrate it with long-standing traditional practices to create a complementary health package is a challenge facing most communities.

Following the principle of 'Health For All by the Year 2000', the National Health Development Programme focuses on the concept of Primary Health Care (PHC), with the *Puskesmas* (Community Health Centre) as the basic health facility, supported by a range of hospitals and other community-based health facilities. Implementation of health services in Indonesia is organised on five levels: central, provincial, district, sub-district and village. Primary Health Care at a sub-district level is provided by *Puskesmas*.

Figure 5.5 *Bidan* or Community Midwives drawing up a monthly report at the *Puskesmas* (Source: Household Survey 2005)

Organising health services within the community is essential for maternal, neonate and child health care, particularly for antenatal, perinatal and post-partum care. Instrumental for carrying out current health policies in the community are 7.243 community health centres, 21.115 sub-district health centres, and 243.783 integrated village health posts. Community participation is organized by the 'Family Welfare Empowerment' (PKK: *Pembinaan Kesejahteraan Keluarga*), with more than 1.2 million health volunteers functioning as mediator between health providers and the community. This infrastructure facilitates implementation of PHC services in communities under the responsible supervision of *Puskesmas*.

Since Maternal and Child Health (MCH) services represent the main activities at the community level, it is the *bidan* (CMW) and not doctors and nurses who make up the largest proportion of staff at *Puskesmas*. Training to become a nurse or midwife mainly takes place in specialised polytechnic schools. Training to become a nurse or midwife has undergone many changes in recent years, especially now that women are required to pass a 3-year Diploma Programme.

The *Bidan di Desa–Pegawai Tidak Tetap* (BDD–PTT) or 'Community Midwife–Temporary Employee' Programme has grown in importance, especially in view of the fact that Indonesia's Maternal (MMR) and Infant (IMR) Mortality Rates have shown a gradual decrease over the last decade. Midwifery training is aimed at young graduates from junior high school and provides a 3-year basic nursing programme followed by a 1-year midwifery training. This programme aims to ensure that trained health professionals are available at the village level. More than 54.000 *Bidan* (CMW) were deployed in rural villages during 1990–1996. Following extensive evaluation, the BDD Programme was discontinued in 1996-1997, after reaching the target. Consensus has been reached that, regardless of where trainees choose to work, either in a community hospital or *Puskesmas*, all practicing midwives must follow the same Three-Year Diploma (DIII) Programme. The Midwifery or D-III Programme began in 1996. Efforts have been made to upgrade *bidan* (CMW), either through specific in-service competency-based training, especially for intranatal care, or through part-time Diploma bridging programmes. Recent evaluations appear to suggest that efforts to increase the capacity of midwives to provide skilled care are proving successful (WHO–SEARO 2004).

The Community Midwife (*bidan*) is a skilled birth attendant competent to provide health care and assistance during and after pregnancy, labour and delivery. According to the 'Safe Motherhood Action Agenda' (1997: 31), a skilled midwife[8] meets the following criteria:

1. Ensures a clean, safe, normal delivery, without unnecessary intervention;
2. Recognizes and responds appropriately to early warning signs of complications, either by managing them if within her or his competence (*e.g.* removal of placenta, repair of perinea or vaginal tears, administration of oxytocin for uterine haemorrhage, etc.) or by prompt referral to those who can carry out necessary obstetrical/surgical interventions;
3. Listens to the woman's complaint and provides her with culturally sensitive emotional support;
4. Provides both non- and pharmacological (if available) pain relief;
5. Monitors maternal and foetal well-being throughout and immediately after delivery;
6. Ensures that the newborn breathes on its own, provides protection from hypothermia and cord infection, and initiates early breastfeeding.

In addition, the Safe Motherhood Action Agenda (1997: 31) states that: "*Ideally, skilled attendants are from the community they serve, and reside in or close to the community. As such they can play an important role in educating community members about maternal health and mobilizing resources for care and referral, if necessary. In addition, skilled attendants promote affective links within the medical system, for example by mediating between traditional health providers in the community, and physicians and other health*

personnel within the formal system". In the 1980s, The Safe Motherhood Action Agenda (1997: 32) confirms that: the Indonesian Government made a commitment to train 54.000 Community Midwives (*Bidan di Desa*: BDD) by 1996–1997. They are junior high school graduates who receive 3 years of nursing education and 1 year of midwifery training. However, the programme faced some challenges in communities where *bidan* were assigned, because the regulation to educate a community member to become *bidan* could not be achieved. It was not easy to find girls graduating from junior high school who were willing to be trained as *bidan* in an area which needed skilled birth attendants: first, because local women were usually poorly educated; second, because not every girl graduating from junior high school (which is rare) is interested in becoming a *bidan* instead of an industrial employee.

The recent Antenatal Care benchmark set for *Bidan* (CMW) is that they should be able to deal with a minimum of 7 'T's (*Timbang* = weighing; *ukur Tekanan darah* = measuring blood pressure; *ukur Tinggi fundus uteri* = measuring the height of *fundus uteri*; *imunisasi Tetanus toxoid* = tetanus toxoid immunization; *TT lengkap* = complete TT; *pemberian Tablet zat besi* = iron (Fe) tablets; *Tes terhadap penyakit menular seksual* = test for sexually transmitted diseases). During pregnancy, in theory, a woman should consult the *bidan* at least four times: once in both the first and second trimesters and twice in the third trimester including delivery. If a pregnant woman adheres to the standard recommendation of no less than four consultations, she will increase her chances of having a healthy pregnancy and safe delivery.

5.5.2 *Puskesmas* (Community Health Centre)

Managed by District Health Offices, the function of a *Puskesmas* is to provide Primary Health Care (PHC) in the community. Their services are holistic, can be integrated and are affordable for the entire community. As institution, *Puskesmas* are community health-care units set up to alleviate certain health dilemmas, such as excessive inequality in health-care management, low quality of health environment, and inadequate insight into community health issues. As community health centre, a *Puskesmas* has a high potential to generate an innovative model for basic health care. Accordingly, staff at a *Puskesmas* should be committed to developing networks within the respective community and local institutions such as: 'Family Welfare Movement' (PKK: *Pembinaan Kesejahteraan Keluarga*),'Rural Community Resilience Institution' (LKMD: *Lembaga Ketahanan Masyarakat Desa*), 'Scout Youth' (*Pramuka*), Traditional Birth Attendant (*paraji*), Community Health Volunteer (*Kader Kesehatan*), etc. As a community institution, *Puskesmas* have three functions: (1) as Centre for Health Development; (2) as Centre for Community and Household Empowerment; and (3) as Centre for Primary Health Care.

The *Puskesmas* is managed by the District Health Office (*Dinas Kesehatan*). Rancaekek has three *Puskesmas*: Rancaekek, Linggar, and Nanjung Mekar. *Puskesmas* are responsible for programmes in the following sectors: Maternal and Child Health, Family Planning, Nutrition, Environmental Health, Elimination of Infectious Diseases, Community Health, Dentistry, Opticians, Development of Traditional Medicine, and the like.

Figure 5.6 Daily Maternal and Child Health activities in a Rancaekek *Puskesmas* (Source: MPS Study 2001)

At a sub-district level, such as Rancaekek, three *Puskesmas* are operational and supported by *Pustu* (*Puskesmas Pembantu*), a satellite health service unit serving minor areas, and mobile *Puskesmas* to reach populations living in remote areas. Mobile *Puskesmas* are equipped with motorized vehicles and/or boats. A *bidan* (CMW) is assigned to each village, especially those with no health facilities. The *bidan* generally serves one village having a population of ca. 3.000. Her main duty is to stimulate individual participation through the *Posyandu* (Integrated Services Post) and group participation through the *Dasawisma* Programme which is an associated programme in which 10 neighbouring households focus on surmounting health and social problems. With regard to health problems within the *dasawisma*, referrals will be sent to a *Puskesmas* or hospital.

5.5.3 *Posyandu* (Integrated Services Post)

Posyandu is an acronym for *Pos Pelayanan Terpadu* ('Post for Integrated Services'). The idea behind *Posyandu* is serving through community participation. The *Posyandu* signifies both the event and post for integrated services, *i.e.* as major source for Maternal and Child Health (MCH) and family planning services. The post is owned and organized by the local community in partnership with PKK ('Family Welfare Empowerment'). The *Posyandu* is the location where monthly activities are conducted in 225.000 sub-villages in Indonesia each year. A *Posyandu* might be held in a villager's house, in the village community hall, or any place large enough or easily accessible to village residents.

Approximately 20% of the activities held in a *Posyandu* include immunization by *bidan* (CMW) or nurses from the Sub-District Health Centre and other types of simple medical

care; however, in other *Posyandu*, volunteer workers provide most of the services. According to Kollman (1990), *Posyandu* support five types of programmes:

(1) Nutrition: *i.e*. weighing children (<5 years of age), giving food supplements and vitamin A preparations.
(2) Maternal and Child Care: *i.e.* antenatal care for pregnant women and TT immunizations.
(3) Family Planning: *i.e.* recruitment of Family Planning participants and distribution of contraceptives.
(4) Immunisation Programme for Children <5 years: *i.e.* polio, chicken-pox, BCG and DPT immunisations.
(5) Diarrhoea Control: *i.e.* distribution of oral rehydrated solution.

Posyandu activities are organised around the 'five-table system'; the specific functions performed at each table are the same throughout Indonesia: at Table 1 children are registered; at Table 2 children are weighed; at Table 3 results are recorded in the child's Growth Chart by a health volunteer; at Table 4 information about the baby's development is provided (*i.e*: better nutrition, oral rehydration, immunization, breastfeeding, and/or postponing the birth of a subsequent child); and at Table 5 medical treatment and supplementary foodstuffs are supplied.

Family Planning clients follow a similar trajectory. A (potential) user of contraceptives first registers at Table 1 before proceeding to Table 4 (information and motivation) to discuss her personal concerns with a health volunteer: *e.g.* (potential) interest in the use of contraceptives, problems encountered when using contraceptives, need to change the method of contraception. If the woman is new to family planning or if she has problems outside the volunteer worker's ability to help, she will be referred to Table 5 where she will meet a Government health official, usually a trained *bidan* (CMW). When a woman suffers serious health problems, or needs a contraceptive method which is not provided at the *Posyandu*, the *bidan* will refer her to the sub-district Community Health Centre (*Puskesmas*) or to the nearest urban hospital. In many cases, staff at a *Posyandu* will provide pills, intrauterine devices (IUD) and contraceptive implants as well as other easier to use methods for contraception.

The *Posyandu* functions under the auspices of health or community volunteers. Health volunteers meet both before and after monthly gatherings to make preparations and to evaluate what has taken place. Beforehand they establish their family planning agenda, with regard to time, location, and broad objectives. The health volunteers meet 3 days before an event to decide which women and children should receive special attention and who will take that responsibility, as well as who will be in charge of providing supplementary nutrition to the children. Two days before a gathering, community health volunteers go house-to-house to encourage neighbours to attend. The day before the *Posyandu* gathering, the health volunteers check that all equipment and provisions are already in place. After the event, they meet to evaluate their achievements and prepare data to report to higher levels.

Kader Kesehatan (Community Health Volunteer)

Health Volunteers are community members who help *Puskesmas* communicate with and spread information to the community at large about health programmes. This is an example of public participation in government programmes by members of the community. According to the Alma-Ata Declaration (1978), public participation is: "… *for developing countries, the most realistic solution for attaining total population coverage with essential health care is to employ community health workers who can be trained in a short to perform specific tasks. They may be required to carry out a wide range of health care activities, or, alternatively, their functions may be restricted to certain aspects of health care, the total range being provided by a team of health workers, each performing a specific group of tasks. In many societies, it is advantageous if these health workers come from the community in which they live and are chosen by it, so that they have its support*".

Figure 5.7 *Kader Kesehatan* (volunteer) weighing a baby at a *Posyandu*.
Source: Frontiers for Health

With regard to pregnancy and childbirth programmes, almost all health volunteers are women who are willing in their spare time to help the community improve health conditions. Health volunteers who are generally responsible for coordinating monthly *Posyandu* activities receive no salary as compensation, even for transportation. This does not deter them because, as active members of the community, they are interested in increasing their own knowledge about health issues, even without reimbursement. Sometimes a health volunteer will received a gift of appreciation from people they have helped. The religious background of all the health volunteers is Islamic, so they believe that doing something beneficial for others will be rewarded by Allāh (*pahala*).

In Rancaekek sub-district, 50 individuals are listed as health volunteers; however, since Government programmes are cross-departmental, some volunteers will also be involved in

other Government programmes on agriculture and education. In comparison, the BKKBN Programme also has its own community volunteer's or rather salaried BKKBN employees. Since there is great affinity between reproductive health and family planning programmes, sometimes health and family planning volunteers cooperate through *Puskesmas*, for instance when spreading information about 'Making Pregnancy Safer' (MPS) and 'Bureau of Mother and Child Welfare' (BKIA) Programmes.

The role of a health volunteer is to motivate and facilitate community participation in order to spread knowledge and change perceptions about pregnancy, childbirth and post-partum care. The health volunteer communicates ideas and information from the *Puskesmas* to the target group, especially to pregnant women, their families and community. The health volunteer's status is as intermediary between the health institution and the public. Every *Puskesmas* in Rancaekek has about ca. 14–18 health volunteers, depending on the number of people who have their roots in the villages where they work. Health volunteers are capable mediators between the community, including traditional *paraji*, and *Puskesmas* because they share the same social, cultural, economic and geographical background and speak the same language (Sundanese).

Rancaekek's population is multi-ethnic because the industrial area has attracted people from far and wide seeking employment as well as provides settlements for government employees. While many of Rancaekek's inhabitants have achieved a higher level of education, families in agricultural areas remain poorly educated. Health volunteers therefore play an essential role in helping to educate and motivate low-income less-educated families in order to help improve conditions for 'Safe Motherhood'.

5.6 Cooperation between *Paraji* and *Bidan*

5.6.1 Role of *Paraji* and *Bidan* in Community Service

Helping young and newly trained *bidan* (CMW) adapt to living in a different community, with specific traditions surrounding pregnancy and childbirth and with different social and cultural conditions, demands. Because many *bidan* do not even speak the community's dialect, bridging the communication gap often proves problematic. A young *bidan* will encounter community distrust because of her lack of experience in managing pregnancy and childbirth. She will need time to adapt to the new environment to which she is assigned. Few *bidan* have remained at their post to successfully fulfil their duties, while many others have eventually thrown in the towel and returned to their own villages or moved to urban areas to open their own midwifery practice. Even while continuing their practices, most *bidan* have chosen to move out of their rental houses. In some areas, shocking stories have emerged about how a dedicated *bidan* was robed and raped while on her way to help a parturient woman give birth during the night.

Bidan (CMW) are government employees required to be on duty in *Puskesmas* from Monday to Friday (08:00–16:00 h). Twenty *bidan* work in Rancaekek's three *Puskesmas*: *i.e*. eight in Rancaekek, seven in Nanjung Mekar, and five in Linggar. Most *bidan* run a private practice after office hours, generally located in their own house, which provides services including antenatal examinations as well as assisting during labour and delivery.

While some *bidan* are willing to make house calls, most prefer to examine their clients at their private practice. Some *bidan* even fetch pregnant woman by car to avoid the problem of transportation.

Because the government stipulates that every pregnant women has the right to be attend by a skilled practitioner during labour and delivery, a Community Midwife (*bidan*) is required to attend a Traditional Birth Attendant (TBA: *paraji* or *dukun bayi*) during delivery. Both *bidan* and *paraji* perform similar tasks for pregnant and perinatal women, although the *paraji* is neither allowed nor competent to repair tears in the perineum or vagina nor to administer oxytocin injections for uterine haemorrhage.

Figure 5.8 *Paraji* massaging a pregnant woman to stimulate psychological serenity and relaxation
(Household Survey 2005)

5.6.2 Training *Paraji* in Maternal and Child Health Care

Paraji (TBA) are frequently trained and taught at *Puskesmas* how to recognise the signs which forewarn a risky pregnancy or childbirth in order to safeguard the life expectancy of mother and newborn. Therefore, one component of a Maternal and Child Health (MCH) system is to delegate *paraji* or *dukun bayi* as mediator in the community where a modern health-care system has been established. The public's preference for *paraji* for antenatal, perinatal and post-partum care is based on the following: (a) a *paraji* imparts a feeling of being in trustworthy hands; (b) the *paraji*'s equipment is sterilized (after the training); (c) a *paraji* is available any time of day; (d) a *paraji* visits her client's home; (e) a *paraji* feels familiar; (f) a *paraji* is approachable like a family member; (g) support can be obtained

from the Government's 'Social Safety Net–Health Department' Programme (JPS–BK: *Jaring Pengaman Sosial–Bidang Kesehatan*).

***Paraji* (*Dukun Bayi*) or Traditional Birth Attendant**	***Bidan di Desa* or Community Midwife**
1. The *paraji* visits her client during and after parturition.	1. The client herself must choose to seek help at the health-care facility.
2. Treatment is based on tradition. While differing somewhat from modern methods, it is accepted by the client and her family because the *paraji* can explain her actions.	2. Health care provided during pregnancy and childbirth must follow stringent regulations based on Western medical science, which is not easily understood by the client.
3. Information about an illness includes both medical (biological and psychological) and spiritual aspects. Therefore, any treatment given will also be directed at healing both the body and mind, and have its roots in beliefs held by the local community.	3. Information provided addresses only medical, not spiritual, problems. Therefore, modern health care frequently fails to fulfil a client's expectations.
4. The *paraji* will not only inquire about illness-related conditions but also discuss and provide information about experiences outside the illness.	4. Any discussion is limited to actual health issues.
5. The *paraji*'s approach is based on her daily relationship with her client and the family. Their bond extends beyond time and the actual issue of health.	5. The midwife's approach remains professional, whether they have had one or many meetings. Relatively distance to the facility plays a part.
6. The client can seek help from the *paraji* at any time both day and night.	6. The medical facility is only opened during regular hours, and people do not dare to ask for help outside the scheduled times.
7. A client is not only a biologi*cal ma*chine and will require spiritual care and friendship when trying to cope with a problem.	7. A client, whether physically or mentally suffering, is merely viewed as a sick individual who needs to be cured.

Figure 5.9 Comparison between *Paraji* (TBA) and Community Midwife (*bidan*) (Source: Zakaria 1989)

Furthermore, Zakaria (1989) reminds us that any attempt to improve Maternal and Child Health (MCH) services, as shown by training *paraji* (TBA), is not aimed at eradicating indigenous healers in favour of modern certified community midwives. Training *paraji* in fact illustrates the recognition and support of traditional alongside modern MCH systems, especially in areas where modern medical care is rare. Moreover, because of their training, *paraji* are now considered to be a close substitute for *bidan* (CMW) when a modern medical system is not in place. In his study, Zakaria (1989) makes a comparison between the activities of *bidan* and *paraji* during ante-peri and post-partum care.

5.6.3 Towards Partnerships between *Paraji* and *Bidan*

The term 'partnership' (*kemitraan*) in the context of Maternal and Child Health means the relationship between *Paraji* (TBA) and *Bidan* (CMW) who strive for a common goal: *i.e.* safe pregnancy and childbirth for the mother and her offspring as well as adequate post-natal/post-partum care. Moreover, there is a need for indigenous healers who are part of the community and who can advise households about health in general and women's health in particular. Encouraging *paraji* and *bidan* to work as partners is very important. There has

always been some friction between *bidan* and *paraji* as to their respective roles in MCH care, and their working relationships have often proved problematic.

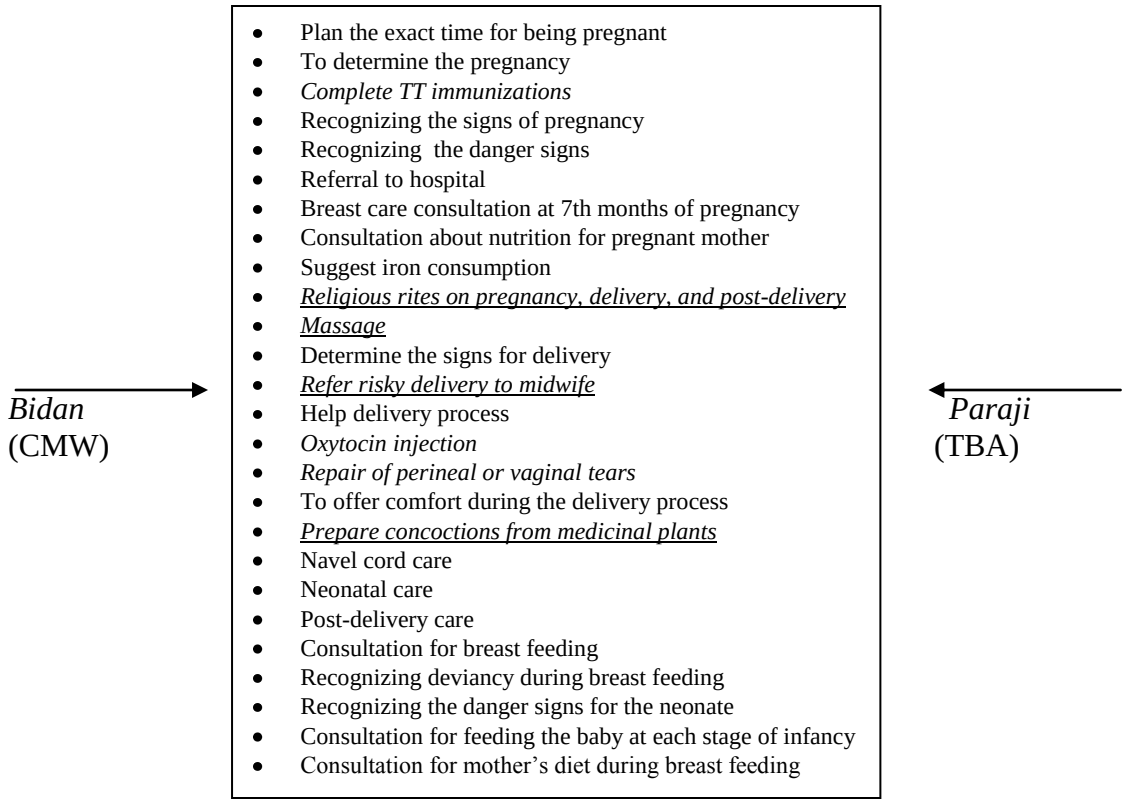


Figure 5.10 List of services provided by *Paraji* (TBA) or *Bidan* (CMW). Note: *Italicized* words concern *bidan* while *underscored italicized* words relate to *paraji*. (Source: Ambaretnani in Making Pregnancy Safer Annual Report 2001)

As member of the community, the *paraji* is normally one of the first people to hear that a woman in her neighbourhood is pregnant. It will be the *paraji* who offers advice to a pregnant woman about nutrition, taboos, and religious incantations, massage, breast feeding, bathing the newborn, rituals for specific periods of pregnancy, preparation of *jamu* concoctions, etc. In contrast, the relationship between the *bidan* and her client will remain more formal. It is the woman herself who must approach the *bidan* to register at a *Puskesmas* or private clinic where a logbook will be kept about her pregnancy.

Figure 5.10 shows the ante-, peri- and post-natal/post-partum services provided which relate to the tasks carried out by *paraji* (TBA) and *Bidan* (CMW). One can see that both the *bidan* and *paraji* provide almost similar antenatal, perinatal and post-partum services, except for TT immunization, repair of the perinea or vaginal tears; as mentioned before oxytocin injections during delivery which must be given by a skilled midwife.

A *paraji* (TBA) is most often an older local woman who has continued to live in the community in which she was raised. Therefore, she shares a similar socio-cultural background with other members of the community. Because she is experienced in helping

women in the community during pregnancy and childbirth, she is trusted by both young and older generations, especially those individuals whom she has helped in the past. People used to believe that *paraji* have spiritual powers for guaranteeing a safe delivery.

Figure 5.11 Partnership between a *paraji* (TBA) and *bidan* (CMW) preparing a woman for childbirth.
(Source: Making Pregnancy Safer Report 2001)

A *paraji* can express her extensive indigenous knowledge during traditional, or religious, ceremonies which are embedded in the local culture. This example illustrates clearly that both *Bidan* (CMW) and *paraji* (TBA) have their own particular, but sometimes similar, niche in the midwifery system. The *bidan* carries out responsibilities which require her to be a more competent and medically skilled health provider, while the *paraji* offers support, especially psychological, through the expression of traditional beliefs related to pregnancy, childbirth and post-partum care.

Their common objective is to provide effective health services to local communities. Today there is a stronger sense of partnership at the village level in terms of providing care for pregnant women, women in labour or giving birth, and both mothers and their newborns. The community regards the cost of childbirth assisted by a *paraji* relatively inexpensive compare to the cost of services offered by a government-employed *bidan*. It is common for a *paraji* to dedicate herself to helping women through childbirth without seeking payment. The compassion a pregnant woman feels for her *paraji* is undeniable and rooted in their shared background, language, common habits, and informal interaction. Normally, after childbirth, the woman's family will offer the *paraji* some form of gratitude

such as money or payment in kind (*e.g.* chickens, vegetables or other agricultural products). In contrast, a *bidan* receives a fixed fee for her services, although some *bidan* are quiet sensitive to a family's financial situation and allow payment in instalments.

The *paraji* (TBA) role during pregnancy, labour and delivery is associated with the community's social and cultural life. The concept of 'three delays' demonstrates the problem of postponement with regard to MCH-seeking behaviour of the woman's family, the community as well as the *paraji*. The consequence is that the community and *paraji* must therefore assume responsibility for the health of the mother and her offspring. Forming partnerships is one solution to reduce maternal and infant mortality. This approach should prove to be advantageous in remote areas with limited access to formal health facilities.

Once each month, one of the three *Puskesmas* in Rancaekek organise gatherings where *paraji* (TBA) and *bidan* (CMW) can share their experiences. At such a gathering, the *paraji* will report all her MCH activities during the past month, and then the *bidan* will do the same. The *bidan* will also share her knowledge on relevant issues and sometimes invite *paraji* to accompany her to a delivery. The aim of such meetings is to try to stimulate a two-way discussion between *paraji* and *bidan* and then sort out the similarities and differences between them.

In the field of midwifery, a new approach has been introduced called *asuhan kebidanan* or midwifery nurturing. The new approach applies the functions and activities which are part of the Community Midwife's (*bidan*) responsibility in providing professional health care to pregnant clients. Midwifery nurturing is based on the principle of expressing concern, empathy, understanding, compassion, and care for a woman during her pregnancy, delivery and post-partum periods. The *asuhan kebidanan* activities are adjusted according to the authority of the *bidan*, such as midwifery science, observation of the socio-cultural-based environment, psychological, emotional, and interpersonal relationships for improvement of MCH services. The *asuhan kebidanan* approach leads to partnerships and collaboration with women at a reproductive age. In reality, this new approach imitated the method used by *paraji* when providing their services to woman during pregnancy, delivery and post-partum care. On this basis, the formation of partnerships between *paraji* and *bidan* is unavoidable because they each share common objectives and can carry out tasks necessary to provide a safe and healthy condition for mother and her offspring during and after pregnancy.

Notes

1. *Kedukunan* is knowledge based on beliefs and inter-relationships with supernatural powers, spiritualism, religion, and tradition.
2. The word *gendong* means to 'carry on the back'. Early each morning well before dawn the *jamu gendong* vendor prepares several litres of three or four different types of *jamu* in her

home, having purchased the ingredients from a local market. She measures out the plant materials, grinds them using a stone mortar and pestle, mixes them with water, and pours them into empty plastic bottles, puts the bottles into a large round bamboo basket, hoists the basket on to her back and sets off on her regular route.

3. TOGA is an acronym of *Taman Obat Keluarga*, literary referring to a 'Family Garden for Medicine'. It is associated with the term *Taman Gizi Keluarga* which indicates a 'Garden for Food for the Family'. In general, the practical use of plant material, and in particular that of medical plants, is widely believed among the population to offer several advantages over the use of chemical components (Slikkerveer and Slikkerveer 1995).
4. Alisjahbana's study in Tanjungsari, Sumedang, West Java, involved *paraji* (TBA) in charge in *Polindes* as partners of community midwives. *Polindes* is an acronym for *Pondok Bersalin Desa* or birthing home. A birthing home is a house where women can receive pregnancy and delivery services by *paraji* (TBA) under the supervision of community midwives.
5. Misoprostol (tablet *PAS Bayi*) is given as tablet to avoid or terminate bleeding during childbirth. It was introduced in a pilot project in Bale Endah, a sub-district in Bandung. A woman who is giving birth should take 4 tablets exactly after the baby's delivery and before the placenta is born.
6. Mediation can be defined as a course of action by which an actor, here called 'mediator', tries to establish communication between two parties who are unable to communicate satisfactorily in a direct way. Such communication can take several forms. The importance of the mediator depends on the respective parties' need for communication. The results of mediation will depend on the mediator's personal qualities and social position as well as on the culturally and socially defined requirements with respect to the mediating role concerned and the circumstances in which mediation takes place.
7. Aids from UNICEF (a portable aluminium box, easy to take along, containing mercurochrome, gauze bandages, soap, alcohol, cotton, scissors, rubber sheeting, bend-bowl, bowl, hand brush, soap can, hand cleaner, and pin set).
8. In the context of midwifery, therefore, 'skilled' implies the ability to provide competent care and assistance during pregnancy, childbirth, and the post-partum period. A skilled birth attendant can be midwife, a nurse with additional midwifery education, or a physician with appropriate training and experience, but does not include Traditional Birth Attendants (*paraji*), according to the definition now being used by WHO (Safe Motherhood Action Agenda 1997: 29).

Chapter VI RANCAEKEK COMMUNITY

6.1. Bandung and Rancaekek Sub-District

Chapter VI first describes Bandung in a broader context, since Rancaekek is one of its 43 sub-districts (*kecamatan*). Rancaekek, the setting for this research, is located between Bandung Municipality and Cicalengka District. Discussion will focus on the demographics for Rancaekek, on the educational and occupational backgrounds of its inhabitants.

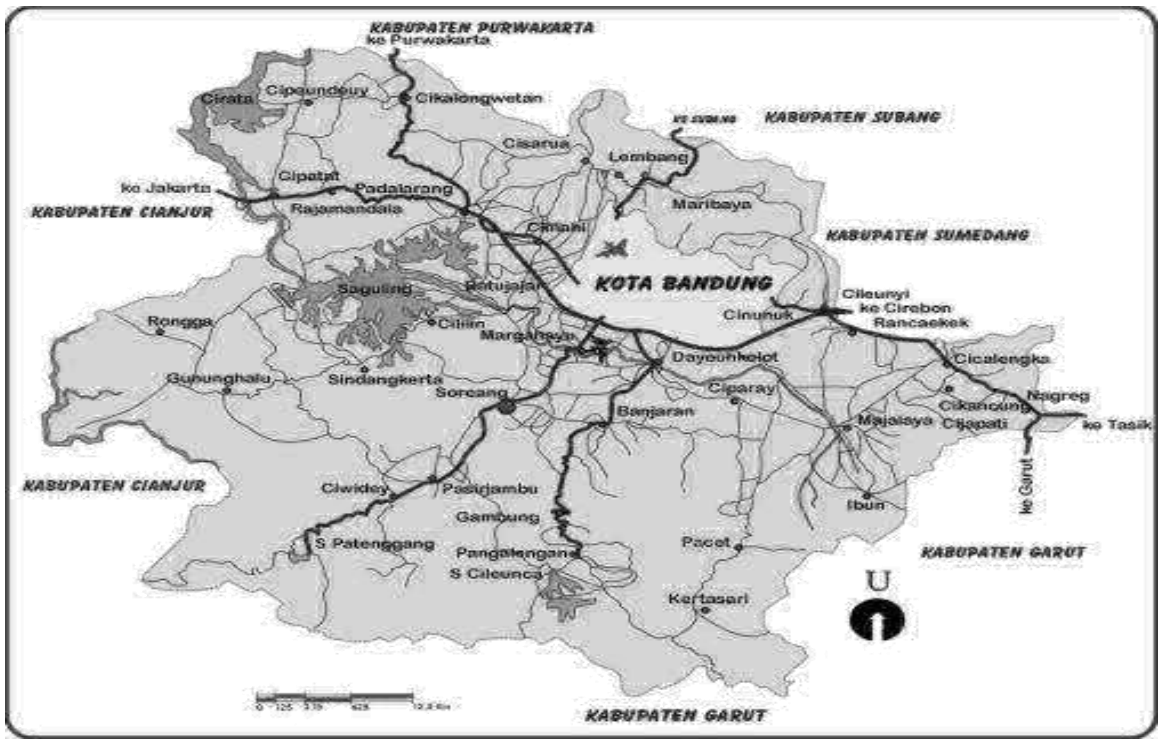
Bandung is both a Municipality (*kotamadya*) and Regency or district (*kabupaten*). Bandung Municipality is the capital of West Java Province and the fourth largest city in Indonesia. Located 768 m (2.520 feet) above sea level, Bandung has a relatively cooler year-around temperature than most other Indonesian cities. The topology of Bandung, which lies in a river basin surrounded by volcanic mountains, provides the city with a good natural defence, which made the city a particularly attractive choice when the Dutch East Indies Government decided to relocate the colony's capital from Batavia to Bandung.

In the 18th century, the Dutch established tea plantations in the mountainous areas surrounding Bandung. In order to give the planters access to the capital city Bandung (180 km or 112 miles to the northwest), a supply road was built in 1786 to connect Batavia (now Jakarta), Bogor, Cianjur, Bandung, Sumedang and Cirebon. In 1809, Louis Napoleon, then 'King of Holland' and its colonies, ordered the Dutch East Indies Governor-General H.W. Daendels to reinforce Java's systems of defence against the British who at that time held sway in India. Daendels built a road, ca. 1.000 km (621 miles) long, stretching across Java from the west to east coast. In 1810, construction brought the road through Bandung; it was named the Main Postal Road (*De Groote Postweg*) and is currently called *Jalan Asia–Afrika*. Europeans living there demanded that the city be made a municipality (*gemeente*), which was granted in 1906. Bandung with its luxurious hotels, restaurants, cafes and European shops gradually became a resort for the plantation owners and was dubbed the 'Paris van Java'. In 1880, the first major railroad was built between Batavia and Bandung, which helped boost light industry in Bandung. The city which had been made a municipality (*gemeente*) in 1906 later gained the status of *stadsgemeente* (city municipality) in 1926.

As stated above, Bandung's location was the primary reason why, in the early 1920s, the Dutch East Indies Government planned to relocate the capital of the Dutch East Indies Colony from Batavia to Bandung. Accordingly, during the 1920s, the Dutch Colonial Government started construction on military barracks and various buildings to house the Central Government (*Gouvernments Bedrijven*, the present-day *Gedung Sate*) and other governmental departments. Further plans were cut short, however, by World War II after which the Dutch were unable to re-establish their colony.

6.1.1 Demographics for Rancaekek

After Indonesia gained its independence on 17 August 1945, Bandung experienced a rapid population explosion as migration and urbanization transformed the city Bandung from a pleasant town to a densely populated area with 15.000 inhabitants per square kilometre. Natural resources were being excessively exploited, in particular when the protected highlands were razed to make room for modern villas and real estate. Although today Bandung must tackle a number of issues involving water resources, waste disposal, flooding and a chaotic traffic system, the city still maintains its charm and continues to attract tourists or people looking for a pleasant place to spend their leisure hours. Businesses have developed shopping centres and factory outlets (garment and beverage) to attract domestic tourists to Bandung Municipality, especially in Jakarta.



Map 6.1 Geographical Layout of the Bandung Municipality and Region
Source: Website *Resmi Kabupaten Bandung*

Bandung District (*Kabupaten*) covers 176.239 hectares and has 4.059.664 inhabitants. Its population is 98.12% Muslim (3.983.409), 0.66% Christian (26.831), 0.98% Catholic (39.609), 0.12% Hindu (4.806) and 0.12% Buddhist (5.009). The life expectancy in Bandung District is 66.96 years. Bandung District shares its borders with five other districts: Bandung Barat District to the north and west, Sumedang and Garut Districts to the east, and Garut and Cianjur Districts to the south. This mountainous region has several high peaks (*gunung*): *e.g*. Bukittunggul (2.200 m) and Tangkubanparahu (2.076 m) to the north, Patuha (2.334 m), Malabar (2.321 m), Papandayan (2.262 m), and Guntur (2.249 m) to the south.

Rancaekek is one of 43 sub-districts (*kecamatan*), with 266 villages (*desa*), in Bandung District and covers an area of 4.604 hectares. Geographically, Rancaekek is located 500–700 m above sea level on the Bandung plateau. The yearly rainfall is 1.500–2.500 mm, and the temperature ranges between 18°C and 24°C. Rancaekek borders on Sumedang District in the north, Solokan Jeruk Sub-District in the south, Cicalengka Sub-District in the east and Cileunyi Sub-District in the west.

Table 6.1 Villages in Rancaekek Sub-District

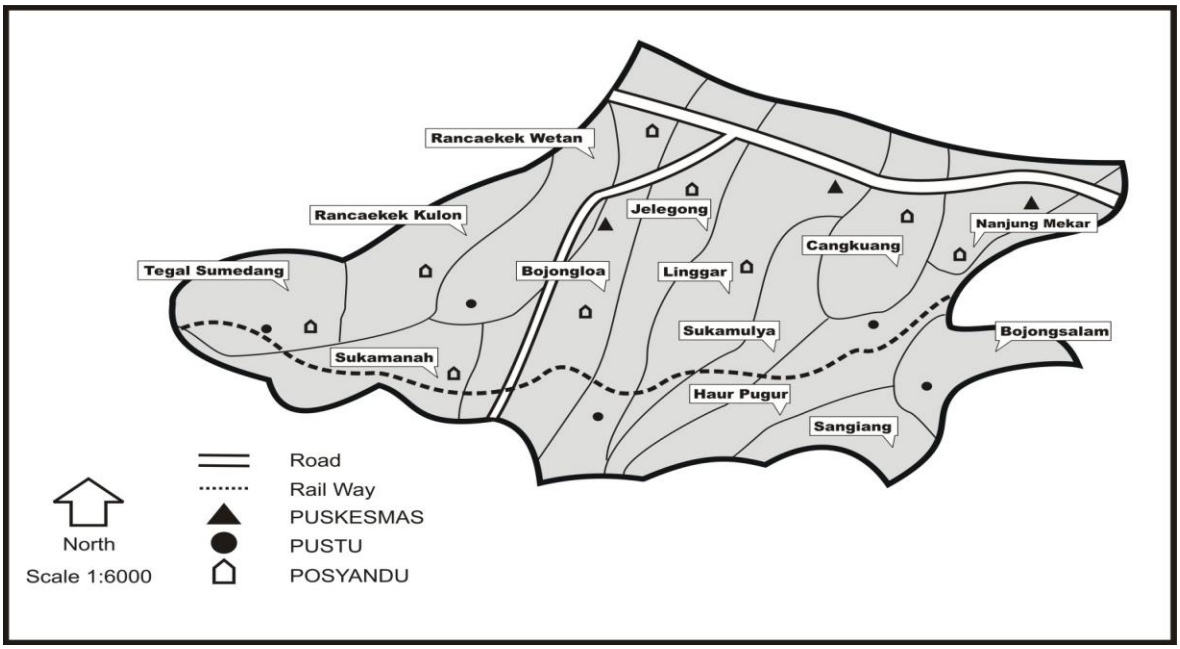
Number	Working Area/Village	*Rukun Warga* (RW/Neighbourhood)	*Rukun Tetangga* (RT/Hamlet)
1	Rancaekek Wetan	34	214
2	Rancaekek Kulon	12	54
3	Bojongloa	21	84
4	Sukamanah	10	41
5	Tegal Sumedang	5	16
6	Jelegong	20	75
7	Linggar	10	42
8	Sukamulya	10	41
9	Cangkuang	12	48
10	Nanjung Mekar	12	42
11	Haurpugur	6	28
12	Bojong Salam	7	25
13	Sangiang	7	27
	Total	166	737

Source: Household Survey (2005)

The distance from Rancaekek to Bandung City is 24 km. Before the Government adopted a policy to locate a modern industrial sector long the main road towards the eastern part of Java, the land was fertile and used to cultivate rice. One side of the road lies in Sumedang District and the other side in Rancaekek Sub-District. In 2000, the site of an ancient temple was unearthed in Kampung Bojong Menje, Cangkuang village, which will become an object for historical study and tourism in the near future.

The population growth in Rancaekek is relatively high due to the huge inflow of migrants seeking work in industry. The number of settlements is increasing rapidly to meet public demand for housing. During the rainy season, eight villages – Rancaekek Wetan, Rancaekek Kulon, Bojongloa, Linggar, Bojongsalam, Cangkuang, Sukamulya and Haurpugur – in the Rancaekek sub-district are regularly inundated by flood waters. Thousands (ca. 11.000) of houses are usually damaged when water (50–150 cm) from the Cikijing, Cimande, and Cikeruh rivers overflow its banks. The most serious flooding generally occurs in Bojongloa and Linggar, leaving the villagers in need of food, clean water, clothes and medical aid. In addition, 355 hectares of rice fields are usually submerged by flood waters.

In the vicinity of Rancaekek, ca. 217 industries are responsible for polluting the rivers, *e.g.* the Citarum River which drains into Jakarta Bay. Pollution is the result of inadequate industrial waste management where company policies have failed to address the problem of waste disposal and permit polluted water to empty into open waterways. Data show that, in the Rancaekek sub-district, hundreds of hectares of rice fields in four villages contain chemical pollutants and heavy metals (B3). Pollution has caused a reduction in quality and quantity of rice production because farmers in the area irrigate their rice fields with water from the Cikijing River.



Map 6.2 Geographical Layout of the Rancaekek Sub-District
Source: Household Survey (2005)

Data from the Research for Soil Development and Agroclimate (2001)[1] show that the soil in Rancaekek rice fields contains high concentrations of sodium (2.03–12.97 me Na/100 g soil). In comparison, when not polluted by waste from the textile industry, the sodium level is only 0.42 me Na/100 g soil. Moreover, Rancaekek's agricultural land is also polluted by heavy metals: mercury (Hg), cadmium (Cd), chromium (Cr), copper (Cu), cobalt (Co) and zinc (Zn). Rice fields in the villages Linggar, Bojong Loa and Jelegong are also polluted by toxic water. Although the public complains about the stench of the befouled rivers in Rancaekek, until a solution is found to regulate clean water, pollution will continue to be not only an annoyance but more importantly a health hazard to the community. A Memorandum of Understanding (MoU No. 660.3/631/I/2002) has been jointly signed by the Government, factories and representative of the community.

Factories in Rancaekek generally produce garments and textiles, *i.e.* industries which prefer to hire women for their patient, gentle touch for sewing, knitting, ironing and quality control. According to gender stereotyping, factories in Rancaekek tend to hire female migrants because they are also more obedient compared to their male counterparts. In

contrast, male labour workers are needed for heavy labour, *e.g.* packing, loading and unloading large shipping containers.

Table 6.2 List of Factories in Rancaekek

Name of Factories/Manufactures	Kind of Product
Dewhirst Menswear	Garment
PT Sunson Textile Manufacturer	Textile
Kahatex	Textile
Aisha Textile, Hashmani Industries	Textile
Bitratex Industries, Polychem Industry TBK	Textile
PT Five Stars Textile	Textile
Delami Garment	Garment
Insan Sandang Inter Nusa Textile Industries	Textile
Mardira Indonesia Garment Industries FTY	Garment
Natatex Prima	Textile
PT Jatayu Tex	Textile
CV Wiska Tex	Textile
Warranty Industries (M) SDN. BHD	Fabric Elastic
Mercutama Nusa Textile Mills	Textile
Seno Makmur Industri	Textile
Dwipapuri Abadi	Footwear
Elcon Finlease and Industries Ltd.	Broker
Wa-Betsy Industrial Co.	Textile Machinery
PT Kewalram Indonesia	Synthetic Yarn
Poly Fibre Industry	Polyester
Nagasahi Parama Shoes Industry	Shoes
Java Industry	Technology for Wireless
Atlas Mustika Industries	Rubber
PT Sekawan	Machinery Supplier
PT Bara Multi Metalika	Metal
PT Multibrata Anugrah Utama	Contractor
PT Gas Industry	Oil and Gas Supplier
PT Gracia Pharmindo	Pharmacy
PT Roda Cipta Semesta	Corporate Advisory Solutions
PT Adira Semesta Industry	Broad weaves Fabric Mills – Cotton
PT Setia Kijireed Industry	Textile Machinery Supplier
Bara Multi Metalika	Coal Industry
Yamatogomu	Rubber Industry

Source: Household Survey (2005)

Factory labour workers are either native to Rancaekek or come from outlying areas such as West and Central Java or even other Indonesian islands. The population distribution in Rancaekek shows that women (32.814) outnumber men (31.138) in the productive age

group from 22 to 55 years (Table 6.3); this population distribution relates to the area's economic function seen on a regional map.

Table 6.3 Population Distribution by Age and Gender in Rancaekek (2002)

Variable	Male		Female		Total	
Age group	*N*	%	*N*	%	*N*	%
0 – 6	5.479	8.8	6.174	9.0	11.653	8.9
7 – 14	7.865	12.6	8.189	11.9	16.054	12.2
15 – 21	7.283	11.7	7.754	11.3	15.037	11.5
22 – 28	6.022	9.6	6.378	9.3	12.400	9.4
29 – 35	8.368	13.4	8.594	12.5	16.962	12.9
36 – 41	5.586	8.9	6.125	8.9	11.711	8.9
42 – 48	5.617	8.1	5.971	8.7	11.588	8.8
49 – 55	5.545	8.9	5.746	8.3	11.291	8.6
56 – 62	3.922	6.3	4.258	6.2	8.180	6.2
63 – 69	2.657	4.3	5.506	8.0	8.163	6.2
70 – 76	2.451	3.9	2.587	3.8	5.038	3.8
> 77	1.620	2.6	1.593	2.3	3.213	2.5
Total	62.415	100.0	68.875	100.0	131.290	100.0

Source: Form of Population and Manpower, Rancaekek Sub-District (2002)

In the research setting, which is an industrial zone in West Java; women generally enter the labour market at a productive age. People living in village neighbourhoods near the main road where factories are located usually work there. Several such villages are Rancaekek Wetan, Rancaekek Kulon, Jelegong, Linggar, Cangkuang, Nanjung Mekar and Bojongloa, although not all areas of these villages are near the main road. In contrast, Tegal Sumedang, Haurpugur and Sangiang are geographically remote settlements and agricultural areas. Classification of villages in the study area which is discussed in Chapter III with regard to the implementation of several health programmes. Villages are labelled 'A' for much developed (*maju*), 'B' for moderately developed (*sedang*) and 'C' for less developed (*tertinggal*). As discussed in Chapter III, the villages in the Rancaekek sub-district are: Rancaekek Wetan (A), Rancaekek Kulon (A), Bojong Loa (A/B), Tegal Sumedang (C), Sangiang (C), Bojongsalam (B), Haurpugur (B/C), Cangkuang (B), Linggar (B), Nanjung Mekar (B), Sukamulya (B), Sukamanah (B) and Jelegong (A/B).

6.1.2 Education and Occupation

From the data for 2002 shows that in Rancaekek, only 55.47% of the population (72.832 of 131.290) has received an education. In 1994, when Indonesia declared that 9 years of schooling was compulsory, the number of younger people enrolling in junior high schools was greater than ever before. Table 6.4 shows that, while more young people are enrolling in junior high school, fewer students are continuing on to senior high school. The table also

shows that too few people are going on to study at institutes of higher learning. One explanation for the increase in dropouts from senior high school is that factories in Rancaekek employ young people directly after graduation from junior high school (*cf.* Table 4.3).

Table 6.4 Formal Education of the Population in Rancaekek

Variable	Gender		Total
Education level	Male	Female	
Incomplete Elementary School	6.374	5.990	12.364
Elementary School	9.265	10.963	20.228
Junior High School	10.136	10.577	20.713
Senior High School	5.748	5.345	11.093
Diplomas I/II	1.433	1.735	3.168
Academy/Diplomas III	1.283	1.389	2.672
University	1.231	1.363	2.594
Total	35.470	37.362	72.832

Source: Form of Population and Manpower, Rancaekek Sub-District (2002)

Industrialization in Rancaekek is also attracting more highly educated people from outside the sub-district who are looking for employment in nearby industries. Geographically Rancaekek is not so far from Jatinangor in the district of Sumedang where several large universities are located: *Universitas Padjadjaran* (UNPAD), *Sekolah Tinggi Pemerintahan Dalam Negeri* (STPDN), *Institute Technology Bandung* (ITB), and *Institute Koperasi Indonesia* (IKOPIN). Housing settlements are being built in Rancaekek to accommodate lecturers, government officials, employees, and even students. Unfortunately, regardless of its proximity, graduates from Rancaekek senior high schools are not always accepted at the nearby universities because selection for entrance to higher education is made on a national level.

The potential for finding employment in Rancaekek Sub-District is good. As shown in Table 6.5, there are 216 (mostly garment) factories in areas near the provincial road: *i.e.* 36 large, 28 middle-sized and 152 small factories. Therefore, much of their manpower comes from areas beyond Rancaekek.

Silvey (2001) draws attention to labour activism, resulting from changing demands of women, and pinpoints different forms of labour activism among workers in two communities in West Java: (a) Rancaekek, located just outside the city of Bandung and (b) Bekasi, located within the Jakarta–Bogor–Tangerang–Bekasi (Jabotabek) urban corridor. Differences in degrees of militancy and involvement in collective action are seen to be linked to differences in gender and local social networks. More women workers in Bekasi have migrated from distant areas, such as central Java, and consequently have fewer social networks upon which they can rely to link them with their families back home. Community norms for women, however, are less restrictive and give women more freedom to become involved in collective political action. Furthermore, Silvey (2001) notes that in Rancaekek,

more women seek work after having children. Local working mothers are more embedded in family networks and. as far as it exists; women's political activism is organized around the platform of motherhood. Since the '*reformasi'* (reformation) movement began in Rancaekek and Bekasi, the economic downturn has caused protests to focus on women's role as mother. Women's activism has therefore shifted towards more 'conservative' themes, specifically women's role in the family. This shift in emphasis has crystallized in similar ways in both Rancaekek and Bekasi. Economic conditions in the community burden families and their households. Not only is the husband expected to be a breadwinner but his wife and other family members are frequently expected to seek employment, if possible, to secure the family's financial well-being. Because an extended family traditionally lives together under the same roof, or has a housemaid to do household chores and care for any young children, more family members are now in the position to work outside the home.

There are two traditional markets in Rancaekek: the main market is located at the junction where the provincial road intersects the district road to Rancaekek, and the smaller market is located within the settlement area. The main market has restaurants and shops which sell various goods like clothing, shoes, furnitures, electronics, pharmaceuticals and cosmetics, accessories, building tools and material, and the like. The traditional market sells fruits and vegetables, meats, and many other products which daily life requires. Vegetable sellers (*tukang sayur*) go door to door, from dawn to dusk selling the day's harvest from their carts. Housewives find this a handy way to obtain fresh produce instead of having to shop at the market every day. Shoe-repair men and vendors selling fruit and foodstuffs usually wander through the settlements to peddle their wares.

Table 6.5 Job Potential in Rancaekek

Job potential	Numbers
Large garment factories	36
Middle-sized garment factories	28
Small garment factories	152
Markets	2
Shops	538
Fish ponds	14
Transportation services	575
Others	906
Total	2.251

Source: Form of Population and Manpower, Rancaekek Sub-District (2002)

In Table 6.5, 'Transportation services' refers to public modes of transportation such as *angkot* (*angkutan kota* = city transportation), *ojeg* (rental motorbike), *becak* (tricycles) and *bengkel* (workshops). The category 'others' refers to employment in areas involving agriculture, poultry (chicken and ducks), as well as a variety of other jobs involving *jamu* and door-to-door sellers, trade in: clothing, shoes, accessories, cooked foods, household equipment, and so forth.

As an industrial area, Rancaekek has the capacity to absorb thousands of people seeking employ as labour workers. In reality, the sub-district of Rancaekek has contributed greatly to economic growth in West Java. Unfortunately, rapid industrialization is the cause of a number of severe problems. As stated above, the quality of water is endangered by polluted surface water in the Bandung basin, including Rancaekek, and by exploitation of the hilly areas north of the Bandung plateau for housing settlements. Moreover, because textile and garment factories require a massive supply of water to keep the production process running, local government authorities should restrict licensing to industries which use excessive amounts of water for production. The industries which are already functional should be required to use surface or pond water.

The distribution of occupations according to the population group aged 10 years and older shows that 39.35% of the working force is employed by the garment industry (*cf.* Table 6.6). Trade and commerce (16.85%) account for the second highest percentage. One should recall that Rancaekek's large commercial area is located near a provincial road and that it's highly mobile population travels freely in - and outside the sub-district. Furthermore, in the non-industrialized sector, usually small vendors actively travel around selling foodstuffs to neighbourhoods in more remote areas. Sudirja's study (*Pikiran Rakyat* 2006) shows that the garment industries have now surpasses the agricultural sector in Rancaekek which, in recent years, was famous as source of rice and fish for West Java. Industry is an economically thriving sector. In 1900, Rancaekek's income per capita was Rp 900.000 and after the garment industry began to develop, its income per capita soared to Rp 2.700.000. The sub-district's annual income has continued to increase from Rp 6 billion in 1990 to Rp 42 billion in 1997.

Table 6.6 Occupation Distribution of the Population in Rancaekek Aged >10 Years

Variable	Male		Female		Total	
Occupation	N	%	N	%	N	%
Agriculture	3.764	10.9	1.569	9.8	5.333	10.6
Industry	10.155	29.2	9.792	61.0	19.947	39.4
Construction	2.547	7.4	–	–	2.547	5.0
Trade & Commerce	6.096	17.6	2.445	15.3	8.541	16.9
Transportation & Communication	6.460	18.6	297	1.9	6.757	13.3
Finance	593	1.7	–	–	593	1.0
Service	5.043	14.6	1.929	12.0	6.972	13.8
Total	34.658	100.0	16.032	100.0	50.690	100.0

Source: Socio-economic data Bappeda Bandung district (2003), Suseda (2003), BPS Bandung Regency (2003)

The garment industry is both capital- and labour-intensive. As factories attracted more people seeking work from both within and outside the sub-district. Rancaekek's population

is burgeoning at a fast rate, thus creating a greater need for food, clothing, and an improved infrastructure. Ironically, while developing industries bring prosperity to some groups of people, they also can have an adverse effect on other groups in the community. In the case of Rancaekek, the garment industry has marginalized the agricultural sector. Industrial expansion encroaches upon agricultural areas and converts farm land into industrial terrain. Remaining agricultural areas are suffering under the impact of industrialization and are being ecologically spoiled and poisoned by waste from the industrial cesspool. Previously, the farming systems found in Rancaekek were *mina-padi* (combined rice and fish farming) but, in recent years, fish and rice production has been on the decline. Peasants in Rancaekek report which, before industrialization became so widespread, they were harvesting 5.5 tons of rice per hectare; in contrast, recent data show only 2.8 tons per hectare per harvest.

In his study on the conversion of agricultural into industrial land. Chofyan (2005) states, that regional development usually has such negative side effects on the lives of local people. Regional economic growth and local prosperity are not always balanced. The objective of Chofyan's study is to reveal the effects of industrial development on local people, especially on farmers who own/work the land which is being converted for industrial use. Chofyan refers to three kinds of farmers: *i.e.* farm owners, share-tenant farmers, and farm labour workers. The conversion of agricultural land in the Rancaekek sub-district has changed people's orientation from farming and land ownership to industrial, commercial and service sectors. Over the past 5 years, manpower has decreased in the agricultural sector on an average by 2.02% annually, while the industrial (36.6%). commercial (24.22%). and service (11.18%) sectors have grown. Changing infrastructures the expanding network of accessible roads, electrical circuits and telecommunication – are exerting the greatest influence on conversion of agricultural land. Expanding industries in Linggar, Cangkuang, Nanjung Mekar, and Rancaekek Wetan villages are located along the provincial Bandung–Cicalengka road. In addition to Rancaekek Wetan village, industrial areas are also found along the road to Majalaya District. Industry in Bojongsalam village is located along the road between Majalaya District and Cicalengka. In addition, the population's living standards tend to decrease, due to their loss in income and status as farmers. The conversion of agricultural land has also changed the attitudes of farmers towards work and land ownership. For share-tenant farmers and farm labour workers, this is evident from their tendency to change occupations, while farm owners tend to sell their land.

6.2 Study Population and Sample Survey

6.2.1 Selection of Five Sample Villages and Respondents

Before discussing the findings from the field work collected in Rancaekek, the research setting will be reviewed. The fieldwork links up the previous research project 'Making Pregnancy Safer' (MPS) held by the WHO Collaborating Centre for Perinatal, Maternal, and Children (WHOCC–PMC) of Universitas Padjadjaran in collaboration with WHO–SEARO in 2001–2002 in the Rancaekek sub-district.

As discussed in Chapter III (methodology and analytical model), the sample for the household survey was drawn from 50% of the female population who had ever been pregnant or delivered a live baby during the 12 month period prior to the survey. Finally, 127 women were selected as respondents from households in: (1) Jelegong, 35 respondents; (2) Cangkuang, 19 respondents; (3) Haurpugur, 33 respondents; (4) Tegal Sumedang, 18 respondents; and (5) Sangiang, 22 respondents (Table 6.7).

Table 6.7 Distribution of Respondents and Households in Rancaekek Sub-District, According to the Five Villages Selected (N=127)

Name of Village	Total RW	SES	MCH Programme (Implemented)	Sample	
				N	%
Jelegong	21	A/B	GSI	35	27.5
Cangkuang	12	B	UNICEF	19	15.0
Haurpugur	6	B/C	GSI	33	26.0
Tegal Sumedang	5	C	GSI	18	14.2
Sangiang	7	C	GSI	22	17.3
Total	51			127	100.0

Source: Household survey (2005)

The respondents chosen by these sampling procedures were collected from the 'poor household lists' (*keluarga miskin*) drawn up in 2005 by the local government to register recipients for National Government aid (BLT: *Bantuan Langsung Tunai*). Because these lists also included data about women's pregnancies and the ages of their infants, they were of practical use when sampling households for the retrospective survey. Consequently, 23 women were still pregnant during the household survey, which is mean that they had neither completed the entire process of pregnancy and childbirth nor had had the opportunity to contact Maternal and Child Health (MCH) services for antenatal, perinatal and post-partum care. Therefore, only 127 (N) women remained who qualified as respondent in this study (*cf.* Table 6.7).

The household survey was taken during the month of Ramadan, or September and October 2005 (*cf.* Sub-Section 3.2.1). The interviewers were students and alumni of the Anthropology Department from Padjadjaran University. Ramadan, the Islamic month of fasting, was an additional blessing for the interviewers, thus making it easier to collect data. During Ramadan more people prefer to stay at home while fasting. The obstacles encountered were distances between houses and villages; due to the rainy season, some parts were flooded making it difficult for vehicles to reach several remote areas. Fortunately, the interviewers brought their own or borrowed local motorbikes. As mentioned in Chapter III, every selected village is categorized (A–C) by its socio-economic condition. Jelegong (A/B) has a better classification (although not the best) compared to the other villages selected in the household survey, followed by Cangkuang (B), Haurpugur (B/C), Tegal Sumedang (C), and Sangiang (C). Two villages, *i.e.* Tegal Sumedang and

Sangiang, are selected because both are considered to be socio-economically under-developed (classified as C) and have been provided with a MCH programme called *Gerakan Sayang Ibu* (‘Mother’s Friendly Movement’. and another programme under the auspices of UNICEF).

6.2.2 Demographic and Ethno-Religious Composition

The total population of Rancaekek numbered ca. 131.290 inhabitants in 2002. The sample population in the reproductive and socio-economically active age group (16–50 years) represents 52.0% of the total members of the selected households. Table 6.8 shows the age distribution (N=695) according to gender for comparison with the age spread for the total population.

Table 6.8 Age Distribution of Household Members in the Sample Survey in Rancaekek, according to Gender (N=695)

Variable Age group (years)	Men		Women		Total	
	N	%	N	%	N	%
0 – 5	82	23.6	74	20.5	156	22.4
6 – 10	38	10.9	42	12.1	80	11.5
11 – 15	32	9.2	29	8.4	61	8.8
16 – 20	26	7.2	28	8.1	54	7.8
21 – 25	35	10.1	42	12.1	77	11.1
26 – 30	32	9.2	41	11.8	73	10.5
31 – 35	32	9.2	27	7.8	59	8.5
36 – 40	25	7.2	27	7.8	52	7.5
41 – 45	16	4.6	12	3.5	28	4.0
46 – 50	11	3.2	7	2.0	18	2.6
51 – 55	8	2.3	6	1.7	14	2.0
56 – 60	6	1.7	8	2.3	14	2.0
61 – 65	1	0.3	1	0.3	2	0.3
66 – 70	2	0.6	2	0.6	4	0.6
71 – 75	1	0.3	1	0.3	2	0.3
76 – 80	1	0.3	–	–	1	0.1
Total	348	50.2	347	49.9	695	100.0

Source: Household survey (2005)

In Figure 6.1, the Age Pyramid for the sample population (N=695) is expressed according to gender (348 men and 347 women). The Age Pyramid is asymmetrical, with marked differences in specific age and gender categories. The gender ratio for 798 surveyed individuals is 99.7 (Table 6.8). Below the Age Pyramid are projected 695 members of 127 sample households surveyed.

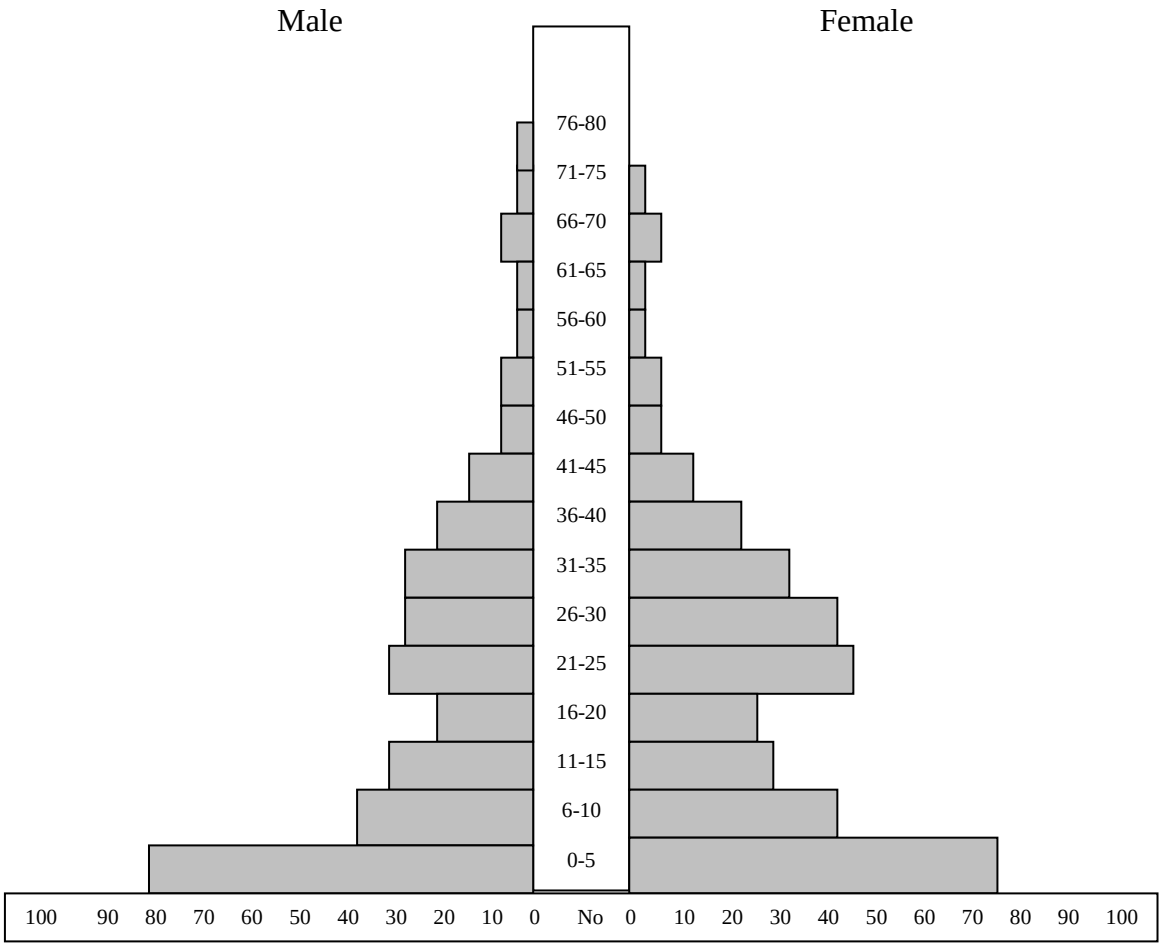


Figure 6.1 Age Pyramid for the sample population (N=695) according to gender (348 men. 347 women)

Table 6.9 Distribution of Ethnicity according to Household Heads and Spouses in the Sample Survey in Rancaekek (N=127)

Variable	Household Heads		Wives	
Ethnicity	N	%	N	%
Sundanese	113	88.9	119	93.7
Javanese	10	7.9	5	3.9
Batak	3	2.4	2	1.6
Palembang	1	0.8	–	–
Malay	–	–	1	0.8
Total	127	100.0	127	100.0

Source: Household survey (2005)

The majority of the population in the study are Muslim (98%); religious beliefs coloured all activities in the community. Only a few sample households are Christian (1.30%) and Catholic (0.70%); generally their ethnicity is Batak, sometime Javanese, but mostly Sundanese.

Table 6.10 shows that 50.4% of the wives in the households sampled received a formal primary education; in contrast, 48.0% of the heads of households received the same level of education. However, far more heads of households received a higher education than their spouses: 26.4% of the heads of households, in contrast to 20.5% of their spouses, received a senior high school education. Furthermore, Table 6.10 shows the total education received by both heads of households and their wives: the majority (49.2%) received an elementary education while fewer (43.3%) completed the high school level. Only 5.1% received a formal university education. Data show that when a woman becomes pregnant, her choice of traditional and/or modern Maternal and Child Health (MCH) will be influenced by the level of education both the husband and wife have received. The process of deciding whether to choose between traditional and/or modern MCH systems will also be influenced by the occupational background of the household head, the status of other senior family members and any influence religious leaders might have on the family.

Table 6.10 Distribution in Type of Formal Education, according to Household Heads and Wives in the Sample Survey in Rancaekek (N=127)

Variable Education	Household Heads		Wives	
	N	%	N	%
Type of formal education				
Never attended school	4	3.2	2	1.6
Elementary school	61	48.0	64	50.4
Junior high school	20	15.7	30	23.6
Senior high school	34	26.8	26	20.5
University	8	6.3	5	3.9
Total	127	100.0	127	100.0

Source: Household survey (2005)

Data on main occupations for women show that 52.0% of the spouses were housewives and 12.6% were self-employed; usually working from home and selling daily necessities to neighbouring households rather than at the market. The category 'Labour worker' which refers to either agricultural or factory work shows that the incomes differ greatly. Heads of households were mostly farmers (31.5%) or self-employed labour workers (32.3%). *i.e.* generally drivers in the transportation sector: including tricycle (*becak*), public transport (*angkot*), and motorcycle (*ojeg*). Other occupations under 'Self-employed' are food vendors or the service sector. For the majority of respondents classified as 'housewife', their only income comes from their husbands. However, a number of housewives have found jobs alongside their roles in the household.

The occupational structure in Rancaekek shows that working in agriculture, formerly the major sector in the area, has recently shifted to employment in industry. Although land in Rancaekek is rapidly being converted for industry, not everyone who has lost land has profited economically from industrial growth. Those who have lost land and have no opportunity to work in industry can still survive economically by seeking work in non-industrial sectors or by becoming self-employed. The category 'Government officer' in Table 6.11 includes teachers, health providers, and employees in local and sub-district governments, while the category 'Unemployed' is dependent on respondents' *emic* answers; for example, when one woman claimed to be unemployed, she was taken on her word without first seeking additional details to validate her claim.

Table 6.11 Distribution of Main Occupation, According to Household Heads and Wives in the Sample Survey in Rancaekek (N=127)

Variable Occupation	Household Heads		Wives	
	N	%	N	%
Unemployed	8	6.3	1	0.8
Housewife	–	–	66	52.0
Farmer	40	31.5	25	19.7
Labour worker	25	19.7	17	13.4
Self-employed	41	32.3	16	12.6
Government officer	13	10.2	2	1.5
Total	127	100.0	127	100.0

Source: Household Survey (2005)

It is customary in many households that various family members share one house; in Rancaekek there is evidence that relatives from the extended family also become part of the household. Often a young couple will continue living at home with the wife's parents until they are able to build or rent their own house. This complex situation can cloud the actual decision-making process when selecting Maternal and Child Health (MCH) services, especially during labour and delivery. This is an important point to remember with regard to the topic of this dissertation. Here 'power' is conferred to senior rather than junior family members or to men rather than women. However, when pregnancy, labour or delivery threatens to become a health risk, then the presence of members of the extended family may help calm the family's frazzled nerves or help transport the expectant mother to a health facility, especially when she lives far from the main road.

Distribution of household size in Table 6.12 shows that 56.6% of the households surveyed have 4–6 members. Smaller families are probably the consequence of the Family Planning Programme (*Keluarga Berencana*) introduced by the Government during the 1970s that used the slogan "*Keluarga Kecil Bahagia Sejahtera*" ("Small Happy and Prosperous Family") and advised against having more than two children. To change the Indonesian patrilineal perception that having a son is preferable, *i.e.* to inherit the father's

family name, another slogan was: "*dua anak cukup, laki-laki atau perempuan, sama saja*" ("Two children are enough, a boy or girl is the same.").

Table 6.12 Distribution of Household Size in the Sample Survey in Rancaekek (N=127)

Variable Household members	N	%
1 – 3	24	18.9
4 – 6	72	56.7
7 – 9	29	22.8
10 +	2	1.6
Total	127	100.0

Source: Household survey (2005)

In some cases, the Government's Family Planning Programme became the pattern for families in Indonesia, including Rancaekek. Table 6.13 shows the distribution for number of children per family in the research setting. The majority of families (62.2%) in Rancaekek have only 1–2 children. However, 26.8% of the families have 3–4 children and 10.2% have 5–6 children which show that only two-thirds of all the families in Rancaekek comply with the Government's recommendation that "Two is Enough" introduced in the 1970s.

Table 6.13 Distribution of Number of Children per Family in the Sample Survey in Rancaekek (N=127)

Variable No. of children	N	%
1 – 2	79	62.2
3 – 4	34	26.8
5 – 6	13	10.2
7+	1	0.8
Total	127	100.0

Source: Household survey (2005)

In the five villages selected for the survey, 50% of the women pregnant during the prior year fulfil the requirements for selection. Table 6.13 shows the distribution of women, most at a good reproductive age (21–40 years). Based on biomedical data, the best child-bearing age for a safe pregnancy is between 20 and 30 years of age. Pregnancy in younger or older woman poses a higher risk to the mother and her offspring. Table 6.14 shows that 40 women fall within the 16–30 age groups while 67 women in other age categories run a higher risk during pregnancy.

Table 6.14 Age Distribution for Women in the Sample Survey in Rancaekek (N=127)

Variable Age (in years)	N	%
11 – 15	1	0.8
16 – 20	15	11.8
21 – 25	25	19.7
26 – 30	35	27.5
31 – 35	27	21.3
35 – 40	19	15.0
41 – 45	5	3.9
Total	127	100.0

Source: Household survey (2005)

The 2005 household survey used the list of *keluarga miskin* (poor families) prepared by the local government which shows to whom aid should be allotted by the National Government of Indonesia. Since this 'poor families' list also includes data regarding pregnancy and the newborn's age, it was used to prepare the retrospective sampling of households with women pregnant 12 months prior to the survey.

Table 6.15 Distribution of Last Childbirth for Women in the Sample Survey in Rancaekek (N=127)

Variable Preceding months	N	%
< 3	31	24.4
4 – 6	15	11.8
7 – 9	17	13.4
10 – 12	64	50.4
Total	127	100.0

Source: Household survey (2005)

As explained in Chapter III, this study employs a retrospective approach to obtain data from respondents about their experiences during pregnancy and childbirth. Table 6.15 groups women in the survey sample, according to the number of months since her last childbirth. Although 50.4% of the women surveyed had given birth 10–12 months earlier, they could recall all they had learned and experienced during pregnancy, labour and delivery. Only 24.4% of the women surveyed had given birth less than 3 months earlier. Table 6.15 shows that most respondents had delivered either during the prior 12-month period or the household survey. The 23 respondents (15.33%) who were still pregnant at the time of writing are excluded because they had not had completed the entire reproductive process through to delivery and therefore could not complete the questionnaire. Experiences which respondents remembered about their pregnancy relate to

their behaviour ('external actions'), rituals, problems encountered during previous pregnancies and childbirth.

6.2.3 Socio-Economic Status

A description of the research setting will include an overview of the socio-economic status (SES) of the community and provide further information on that of respondents selected in the retrospective survey. Respondents were distributed equally within the Rancaekek sub-district which, as explained earlier, has a multifaceted character with mixed community settlements, agricultural land, service and industrial sectors. Here people are self-employed or work as farmers, government officers and factory workers. The socio-economic status of the inhabitants is dependent upon the jobs available to which they are accustomed. Unfortunately, decreased productivity in the agricultural sector, due to less available land for farming, and irrigation water chemically polluted by the garment industry in Rancaekek, has caused many farmers to suffer a drop in income compared to the past when Rancaekek was famous as rice 'warehouse' for West Java. Moreover, since the monetary crisis in 1998, poverty has been on the rise; *i.e.* the situation has been exacerbated by an increase in the price of oil and the global economic crisis which have impacted peoples' lives worldwide. While incomes have been falling, prices are unexpectedly on the rise.

Table 6.16 shows the distribution of socio-economic status (SES) of respondents from a number of related indicators: *i.e.* household income, health insurance, type of house, ownership of land, livestock, electronic equipment, and categorized according to 'poor', 'average' and 'well to do' (*cf.* Chapter VIII. bivariate analysis). Categorization shows that more than 39.4% of the households surveyed have an 'average' socio-economic status (SES); 49.8% of the households are categorized as 'poor' while only 10.8% are considered 'well-to-do'. The villages Sangiang (16.7%) and Tegal Sumedang (0%) have only a few well-to-do inhabitants; for each village 24.3% of the respondents surveyed are 'poor'. Table 6.16 and Table 6.17 show the socio-economic status (SES) of the respondents according to individual health insurance for poor families and home ownership, respectively.

Table 6.16 Distribution of Socio-Economic Status according to Health Insurance (Poor Health Card), in the Sample Survey in Rancaekek (N=127)

Variable Health Insurance	N	%
No	82	64.6
Yes	45	35.4
Total	127	100.0

Source: Household Survey (2005)

Only 64.6% of the respondents receive Government health insurance for poor families; thus one must assume that the remaining 35.4% are 'average' or 'well-to-do' households. Health insurance is uncommon in Indonesia, as in Rancaekek. Low take-home pay, often

insufficient to buy a family's basic needs, does not afford people the opportunity to carry health insurance. Therefore, diversification in employment is pre-requisite to offset a shortage in income. Usually, a wife must find work in the non-industrialized sector by selling goods to her neighbours or in the community: *e.g.* selling her wares in an office or in an *arisan* (monthly neighbourhood or family gathering where money is collected and distributed among participants by lottery). Men often supplement the family income by holding down a second job in the public transportation sector, *e.g.* as motorbike driver (*ojeg*). In Indonesia, owning a motorbike has become very common because they can be bought by making a down payment of only Rp. 500.000 (ca. US$50) and then leasing it for 3 years. Some agents even allow the buyer to pay in instalments.

Table 6.17 Distribution of Socio-Economic Status According to House Ownership in the Sample Survey in Rancaekek (N=127)

Variable House ownership	N	%
Rents the house	53	41.7
Lives in relative's house	10	7.9
Owns the house	64	50.4
Total	127	100.0

Source: Household Survey (2005)

Because housing is considered out of reach for poor families, ownership of a house can throw light on the respondent's socio-economic status (SES). Owning a house is every family's dream, but they will need a great deal of money even to buy it in instalments. Table 6.17 shows that 41.7% of the households must rent a house and that 7.9% still live with relatives. In addition, 50.4% of the respondents surveyed own either a small (49.33%) or medium-sized (48.00%) house. When built in a low-cost housing settlement, the buildings have a standard size (in m^2): the smallest house is 21 m^2, a medium house is 35–45 m^2, and a large house is 70 m^2. The price also depends upon the width of the parcel of land upon which the building sits.

Table 6.18 Distribution of Socio-Economic Status by Type of House in the Sample Survey in Rancaekek (N=127)

Variable *Type of house*	N	%
Bamboo	27	21.3
Brick	72	56.7
Bamboo and brick	19	15.0
Concrete	9	7.0
Total	127	100.0

Source: Household Survey (2005)

In Rancaekek, not all houses are located in a resettlement area; people generally live in a *kampung* house made from *bilik* (woven bamboo). People think that, ideally, a house should be built from bricks; therefore, when sufficient funds are available, they usually try to reconstruct a bamboo wall from brick. Table 6.18 shows that 56.7% of the houses have brick walls and 21.3% are made from bamboo. Nineteen (15.0%) houses have been constructed using a combination of bamboo and brick. People also hope to transform earthen floors into a more solid foundation using cement or ceramic tiles. A house generally has 2–3 sleeping rooms: *i.e.* one main room for the husband and his wife and a second room for children and other relatives.

However, when family members are old enough, then sharing a sleeping room, even the main room, is common. Some people (3.1%) only have one room in which to sleep; in that case, at night sleeping mats or mattresses are rolled out in the sitting room. Most lavatories are built inside the house (89%).When this is the case, the backyard will have a well. When there is neither an inside lavatory nor well nor backyard, then most probably the house is joined to other buildings. Most respondents (50.67%) do not own much furniture. and average prices (48%) show the economic status of the Rancaekek community.

Table 6.19 Distribution of Telecommunication in the Sample Survey in Rancaekek (N=127)

Variable (Telephones)	N	%
None	94	74.1
Home telephone	6	4.7
Mobile telephone	21	16.5
Home & mobile telephones	6	4.7
Total	127	100.0

Source: Household Survey (2005)

Mobile telephones are quiet popular in Indonesia nowadays, and almost everyone attempts to own one. In the major cities, even young children in elementary school have been equipped with mobiles by their parents in order to communicate more easily when they are away from home. However, during the household survey in Rancaekek in 2005, 74.0% of the respondents said they had no means of communication in their homes (*cf.* Table 6.19). Telecommunication is indispensable when having to cope with high-risk conditions such as pregnancy, labour and childbirth, when rapid treatment by a health provider could save a life.

In the case of high-risk pregnancy, labour and delivery, when time is of the essence, then transportation is of great importance to reach a community health centre (*Puskesmas*). Table 6.20 shows the distribution of types of transportation in the sample survey owned by households: *e.g.* bicycles, motorbikes, cars and the tricycle (*becak*). The idea of *ambulans desa* (Village Ambulance) is to mobilize owners of vehicles to stand ready should calamity befall someone in their neighbourhood, *e.g.* during pregnancy, labour or delivery.

Table 6.20 Distribution of Means of Transportation in the Sample Survey in Rancaekek (N=127)

Variable (Transportation)	N	%
None	48	37.8
Bicycles	33	26.0
Motorbikes	23	18.1
Cars	21	16.5
Becak	2	1.6
Total	127	100.0

Source: Household Survey (2005)

Table 6.21 Distribution of Family Members from 127 Households in the Sample Survey in Rancaekek (N=695)

Variable Member of Household	N	%
Head of household	127	18.3
Wives	127	18.3
Son	148	21.3
Daughter	150	21.6
Father	2	0.3
Mother	6	0.9
Grandfather	–	–
Grandmother	5	0.7
Grandson	30	4.3
Granddaughter	23	3.3
Brother	4	0.6
Sister	2	0.3
Cousin	–	–
Nephew	1	0.1
Niece	2	0.3
Son-in-law	30	4.3
Daughter-in-law	9	1.2
Brother-in-law	4	0.6
Sister-in-law	8	1.1
Father-in-law	1	1.0
Mother-in-law	7	0.9
Other relationship	6	0.9
Unrelated (housemaid)	3	0.4
Total	695	100.0

Source: Household survey (2005)

Further discussion will touch upon the ethnicity and religiosity of the community is more than 90% Sundanese and Muslim. The ethnic composition of the survey sample is 93.7% Sundanese, 3.9% Javanese, 1.6% Batak, then 1.6% Palembang and Malay (*cf*. Table 6.9), *i.e*. local cultures share a number of common rites. Common rites of passage are performed during and after pregnancy for both the mother and her offspring. The following are several examples of rituals: *tingkeban* or *nujuh bulan*, held during the 7th month of pregnancy; *puputan* or *puput puseur*, held when the umbilical cord dries up and falls off (*cupat pusuer*) or is removed from the naval; *nurunkeun*, held when the infant touches the ground for the first time; *ngabersihan* or *sunat* or *ngislamkeun*, held at circumcision (usually for boys but in some cases girls). The *ngawinkeun* ritual is celebrated when a person marries, and other rites are held when a person passes away.

Islam, the religion professed by the majority of ethnic Sunda, has over time become part of Sundanese culture. Every part of their daily lives and local beliefs are assimilated with Islam. Interestingly, several Islamic phrases are even used in daily conversations, rituals and ceremonies. In addition to the Sundanese greeting spoken in the morning (*wilujeng enjing*) and afternoon (*wilujeng siang*), the Islamic greeting '*assalamualaikum*' ('peace be upon you') when one meets a fellow Muslim or '*Allahuakbar*' (Allāh is Great) when one wishes to express admiration are now commonly heard. Harsojo (1979: 315) has said: "… *although Islam is the formal religion of Sundanes, but the pattern and the daily life is still influenced or coloured with the perceived of animism and dynamism*". Only a few households surveyed are Christian (1.30%) or Catholic (0.70%).

6.3 Local Maternal and Child Health and Medicinal Plants

6.3.1 Indigenous Knowledge of the Reproductive Process

Stages or trimesters of pregnancy run parallel in traditional and modern Maternal and Child Health (MCH) systems. Traditionally indigenous wisdom and systems of belief define the trimesters. However, in this case, it is Islam as predominant religion practiced in rural areas of Rancaekek gives meaning to life growing in the womb. Islam teaches us that, during the first 3 months, the embryo has no soul. However, when a woman's pregnancy reaches 4 months, the Breath of Allāh will blow the soul into the body of the foetus, which explains why a pregnant woman will begin to feel life pulsating in her abdomen during the second trimester.

In Rancaekek, the ritual performed at this time consists of reading special chapters or *sūrah*s (religious texts: *soleh* for boy. and *solehah* for girl) from the Holy Qur'ān. The readings are believed to bless the baby with a good disposition, as well as make it intelligent, obedient to its parents, and good looking. Chapters (*sūrah*) and verses (*ayāt*) recited from the Holy Qur'ān during the 4th month ritual are: *Al-Mu'minun* (Q23: 12–14), *Lukman* (Q31: 14), *Yusūf* (Q12: 1–16), *Maryam* (Q19: 1–5), and *Ar-Rahmān* (Q55: 1–78). The ritual, performed by a religious leader, who is usually a woman (*ustadzah*), is attended by women from the neighbourhood as well as other female relationships. The *ustadzah* will begin by leading the participating women in a recitation of appropriate *sūrah*s from the Holy Qur'ān. Thereafter she will speak about how Allāh blows the soul into the foetus

before praying for a safe pregnancy, delivery, and healthy offspring. Another local belief, not based on Islam, says that at the onset of the 7th month of pregnancy, the foetus is mature enough to be born and strong enough to grow and thrive if it survives delivery. However, at 8 months, it is thought that the foetus has reverted to a weaken state and shoul, therefore, not be born at that stage of gestation. Thus, the perfect time to be born is after spending 9 months in the womb.

Prayer	**Prayer**
Bismillah ir-raḥmān ir-raḥīm. Al-ḥamdu lī l-lahi rabbi l-ālamīn. Allahumma shalli alā sayyidinā Muḥammad. Thibbil quluubi wadawaaihaa. Wa aafiyatil abdaani wa syifaaihaa. Wanuuril abshaari wa dhiyaa ihaa. Waquubil arwaahi waqidzaa ihaa. Wa alla aallihi washahbihi wabaarik wa sallim. Allahummah fazh waladaha maa adama fii bathnihaa. Washfihii maa ummihi antasysyaafii laa syifaa illa syifaa uha syifaa an laa yugoodiru saqaman. Allahumma shawwirhu fii bathniihaa shur rotan hasanatan. Watsabbit qolbahu iimaanan bika wabinaa suuliha. Allaahumaj alhu shahiihan kaamilan wa aaqilam haa dziqan wa aaliman aamilan. Allahumma thawwil umrahu washahhik jasadahu wahassin khuluqohu wafashshih lisaa nahu. Wa ahsin shantahu li qiraa atil hadiitsi wal qur'aan. Warfa' darojatuhu. Wawasi rijqahu. Wajalhu insaanan kaamilan saaliman fiddunya walaakhirah. Bibirakati sayyidina Muhammadin shallallahu alaihi wasalamam wallhamdu lillahi rabbil alamina. Amin. amin yaa robbal aalamin.	In the name of Allāh, the All Mighty, All Merciful. All praise be to Allāh, Lord of the Universe. Oh Allāh, please increase the prosperity of our leader Muhammad (PBUH). As our therapist and relieve As cured and refreshed our body. As ray and light of our eyes. As reinforcement and food for spiritual nourishment. Please bless and hold safely his family and all his friends. Oh Allāh, please protect the baby in the mother's womb. May it happen, please give health to the baby and mother. There is no other health but Allāh's. Health which never ends with sickness. Oh Allah, please give beauty to the baby. And may it happen; deliver the baby in good health and safety. Oh Allāh. May it happen; that the baby be healthy, perfect, smart, and understand religious shaykhs. Oh Allāh. May it happen; bless the baby with long life, physical and spiritual health. good behaviour, fluent spoken word, and good voice for reading the Qur'ān. And give good status. And give good luck. Help the baby become a perfect person and remain safe in the world and the hereafter. With the blessing of the Great Prophet Muhammad (PBUH) and all praise for Allāh. Lord of the Universe. Amen, amen. Oh Lord of the Universe.

Figure 6.2 Prayer is readed by religious leader for a save pregnancy, delivery and healthy offspring
(Source : Household Survey 2005)

Local people believe that pregnancy is a natural part of the human reproductive process and subject to natural forces. One *paraji* gave the following clarification regarding beliefs and pregnancy: (1) the force of Nature, believed to impact human lives, has two faces: *friendly*

and *scary*. Unusual natural phenomena occurring in the *macro-cosmos* are significant signs carrying meaning for the *micro-cosmos* (*i.e.* the pregnant woman). (2) Time prescribes what humans should (prescriptions) or should not (prohibitions) do during the turning of its cycles: *e.g.* at dawn, noon and twilight it is believed that spirits wander outside the house. Therefore one should try to remain indoors and avoid outside activities during those times. On Monday and Thursday nights Nature shows its 'scary' face and is a risky time for the 'weak' such as pregnant, perinatal or post-partum women. The Sundanese people are suspicious of night time and feel that night is unsafe, which explains why a baby born during the dark of night will grow to be brave and strong. An individual's safety should be harmonised in several ways by performing rituals, doing what is prescribed and avoiding what is forbidden (taboo or *pamali*). Rituals refer to all sacred activities using idiomatic symbols to help guarantee a person's safety.

Qualitative findings in Rancaekek unearthed a number of beliefs, rituals, obligations and taboos (*pamali*) for women during and after pregnancy as well as for their husbands and offspring. When a woman wants to become pregnant, she must mind her behaviour carefully and watch her intake of foods which can affect pregnancy and the foetus. As described earlier. *e.g.* she should eat from a small plate, symbolic for the size of the baby, because delivering a large baby could prove difficult. Consuming certain foods such as fish, pineapple, hot food (*lada*), coffee, preserved cassava (*peuyeum*), coconut water, and the like, is strictly taboo. The expectant mother should comply with a number of obligations: *e.g.* always having with her a sharp object, such as a nail cutter, tiny knife, small scissors or bamboo knife (*hinis*) and ginger (*pang lay*: *Zingiber gramenieum*) to ward off evil spirits.

Figure 6.3 *Nujuh Bulan*, ritual bath performed when a woman is 7 months pregnant
Source: Google Search (2006), tatiksblasipsstu.blogspot.com

Each time a pregnant woman 'misbehaves' or sees an object which looks ugly or threatening, she must express '*amit-amit*' to avoid endangering the baby's perfect shape. Many taboos which a pregnant woman must avoid will be of consequence for her husband's behaviour (termed *nurut buat*[2] while his wife is pregnant). During his wife's pregnancy the husband is obliged to watch carefully what he says. He is also forbidden to kill an animal, to leave the house during the night, to sit in the centre of a door or on the veranda, to go fishing, to knot his hair, to sit cross-legged or with hanging feet, to sleep diagonally across the bed, to step over long shoots of bamboo, to wrap a towel around his neck as collar, and so forth. Every taboo could adversely impact his pregnant wife and their infant in the womb.

When the pregnancy enters the 7th month, a *nujuh bulan* ritual is held to assure that the delivery will be safe for mother and her newborn. A *paraji* (TBA) will lead the ritual during which every activity relates to the number 'seven' (*tujuh*)', symbolic for the month of pregnancy. During the ritual, the pregnant woman will be bathed by her husband and six elder women from the community (*e.g.* mother. mother-in-law. grandmother. aunties) and finally by the *paraji* herself (Figure 6.2). The bathing water is drawn from seven wells within the area and scented by petals from seven types of fragrant flowers such as *melati* (*Jasminum sambac. Alt.*), *mawar* (*genus rosa*), *kenanga* (*Canangium odoratum*), *cempaka* (*Michelia champaca*), *sedap malam* (*Murraya paniculata L.*) and *kamboja* (*Adenium obesum*).

Figure 6.4 Yellow coconuts ready to be cut by the husband during a *nujuh bulan* ritual.
Source: Field Study (2007)

While the *paraji* is bathing the pregnant woman, she will wear a loose fitting *sarong*. The *paraji* will drop into the *sarong* several kinds of 'slippery' items, symbolic for a safe delivery: *e.g.* gold fish (*lauk emas, Cyprinus carpio*), eel (*belut, Symbranchidae*), egg (*endog*), and so forth. The women participating will hold closed the lower hem of the

sarong to catch the slippery items. After the ritual bath, the pregnant woman will change her clothes 7 times. Encircled by participants attending the ritual, the *paraji* will help dress the pregnant woman in the first set of clothing consisting of the traditional *kain batik panjang* and *kebaya*. Then the *paraji* will ask the women forming the circle: "Is this cloth fit for her?" They traditionally reply "No". This ritual dressing and undressing will be repeated six times. After she has dressed for the seventh time, all the women in attendance will answer: "Yes, it is fit for her!"

Another ritual will be the selling of fruit salad (*rujak bebeg*)[3]. Everyone attending the ritual must buy the *rujak* with fake money made from broken tiles. The flavour of the *rujak* is associated with the baby's gender. A hot, salty or tasteless salad signals that the baby will be a boy; when the *rujak* is tasty and mild then the baby will be a girl. The group will make a second guess when the husband cuts a yellow coconut which has usually been decorated on opposite sides with one of two *wayang* or puppet figures. These mystical figures are Arjuna and Subadra who symbolize a boy and girl, respectively. After the yellow coconut has been sliced in two parts, everyone is anxious to know whether Arjuna or Subadra is one the largest section. Why Arjuna and Subadra? They are an attractive and likeable pair. Arjuna is heroic and Subadra is typically feminine so the expectant parents hope that their child will inherit similar characteristics.

Another traditional belief relates the baby's gender to the expectant mother's behaviour. If a pregnant woman dislikes dressing-up and is lazy, then the baby might be a boy; in contrast, if she likes doing feminine activities, then the baby will certainly be a girl. Tradition says that every object which a pregnant woman finds pleasant will affect the future baby's gender. Nowadays, when a woman can afford ultrasonography, she will use it to check how the foetus is developing and to learn its gender; therefore, several traditional practices are falling out of favour. People no longer draw *wayang* on young coconuts or turn to tasting *rujak* to estimate whether the infant will be a boy or girl (Figure 6.3).

Commonly, when a woman is 8 months pregnant, the family will prepare *bubur lolos* or porridge made from rice flour and brown sugar topped with coconut milk which makes it slippery. Then it is wrapped in *daun pisang* (banana leaves) with one side left open so that the porridge can easily slide out (*lolos*). Slippery porridge is associated with the expectation that the coming delivery will be 'as easy as the *bubur lolos*'.

Post-natal rituals

After childbirth, the *paraji* will attend to the placenta or *ari-ari/bali*[4] which is delivered after the infant. Because the placenta has shared the uterus and accompanied the newborn into this world, tradition says that it should be treated like the infant's twin sibling. Therefore, the placenta is carefully cleansed and saturated with onion (*Allium ascalonicum*), *kunyit* (*Curcuma domestica Val*), coconut milk (*santen, Cocos nucifera*), brown sugar (*gula beureum*), and tamarind (*asem, Tamarindus indica L.*). All ingredients are put into a clay pot (*pendil*), together with *sūrah*s from the Holy Qur'ān, needle and threat, coins, flowers, before being covered with white fabric and placed near the newborn. The *paraji* (TBA) will organize the entire ritual in which the husband arranges an oil lamp with seven wicks (*sumbu*) and the post-partum woman and her mother-in-law prepare a bamboo stick with red chilly (*Capsicum*), *bawang beureum* (onion, *Allium ascalonicum*), *panglay* (*Zingiber gramenieum*)[5], *koneng temen* (*Curcuma domestica*), and *jaringao*

(*Acorus terretria*). The placenta can be treated in one of two ways: it can be buried in the yard near the house or sent floating down the river. People believe that there will always be a bond between a baby and its placenta. When the baby cries continuously, then people suspect that it has something to do with the placenta. In that case, they will prepare a small ritual (*dulurna nu medal bareng*) for the baby's brother or sister placenta. A small bag (*kanjut kundang*) made from cloth will be placed near the baby's bed containing *panglay* (*Zingiber gramenieum*), *bawang bodas* (garlic, *Allium sativum*), and a sharp object such as nail. The *kanjut kundang* is meant to protect the baby from evil spirits (Figure 6.4).

Figure 6.5 *Kanjut kundang* bag and its contents: *panglay* (*Zingiber gramenieum*), garlic, and a nail representing sharp objects
Source: Field Study (2006)

How a family expresses its gratitude to the *paraji* (TBA) depends on the socio-economical situation of the pregnant woman's household. The *paraji* never worries about compensation, *i.e.* whether she will be paid in kind or in cash. She will not complain if the family expresses their gratitude by giving her vegetables, chickens, fruits, rice and *samak jarian* (mat woven from *pandan* leaves – *Pandanus amaryllifolius*) which is used during childbirth. After delivery, the *paraji* will visit almost every day to bathe the baby, to prepare herbal remedies or *jamu* as drink or ointment to rub on the mother or her newborn, or to massage the mother. During her visits, the *paraji* will hold small rituals: *e.g.* to celebrate detachment of the baby's umbilical cord (*puput puseur*), to mark the seventh day after birth by hanging the cradle from *kain batik* (*ngayun*), to thank Allāh by slaughtering an animal (*aqeqah*: two male goats/sheep for a boy and one male goat/sheep for a girl), and so forth. For the *nenjrag bumi* ritual, meant to assure that the infant will grow to be brave, heroic and not easily frightened in the future, the baby is placed on the floor while the *paraji* stamps her foot seven times. Holding the infant on her lap, the *paraji* will massage it and make a wish by repeating *jampe*[6] as follows.

Jampe	Translation
Ulah saomong-omongna, ari lain omongkeuneun.	Do not just talk, if there's nothing to say.
Ulah saambue-ambuen, ari lain ambeueunana.	Do not just sniff, if there's nothing to smell.
Ulah sadeuleu-deuleuna, ari lain deuleueunana.	Do not just watch, if there's nothing to see.
Ulah sadenge-dengen, ari lain dengekeuneunana.	Do not just listen, if there's nothing to hear.
Ulah sacokot-cokotna, ari lain cokoteunana.	Do not just take, if it's not there for the taking.
Ulah sarampa-rampana, ari lain rampaeunana.	Do not just touch, if it's not to be touched.
Ulah satincak-tincakna, ari lain tincakeunana.	Do not just step over, if it's not worth the step.
Ulah saasup-asupna, ari lain asupeunana	Do not just enter, if it's not there to enter.
Ulah uruy ka pamulu batur	Do not just crave, what's not yours to have.
Ulah kabita ka pangala jalma	Do not just envy, what belongs to another.
Batur mah tukang kabitur	Others are easily get desired.
Jalma mah gampang katara	People are easy to see.
Sing ajeg sing panceg dina tangtungan diri sorangan	Be strongly rely on yourself
Ngaub kana nuhun agama jeung darigama	Hold fast to your religion
Source: Household Survey (2005)	(The *paraji* will then stamp/*nenjrag* her leg on the floor near the baby.

Figure 6.6 *Paraji* (TBA) massaging a baby and offering advice to its mother
Source: Tea Seroya based on household survey (2005)

Forty days after childbirth, the *paraji* accepts *perwanten* (cake, rice, fish, and fruits) and *cangkaruban* (placed in a bowl with water and coins from which she will wash her hands). At this time, a ritual procession, together with *asrakal* (honour tribute to Prophet

Muhammad), is held to celebrate the cutting of the baby's hair. Moreover, another ritual is held 40 days after delivery during which the *paraji*, with the words '*seja masrahkeun*', relinquishes her responsibility for the mother and her offspring and entrusts them to the husband and family. The *paraji*'s words "I would like to hand over" underline her supervision and the extent of her responsibility for the physical and spiritual well-being and safety of the mother and infant during the post-natal period. The *paraji* also gives a chicken which is called *si hurip* ('the alive') which is analogous to the baby; *i.e*. they will grow up together.

6.3.2 Knowledge and Use of Medicinal Plants in Rancaekek

In traditional medical systems, the collectors of plants and producers of herbal remedies have the real intention to recognize and acknowledge the spiritual essence of the plant. Bodeker (1999: 263–264) states that: "*The intimate knowledge of local communities about their bio-resources is clearly seen in the tremendous diversity of local names for, and uses of, the same plant and animal species as one moves across what may referred to as 'ethnobiogeographic regions'. The etymology of local names and the content of local knowledge also reveal the understanding communities have of the properties, morphology, penology, reproductive biology and habitats of plants*".

In Indonesia reorientation towards indigenous knowledge systems confirms the general view that herbal remedies offer several advantages: they are readily available, cost less and are relatively safe as natural products in terms of side effects (Slikkerveer 2003). In addition Slikkerveer (2003: 42) notes that generally in rural areas *"... different types of indigenous healers* (dukun and jamu gendong) *and midwives* (*bidan*) *continue to use numerous plants in their traditional remedies, called* jamu *– a collective term used to define indigenous herbal medicine prepared from usually wild plant materials* (ramuan) *such as leaves, flowers, fruits, bar, roots, etc. Until recently, the knowledge of plants which are used for the preparation of* jamu, *laid down as recipes and formulas in hand-written documents*".

Most *jamu* contains mixed, often pounded, ingredients, some of which are prepared in boiled water before being used as drink or ointment. They are not only used as remedy but also more regularly to promote a sound and healthy body or to enhance beauty – although the use of *jamu* as local cosmetic is still largely overlooked in the literature. It is estimated that between 1000 and 1300 plant species, generally collected in the wild, are used to prepare traditional *jamu*.

During pregnancy, attention is focused on maintaining strengthen of the expectant mother and her foetus. Usually, the *paraji* will suggest that the pregnant woman avoid several types of food and drink and instead nourish her body with specific foodstuffs which are considered beneficial for foetal development. As shown above, a pregnant woman is expected to adhere to certain dietary prescriptions, such as avoiding foods with a 'sharp' character (*e.g. ganas*. pineapple), soft-drinks, and so forth during the first stage of pregnancy. During her pregnancy and around childbirth, a woman not only receives advice from the *paraji* but also from elder women in her household, who based on the family's

financial condition, might try to persuade her to choose one MCH system instead of another or influence her to use *jamu* as supplement for good health.

In general, *jamu* and herbal medicines are recommended after childbirth to restore the woman's strength and help the newborn grow strong. The mother's food intake should contain specific foods and herbs to stimulate milk production. During her post-natal period, both the mother and her offspring are thought to be in a state of transition, which makes them vulnerable to supernatural and evil forces.

In recent years, the ongoing use of medicinal plants has led to the manufacture of 'modern' *jamu*, thus flooding the market with locally produced 'ready-to-use' natural remedies. Such products, sold pre-packaged or as sachets, are an attempt to compete with costly modern, largely biochemical, pharmaceuticals imported from the West (*obat paten*).

There is no question that traditional Maternal and Child Health relies on indigenous medicinal plants and knowledge systems when preparing herbal concoctions[7] for both mother and her offspring. People believe that indigenous healers skilled in the art of healing have the power to treat both mother and infant when necessary. The *paraji* knows which particular part of a plant to use when preparing concoctions and decoctions[8] to be administered to her clients.

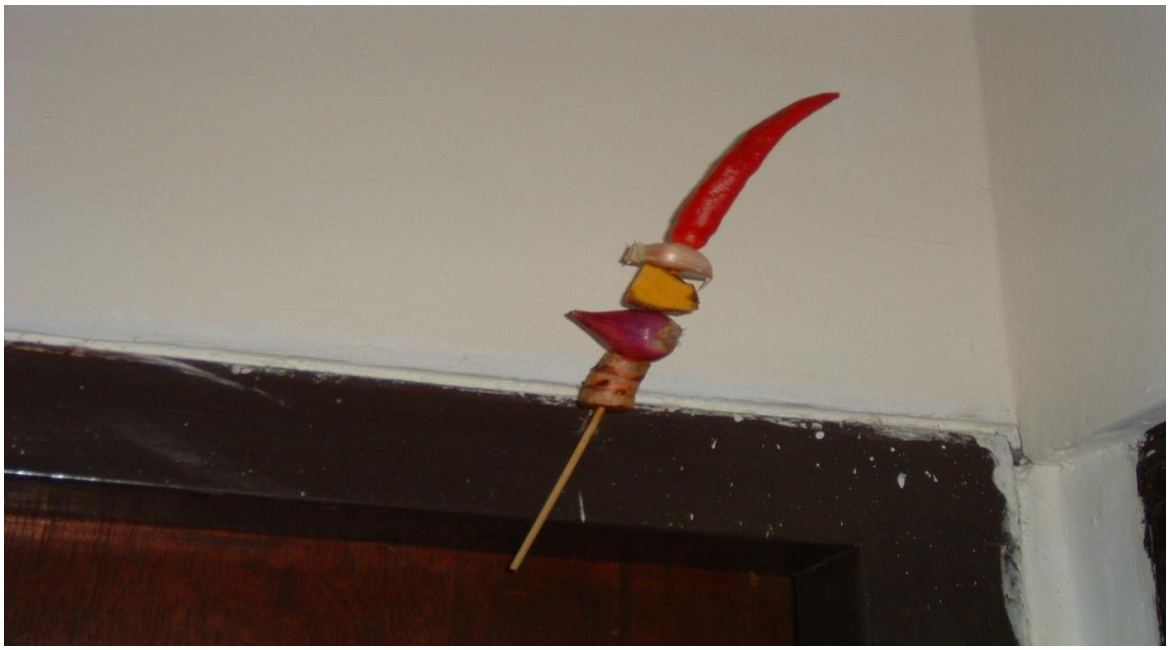


Figure 6.7 *Tulak bala* set of red chilly (*cabe beureum –Capsicum annum*), garlic (*bawang bodas – Allium sativum*), *panglay* (*Zingiber gramenieum*), onion (*bawang beureum – Allium ascalonicum L.*), and *kunyit* (*Curcuma domestica*), placed above the front door or door to the mother and baby's room.
Source: Households Survey (2006)

Paraji are knowledgeable about indigenous classifications and understand their function and efficacy, especially *Zingiberaceae* (*sarupaning kokonengan*), *koneng temen* (*Curcuma domestica*), *kunci* (*Curcuma rotunda L.*), *koneng hideung* (*Curcuma aeruginosa*), *temu*

giring (*Curcuma heyueana*), *koneng gede* (*Curcuma xanthorrhiza*) and *koneng bodas* (*Curcuma alba*). These are traditionally used to treat mother and child in concoctions and decoctions to be applied as drink, rub and patch.

Table 6.22 Local Classifications of Medicinal Plants Used as Traditional Herbal Medicine for Pregnant Woman, as Documented through In-depth Interviews with *Paraji* in the Study Area of Rancaekek.

Local Name	Botanical Name	Medicinal Use	Stage of Pregnancy	Part Used
Alang-alang	*Imperata arundinaceae*. Cyrill.	heartburn (*panas dalam*)	pregnancy	roots
Areuy/Cabe Jawa	*Piper retrofractum Vahl.*	difficult delivery	parturition	fruit, root, leaf
Asem Jawa	*Tamarindus indica*. *Linn*	cleanse the blood	pregnancy, parturition. post-partum	fruits
Awi koneng	*Bambusa vulgaris scrad Gigantochloa*	avoidance of evil	pregnancy, post-partum	twigs
Adas pulowaras	*Foeniculum vulgare Mill*	stomach trouble, a cold cough	pregnancy, post-partum	seeds
Batrawali	*Tinospora crispa Diels*	strengthened	pregnancy, post-partum	stalks
Bawang bodas	*Allium sativum L.*	avoidance of evil	hypertension pregnancy, *kanjut kundang*	tuber
Bawang beureum	*Allium cepa Linn*.	catch a cold	*tulak bala*	tuber
Bawang nunggal	*Allium ascalonicum*	hypertension	pregnancy	tuber
Bonteng	*Cucumis sativus L*.	leucorrhea (*keputihan*)		fruit
Cabe beureum	*Capsicum*	avoidance of evil	pregnancy, post-partum	fruit
Cengkeh	*Syzigium aromatum*	toothache, mixture with other *jamu*	pregnancy, post-partum	fruit
Cikur	*Kaemferia galanga*	cough, cleanse blood	pregnancy, post-partum	Rhizome *Linn.*
Enteh	*Camellia sinensis*	with sugar will provide energy	pregnancy, parturition	leaf
Ganas	*Ananas squomosus*	prohibited for pregnant	pregnancy	fruit
Gedang	*Carica papaya L.*	compress the breast	post-partum	leaf. fruit
Handeuleum	*Graptophylum pictum* (*L*) *Griff*	constipation, avoid haemorrhoids	parturition	leaf
Jahe	*Zingiber officinale Rosc.*	vomiting, reduce blood smell	first trimester, post-partum	rhizome
Jawer kotok	*Coleus scutellarioides Benth.*	haemorrhoids, fever. to ease delivery	third trimester of pregnancy	leaf, stem, root
Jeruk nipis	*Citru aurantifolia. Swingle*	Cough, massage, mixture with other *jamu*	pregnancy, post-partum	fruit
Kalapa (hejo)	*Cocos nucifera Linn*	to ease delivery, fair skin of the baby	scraped, squeezed oil, drink	fruit, husks shells
Kaliki	*Ricinus communis*	fever	pregnancy	leaf
Katuk	*Sanopsus androgynus Mirr*	breast milk	post-partum	leaf
Koneng Temen	*Curcuma domestica Vhal*.	cleanse the blood, mixed with other kinds of *jamu*	pregnancy, post-partum	rhizome
Koneng Gede	*Curcuma*	cleanse the blood	pregnancy, post-partum	rhizome
Kunci	*Boesenbergia pandurata*	mixture with *bayam*	pregnancy, post-partum	rhizome
Panglay	*Zingiber cassummunar*	avoidance of evil	pregnancy, post-partum	rhizome
Seureuh	*Piper betle L*.	avoid leucorrhoea, cough, Eyes, avoid bleeding	Pregnancy, post-partum	leaf

Source: Household Survey (2006)

Figures 6.7–6.11 provide photographs and classifications of medicinal plants used by *Paraji* (TBA) to treat both mother and infant during and after pregnancy and childbirth.

Figure 6.8
Asem Jawa (*Tamarindus indica. Linn*)
Source: Household Survey (2005)

Figure 6.9
Daun Katuk (*Sanopsus androgynus Mirr*)
Source: Household Survey (2006)

Figure 6.10
Seureuh (*Piper betle L.*)
Source: Household Survey (2006)

Figure 6.11
Koneng (*Curcuma domestica*)
Source: Household Survey (2005)

Figure 6.12
Jahe (*Zingiber officinale Rosc.*)
Source: Household Survey (2005)

Notes

1. Environmental Contaminants and Pollutants – Group B3. Heavy metals, pesticides and industrial pollutants can reach unacceptable levels within animals in several ways if their environment is polluted with industrial or agrochemical contaminants. [...] Regulatory limits for these substances are low because many tend to accumulate in fat and other tissues. Consequently, their concentrations will increase in individuals further up the food chain and thus will be higher in humans than in farmed animals. An area of emerging concern is the build up of several agents whose long-term effects may be additive." (http://www.afbini.gov.uk/)
2. The husband's behaviour (*nurut buat*) will influence the baby's development: e.g. if the husband kills an animal while his wife is pregnant, then the baby will born with a physical defect.
3. The *rujak bebeg* consists of seven kinds of young fruit such as: *kadongdong* (*Spondias dulcis*), *bonteng* (cucumber), *buah ngora* (young mango – *Anacardiaceae – Mangifera*), *jeruk bali* (pamelo – *citrus maxima*), guava (*jambu batu – Psidium guajava*), *jambu air* (*Syzygium aqueum*), *balingbing* (*Averhoa bilimbi*), *ganas* (pineapple – *Ananas comosus*), *delima* (*punica granatum*), and the like. The fruit is mixed with salt, *asem jawa* (*Tamarindus indica. Linn*), *gula* jawa (brown sugar), and *cengek* (*Capsici fruteescentis Fructus*).
4. *Bali* or *ari-ari* is the placenta which is thought to be the baby's twin sibling. A nearly identical belief is shared by the Javanese and Sundanese (*kakang kawah. adi ari-ari*). The foetal membrane (*banyu kawah)* is considered to be the 'elder brother' since it broke before the baby's birth, while the placenta (*bali* or *ari-ari*) is the baby's 'younger brother' since it was born after the baby.
5. *Panglay* (*Zingiber gramenieum*) is a very important type of root which has the power to ward off evil. It is generally used as part of an 'amulet' for the mother and her newborn because during the transitional 40-day period after childbirth their 'weak' condition is susceptible to ghostly disturbances. To ward off evil, sometimes the *paraji* will chew *panglay* and spit (*di bura*) its juice throughout the house.
6. *Jampe* is the *paraji*'s well wishes for the baby. It is taken from the manuscript *Siksa Kanda ng Karesian* (1518).
7. In Traditional Medicine, a concoction contains various ingredients such as herbs, spices, condiments, powdery substances or minerals, mixed together, minced, dissolved or macerated into a liquid which can be ingested or rubbed on the skin. On a different level, 'concoction' is sometimes loosely used as metaphor to refer to a cocktail or motley assembly of products, persons or ideas. Quite often very pungent and spicy ketchups or hot sauces, usually with Cayenne pepper as its base, are inadvertently – or for commercial reasons – called 'concoctions'.
8. A 'decoction' is an extraction of herbal or plant material which includes, but is not limited to: stems, roots, bark, and rhizomes. Some teas are 'decoctions'. However, decoctions differ from most teas, infusions, or tisanes, in that decoction are usually boiled. Likewise, the term is used colloquially in South India to refer to black coffee prepared by traditional methods.

Chapter VII PREGNANCY AND CHILDBIRTH IN RANCAEKEK

7.1 Pregnancy. Childbirth and Maternal and Child Health Utilisation Behaviour

Chapter VII will first discuss women's Maternal and Child Health (MCH) utilisation behaviour during pregnancy and childbirth at an individual level. Focus will be on the management of pregnancy during the three trimesters which parallel development of the foetus. Data show which steps pregnant, perinatal and post-partum women take when seeking assistance outside the house, whether it is from a traditional and/or modern MCH system available in the study area. It is remarkable that both traditional and modern MCH systems arrive at almost identical estimations for the periods of foetal development. Pregnancy is divided into trimesters according to biomedical science. A pregnant woman may begin to experience foetal movement which resembles a mild flutter or twitch at ca. 8–12 weeks gestation. In Rancaekek, local tradition based on indigenous knowledge and Islamic beliefs, practiced by *paraji* (TBA) tells us that foetal movement, when first felt around 4 months gestation, indicates that Allāh (God) has blown the soul into the body of the foetus to create a new life (*cf.* Chapter VI). To honour this blessed event, the pregnant woman's family will hold a ritual, or *pengajian*, or group reading from the Holy Qur'ān led by a religious leader invited to conduct the ceremony. If a pregnancy terminates prematurely at 7 months, biomedical science and intensive medical care can sometimes keep alive an infant born at 28 weeks gestation. In contrast, traditional customs and beliefs indicate that at 7 months a baby is considered 'mature' although not yet completely developed. Such an infant will continue to grow and develop normally if it is strong enough to survive delivery. Aware that her pregnancy might terminate at 7 months, a woman's family will perform a ritual called *nujuh bulan* to ensure a safe delivery and continuing good health for both mother and newborn (*cf.* Chapter VI).

Chapter VII will also present behavioural patterns for utilisation of plural MCH systems in Rancaekek. Such patterns mainly illustrate the interaction between health-seeking behaviour related to health issues and determining factors, such as a household's socio-economic situation, which affect a woman's health-seeking actions during different stages of pregnancy. It should be noted that analysis does not include an assessment of the quality and range of MCH systems available. Although self-treatment ('internal' actions) during pregnancy is also part of the analysis, focus will centre on the 'external' actions taken outside the house which lead to utilisation of plural MCH systems in the study area. Therefore, research on MCH utilisation behaviour concentrates on the number of external actions, expressed as scores, which pregnant and perinatal women have taken from confirmation of pregnancy through childbirth with components of plural MCH systems.

Although data are collected from 150 pregnant women in Rancaekek, only 127 women had actually given birth to a live newborn during the 1-year period prior to the survey, thus enabling them to report all of their external contacts either with a traditional and/or modern MCH system during the course of pregnancy, delivery and post-partum care. In this study,

these 127 of 150 women are followed individually according to their external actions, while the remaining 23 women who were still pregnant at the time of the survey are excluded from the sample. For analysis, it is preferable to include women who have had the opportunity to utilise MCH services from the beginning to completion of pregnancy.

7.1.1 Individual Behaviour of Pregnant Women

Utilisation of Maternal and Child Health (MCH) services can exert a considerable impact on the life of a pregnant woman herself as well as on her offspring. For this reason, a substantial amount of research, directed specifically at women, has obviously been carried out on MCH utilisation behaviour. In Rancaekek, a woman's reliance on the male head of the household, responsible for the family's finances, may be somewhat of a hindrance when it comes to deciding which type of health care to use. As wife, and perhaps already mother, a pregnant woman will depend on the support of other family members to help with household chores or perhaps take care of other siblings.

Pregnancy and childbirth are therefore not simply an individual concern; generally this process is a social matter involving the entire family. In Sundanese culture, during her first trimester (< 4 months) of pregnancy called *ngidam*, a woman is not considered to be fully pregnant. During this early stage, an apprehensive woman might begin to behave oddly, making peculiar requests, particularly to her husband, which may involve the extended family. She might ask her husband to fetch an unusual, impracticable, or not easily obtained item. She might crave fruits out of season or *rujak* (fruit salad) in the middle of the night although it can only be bought and eaten during the day. One pregnant woman's hilarious craving was to lick a bald head. People traditionally believe that a pregnant woman's requests should be honoured because failure to comply will produce a continuously drooling and salivating offspring (*ngacay*). During the second trimester, at ca. 4 months gestation, the woman's pregnancy will finally be acknowledged when she feels a fluttering sensation in her abdomen.

Although a foetus is borne by one individual, when it comes to choosing which type of MCH system to use during pregnancy and childbirth, then an abundance of opinions are quickly offered by various members of the family, neighbours and friends. Demonstration of empathy towards the pregnant woman and enthusiasm about the coming birth will initially be expressed by voicing concerns about the expectant mother's physical and emotional state. Friends and family will help prepare her for childbirth by performing rituals and by helping supervise the family's finances. Everyone involved will express their own opinions about which type of MCH system to use. The period during pregnancy creates socially constructed events. Family expectations, as well as those of close neighbours and friends, will have a bearing on the pregnant woman during the process of childbirth. When she becomes incapacitated while suffering the pangs of delivery, people around her will interpret her needs in an attempt to relieve her discomfort. Frequently, people go in search of help or try to offer what they hope will provide worthwhile relief. Behavioural patterns during pregnancy can be influenced by a variety of social factors, such as the birth attendant, the family's socio-economic status (SES), available transportation, and so forth. Lorber and Moore (2002: 138) describe that: "… *these social factors cluster in systems of expectations and practices legitimated by norms and values*,

which sociologists call institutions – the economy, the family, the medical system, and the gender order. [...] The patient is also a family member, and his or her relationships with partner, children, siblings, and parents intertwine the medical system with the family as a social institution". The social context within which pregnancy and childbirth take place is of immense importance. Pregnancy and childbirth are cantered within a wide circle of interaction which draws together numerous people, such as family, friends, health providers, indigenous healers, and socio-cultural elements, such as environment, occupation, socio-economic status (SES), family and community obligations, knowledge, beliefs, values, attitudes and practices – all of which affect MCH utilisation behaviour for both traditional and modern systems.

7.1.2 Maternal and Child Health Utilisation Behaviour

Utilisation of Maternal and Child Health systems encompasses a range of efforts made by pregnant women, supported by members of her household, including all actions undertaken from the first signs, diagnosis or confirmation of pregnancy through childbirth. In accordance with the analytical model presented in Chapter III, behaviour refers to the action-taking process ('no action', 'internal action', 'external action') when choosing which plural (traditional and/or modern) MCH system in Rancaekek to use. Choices which reflect a woman's needs during specific periods of her pregnancy are based, *e.g*. on trust, on the household's financial status – all with regard to a number of socio-cultural factors.

Seniority bestows social privileges upon individual(s) regarded as decision maker, in this case elder women who have had experience with MCH systems. Gender is an important determinant as to whether the wife and/or her husband will decide where to seek help – a decision usually taken by the head of the household. In Sundanese culture, as head of his household, the husband should ideally be older than his wife and treated as '*akang*' or '*aa*' (elder brother). When a husband is younger than his wife, the term is still used as a sign of respect. Therefore, the status of husband and wife are hierarchically structured by the family's socio-cultural values. When a decision must be made, regardless of the issue at stake or whether the couple has discussed it together, the final word is left to the husband's discretion as head of the household.

Utilisation of MCH systems during and after pregnancy is also dependent on the quality of the relationship between the pregnant woman and her parents or other senior family members. In addition to her husband, parents (especially mother or mother-in-law) will exert considerate influence on her choice which MCH system to use. Senior women in the community consider themselves more experienced with regard to pregnancy, childbirth, post-natal/post-partum care. A young woman's lack of knowledge about antenatal, perinatal and post-partum care will cause her to 'give herself over' to the decisions taken by senior family members, especially the elder women.

Table 7.1 Family Member Involvement with regard to Women's Choice of Maternal and Child Health Systems in Rancaekek during Pregnancy and Parturition (N=127)

Advice-giver	Pregnancy		Delivery	
	N	%	N	%
No one in particular	12	9.4	6	4.7
Wife	64	50.4	68	53.6
Husband	23	18.1	23	18.1
Wife and husband	3	2.4	1	0.8
Senior family members	25	19.7	29	22.8
Total	127	100.0	127	100.0

Source: Household Survey (2005)

From the moment a woman becomes aware that she is pregnant, she must make a series of decisions individually or together with people in her social network, such as her nuclear family: *i.e*. husband, parents, parents-in-law, senior members of the extended family. Occasionally influential neighbours or, in some cases, a volunteer health cadre, religious or community leader, will pressure a woman to make certain decisions. Input from senior family members with more experience is usually quite substantial. Table 7.1 presents data from the survey on family involvement and the utilisation of MCH services during pregnancy and parturition. Although many women decide for themselves which type of MCH system to use during pregnancy (50.4%) and parturition (53.6%), the roles other senior family members play in the decision-making process show a reasonable influence (pregnancy: 19.7%; delivery: 22.8%). One cannot overlook the husband's strong influence in the process of MCH utilisation (pregnancy and delivery: 18.1%).

Utilisation of MCH systems is deeply rooted in a culture and influenced by social status, family beliefs and values, advice from others as well as other above-mentioned factors. The response category 'no one in particular' (pregnancy: 9.4%; delivery: 4.7%) deserves further attention. When a pregnant woman replies 'no one in particular', she is either showing a lack of confidence and tendency to turn to others for advice due to her status as wife in the household or she is uncertain whether the family can afford the cost of available MCH services. This suggests that, in such cases, the pregnant women will lack complete autonomy, especially during labour and delivery, to make her own choices about her own health situation.

Rancaekek Sub-District has three Community Health Centres (*Puskesmas, Pustu*): (1) *Puskesmas* Rancaekek with 'in-patient care', in the village Bojongloa located in the centre of the sub-district (*Kecamatan*); (2) *Puskesmas* Nanjung Mekar without beds, in the village Nanjung Mekar; and (3) *Pustu* Linggar (satellite health centre), in the village Linggar. There are 14 private and 10 Community Midwives (BDD: *Bidan di Desa*) in the study area. Approximately 30 trained *paraji* (TBA) are registered at the *Puskesmas*, but it is estimated that the actual number of practicing *paraji* is double that number. During this study, three new *paraji* were encountered who had never been trained at the *Puskesmas*. Ambaretnani (2002) points out that, in Rancaekek, the number of women examined at a

Puskesmas during pregnancy has been increasing because of the implementation of several 'Safe Motherhood' programmes such as: 'Making Pregnancy Safer' (MPS), 'Mother's Friendly Movement' (GSI), 'Maternal and Neonatal Health', and the 'White Ribbon Movement' or 'Maternal and Neonatal Health' (MNH: *Gerakan Pita Putih*). The implementation of *Desa Siaga* (Alert Village) and other programmes dating from 2000–2005 to 2010 shows the numbers increasing from 73% to 85.5%. Today 79.6% of the husbands and their wives are knowledgeable about the danger signs which might occur during pregnancy and childbirth. Husbands play a decision-making role in seeking help for their pregnant and perinatal wives in 61.6% of the cases, and they take responsibility in attending their wife's delivery 65% of the time.

Before carrying out the household survey in Rancaekek, it was clear through observation that qualitatively the community could be divided into three categories with regard to the socio-economic status (SES) of households and utilisation of traditional and modern MCH systems during and after pregnancy: (1) well-to-do households with a better socio-economic status (SES) can choose whatever type of MCH service is needed: *i.e.* these are families who own a private business, in particular stores or shops along the main road, and families considered wealthy by community standards; (2) average-income households with a socio-economic status (SES) which can afford modern MCH services: *i.e.* these are families of government officials, industrial labour workers, large land owners, etc.; and (3) poor households in the community who can only afford traditional MCH care, perhaps briefly supplemented by modern MCH services during a specific phase of pregnancy, such as confirmation of pregnancy, *i.e.* these are peasants without land, *becak* and *ojeg* drivers, the unemployed, etc.

Table 7.2 Geographical Accessibility of Traditional and Modern Maternal and Child Health Systems for Potential Clients in Rancaekek (N=127)

Distance	Traditional MCH		Modern MCH	
	N	%	N	%
'Near'	107	84.3	62	48.8
'Average'	14	11.0	30	23.6
'Far'	6	4.7	35	27.6
Total	127	100.0	127	100.0

Source: Household Survey (2005)

The geographical distance to MCH facilities differs depending on the location of the villages. In Rancaekek, *Puskesmas* are generally located near the main road (*cf.* Map 6.2), with easy access for all members of the community. However, for people living in remote parts of the sub-district with no access to roads, the situation is quite different, Because of the geographical distance and contour of the land, transportation needed specifically to reach a *Puskesmas* is quite costly, although not exorbitant. Fortunately, a number of *Pustu* (satellite *Puskesmas*), *Posyandu* and *Bidan* (CMW) have set up practice offering private

MCH services near access roads. Consequently, for communities in remote areas, the nearest MCH providers continue to be the Traditional Birth Attendants (*paraji*).

Table 7.2 shows the number of traditional and modern MCH services and their geographical distance from potential clients. To be accurate, traditional MCH systems are embedded in communities in which they function and are thus closer to the public, both socially and culturally. The concept 'distance' when applied to humans, as distinguished from special relations, has come into use among sociologists in an attempt to reduce gradations and degrees of understanding and intimacy, which characterize personal and social relations, in general, to some measurable term. Social distance, which means the distance between different social groups, not only locations, refers to social interaction within the community of Rancaekek towards traditional and modern MCH systems. Social distance shows the degree of intimacy on three levels (pregnant woman, traditional *paraji* and community *bidan*) in MCH systems. Intracultural relationships show a greater degree of intimacy (*e.g.* pregnant woman and *paraji*), while inter-cultural interactions demonstrate less intimacy (*e.g*. pregnant woman and *bidan*). The Rancaekek community can be classified according to education, occupation, and socio-economic status (SES). Well-educated people with a professional background generally have a higher socio-economic status (SES) and tend to interact better with *Bidan* (CMW). However, based on their knowledge, perceptions and beliefs, many well-educated people will not hesitate to use Traditional Medicine and practices for their particular needs. The term social distance can be used to express a variety of differences such as social class, discrepancies in knowledge about MCH systems, variations in language or terminology for the same object, but also to the fact which social differences are obstacles hampering integration.

Modern health providers (including *bidan*) often use difficult to understand medical terminology during discussions and consultations with the local community. Physicians and other MCH providers are formally educated in the medical sciences in large cities and come from different communities and social class. The language they sometimes speak cannot be easily understood by *paraji* and their clients from a poorer, less educated background – perhaps because of culturally determined differences or because of the ways in which the local community communicates. Social class strongly determines one's cultural identity; socio-economic inequality might exacerbate the 'cultural distance' between MCH providers and their clients. Because they share a common background, *paraji* can interact effectively with local people and understand the other's point of view, a factor which creates a more solid bond between *paraji* and client from the local community. In this study, three types of 'distances' ('social', 'cultural' and 'geographical') are observed and then categorized ('near', 'average' and 'far').

Pregnant women need transportation to reach MCH facilities for antenatal, perinatal and post-partum care. Public transportation along main roads employs small motorized vans (*angkutan kota*), which can carry ca. 13 people, which follow a fixed route and charge a set fee. Because *angkutan kota* cannot enter narrow streets (*gang*), the community has begun using smaller vehicles such as the *ojeg* (rental motorbike) and *becak* (tricycle). The *becak* is only suitable for use on level streets because it is pedalled and has a triangular shape. However, the *ojeg* can tackle foothills and hilly areas because it is motorized. Thus to reach a *paraji's* house located near a community settlement, one must either walk or use a *becak* or *ojeg* as transportation. However, a *paraji* will usually visit her client for

consultation and check-ups. In contrast, people living in remote villages will require several types of transportation, for which they must pay a substantial sum, to reach a modern MCH centre, such as the Puskesmas, or a private *bidan* (CMW) located along the main road. Interestingly, the findings from the household survey show that MCH services offered by *paraji* or *bidan* are equally preferred by the respondents.

Table 7.3 Preference for Traditional and/or Modern Maternal and Child Health Systems during Pregnancy and Childbirth, based on Respondent Statements (N=127)

MCH Preference	Respondent Statements	
	N	%
Paraji (Traditional Birth Attendant)	59	46.5
Bidan (Community Midwife)	63	49.6
Paraji and *bidan*	5	3.9
Total	127	100.0

Source: Household Survey (2005)

Table 7.3 shows that the respondents surveyed respect and have almost equal preference for *paraji* (46.5%) or *bidan* (49.6%) for pregnancy and childbirth. In-depth interviews reveal some reasons for the slight difference in preference. One should recall that *paraji* offer a whole package of services – both physical, spiritual and psychological – starting when a woman discovers she is pregnant continuously through to 40 days after childbirth. The advantages that the *paraji* offers are home visits and a flexible system of payment resulting from her shared bond with the community. Such advantages make it possible for families from poor socio-economic backgrounds to reward the *paraji* not with money but with their gratitude expressed in a multitude of ways. The cost (ca. Rp 300.000–400.000) of childbirth is generally fixed when assisted by a *bidan* and is a major expense for a poor family, although some *bidan* who are sensitive to a client's social and financial predicament are flexible about the payment. In lieu of cash, *paraji* and *bidan* often receive payment in kind such as agricultural or poultry products: *e.g.* chickens, coconuts, rice, vegetables, cassavas, fruits, and so forth.

Sharing ordinary social and cultural contacts in the community creates open lines of comfortable communication between *paraji* and their clients in contrast to *bidan* in *Puskesmas* or private practices. Whereas *paraji* are unrestricted and can offer their services to the community whenever the need arises, government-employed *bidan* at *Puskesmas* must adhere to certain rules and regulations: they must be registered, be punctual for work within fixed hours, and be paid for their services and eventually reimbursed for the cost of transportation. In contrast to an appointment at a *Puskesmas*, a 'home visit' affords the *paraji* time to consult with her client and other household members about pregnancy and eventual problems. If the need arises, the *paraji* can prepare herbal remedies and apply massage any time of day or night (*cf.* Chapter I). Table 7.4 shows the number of 'home visits' by *paraji* and *bidan* to observe and discuss pregnancy and offer post-natal/post-

partum care for the mother and her offspring, especially for women who do not visit the *Puskesmas*.

Table 7.4 'Home Visit' Behaviour of Traditional and Modern Maternal and Child Health Providers to Pregnant and Parturient Women in Rancaekek (N=127)

Home Visit	Respondent Statements	
	N	%
No home visits	46	36.2
Paraji (Traditional Birth Attendant)	59	46.5
Bidan (Community Midwife)	13	10.2
Paraji and *bidan*	9	7.1
Total	127	100.0

Source: Household Survey (2005)

Paraji show an admirable number of 'home visits' (46.5%), in contrast to *bidan* (10.2%), in an attempt to communicate with their clients. Thus it is clear that *bidan* only have contact with pregnant client if they choose to visit her by appointment at a private clinic or *Puskesmas*.

7.2 Patterns for Utilisation of Plural Maternal and Child Health Systems

As explained in Chapter II, the present study employs an analytical model at systems level in order to describe and explain factors which appear to play a role in the utilisation of plural Maternal and Child Health (MCH) systems. Research into the use of MCH services concentrates on the number of contacts pregnant women make with plural MCH systems during the 12-month period prior to the survey, expressed as scores referred to as attendance or utilisation rates.

7.2.1 Establishing Stages of Pregnancy

Pregnant women should be allowed to decide for themselves which MCH system they prefer to use during pregnancy, labour and childbirth. Data show that one-half of all respondents in the household survey make their own choices. Only several women share the decision-making process with their husbands. A woman's role in choosing which MCH system to use during pregnancy and childbirth is minimal because generally it is the husband and other senior members of the extended family who help decide what service is needed. When a husband makes decisions without first consulting with his wife, this indicates that he affords his wife no right to be heard. However, when senior family members strongly suggest certain options, their recommendations will usually be based on their own experiences during pregnancy and childbirth.

Patterns for MCH utilisation behaviour are derived from detailed accounts of respondent behaviours from the moment a woman suspect she is pregnant through

childbirth. Behaviour during pregnancy refers to all actions undertaken by a woman from the onset of pregnancy to monitor health and determine which MCH services to use during each stage. To better understand the complex MCH-seeking steps taken by pregnant women up until childbirth the following components will be examined more closely (*N*=127 respondents in the household survey):

(1) *Pregnant women*: Respondents in the survey who reported that they had been pregnant and given birth to a live newborn during the 12-month period prior to the survey.
(2) *Perceived pregnancy*: How these respondents experienced their pregnancies.
(3) *Plural MCH systems*: Traditional and modern MCH systems in the Rancaekek area where respondents live, as a source for help and consultation during pregnancy, childbirth and post-partum care.
(4) *Steps taken by pregnant women to contact MCH services*: Number of contacts made by pregnant women cited above who visited one or more MCH facility for examination, immunisation or childbirth.

These components will now be examined in more detail. Table 7.5 shows the number of respondents who were still pregnant or had given birth during the 12-month period prior to the survey.

Table 7.5 Stage of Pregnancy, during the Prior 12 Months, Reported by Women in the Sample Survey (N=150)

Status	Pregnant		Parturient		Total	
	N	%	N	%	N	%
	23	15.33	127	84.67	150	100

Source: Household Survey (2005)

Data show that 127 respondents had already given birth prior to the survey; this is essential to analyse MCH utilisation behaviour from the onset of pregnancy through to post-partum care. While 23 still pregnant respondents are considered unsuitable for inclusion in the survey, the remaining 127 post-partum respondents continue to be interviewed about their needs and preferences with regard to utilisation of MCH systems.

The actions taken by these 127 respondents can be categorized as follows: (1) 'external action' refers to the steps actively taken to seek treatment during certain stages of pregnancy; (2) 'internal action' refers to the exclusive use of self-help or self-treatment measures among female respondents who kept check of their own pregnancies; (3) 'no action' refers to female respondents who never took steps, either in - or external, to seek help during pregnancy.

Data in Table 7.6 illustrate that, after recognizing the onset and first signs of pregnancy, each of the 127 respondents took active (external) steps to seek confirmation. Thereafter,

each pregnant woman undertook the first step to seek contact or consultation with either traditional and/or modern MCH services.

Table 7.6 Active Confirmation of Pregnancy, using Traditional or Modern Maternal and Child Health Services in Rancaekek Sub-District during the Prior 12 Months (N=127)

Confirmation	Type of MCH System					
	Traditional		Modern		Total	
	N	%	N	%	N	%
Confirmations	53	41.7	74	58.3	127	100.0

Source: Household Survey (2005)

Data in Table 7.7 show to which type of MCH system pregnant respondents sought help after recognizing the signs of pregnancy (nausea, vomiting, dizziness, craving sour foods, etc.). All of the women (*N*=127) who had completed pregnancy and given birth sought some form of confirmation of pregnancy in one of the available MCH systems. Of these 127 women, 53 respondents (41.7%) from the 'external action' group contacted a *paraji* to determine pregnancy, and 74 respondents (58.3%) sought help from a modern MCH system (*bidan*/*Puskesmas*), including 4 respondents (3.2%) who went to hospital.

Table 7.7 External Actions Taken by Respondents to Confirm Pregnancy, according to Types of Maternal and Child Health Systems Reported (N=127)

MCH System	N	%
Paraji (Traditional Birth Attendant)	53	41.7
Bidan (Community Midwife)	70	55.1
Hospital	4	3.2
Total	127	100.0

Source: Household Survey (2005)

Actions taken are categorised as follows:

– external action: pregnant women or respondents who seek help to obtain treatment during certain stages of pregnancy;
– internal action: pregnant women or respondents who make exclusive use of self-help to examine and treat their own pregnancies;
– no action: pregnant women or respondents who neither take action nor seek treatment for their pregnancies.

The ‘internal actions’ category comprises respondents in the sample survey who used individual check-ups to determine whether they were pregnant. Thus 22 women (17.3%) reported that they had used a ‘test-pack’ bought from a drugstore to ascertain whether the level of hormone in their urine confirmed pregnancy. This group consists of well-educated women from average or well-to-do socio-economic backgrounds in the study area. Thereafter, the next step was to consult a modern MCH facility for further confirmation. Because the pregnancy test-pack is considered modern, this group of women is categorized as users of modern methods for confirming pregnancy.

7.2.2 Four Steps towards Parturition: External Actions

As well as to confirm pregnancy, women also take steps during different stages of pregnancy to seek consultation and/or treatment with traditional and modern MCH systems. A pregnant woman’s choice of MCH systems will depend on the extent of her knowledge, perceptions, beliefs, attitudes and experience, as well as on factors in her socio-cultural environment. During this phase of her life, social networks will bring together family and friends, health providers and indigenous healers as well as elements of her social and physical environment such as occupation, education, financial or socio-economic status (SES), family and community obligations, etc. Social context is thus an important part of pregnancy and childbirth.

(1) *Step 1*

It is of interest to observe how respondents, who were pregnant and have given birth 1-year prior to the household survey, ‘flow’ between MCH systems available in the study area. During Step 1, 12 (9.4%) women gave birth: 8 assisted by traditional *paraji* and 4 by community *bidan* (*cf.* Figure 7.1). It should be noted that 12 women never received check-ups after confirming their pregnancy; thus they never received antenatal care or immunisations prior to the antenatal care or immunisations

Table 7.8 Step 1: Treatment Category (Check-Up) for Pregnant Women in the Sample Survey, according to the Type of Maternal and Child Health Service Reported (N=127)

Category	N	%
Traditional MCH Care	53	41.7
Modern MCH Care	74	58.3
Total	127	100.0

Source: Household Survey (2005)

Table 7.8 shows the number of pregnant women who requested an initial check-up after confirmation and the type of MCH system used. After the first check-up, the number of respondents confirmed pregnant who used the traditional MCH system increased from 39 (30.7%) to 53 (41.7%). In contrast, the number of respondents who sought confirmation at a modern MCH facility dropped from 88 (69.3%) to 74 (58.3%). This flow between

traditional to modern MCH systems and *vice versa* is very much dependent on the needs and perceptions of pregnant women.

(2) *Step 2*

Table 7.9 shows that 115 pregnant women reached Step 2. Twenty-five (21.7%) women decided to use traditional MCH services; among them 19 women gave birth aided by a *paraji*. while 6 women sought consultation, herbal medicine or massage. Ninety (78.3%) women decided to contact a modern MCH facility: among them 55 women gave birth aided by a *bidan*, while 35 pregnant women continued on to Step 3. In this study, the four steps undertaken are parallel with the trimesters of pregnancy during which time a pregnant woman would ideally pay at least four visits to a modern MCH facility. It should be noted that women who delivered during Step 1 or Step 2 did not fail to receive their immunisations. Women who report their contacts with MCH providers according to their external actions rather than to trimester of pregnancy correlate very well with the 'predisposing', 'perceived', 'enabling', and 'institutional' factors.

Table 7.9 Step 2: Treatment Category (Check-Up) for Pregnant Women in the Sample Survey, according to the Type of Maternal and Child Health Service Reported (N=115)

Category	N	%
Traditional MCH Care	25	21.7
Modern MCH Care	90	78.3
Total	115	100.0

Source: Household Survey (2005)

(3) *Step 3*

Table 7.10 presents the distribution of 41 (32.3%) pregnant respondents during Step 3: 37 (73.2%) women gave birth while 4 pregnant women continued on to Step 4. Eleven women gave birth aided by *paraji*, and 26 women by *bidan*. Here, 41 women completed Steps 1–3.

Table 7.10 Step 3: Maternal and Child Health Category for Pregnant Women (N=41) in the Sample Survey in Rancaekek Sub-District

Category	N	%
Traditional MCH Care	11	26.8
Modern MCH Care	30	73.2
Total	41	100.0

Source: Household Survey (2005)

(4) *Step 4*

Table 7.11 shows that the remaining 4 women all gave birth at modern MCH facilities. Research into the use of MCH systems focuses on the number of contacts which pregnant and perinatal women have had with components of the plural MCH system 12 months prior to the survey. Contacts are expressed as scores, referred to as attendance or utilisation rates. Reported contacts of pregnant women with one or more components of MCH systems, whether traditional or modern, have been entered as independent variables in the analytical model.

Table 7.11 Step 4: Category of Maternal and Child Health Systems and Pregnant Women Seeking Care (N=4)

MCH System	N	%
Traditional MCH Care	-	-
Modern MCH Care	4	100.0
Total	4	100.0

Source: Household Survey (2005)

Utilisation of traditional and modern MCH systems and the number of contacts made by pregnant women are calculated as a ratio. Because the needs of women vary from stage to stage of pregnancy, their utilisation of MCH systems can also vary. In Step 0, when a woman must determine whether she is pregnant, more women (*N*=88) sought confirmation from *bidan* who employ laboratory tests than women (*N*=39) who requested help from *paraji*. At the start of the second trimester (4 months), to ensure a healthier pregnancy, more women turned to modern MCH providers for their TT injections – a treatment which only *bidan* and other modern providers are allowed to give.

The numbers of contacts made with MCH systems are derived from the household survey. Respondents who took external actions reported that they had sought consultation with at least one available MCH service up until giving birth. However, respondents who took no external actions were also tracked because such behaviour was only observed during Step 0 for confirmation of pregnancy. By excluding women who were still pregnant at the time of the household survey – *i.e*. those unable to report steps taken during the entire cycle of pregnancy and childbirth – it will be possible to relate the total pattern of MCH utilisation behaviour according to various categories of independent variables: predisposing, enabling and institutional factors.

As discussed earlier and now shown in Table 7.12, while 12 pregnant women have taken only one step after confirmation of pregnancy, other women have continued to seek help from traditional and/or modern MCH systems during pregnancy through delivery. Bushkens and Slikkerveer (1982: 101–103) describe this as "*flow through cases*". The flow between MCH systems illustrates the inter-relationships which develop between pregnant women and both traditional and modern systems. A total of 127 respondents report that they have taken Steps 1–4: 12 (9.4%) women who have taken no more than one step before delivery are categorised as such. There are several reasons for such behaviour: these

women are either from poor households unable to afford assistance or they have experienced no complaints during pregnancy. Generally, respondents made 2–3 visits between confirmation of pregnancy and childbirth (2 steps: 74 – 58.3 %; 3 steps: 37 – 29.1%). These women will have visited a Community Midwife (*bidan*) or *Puskesmas* for immunisations after confirmation of pregnancy; if they experience no further complaints, then their second step will be for childbirth.

Table 7.12 Steps and Number of External Actions Reported by Pregnant Women up through Delivery (N=127)

Women	Stage of Pregnancy	Pregnant Respondents	
		N	%
1 step	Delivery	12	9.5
2 steps	Pregnancy and delivery	74	58.3
3 steps	Pregnancy and delivery	37	29.1
4 steps	Pregnancy and delivery	4	3.1
Total		127	100.0

Source: Household Survey (2005)

Figure 7.1 presents the 'Decision Tree' which tracks the flow of pregnant and perinatal women between plural MCH systems in Rancaekek. This demonstrates how pregnant women, after noticing the first signs of pregnancy, try to determine their condition, before taking Steps 1–4, up until childbirth. Arrows (→) in the figure illustrate which MCH system pregnant and perinatal women decided upon, according to their individual needs during specific stages of pregnancy, and how they sometimes switched between traditional and modern MCH systems. The 43 women who confirmed their pregnancy traditionally were uncertain which MCH system to select for childbirth. Utilisation of traditional and/or modern MCH systems is very much dependent on 'predisposing', 'enabling' and 'institutional' factors. At the last step of every category, which correlates with childbirth, data show that 38 women delivered traditionally while 89 women delivered using available modern MCH facilities.

The Decision Tree designed for women in the sample survey in Rancaekek shows the steps taken during pregnancy up until delivery. It also shows the alternation between existent MCH systems in the area, depending on the woman's stage of pregnancy, her needs and perceptions as well as on her knowledge, attitudes and opinions about pregnancy. Therefore, the steps parallel the stages of pregnancy, biomedically divided into trimesters according to development of the foetus. The Decision Tree shows the ways pregnant women visit traditional or modern MCH facilities in Rancaekek, variations in which surely demonstrate how these women best cope with the conditions of pregnancy. The first group comprises 43 women (33.8%) who have confirmed their pregnancy using traditional systems; the second group comprises 84 women (66.1%) who have sought the help of a modern MCH system, which demonstrates that these women have learned, not

necessarily through education, that modern MCH services can accurately diagnose pregnancy.

Step 0, is the confirmation of the pregnancy, because after the women know that they are pregnant, then the other steps will be taken. Step 1, taken after confirmation, shows that 12 pregnant women did not continue to employ additional MCH services; however, for childbirth 8 women sought help from a *paraji* (TBA) and 4 from a *bidan* (CMW). These women are categorized as having taken only one step. Step 2, includes pregnant women who have continued to seek MCH services; several visited *paraji* for consultation, massage, or herbal concoctions. Of these women, 74 (58.3%) reported having delivered during Step 2: 19 were assisted by *paraji* and 55 in modern MCH facilities. These women are categorised as having fulfilled two steps. A total of 41 (32.3%) women completed Step 3, during which time 37 delivered while 4 women continued seeking MCH services up to Step 4.

The Decision Tree in Figure 7.1 also shows the inter-relationship between pregnant women and their choice of MCH system, with regard to the independent factors in the conceptual framework: (1) 'predisposing factors' with psycho-social characteristics at an individual level (knowledge. opinions. decision making and beliefs); (2) 'perceived factors' (perceptions of experience during pregnancy); (3) 'enabling factors' (socio-economic status at an individual level); (4) 'geographical accessibility' or distance to MCH facilities; (5) 'intervening factors' at an individual level through the impact of MCH systems introduced within the community. These independent factors influence how pregnant women make use of MCH services in the community.

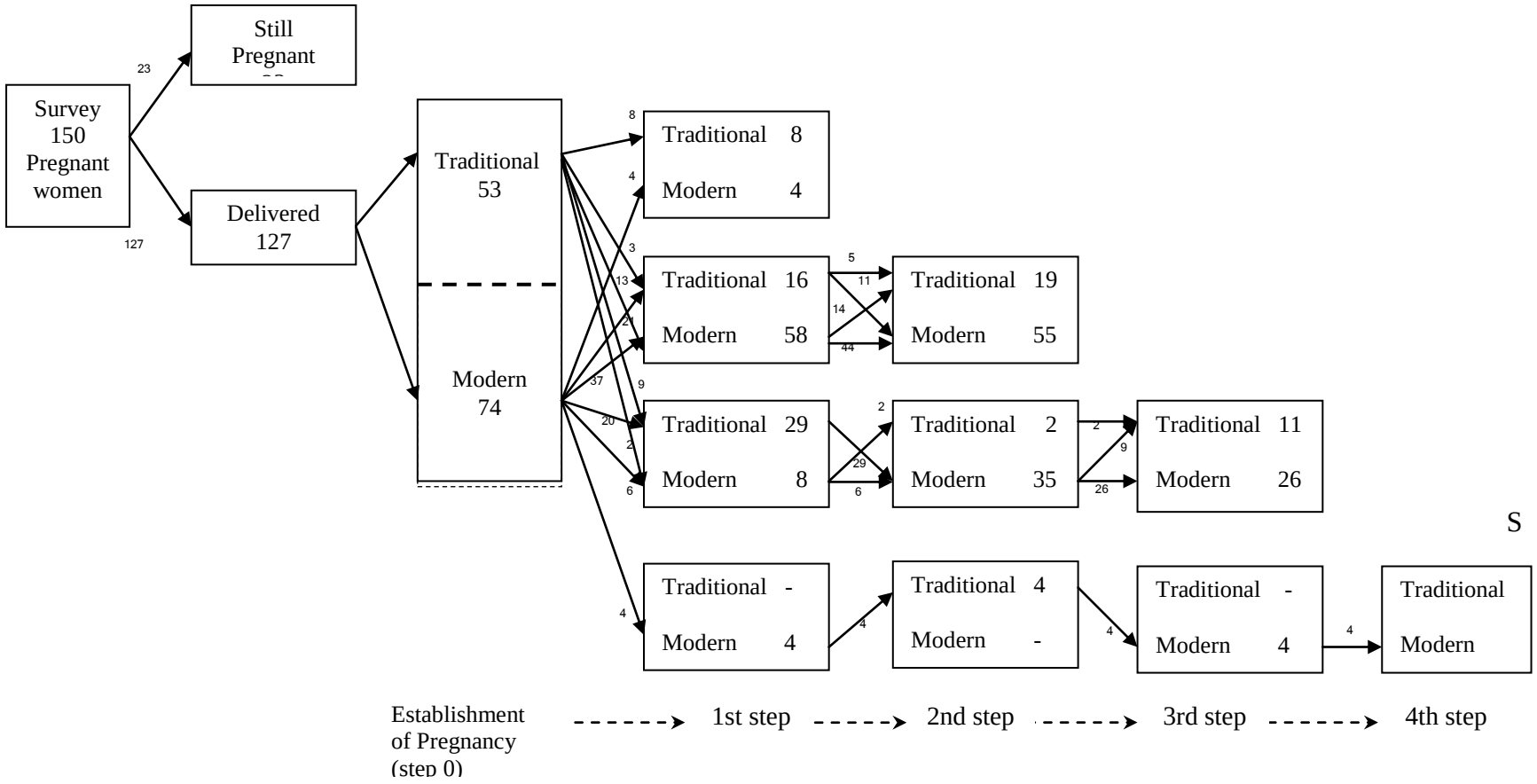
The Decision Tree illustrates the multiple-use strategy of pregnant women who use MCH systems. A woman's choices reflect not only her own beliefs and preferences but also those of her family, friends or neighbours. The more medically pluralistic a society is, the more considerably complex the relationship between knowledge about pregnancy, childbirth and social context. A community with plural medical systems will stimulate the public to make choices beneficial to their health. The opportunity to choose between plural medical systems available in the area leads to the integration of such systems. Figure 7.1 and Table 7.13 illustrate how the numbers change during each MCH utilisation step from traditional and modern MCH services.

The 150 respondents selected for the survey sample are categorized in one of two groups: 23 still pregnant women and 127 post-partum women. One of the 23 women got no farther than Step 2, while the other 22 respondents could only be traced up to Step 3 because they were still 4–6 months pregnant. External actions taken by the 127 post-partum women help elucidate the patterns of MCH utilisation behaviour.

7.2.3 Overall Pattern for Utilisation of Maternal and Child Health Systems

Reported contacts between pregnant and perinatal women with plural Maternal and Child Health (MCH) systems are entered into SPSS 15.0 then SPSS 17.0 as independent variables. As explained in detail earlier, of the 150 respondents. 127 post-partum women are included in the sample survey. They are then re-traced using SPSS and/or manually by cross-examination to discover the number of individual contacts they made with plural MCH systems in the area.

Figure 7.1 Decision Tree Showing the Flow of Pregnant and Parturient Women in the Sample Survey through Plural MCH Systems in Rancaekek



Source : Household Survey (2005)

Since external actions indicate that respondents have conferred with one or more MCH system during pregnancy, this category will help determine the overall pattern of MCH utilisation behaviour with regard to the various categories of independent factors: predisposing, enabling and institutional. The overall pattern of MCH utilisation, based on the behaviour of 127 respondents, is compiled on the basis of individual actions reported and the number of steps taken during the course of pregnancy, *i.e.* calculation of the total number of contacts made with MCH systems for pregnancy and childbirth. Data in Table 7.13 are combined with data presented in Figure 7.1 for the Decision Tree to show the flow of pregnant women through the plural MCH systems.

Numbers in the Decision Tree bring together and help construct the total number of contacts with plural MCH systems shown in Table 7.13; this table provides data for 127 respondents surveyed who have sought external contact with modern (check-ups. immunisation and consultations) and traditional (check-ups. massage and consultations) MCH systems during pregnancy. The flow of pregnant and parturient women seeking assistance represents their needs during a particular stage of pregnancy. A pregnant woman may contact a *paraji* (TBA) to treat fatigue and then go to a Community Midwife (*bidan*) for immunization or *vice versa*. The number of contacts has been made by 127 women with plural MCH systems subsequently total 287 visits to either traditional or modern MCH providers. Of these 287 contacts, 89 (31.0%) were to *paraji* and 198 (69.0%) to *bidan*.

Table 7.13 Total Number of External Actions Taken during Steps 1–4 by Pregnant Women Seeking Help from Traditional and/or Modern Maternal and Child Health Systems in Rancaekek (N=127)

Pregnant women	No. of Steps	Contacts with plural MCH systems				Total visits	
		Traditional		Modern			
		n	%	n	%	n	%
12	1	8	66.7	4	33.3	12	100.0
74	2	35	23.6	113	76.4	148	100.0
37	3	42	37.8	69	62.2	111	100.0
4	4	4	12.5	12	87.5	16	100.0
Total 127	-	89	31.0	198	69.0	287	100.0

Source : Household Survey (2005)

The total number of external actions taken by pregnant and parturient women (N=127) and the resulting pattern for MCH utilisation behaviour (N=287) was followed by multiplying the respondent data according to the number of individual contacts: 12 (9.4%) women made one contact, 74 (58.3%) made two contacts, 37 (29.1%) made three contacts and 4 (3.2%) made four contacts. Data were entered into SPSS 15.0 and then 17.0. Chapter VIII will discuss the application of bivariate analysis to find correlations between independent and dependent variables. Thereafter an analytical model for advanced multivariate analysis is employed to study the utilisation of MCH systems: *i.e.* non-linear canonical correlation analysis OVERALS.

Chapter VIII UTILISATION OF PLURAL MATERNAL AND CHILD HEALTH SYSTEMS

Chapter VIII presents a follow-up to earlier sections which have identified and described the various factors affecting the utilisation of Maternal and Child Health (MCH) systems as *emic* answers from respondents within the Rancaekek study area. Following recent advances in quantitative behavioural science, this study documents various factors categorised as determinants of human behaviour, within the complex health-seeking process during pregnancy and childbirth, expressed in terms of multiple and differential utilisation of plural MCH systems. Quantitative findings will complement the qualitative data presented in previous sections. Analysis using a conceptual model to research the utilisation of both traditional and modern MCH systems in Indonesia has revealed a set of factors which tend to influence how people regard Maternal and Child Health. Data gathered during the household survey yield information regarding the practices reported by pregnant and perinatal women during the 12-month period preceding the survey. Interaction between factors is analysed using a conceptual model in which the correlations between 'predisposing', 'perceived', 'enabling', 'institutional' and 'intervening' factors are analysed in conjunction with the two dependent variables for the utilisation of plural MCH systems in Rancaekek. At this stage of the study, one must question which factors clearly exert a greater influence on the utilisation of traditional and modern MCH systems in the study area. In order to answer this question, one must first examine how people regard both of these systems as well as the coherence between various blocks of factors.

To this end, bivariate analysis is applied to ascertain the correlation between factors which influence two dependent variables: *i.e. utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) systems. The following independent and intervening variables, distributed over the two dependent variables, will be cross-tabulated. In view of the fact that bivariate analysis indicates that coherence between the two sets of variables is not always systematic – *i.e.* statistical significance using Pearson's (chi-squared) χ^2, strength of association between variables using Cramer's *V* if at least one variable is nominal, it is essential to run multivariate and multiple regression analyses to gain a better understanding of the associations between all the model's related variables.

Consequently, the second step of the analysis aims to uncover the intra- and inter-relationships of all independent and intervening factors as well as their overall influence on the dependent variables. Multivariate analysis (OVERALS) makes possible not only the identification of specific determinants for the utilisation of MCH systems but also facilitates calculation of the relative effects of various variables within the overall patterns of MCH utilisation behaviour during pregnancy and childbirth. Finally, multiple regression analysis is implemented to uncover further associations between groups of variables, signified and represented as 'blocks' in the model, by observing relevant calculated regression values. The essential role of analysis is to clarify and help explain the predictive values for the overall interaction between variables in health-seeking behaviour in Rancaekek. Chapter VIII concludes with an interpretation and discussion of the outcomes of the analyses with regard to the model's structure.

Data from the quantitative survey are analysed using the *Statistical Program for Social Sciences* (SPSS), first converted to SPSS 15.0 and thereafter to SPSS 17.0 for quantitative analysis. Responses from all 127 respondents are first entered into the database. Then a series

of steps, explained below, are taken to prepare the data for final analysis. After completing this preparatory step, data is coded in order to build the final database, which can be viewed both in a numeric and textual format. Care must be taken to label the responses in such a way that makes them uniformly compatible during computation.

8.1 Bivariate Analysis of Maternal and Child Health Systems

8.1.1 Preparation for Analysis: Data Sets and Variables

First, bivariate analysis is applied to achieve a broad understanding of the relative effect of each independent and intervening factor on the two dependent variables for the use of modern and traditional Maternal and Child Health (MCH) systems. The factors, presented at an analytical level in Chapter III, are now redefined as variables and entered into the analytical model for further analysis. Results obtained from the qualitative data collected indicate that the use of traditional and/or modern MCH systems in Rancaekek is influenced not only by socio-demographic variables such as occupation and level of education but also by psycho-social variables such as beliefs, knowledge, perception of pregnancy and childbirth, as well as enabling and institutional factors. As a consequence, quantitative surveys have also sought to specify and measure operational and complex factors retrieved from collected responses (*emic*) using several relevant indicators – translated into a series of questions – in order to achieve a maximum level of understanding.

Findings during qualitative data collection in five sample villages document that the public faithfully respects *paraji* (TBA) not only for their role during pregnancy and childbirth but also as health consultant for other family members. The *paraji* is a respected senior member of the community experienced and knowledgeable about pregnancy and childbirth as well as health and healing in a broader perspective for babies, mothers and other family members in general (*cf.* Chapter I). However, one cannot deny that modern MCH systems, with the *bidan*(CMW), have recently improved as modern programmes are continuously being implemented by the Indonesian Government, international institutions and NGOs.

Finally, data analyses are carried out with the aim to elucidate complicated associations and interactions between various 'blocks' of factors in the analytical model. Several steps are necessary to prepare data for final analysis. This study follows the entire preparatory and coding processes which subsequently lead to final analysis of the data. These steps include the grouping of questionnaire responses, coding into similar or different variables and execution of mathematical computations. Open-ended responses are re-grouped and inserted into the data set. Here 'original responses'[1] refers to responses in the data set after the second entry. In preparation for multivariate analysis, structured according to the study's conceptual model, the total number of responses to 100 questions on related issues is first reduced to 23 variables provided with recalculated 3-response categories.

After completing the preliminary steps, included in the first and second data entries, frequencies for the data sets and single responses for multi-response questions are determined, questions re-grouped, variables labelled, and factors finally calculated into model-based variables[2]. Bivariate analysis has become the first statistical method to assess the relative influence of 'predisposing', 'enabling', 'perceived pregnancy', 'institutional' and 'intervening' factors on utilisation of plural MCH systems, both 'traditional' and 'modern'. Bivariate analysis basically seeks to give a general overview of the direct associations between the 21 independent and 2 dependent variables. While multivariate analysis (OVERALS) focuses more specifically on the interaction between independent and

dependent variables, finally, followed by multiple regression analysis to assess the correlation values (*r*) between various blocks.

Data Sets
Analysis basically includes the assessment of interactions between 23 variables divided between eight blocks of factors placed in two data sets; each variable with its specific label will be given in more detail below.

Set 1: Independent variables (Blocks 1–6):
Predisposing factors: socio-demographic variables (7)
Predisposing factors: psycho-social variables (9)
Enabling factor: socio-economic variable (1)
Perceived pregnancy factors: perceived pregnancy variable (1)
Institutional factors: institutional variables (2)
Intervening factors: intervening variable (1)

Set 2: Dependent variables (Blocks 7–8):
Utilisation of traditional MCH (1)
Utilisation of modern MCH (1)

Response categories for open-ended questions increase impressively, sometimes reaching as many as 40 combinations of categories. Therefore, they are re-grouped into new categories, simplified and made compatible for re-computation. Re-checking by means of frequency tables shows that many multiple responses should be re-grouped into fewer categories, put in order, and then ranked according to their labels valued from 'negative' to 'positive' and from 'little' to 'much'. Corrections are calculated and then entered into the data set. Several questions with multiple responses give a complicated output, *e.g*. questions about types of taboos during pregnancy, expanded from 6 to 40 combinations of categories.

The process of re-grouping multiple into fewer categories, which share logical meanings with regard to the topic of the study, is called 're-coding'. Re-coded data can then be used as fundamental material in the analytical process. Some respondent answers show that several questions were too complex to include in the quantitative analysis. These include responses to several questions in Block 1 about occupation; in Block 2 about decision making, belief in rituals, types of taboos; in Block 3 about unusual expenses; in Block 4 about the meaning of motherhood, perceptions about pregnancy, risks and problems during and after pregnancy and delivery, miscarriage, abortion, reasons for and experiences during abortion; in Block 5 about transportation needed to reach MCH facilities, financial arrangements needed during pregnancy and childbirth, and frequency of contacts between respondents and *paraji* or *bidan*; in Block 6 about MCH programmes and sources of information about programmes introduced in Rancaekek; in Block 7 about reasons for using *paraji* (TBA), stages of pregnancy in which to seek traditional MCH services; in Block 8 about reasons for employing *bidan* (CMW) and other modern services, stages of pregnancy in which to call upon the *bidan*.

Two types of analysis are run to gain a better understanding about the associations between independent and dependent variables. Bivariate analysis calculates statistical significance used to indicate correlations between independent and dependent variables. It is necessary to analyze the values of Pearson's χ^2 because, in this type of statistical hypothesis test, the statistics are distributed using a χ^2 method. Values obtained from the data are then

compared to a critical value from the χ^2 test, that value of 0.05 is established in the bivariate analysis. On the basis of statistics, calculating the values for χ^2 helps to determine the significance between two variables. Moreover, the Pearson's χ^2 test for independence permits Cramer's *V* which indicates the strength of associations, if at least one variable is nominal in the cross-tabulation. The absolute values for Cramer's *V* are between 0 and 1, where '0' means 'no association' and '1' means 'perfect association'. Subsequently, advanced multivariate and multiple regression analyses provide deeper insight into the coherence and interaction between all variables in the model. Significance in cross-tabulations is a first expression of the degree of probability which could not just have occurred by pure chance in a recorded association between variables[3].

Variables

A total of 23 variables, divided between the above-mentioned eight blocks in two data sets – recalculated if necessary – have been labelled as follows:

Socio-demographic variables:

Variable *Type of village* (label: typvil), Responses were not recalculated. Original responses used in the analysis are: 'Jelegong', 'Haurpugur', 'Cangkuang', 'Sangiang', 'Tegal Sumedang'.

Variable *Age* (label age), Response categories have been re-group as: '11-20', '21–30', '31–40', '>40'.

Variable *Education of women* (label eduw), Recalculation was not required, Original responses used in the analysis are: 'no education', 'elementary school', 'junior high school', 'senior high school', 'university'.

Variable *Education of husbands* (label eduh), Recalculation was not required, Original responses used in the analysis are: 'no education', 'elementary school', 'junior high school', 'senior high school', 'university'.

Variable *Occupations of women* (label occuw), Response categories have been re-grouped as: 'housewife', 'peasant', 'factory labourer', 'small enterprise'.

Variable *Occupations of husbands* (label occuh), Response categories have been re-group. and some categories omitted for lack of replies: 'unemployed', 'peasant', 'factory labourer', 'employee', 'retired'.

Variable *Number of children* (label nuchil), Response categories have been re-group, based on the original responses, thus creating the following categories: '1–2', '3–4', '5-6' and '>6'.

Variable *Pregnancy status* (label presta), this variable has been omitted because the study is only interested in respondents who completed the process of pregnancy with external actions, commencing with the confirmation of pregnancy and ending in childbirth.

Psycho-Social variables:

Variable *Knowledge about pregnancy* (label knopre), Response categories have been re-group based on the original responses, thus creating the following categories: 'little knowledge', 'average knowledge', 'much knowledge'.

Variable *Knowledge about high-risk pregnancy* (label knohrp), Response categories have been re-group based on the original responses, thus creating the following categories: 'little knowledge', 'average knowledge', 'much knowledge'.

Variable *Knowledge about miscarriage* (label knomis), Response categories have been re-group based on the original responses, thus creating the following categories: 'little knowledge', 'average knowledge', 'much knowledge'.

Variable *Opinion about TBA skills* (label opitba), Response categories have been re-group, based on the original responses, thus creating the following categories: 'no opinion', 'negative opinion', 'between negative and positive opinion', 'positive opinion'.

Variable *Opinion about midwife skills* (label opimid), Response categories have been re-group based on the original responses, thus creating the following categories: 'no opinion', 'negative opinion', 'between negative and positive opinion', 'positive opinion'.

Variable *Health-seeking behaviour during pregnancy* (label hsbpr), Response categories have been re-group, based on the original responses, thus creating the following categories: 'little input', 'average input', 'much input'.

Variable *Health-seeking behaviour during delivery* (label hsbde), Response categories have been re-group, based on the original responses, thus creating the following categories: 'little input', 'average input', 'much input'.

Variable *Belief in pregnancy rituals* (label belrt), Response categories have been re-group, based on the original responses, thus creating the following categories: 'little belief in', 'average belief in', 'much belief in'.

Variable *Belief in taboos during pregnancy* (label betab), Response categories have been re-group, based on the original responses thus creating the following categories: 'little belief in', 'average belief in', 'much belief in'.

Enabling variables:

Variable *Socio-economic status* (label SES), Response categories have been re-group, based on the original responses, thus creating the following categories: 'poor', 'average', 'well to do'.

Perceived pregnancy variables:

Variable *Perception of experiences during pregnancy* (label percp), Response categories have been re-group, based on the original responses, thus creating the following categories: 'low perception', 'average perception', 'much perception'.

Institutional variables:

Variable *Geographical accessibility of traditional MCH* (label actra), Response categories have been re-group, based on the original responses, thus creating the following categories: 'near', 'average', 'far'.

Variable *Geographical accessibility of modern MCH* (label acmod), Response categories have been re-group, based on the original responses, thus creating the following categories: 'near', 'average', 'far'.

Intervening variables:

Variable *Impact of MCH programmes through participation* (label impac). Response categories have been re-group, based on the original responses, thus creating the following categories: 'low impact', 'average impact', 'much impact'.

Dependent (Plural MCH Systems) variables:

Variable *Utilisation of traditional MCH* (label ustra), the re-grouping of questions and recomputing of response categories is executed on the basis of the original responses, thus creating the following response categories: 'little use', 'average use', 'much use'. The original responses included categories to questions asking respondents how they had actually used MCH facilities during the previous 12-month period, with regard to various

components such as: pregnancy determination, pregnancy consultation, immunization, massage, childbirth, and post-natal/post-partum activities.

Variable *Utilisation of modern MCH* (label usmod), Re-grouping questions and recomputing response categories has been executed on the basis of the original responses, thus creating the following response categories: 'little use', 'average use', 'much use'. The original responses comprise categories for questions asking respondents how they actually used MCH facilities during the previous 12-month period with regard to various components such as: pregnancy determination, pregnancy consultation, immunization, massage, childbirth, and post-natal/post-partum activities.

Bivariate analysis was carried out by cross-tabulating the distribution of 23 independent variables, between 'predisposing', 'perceived', 'enabling', 'institutional', 'intervening' factors, over 2 dependent variables. As regards the determination of statistical significance, whether there exists a systematic correlation between two variables, calculated values of Pearson's χ^2, based on the criterion 95%, *i.e.* a value of 0.05, is indicated for each variable in Tables 8.1–8.4, Pearson's χ^2 assists in deciding whether there is a strongly significant correlation between variables on the basis of statistical calculations. In the null hypothesis, correlation between two factors is refuted, if Pearson's χ^2 is > 0.05. A strong correlation is indicated if Pearson's χ^2 is < 0.01. Cramer's *V* shows the strength of correlation, if at least one variable is nominal in the cross-tabulation. The absolute values of Cramer's *V* are between 0 and 1, where '0' means 'no' and '1' means 'perfect' association correlation.

Significance is basically regarded as an expression of the degree of probability that a calculated correlation between variables could not have emerged by chance; analysis of the research findings is extended beyond the bivariate analysis of cross-tabulation of variables to multivariate and multiple regression analyses with the objective to provide more information and insight into the coherence between all variables in the model.

8.1.2 Dependent Factors

During the overall analysis, assessment of the dependent factors *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) has proven to be rather complicated. Pregnancy is a process for human reproduction, divided into trimesters based on development of the foetus. It is remarkable that the stages of pregnancy run parallel in both traditional and modern systems. Utilisation of MCH systems reflects the pregnant woman's needs according to the stages of her pregnancy. Every stage requires specific care, according to *Puskesmas*' strategy to assure a healthy pregnancy and live newborn such as: determination and conformity of pregnancy and immunizations. In contrast, the traditional MCH system focuses on how a pregnant woman feels. MCH utilisation behaviour is influenced by factors labelled as independent variables, mostly socio-economic status (SES). Further operationalisation of the concept for specific variables has been described in Chapter III (Table 3.8), based on the values for dependent variables within the model, as executed in respondent scores reported during a 12-month period prior to the household surveys in five sample villages in Rancaekek. To illustrate further the importance of the dependent variables for utilisation of traditional and modern MCH systems, additional related variables had to be analysed for tolerance to achieve the most realistic calculation of respondents' answers. While empirically observed scores for the utilisation of MCH systems during the 12-month retrospective period would be perfect.

Bivariate and multivariate analyses are employed to construct an analytical model. All components are inter-complementary and, at the end of the study, will provide the 'big picture' or a complete package of information about the community (*cf.* Chapter III. Sub-section 3.2.3), rendering the appropriate methodology for analysis of data collected in the research setting. Although the same limitations emerge during calculation of psycho-social factors in the analysis, individual opinions of the respondents are not only relevant for utilisation of MCH systems but even more so for various categories of independent and intervening factors.

8.1.3 Enabling Factor

Socio-economic status (label: SES). As explained in Chapter III, 'enabling' factors include variables at an individual level which can be regarded as characteristic for the respondent concerned but also depend on the socio-economic condition of the community in question. Analysis is carried out on a series of related factors, such as family income, financial resources, property consisting of land and animal resources, cost of living and social status, which renders a 3-level classification ('poor', 'average', 'well-to-do') to assess the individual use of MCH systems. An individual's socio-economic status (SES) within the household is strongly significant with *utilisation of traditional and modern MCH* (Pearson's χ^2 = 0.000). This is understandable since MCH utilisation behaviour during pregnancy, most often during childbirth, is strongly correlated with socio-economic status (SES) of the household. One should recall that, in the traditional MCH system, the services offered by *paraji* (TBA) require no fixed fee; payment is based not on a family's financial situation but rather on the family's gratitude, expressed wholeheartedly by the husband or wife's family.

8.1.4 Predisposing Factors

Predisposing factors comprise two groups of variables, *i.e.* socio-demographic and psycho-social, which are assumed to influence the utilisation of MCH services during pregnancy and childbirth at an individual level and which, with regard to personal characteristics and respondent backgrounds, can be related to utilisation of MCH systems. The category 'socio-demographic' factors includes the variables: *type of village* (typvil), *age* (age), *education of husbands* (eduh), *education of women* (eduw), *occupation of husbands* (occuh), *occupation of women* (occuw), *and number of children* (nuchil). The category 'psycho-social' factors include the variables: *knowledge about pregnancy* (knopre), *knowledge about high-risk pregnancy* (knohrp), and *knowledge about miscarriage* (knomis), Table 8.1 shows the successive distribution of predisposing variables (*N*=287) over *utilisation of traditional MCH* and *utilisation of modern MCH* from the 287 contacts with the MCH services by the 127 respondents. As can be seen from the values of Pearson's χ^2, although not all bivariate correlations in these categories show significance, most variables are significant with a certainty of 95%, amounting to values for Pearson's $\chi^2 \leq 0.05$ discussed below.

Socio-Demographic

Type of village (label: typvil): For quantitative data collection, or the household survey, five villages were chosen from among 13 in Rancaekek Sub-District, *i.e.* Jelegong (A/B), Cangkuang (B), Haurpugur (B/C), Sangiang (C), and Tegal Sumedang (C). The variable *type of village* (see Table 8.1) is also very significant (Pearson's χ^2 = 0.000) with respect to the two

dependent variables *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) (Pearson's χ^2 = 0.000). Generally, in comparison, the traditional MCH system is used less frequently than the modern MCH system in the five sample villages in Rancaekek (traditional: 31.0%; modern: 79.0%). People in Tegal Sumedang and Sangiang, two villages categorized as having a low socio-economic status (SES: *cf.* Chapter III), relied more on traditional MCH services (Tegal Sumedang 55.6%; and Sangiang 53.1%) because this geographically remote village makes access to modern *Puskesmas* difficult.

Age (label: age): The variable *age*, for respondents pregnant during the preceding 12-month period, is less significant with respect to *utilisation of traditional and modern MCH* (Pearson's χ^2 = 0.003, Cramer's V = 0.003). Remarkably, women with high risks pregnancy are quite high (11-20 years = 11.1%; and 31->40 years = 38.3%). It shows that 49.4% women are facing risks of pregnancy.

Education (labels: eduw, eduh): Table 8.1 shows that both *education of women* (eduw) and *education of husbands* (eduh) are strongly significant, with *education of women* (eduw) showing significance for *utilisation of traditional and modern MCH* (Pearson's χ^2 = 0.000, Cramer's V = 0.000). Similarly, *education of husbands* (eduh) also shows significance for *utilisation of traditional and modern MCH* (Pearson's χ^2 = 0.000, Cramer's V = 0.000). This shows that correlation between education and utilisation of traditional and modern Maternal and Child Health is significant.

Occupation (labels: occuw. occuh): Variable *occupation of women* (occuw) show less significance comparing to the variable *occupation of husbands* (occuh) for *utilisation of traditional and modern MCH* (women: Pearson's χ^2 = 0.052; husbands: Pearson's χ^2 = 0.000). This shows that the variable of *occupation of women* (occuw) less correlated to the *utilisation of traditional and modern MCH*, while the variable of *occupation of husbands* (occuh) are strongly correlated with *utilisation of traditional and modern MCH*.

Number of children (label: nuchil): This variable shows not significance for *utilisation of traditional and modern MCH* (Pearson's χ^2 = 0.191) no correlation for *utilisation of traditional and modern MCH* (Cramer's V = 0.000).

Psycho-Social Variables

Knowledge about pregnancy (label: knopre): This variable is significant for both dependent variables *utilisation of traditional and modern MCH* (Pearson's χ^2 = 0.001). Knowledge about pregnancy including high-risk and miscarriage show strong correlations with the use of traditional and modern MCH services.

Knowledge about high-risk pregnancy (label: knohrp): This variable is significant for *utilisation of traditional and modern MCH* (Pearson's χ^2 = 0.001). After many programmes about knowledge on high-risk pregnancy have been introduced by the government and non-government organisations mostly to the *paraji* (TBA) and to the community, the referral system to the community midwife, health centers and hospital is escalating.

Knowledge about miscarriage (label: knomis): This variable is strongly significant for *utilisation of traditional and modern MCH* (Pearson's χ^2 = 0.000). It is interesting to note that

the correlation between *knowledge about miscarriage* (knomis) and *utilisation of traditional and modern MCH* is strongly significant. One should not forget that it is the *paraji* (TBA) who demonstrates concern and empathy when a woman suffers a miscarriage and who prepares herbal medicinal concoctions to cleanse her womb, monitors her health, as well as buries and performs rituals for the foetus.

Opinion about TBA skills (label: opitba): Table 8.1 shows that this variable shows significance for *utilisation of traditional and modern MCH* (Pearson's $\chi^2 = 0.003$). It is almost similar with the o*pinion about midwife skills* (label: opimid): this variable is significantly correlated with *utilisation of traditional and modern MCH* (Pearson's $\chi^2 = 0.000$).
Perceived Pregnancy Variable:

Perception of experiences during pregnancy (label: percp): This variable, which refers to the physical manifestations of a pregnant woman, correlates significantly with *utilisation of traditional and modern MCH* (Pearson's $\chi^2 = 0.000$).

8.1.5 Institutional Factors

Geographical accessibility of traditional MCH (label: actra). This variable shows no significance with respect to *utilisation of traditional MCH* (Pearson's $\chi^2 = 0.119$). The concept 'geographical accessibility' takes into account not only the physical distance but also the social distance as one of the concerns when using traditional, but not modern, MCH systems. Table 8.4 shows the use of traditional MCH services when geographically 'near' or accessible to the community, especially for villages such as Sangiang and Tegal Sumedang located in remote areas. Distance also refers to social contact between the community and *paraji* (TBA) who, as part of the community, shares the same culture, values, social life and language (*cf.* Chapter I).

Geographical accessibility of modern MCH (label: acmod). This variable, including social distance as explained above for the traditional MCH system, is neither significantly correlated with *utilisation of traditional MCH* (Pearson's $\chi^2 = 0.119$) nor with *utilisation of modern MCH* (Pearson's $\chi^2 = 0.422$). The public's interaction with *bidan* (CMW) is more formal in comparison to such interaction with Traditional Birth Attendants (*paraji*). As government employees in the *Puskesmas*, *bidan* wear uniforms and are most often posted in Rancaekek by the Department of Health. This explains the distance in social relationships, which becomes apparent when studying modern MCH systems, as demonstrated by the intervening factors.

Table 8.1 Multiple Care Utilisations in 287 Contacts with Traditional and Modern MCH Services Reported by 127 External Actions of Pregnant and Delivery Mothers in Five Sample Villages (N = 287)

Variable	Plural MCH Systems					
	Trad.	%	Modern	%	Total	
	N	%	N	%	N	%
Predisposing factors Socio-Demographic						
Type of Villages						
Jelegong	15	18.5	66	81.5	81	100.0
Haurpugur	18	45.0	22	55.0	40	100.0
Cangkuang	5	6.9	67	93.1	72	100.0
Sangiang	26	53.1	23	46.9	49	100.0
Tegal Sumedang	25	55.6	20	44.4	45	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
Age of Women						
11 – 20 years	15	16.9	17	8.6	32	100.0
21 – 30 years	52	58.4	93	47.0	145	100.0
31 – 40 years	18	20.2	82	41.4	100	100.0
>40 years	4	4.5	6	3.0	10	100.0
(Pearson Chi-Square .003/Phi Cramer's V .003)						
Education of Women						
No Education	2	50.0	2	50.0	4	100.0
Elementary School	58	45.3	70	54.7	128	100.0
Junior High School	24	25.3	71	74.7	95	100.0
Senior High School	5	9.1	50	90.9	55	100.0
University	0	0.0	5	100.0	5	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
Education of Husbands						
No Education	0	00.0	6	100.0	6	100.0
Elementary School	51	47.7	56	52.3	107	100.0
Junior High School	26	31.7	56	68.3	82	100.0
Senior High School	11	13.8	69	86.3	80	100.0
University	1	8.3	11	91.7	12	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
Occupation of Women						
Housewife	58	30.4	133	69.6	191	100.0
Peasant	11	50.0	11	50.0	22	100.0
Laborer	15	35.7	27	64.3	42	100.0
Small Enterprises	5	15.6	27	84.4	32	100.0
(Pearson Chi-Square .052/Phi Cramer's V .052)						

Table 8.1 Multiple Care Utilisations in 287 Contacts with Traditional and Modern MCH Services Reported by 127 External Actions of Pregnant and Delivery Mothers in Five Sample Villages (N = 287) (continued)

Variable	Plural MCH Systems					
	Trad.	%	Modern	%	Total	
	N	%	N	%	N	%
Occupation of Husbands						
Unemployed	6	60.0	4	40.0	10	100.0
Peasant	29	48.3	31	51.7	60	100.0
Laborer	35	26.7	96	73.3	131	100.0
Small Enterprises	3	5.8	49	94.2	52	100.0
Employee	7	50.0	7	50.0	14	100.0
Civil Servant	4	40.0	6	60.0	10	100.0
Retired	5	50.0	5	50.0	10	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
Number of Children						
1 - 2	50	29.8	118	70.2	168	100.0
3 - 4	26	30.6	59	69.4	85	100.0
5 - 6	11	34.4	21	65.6	32	100.0
> 6	2	100.0	0	0.0	2	100.0
(Pearson Chi-Square .191/Phi Cramer's V .001)						
Predisposing Factors Psycho-social Knowledge about Pregnancy						
Very little knowledge	26	48.1	28	51.9	54	100.0
Little knowledge	29	34.5	55	65.5	84	100.0
Average knowledge	27	30.3	62	69.7	89	100.0
Much knowledge	5	9.8	46	90.2	51	100.0
Very much knowledge	2	22.2	7	77.8	9	100.0
(Pearson Chi-Square .001/Phi Cramer's V .001)						
Knowledge about High-risk Pregnancy						
Very little knowledge	17	37.0	29	63.0	46	100.0
Little knowledge	39	43.3	51	56.7	90	100.0
Average knowledge	23	26.1	65	73.9	88	100.0
Much knowledge	10	21.7	36	78.3	46	100.0
Very much knowledge	0	0.0	17	100.0	17	100.0
(Pearson Chi-Square .001/Phi Cramer's V .191)						
Knowledge about Miscarriage						
Very little knowledge	26	46.4	30	53.6	56	100.0
Little knowledge	41	45.6	49	54.4	90	100.0
Average knowledge	21	17.8	97	82.2	118	100.0
Much knowledge	1	4.3	22	95.7	23	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						

Table 8.1 Multiple Care Utilisations in 287 Contacts with Traditional and Modern MCH Services Reported by 127 External Actions of Pregnant and Delivery Mothers in Five Sample Villages (N = 287) (continued)

Variable	Plural MCH Systems					
	Trad.	%	Modern	%	Total	
	N	%	N	%	N	%
Opinion about TBA Skills						
No opinion	0	0.0	14	100.0	14	100.0
Negative opinion	10	38.5	16	61.5	26	100.0
Between negative &positive	6	14.6	35	85.4	41	100.0
Positive opinion	73	35.4	133	64.6	206	100.0
(Pearson Chi-Square .003/Phi Cramer's V .003)						
Opinion about Midwife Skills						
No opinion	8	100.0	0	0.0	8	100.0
Negative opinion	6	42.2	7	53.8	13	100.0
Between negative &positive	10	66.7	5	33.3	15	100.0
Positive opinion	65	25.9	186	74.1	251	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
MCH Care Utilisation Behaviour during Pregnancy						
Little Input	35	33.0	71	67.0	106	100.0
Average Input	9	25.0	27	75.0	36	100.0
Much Input	45	31.0	100	69.0	145	100.0
(Pearson Chi-Square .668/Phi Cramer's V .668)						
Health-seeking Behaviour during Delivery						
Little Input	26	22.6	89	77.4	115	100.0
Average Input	10	55.6	8	44.4	18	100.0
Much Input	53	34.4	101	65.6	154	100.0
(Pearson Chi-Square .008/Phi Cramer's V .008)						
Belief in Pregnancy Rituals						
Very Little Belief in	10	38.5	16	61.5	26	100.0
Little Belief in	0	0.0	12	100.0	12	100.0
Average Belief in	4	10.3	35	89.7	39	100.0
Much Belief in	53	43.1	70	56.9	123	100.0
Very Much Belief in	22	25.3	65	74.7	87	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
Belief in Taboos during Pregnancy						
Don't Belief in	7	87.5	1	12.5	8	100.0
Very Little Belief in	4	16.7	20	83.3	24	100.0
Little Belief in	7	21.9	25	78.1	32	100.0
Much Belief in	28	25.5	82	74.5	100	100.0
Very Much Belief in	43	38.1	70	61.9	113	100.0
(Pearson Chi-Square .001/Phi Cramer's V .001)						
General Total	89	31.0	198	79.0	287	100.0

Table 8.2 Distribution of Socio-Economic Status Variable over the Utilisation of Traditional and Modern MCH Systems in Five Sample Villages (N = 287)

Variable	Plural MCH Systems					
	Trad.	%	Modern	%	Total	
	N	%	N	%	N	%
Socio-Economic Status						
Poor	63	44.1	80	55.9	143	100.0
Average	24	21.2	89	78.8	113	100.0
Well to Do	2	6.5	29	93.5	31	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
General Total	89	31.0	198	79.0	287	100.0

Table 8.3 Distribution of Perceived Pregnancy Variable over the Utilisation of Traditional and Modern MCH Systems in Five Sample Villages (N = 287)

Variable	Plural MCH Systems					
	Trad.	%	Modern	%	Total	
	N	%	N	%	N	%
Perceived Pregnancy						
Perceptions of Experiences during Pregnancy						
Very Low Perceptions	24	33.8	47	66.2	71	100.0
Low Perceptions	35	29.9	82	70.1	117	100.0
Average Perceptions	7	25.0	21	75.0	28	100.0
High Perceptions	11	19.6	45	80.4	56	100.0
Very High Perceptions	12	80.0	3	20.0	15	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
General Total	89	31.0	198	79.0	287	100.0

Table 8.4 Distribution of Institutional Variable over the Utilisation of Traditional and Modern MCH Systems in Five Sample Villages (N = 287)

Variable	Plural MCH Systems					
	Trad.	%	Modern	%	Total	
	N	%	N	%	N	%
Geographical Accessibility of Traditional MCH System						
Near	60	34.9	112	65.1	172	100.0
Average	10	33.3	20	66.7	30	100.0
Far	19	22.4	66	77.6	85	100.0
(Pearson Chi-Square .119/Phi Cramer's V .119)						

Table 8.4 Distribution of Institutional Variable over the Utilisation of Traditional and Modern MCH Systems in Five Sample Villages (*N* = 287)

Variable	Plural MCH Systems					
	Trad.	%	Modern	%	Total	
	N	%	N	%	N	%
Geographical Accessibility of Modern MCH System						
Near	34	29.8	80	70.2	114	100.0
Average	13	25.0	39	75.0	52	100.0
Far	42	34.7	79	65.3	121	100.0
(Pearson Chi-Square .422/Phi Cramer's V .422)						
Impact of MCH Programmes through Participation						
Some Impact	37	63.8	21	36.2	58	100.0
Average Impact	39	18.7	170	81.3	209	100.0
Much Impact	13	72.2	5	27.8	18	100.0
Very Much Impact	0	0.0	2	100.0	2	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
Utilisation of Traditional MCH System						
Very Little Use	1	5.0	19	95.0	20	100.0
Little Use	0	0.0	6	100.0	6	100.0
Average Use	19	18.8	82	81.2	101	100.0
Much Use	0	0.0	2	100.0	2	100.0
Very Much Use	69	43.7	89	56.3	158	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
Utilisation of Modern MCH System						
Very Little Use	8	100.0	0	0.0	8	100.0
Little Use	2	10.0	18	90.0	20	100.0
Average Use	20	40.8	29	59.2	49	100.0
Much Use	41	44.1	52	55.9	93	100.0
Very Much Use	18	15.4	99	84.6	117	100.0
(Pearson Chi-Square .000/Phi Cramer's V .000)						
General Total	89	31.0	198	79.0	287	100.0

8.1.6 Intervening Factors

Impact of MCH programmes through participation (label: impac). This intervening variable, which concerns the implementation of MCH programmes introduced in the Rancaekek community, is clearly correlated and strongly significant for *utilisation of traditional and modern MCH* (Pearson's χ^2 = 0.000). Several programmes implemented in the area have had an increased impact on the use of modern MCH facilities: especially the UNICEF 'Safe Motherhood' Programme in Cangkuang village, and the Minister of Women's Affairs programme 'Mothers' Friendly Movement' in Sangiang, Tegal Sumedang, Jelegong and Haurpugur.

Overall, it is clear that, using bivariate analysis, several variables show significant correlation with either the reported utilisation of traditional or modern MCH systems or, in few cases, with both. Predisposing socio-demographic factors which include *type of village* (typvil), *education of women* (eduw), *and education of husbands* (eduh) only correlate significantly with *utilisation of traditional and modern MCH* through the contacts to the services starting during the women feel that they are pregnant until parturition.

Among the psycho-social factors, *knowledge about pregnancy* (knopre) and *knowledge about miscarriage* (knomis) show a strongly significant correlation with reported *utilisation of traditional MCH* as well as to the *utilisation of modern MCH.* The variables *opinion about TBA skills* (opitba) and *opinion about midwife skills* (opimid) demonstrate a strong significance with both *utilisation of traditional and modern MCH*.

The variable *health-seeking behaviour during pregnancy* (hsbpr) shows no significance with the reported *utilisation of traditional and modern MCH*. Indeed, the variable *socio-economic status* (SES) of respondents shows very strong significance for the reported *utilisation of traditional MCH* and *utilisation of modern MCH*. The factor 'institution' for MCH systems in the study area concerning respondents' villages not only shows a weakly significant correlation with *utilisation of modern MCH* but also a non-significant correlation with the reported *utilisation of traditional MCH*. Finally, the intervening variable *impact of MCH programmes through participation* (impac) shows a significant correlation with both reported *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod).

The overall pattern also reveals that respondents in the villages sampled use both types of traditional and modern MCH systems, illustrated most markedly in the higher scores for 'average' and 'much' use. This demonstrates that, although the use of modern MCH services is increasing, some respondents still prefer to seek help from the traditional system during some stages of pregnancy because of the type of services offered by a *paraji* (TBA) such as: massage, rituals, *jamu* (herbal concoctions), moral and psychological support.

Cross-tabulation of direct correlations between variables, namely using bivariate analysis, generally shows strongly significant correlations between 'predisposing', 'enabling', 'perceived' and 'intervening' variables, on one hand, and the two dependent variables, on the other hand (see Tables 8.1–8.5). In Section 8.2, ways are examined in which variations in the use of traditional and modern MCH systems can be explained in more detail in terms of correlations and interactions between all variables and 'blocks' using the analytical model selected for this study.

8.2 Multivariate Analysis: OVERALS

Bivariate analysis of cross-tabulations between quantitative data from the household survey discussed above demonstrates the relation between 'predisposing', 'perceived', 'enabling' and 'intervening' factors, on one hand, and the two dependent variables *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod), on the other hand. Following the pattern arising within the first four categories of factors, variations are discovered between separate correlations between these and the dependent variables *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod). As described in Chapter III (*cf*. Figure 3.1), the conceptual model and its components have been developed and are implemented as an explanatory model for the use of MCH systems in Rancaekek.

Although bivariate analysis can test complex quantitative data reflecting interaction between independent and intervening *versus* dependent variables, the overall complicated process cannot be explained by simple cross-tabulation. Explicitly, hundreds of tables would

be necessary in order to analyse the interactions between the study's 23 variables, resulting in a rather disorderly analysis and rendering identification of significant correlations extremely subjective. As described in Chapter III, the application of various multivariate analyses offers the advantage that related research can draw upon many years of experience of researchers such as Greenlick *et al*. (1973) and Kohn & White (1976) who developed the early models for analysis of human behaviour, and such as Gifi (1981) and Van der Burg, De Leeuw & Verdegaal (1983; 1988) at the Department of Data Theory, Leiden University, who went on to further develop related multivariate analysis models. Thereafter, Slikkerveer (1990; 2001) has developed a particular analytical model for the study and analysis of transcultural utilisation behaviour of health care in Sub-Saharan Africa, thus providing the basis for the present analytical model, *i.e*. using non-linear canonical correlation analysis OVERALS for advanced multivariate analysis of the utilisation of MCH systems in Indonesia.

Non-linear canonical correlation analysis makes possible the determination of coherence between categories of independent and intervening variables and dependent variables for the utilisation of MCH systems in the research setting, thus subsequently enabling the interpretation of such coherence by incorporating data into the final explanatory model. OVERALS is an explanatory analysis technique, the method of which can be seen as factor analysis of two sets of variables. A factor from the first set should show maximum correlation with a factor from the second set. Such 2-factor correlation is called *canonical correlation* (*r*).

8.2.1 OVERALS Canonical Correlation Analysis

The OVERALS programme for analysis of quantitative data collected during the household survey is implemented in the canonical correlation model for utilisation of MCH systems by 23 variables, grouped into eight 'blocks' as described in Chapter III (*cf.* Fig. 3.1).
Canonical correlation analysis of two sets of variables through alternating least-squares offers the advantage not only to specify the number of sets, each containing variables, but also to enumerate the dimensions. Plotting the resulting projection of variables in canonical space indicates the quantifications and coordinates of the category. The analogous to the use of multiple regressions and canonical correlation analysis, OVERALS, an up-dated version of CANALS, focuses on the correlation between two sets of variables (*cf.* Agung 2005).

OVERALS analysis employs an itemized list of 23 variables, with the number of categories and the ordinal or single nominal scaling levels specified for each variable. The list of variables with their labels is grouped according to the following blocks of the model:

- Block 1 includes socio-demographic factors: *type of village* (label: typvil); *age* (label: age); *education of husbands* (label: eduh); *education of women* (label: eduw); *occupation of husbands* (label: occuh); *occupation of women* (label: occuw); *number of children* (label: nuchil).
- Block 2 includes psycho-social factors: *knowledge about pregnancy* (label: knopre); *knowledge about high-risk pregnancy* (label: knohrp); *knowledge about miscarriage* (label: knomis); *opinion about TBA skills* (label: opitba); *opinion about midwife skills* (label: opimid); *health-seeking behaviour during pregnancy* (label: hsbpr); *health-seeking behaviour during delivery* (label: hsbde); *belief in pregnancy rituals* (label: belrt); *belief in taboos during pregnancy* (label: betab).

Table 8.5 Distribution of Component Loadings for both Dimensions between Set 1 and Set 2 with a Total of 23 Variables Surveyed (N=287)

Component Loadings			
Set	Label	Dimension	
		1	2
1	typvil(a.b)	0.514 (4)	0.311 (3)
	agew(b.c)	–0.190	–0.090
	eduh(b.c)	–0.391	0.285 (5)
	eduw(b.c)	–0.585 (2)	0.064
	occuh(a.b)	–0.076	0.194
	occuw(a.b)	–0.365	–0.196
	nuchil(b.d)	–0.101	–0.296 (4)
	knopre(b.c)	–0.212	0.120
	knohrp(b.c)	–0.143	–0.062
	knomis(b.c)	–0.029	–0.188
	optba(a.b)	0.429 (4)	–0.232
	opmid(a.b)	–0.233	–0.201
	hsbpr(b.c)	–0.120	0.068
	hsbde(b.c)	0.171	0.171
	belrt(b.c)	0.200	0.150
	betab(b.c)	0.200	0.079
	percep(b.c)	–0.111	–0.136
	SES(b.c)	–0.576 (3)	0.316 (2)
	actra(b.c)	–0.427	0.172
	acmod(b.c)	0.009	0.148
	impac(b.c)	–0.136	0.049
2	ustra(b.c)	0.876 (1)	–0.337 (1)
	usmod(b.c)	–0.130	0.244

a. Optimal Scaling Level: Single Nominal
b. Projections of the Single Quantified Variables in the Object Space
c. Optimal Scaling Level: Ordinal

- Block 3 includes perceived pregnancy factor: *perception of experiences during pregnancy* (label: precp).
- Block 4 includes enabling factor: *socio-economic status* (label: SES).
- Block 5 includes institutional factors: *geographical accessibility of traditional MCH* (label: actra); *geographical accessibility to modern MCH* (label: acmod).
- Block 6 includes intervening factor: *impact of MCH programmes through participation* (label: impac).

Finally, 'utilisation of plural MCH systems' is sub-divided into two blocks, each having a dependent variable:

- Block 7 includes *utilisation of traditional MCH* (label: ustra).
- Block 8 includes *utilisation of modern MCH* (label: usmod).

Calculated correlations represented as component loadings (Table 8.5) show that both dimensions definitely confirm a significantly high correlation between Set 1 with independent and Set 2 with dependent variables, for utilisation of both traditional and modern MCH

systems (resp. 0.876 and –0.130 *versus* –0.337 and 0.244). Four strong factors influence the *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) in the first dimension for Rancaekek. The strongest variable is *socio-economic status* (SES: –0.576) for households, followed by *education of wives* (eduw: –0.585), *opinion about TBA skills* (opitba: 0.478), and *geographical accessibility of traditional MCH* (actra: –0.429). These variables are related to knowledge and understanding about a woman's reproductive process during pregnancy, childbirth, and thereafter. As head of the household, the educational background of the husband is quite influential regarding the use of traditional and/or modern MCH systems because, as decision maker, the husband is also responsible for his wife's pregnancy and the type of assistance sought for delivery. This high correlation between component loadings further supports the close relationship between knowledge, belief, perception, and opinion towards pregnancy, delivery and MCH systems in the study area and the sample surveyed.

Most component loadings in Dimension 1 (D_1) confirm the results using bivariate analysis, indicating that variables with a significant correlation are the strongest in the solution. These underscore, among the background variables, *the use of traditional MCH system* (ustra: Pearson's χ^2 = 0.000; Phi Cramer's V .000) with regard to component-loading D_1 = –0.876 and D_2 = –0.337) where knowledge of the reproductive process, *i.e*. during and after pregnancy, indeed shows a strong correlation with and influence on the use of MCH systems in the study setting. Moreover, it also calculates results for: *knowledge about pregnancy* (knopre: Pearson's χ^2 = 0.001; component loading D_1 = –0.212), *knowledge about miscarriage* (knomis: Pearson's χ^2 = 0.001; component loading in D_1 = –0.029), and *opinion about TBA skills* (opitba: Pearson's χ^2 = 0.003) in relation to Dimension 1 component-loading (D_1 = 0.429).

In the analysis, the score (D_1 = –0.576) for component-loading Dimension 1 is for *socio-economic status* (SES), again underscoring the role of household socio-economic status when choosing MCH systems (SES: Pearson's χ^2 = 0.000; and Phi Cramer's V 0.000). Not surprisingly, the variable *impact of MCH programmes through participation* (impac), for programmes implemented by the Government and international organisations in collaboration with NGOs, shows coherence with *utilisation of modern MCH* (usmod: Pearson's χ^2 = 0.000; D_2 = 0.151).

As a consequence, multivariate analysis demonstrates that the impact of MCH is strongly related to the *utilisation of modern MCH* (usmod) in the study area.

8.2.2 Projection of Variables and Objects in Canonical Space

A graphical representation, or scatter plot, of all the variables already described can be used to gain a better understanding of the complex coherence between variables by projecting the correlations in the canonical space (*cf*. Figure 8.1). The length of a vector, between the locus of a respective variable and zero, will indicate the relative importance of the variable.

Both dependent variables *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) have been projected in canonical space in relation to 23 predictor variables. Figure 8.1 shows the scatter plot for 23 optimally scaled variables from the survey data in canonical space, including the two dependent variables. The figure shows the divergence between *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) variables which have been projected in canonical space in relation to 21 predictor variables.

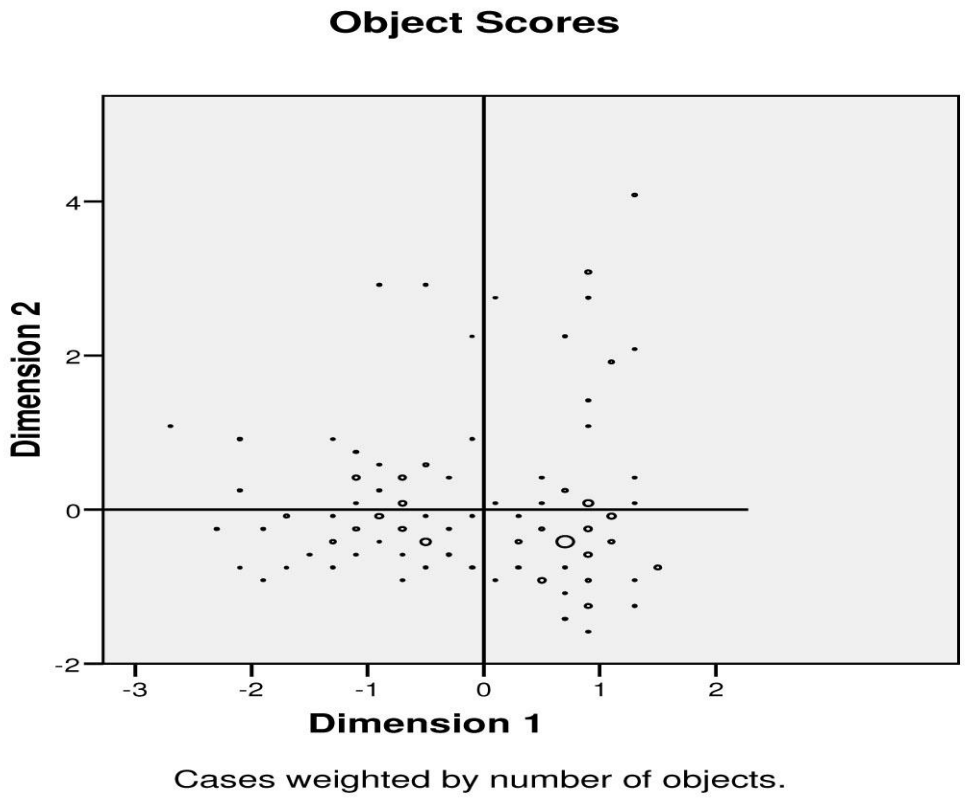


Figure 8.1: OVERALS analysis of the utilisation of Maternal and Child Health systems: Projection of 23 optimally scaled variables from Set 1 and Set 2 in canonical space (variables are labelled)

From the scatter plot it becomes clear that *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) variables are forming different dimensions. A very strong correlation emerges between *opinion about TBA skills* (optba: 0.429 in D_1) *versus utilisation of traditional MCH* (ustra: 0.876 in D_1). In contrast to traditional MCH, *utilisation of modern MCH* (usmod: –0.244 in D_2) shows a high correlation with *geographical accessibility of modern MCH* (acmod: 0.148 in D_2). Indeed, as already observed during qualitative research, the use of both MCH systems is complementary and integrated, depending on women's needs during the trimesters of pregnancy.

Utilisation of traditional MCH (ustra: Traditional Birth Attendant (TBA) or *paraji*) shows a strong coherence with *opinions about TBA skills* (opitba): *i.e*. how pregnant and perinatal women view the *paraji*'s specific skills such as: determination of stages of pregnancy using fingers for measurement, ability to massage both pregnant and perinatal women, knowledge of rituals, and especially knowledge and ability to use medicinal plants for the preparation of *jamu*. In contrast, *utilisation of modern MCH* (usmod: Community Midwife (BDD) or *bidan*) shows a strong correlation with the 'intervening' factors: *i.e*. 'Safe Motherhood' programmes introduced by the Government (Ministry of Health, Ministry of Women's Affairs, West Java Health Office/*Dinas Kesehatan*), international organisations such as WHO, UNICEF, FHI (Family Health International); and several NGOs such as WHOCC–UNPAD, Frontiers for Health (F2H), *Gerakan Pita Putih* (MNH), etc.

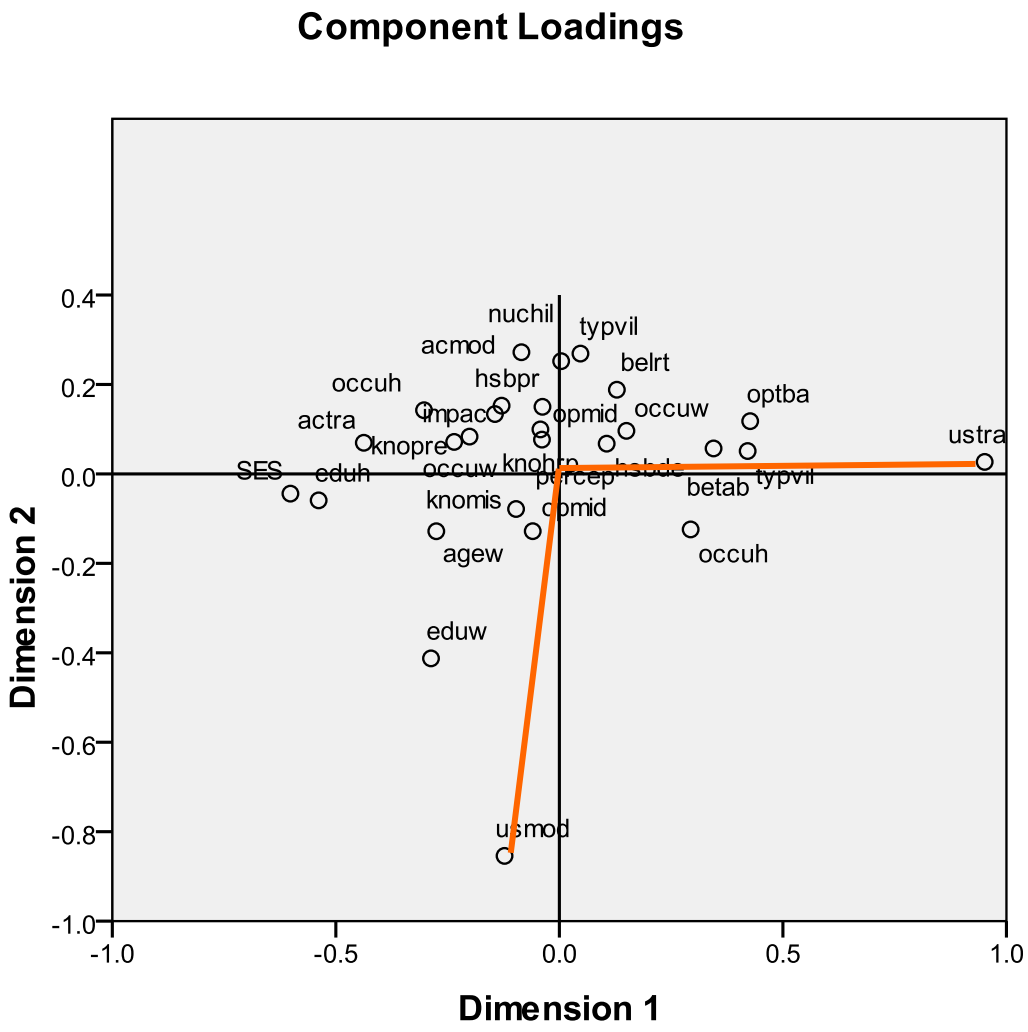


Figure 8.2: Projection of respondents in the sample survey as objects in canonical space, specified according to their relevant variables

The scatter plot in Dimension 1 further substantiates that the variables *socio-economic status* (SES) and *perception of experiences during pregnancy* (percp) show a similar strong coherence with both dependent variables, validating their value as relevant indicators for either utilisation of traditional or modern MCH systems, depending upon the needs of women during the stages of pregnancy. *Utilisation of traditional MCH* (ustra) shows a strong coherence with *health-seeking behaviour during delivery* (hsbde), *belief in taboos during pregnancy* (betab), *opinion about TBA skills* (opitba), thus verifying their strong significance between the independent variables with regard to the use of traditional and modern MCH systems within the Rancaekek community. In contrast, *utilisation of modern MCH* (usmod) shows a strong coherence with *education of women* (eduw), *knowledge about high-risk pregnancy* (knohrp), *health-seeking behaviour during pregnancy* (hsbpr), *opinion about midwife skills* (opimid), and *geographical accessibility to modern MCH* (acmod). In view of these rather fascinating results from multivariate analysis, it is interesting not only to establish

to what extent the variants and variables are correlated but also to project the objects or individuals of the survey in canonical space. Figure 8.1 shows the projection of individuals surveyed in canonical space (N=287). In this scatter plot, the position of each respondent is a function of his/her scores across all variables.

The overall projection of respondents shows a tendency among objects/respondents towards separation into one relatively larger group, mainly located in the upper-left quadrant in canonical space in which the variable *utilisation of modern MCH* (usmod) is plotted. This quadrant is dominated by the variables for *socio-economic status* (SES), *knowledge*, (knopre, knohrp, and knomis), *health-seeking behaviour*s (hsbpr, hsbde), *education* (eduh, eduw), and *opinion about midwife skills* (opimid: *bidan*). In contrast, the other grouping, mainly located in the upper-right quadrant in canonical space, is dominated by the variables *type of village* (typvil), *occupation of husbands* (occuh), *belief in taboos during pregnancy* (betab), *opinion about midwife skills* (opimid), and *perceptions of experiences during pregnancy* (percp) (*cf.* Figure 8.2).

Comparison of the projections of variables in Figure 8.1 and objects in Figure 8.2 in canonical space confirms the existence of a strong correlation and predictive value in both Dimensions 1 and 2 (D_1, D_2) between the location of objects from two comparable sub-groups in the sample survey in relation to their scores as variables for *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) in the research setting.

8.3 Multiple Regression Analysis

8.3.1 Calculation of Multiple Correlation Coefficients

In view of the fact that one of the main objectives of this study is to develop an explanatory model for the utilisation of plural MCH systems, multivariate analysis should now be broadened to enable the testing of correlations between the model's blocks of factors (predisposing, perceived, enabling, institutional, and intervening) and to determine their interaction with the factor 'utilisation of plural MCH systems', originally employed to conceptualize the actual use of plural MCH systems in Rancaekek.

As reminder from Section 8.1.1, Set 1 encompasses 21 independent variables divided between six blocks of factors: (1) socio-demographic: *type of village* (typvil), *age* (age), *education of women* (eduw), *education of husbands* (eduh), *occupation of women* (occuw), *occupation of husbands* (occuh), and *number of children* (nuchil); (2) psycho-social: *knowledge about pregnancy* (knopre), *knowledge about high-risk pregnancy* (knohrp), *knowledge about miscarriage* (knomis), *opinion about TBA skills* (opitba), *opinion about midwife skills* (opimid), *health-seeking behaviour during pregnancy* (hsbpr), *health-seeking behaviour during delivery* (hsbde); *belief in pregnancy rituals* (belrt), *belief in taboos during pregnancy* (betab); (3) Perceived Pregnancy: *perception of experiences during pregnancy* (percp) (4) Enabling: *socio-economic status* (SES); (5) Institutional: *geographical accessibility of traditional MCH* (actra), *geographical accessibility of modern MCH* (acmod); and (6) Intervening: *impact of MCH programmes through participation* (impac). Set 2 includes the dependent variable 'utilisation of plural MCH systems', divided into *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod).

The process of analysis runs as follows; 21 independent variables are set against 2 dependent variables and tested using canonical correlation analysis. Using bivariate and multivariate analyses, all variables in the survey are checked for correlation without discriminating between categories or blocks of variables. This has brought to the fore and

helps facilitate recognition of conclusions related to correlation, interaction and estimation, using OVERALS canonical correlation analysis.

In order to establish the relative importance of each of the six 'blocks' of independent variables, in relation to the two 'blocks' of dependent variables *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod), multiple regression analysis is carried out, based on the calculation of multiple correlation coefficients with optimal scaling using OVERALS. The advantage of multiple regression analysis is that it enables assessment of the overall contribution of the five 'blocks' of variables in predicting patterns for *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) in Blocks 7 and 8, respectively. In order to calculate the multiple correlation coefficients (*r*), the following formula is used: $pd = 2 \times Ed - 1$ (*cf.* Van den Burg 1983). In this analysis, the single nominal variables can be scaled differently, while the quantifications of the OVERALS solution are used. Table 8.6 shows the correlation coefficients (*r*) for Blocks 1–8 of the model.

Table 8.6 Calculated Multiple Correlation Coefficients between Eight Blocks in the Model

Block <—> Block		Calculation (*Ed*)	Multiple Correlation Coefficients (*r*)
1 <———>	2	2 x 0.868 – 1 = 1.736 – 1 =	0.736
		2 x 0.819 – 1 = 1.638 – 1 =	0.638
1 <———>	3	2 x 0.669 – 1 = 1.338 – 1 =	0.338
1 <———>	4	2 x 0.858 – 1 = 1.716 – 1 =	0.716
1 <———>	5	2 x 0.808 – 1 = 1.616 – 1 =	0.616
		2 x 0.729 – 1 = 1.458 – 1 =	0.458
1 <———>	6	2 x 0.730 – 1 = 1.460 – 1 =	0.460
1 <———>	7	2 x 0.843 – 1 = 1.686 – 1 =	0.686
1 <———>	8	2 x 0.734 – 1 = 1.468 – 1 =	0.468
2 <———>	3	2 x 0.749 – 1 = 1.498 – 1 =	0.498
2 <———>	4	2 x 0.791 – 1 = 1.582 – 1 =	0.582
2 <———>	5	2 x 0.717 – 1 = 1.434 – 1 =	0.434
		2 x 0.665 – 1 = 1.330 – 1 =	0.330
2 <———>	6	2 x 0.751 – 1 = 1.502 – 1 =	0.502
2 <———>	7	2 x 0.791 – 1 = 1.582 – 1 =	0.582
2 <———>	8	2 x 0.658 – 1 = 1.316 – 1 =	0.316
3 <———>	4	2 x 0.791 – 1 = 1.582 – 1 =	0.582
3 <———>	5	2 x 0.595 – 1 = 1.190 – 1 =	0.190
3 <———>	6	2 x 0.535 – 1 = 1.070 – 1 =	0.070
3 <———>	7	2 x 0.527 – 1 = 1.054 – 1 =	0.054
3 <———>	8	2 x 0.526 – 1 = 1.052 – 1 =	0.052
4 <———>	5	2 x 0.694 – 1 = 1.388 – 1 =	0.388
4 <———>	6	2 x 0.602 – 1 = 1.204 – 1 =	0.204
4 <———>	7	2 x 0.774 – 1 = 1.548 – 1 =	0.548
4 <———>	8	2 x 0.615 – 1 = 1.230 – 1 =	0.230
5 <———>	6	2 x 0.552 – 1 = 1.104 – 1 =	0.104
5 <———>	7	2 x 0.693 – 1 = 1.386 – 1 =	0.386
5 <———>	8	2 x 0.580 – 1 = 1.160 – 1 =	0.160
6 <———>	7	2 x 0.561 – 1 = 1.122 – 1 =	0.122
6 <———>	8	2 x 0.529 – 1 = 1.058 – 1 =	0.058

The values in the calculation are the eigenvalues in the first and second dimensions of the solution in OVERALS between the various 'blocks' of the model.

From the calculations in Table 8.6 it becomes clear that there exists a relatively strong coherence between the five blocks of independent variables, confirming the significant role which these categories of variables play in the overall configuration of the analytical model, as under-reported by the preceding qualitative and quantitative bivariate and multivariate analyses. Calculated values from multiple regression analysis indicate that the prediction for the traditional MCH system in the first dimension is strongly dominated by the predisposing psycho-social variables in Block 2 ($r_1 = 0.736$) and predisposing socio-demographic variables in Block 1 ($r_1 = 0.638$).

Interestingly, *opinion about TBA skill* (opitba: trust and home visits) is the strongest independent variable in Block 2 ($a = 0.582$) and shows a strong coherence with the dependent variable *utilisation of traditional MCH* (ustra) in Block 7 ($b = 0.582$), while *opinion about midwife skills* (opimid) is weaker ($b = –0.130$, $c = 0.244$) (*cf.* Table 8.1). In addition, prediction for *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) in Dimension 1 is clear, with the intervening variables which elevate *utilisation of modern MCH system*s (traditional: $r_1 = 0.122$; modern: $r_1 = 0.058$) (*cf.* Figure 8.3).

To determine the relative importance of each of the six 'blocks' of variables, another analysis is carried out using multiple regression, based on the calculation of multiple correlation coefficients with optimal scaling using OVERALS. The advantage of using stepwise multiple regression analysis is that it enables assessment of the overall contribution of the six 'blocks' of variables in predicting the pattern of utilisation for the dependent variables (Block 7 and Block 8). The formula used is $pd = 2 \times Ed - 1$ (*cf.* Van der Burg 1983). The single nominal variables can be scaled differently, while the quantifications of the OVERALS solution are used. Table 8.6 shows the correlation coefficients (r) for Blocks 1–8 of the model.

Coherence between Independent Variables

The calculated correlation coefficients (r) show a relatively strong coherence between the six blocks of independent variables, confirming the significant role the groups play in the overall configuration of the model as substantiated by the preceding qualitative study. A particular strength in coherence is found for the correlation coefficients for Blocks 1-2 ($r = 0.736$ and $r = 0.638$); Blocks 1-3 ($r = 0.716$); Blocks 1-4 ($r = 0.338$); and Blocks 2-4 ($r = 0.498$).

Coherence between Independent versus *Dependent Variables*

There is coherence between the independent and dependent variables. Of particular strength is the coherence for Blocks 1-7 ($r = 0.686$); Blocks 2-7 ($r = 0.582$); Blocks 4-7 ($r = 0.584$); Blocks 1-8 ($r = 0.468$); and Blocks 4-8 ($r = 0.230$).

8.3.2 Final Model for Utilisation of Plural Maternal and Child Health Systems

Figure 8.3 shows the process of Maternal and Child Health (MCH) utilisation behaviour in the selection of MCH systems, which can also be studied as MCH utilisation behaviour (*cf.* Millon 1975) based on an individual's position within the household and community. This can be seen in the basic model for utilisation of MCH systems which encompasses eight blocks of independent, intervening and dependent variables, in which the main multiple correlation coefficients (r) calculated are presented, each indicating the relative value for interaction between the blocks.

On the basis of the multiple correlation coefficients (r), show in Figure 8.3, the values in the model not only confirm the relatively strong coherence between the five blocks of

independent variables but also render highly predictive the values of these blocks of variables for the utilisation of MCH systems. Since the objective of this study includes the development of an explanatory model, using sample surveys, with regard to the use of MCH systems, multivariate analysis should now be applied to test for correlation between blocks of factors: *i.e*. predisposing, perceived, enabling, institutional, intervening, and utilisation of plural MCH systems.

Blocks 7 and 8 in the model refer to overall utilisation of plural MCH care, *i.e*. both traditional and modern systems. Using stepwise multiple regression analysis and OVERALS enables assessment of the contribution of both blocks of variables in predicting utilisation patterns for MCH systems.

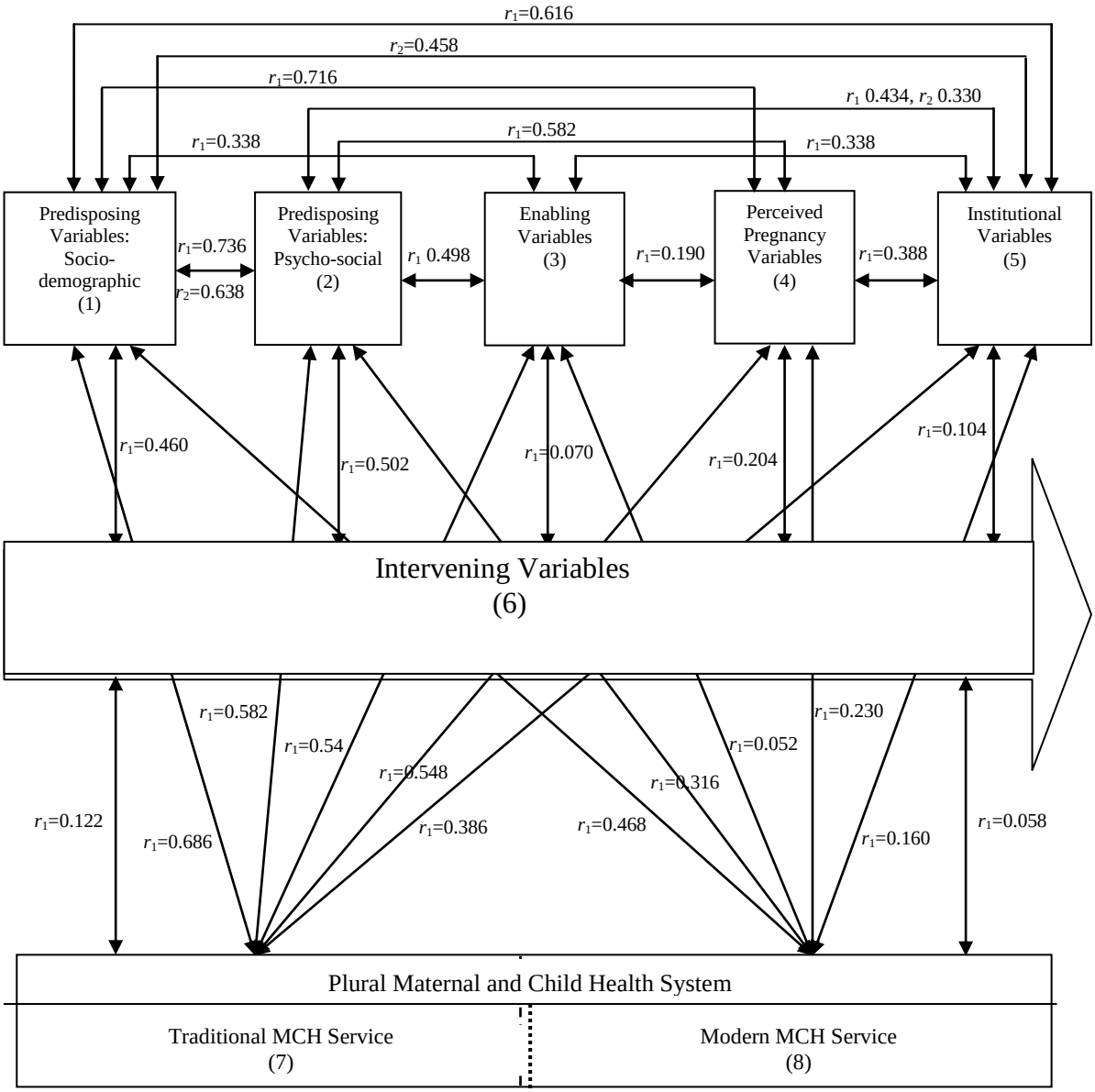


Figure 8.3 Conceptual Model on Utilisation of Plural Maternal and Child Health Care Systems *Paraji* and *Bidan* in Rancaekek: Integrated Medicine for Advanced Partnerships amongst Traditional Birth Attendants and Community Midwives in the Sunda Region in West Java, Indonesia.

The highest direct contribution to the prediction of utilisation of MCH systems in Dimension 1 is first provided by Block 1 (predisposing, socio-demographic variables: resp. $r_1 = 0.686$ and $r_1 = 0.468$), followed by Block 2 (predisposing, psycho-social variables: resp. $r_1 = 0.791$ and $r_1 = 0.658$). It should be noted that Block 1 is dominated by the variables: *education of husbands* (eduh: *b,c* = 0.285), *education of women* (eduw: *b,c* = –0.585), and *occupation of husbands* (occuh: *a.b* = 0.194). The model also clearly illustrates the relatively high correlation values between Block 1 and Block 2, both in the first ($r_1 = 0.736$) and second ($r_2 = 0.638$) dimensions.

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In the model, contributions to *utilisation of traditional MCH* (ustra) from Block 1 ($r_1 = 0.686$), Block 2 ($r_1 = 0.582$), Block 4 ($r_1 = 0.584$), and Block 5 ($r_1 = 0.386$) are indeed emerging as relatively high, underscoring the close correlation between independent and dependent factors for use of the traditional MCH system. In the context of modern MCH care, a strong correlation is shown for Block 1 ($r_1 = 0.468$), Block 2 ($r_1 = 0.316$) and Block 4 ($r_1 = 0.584$). Indeed, *utilisation of traditional MCH* (ustra: $r_1 = 0.122$) and *utilisation of modern MCH* (usmod: $r_1 = 0.058$) are closely correlated with the intervening variables in Block 6.

8.4 Interpretation of the Results of the Analysis

The results from the bivariate analysis is presented in the first part of this chapter, show realistic correlations between the independent, intervening and dependent variables for utilisation of traditional and modern Maternal and Child Health (MCH) systems in the research setting Rancaekek. Quantitative analyses clearly demonstrate that, among the categories or 'blocks' of variables, the independent socio-demographic variables play a dominant role: *i.e*. *type of village* (typvil, according to socio-economic categorisation), (formal) *education of husbands/women* (eduh, eduw), *occupation of husbands/women* (occuh, occuw), *age* (age), and *number of children* (nuchil). The psycho-social variables confirm the significant role some variables play in the utilisation of MCH systems in the research area: *i.e*.

knowledge about pregnancy (knopre), *knowledge about high-risk pregnancy* (knohrp), *knowledge about miscarriage* (knomis), *opinion about TBA skills* (opitba), *opinion about midwife skills* (opimid), *health-seeking behaviour during pregnancy* (hsbpe), *health-seeking behaviour during delivery* (hsbde), *belief in pregnancy rituals* (belrt), *belief in taboos during pregnancy* (betab), and *perception of experiences during pregnancy* (percp).

Bivariate analysis also renders that *socio-economic status* (SES) of respondent households shows a strong correlation with *utilisation of traditional MCH* (ustra) and/or *utilisation of modern MCH* (usmod) during the process of pregnancy and delivery. While the category of intervening variables shows a strong correlation with *utilisation of modern MCH* (usmod), it is highly correlated with 'Safe Motherhood' programmes which have been implemented continuously within the Rancaekek community. Several 'Safe Motherhood' programmes (*e.g.* UNICEF and WHO-SEARO's 'Making Pregnancy Safer') have been set up for the entire community of Rancaekek, a sub-district of West Java Province, while other programmes, such as 'Mothers' Friendly Movement' (GSI: *Gerakan Sayang Ibu*), only focus on MCH care in remote and impoverished areas.

The variable *type of village* (typvil), categorised by the local government as to geography and socio-economic status, determines an individual's tendency to use traditional and modern MCH systems. Tegal Sumedang and Sangiang villages are geographically remote areas and labelled as less-developed (C), an exceptional condition which is included in the data for MCH utilisation in those two villages. Thus, 'Mother's Friendly Movement' (GSI: *Gerakan Sayang Ibu*) was set up as a government programme for rural areas with few MCH services. 'Safe Motherhood' programmes have been shown to enhance the use of MCH systems, making them more dynamic. Although on an individual level knowledge about the reproductive process has increased, it can be seen from the household survey that, based on opinions about *paraji* (TBA) and their skills, respondents continue to seek help from both MCH systems, depending on the woman's needs during different stages of pregnancy.

The overall pattern exposes a shift in influence between various categories of independent and intervening variables, from scores reported for traditional MCH services towards those reported for integrated traditional and modern MCH systems – characterised by a relatively equal coherence between MCH systems. Outcomes of the bivariate analysis were significantly re-inforced using multivariate analysis. Not only is the degree of coherence between independent and dependent variables numerically remarkable but advanced canonical correlation analysis using OVERALS has put further weight on coherence between variables. Additionally, the calculation of component loadings has expanded the under-reported interactive and predictive values of determinants for the utilisation of MCH systems in both dimensions. The subsequent projection of optimally scaled variables in canonical space also shows the direction in which the category quantifications of the variables increase. Projection of the results from canonical correlation analysis has shown a strong coherence between predisposing factors (socio-demographic. psycho-social. socio-economic. and institutional factors) and the two dependent variables for use of MCH systems.

Analysis has demonstrated that the sampled respondents themselves have integrated the use of traditional and modern MCH systems because practitioners in both systems have their own specialties (*cf.* Figures 6.3-6.11): *i.e.* the *paraji* (TBA) possesses expert indigenous knowledge about rituals, massage, and preparation of medicinal herbal concoctions from plants for pregnant, perinatal, and post-partum women, while the Community Midwife (*bidan*) is expert in the use of complete TT immunisations, in giving oxytocin injections, in repairing the perinea or vaginal tears, and in providing modern care during high-risk delivery. While the *bidan*'s level of education makes her more highly skilled and medically competent,

it is the *paraji*'s knowledge and understanding of traditions and of psychological and belief systems which make her a noteworthy support, both during and after pregnancy and childbirth.

Finally, results of multiple regression analysis strengthen the mutual coherence between respondents' scores in the use of both traditional and modern MCH systems during the trimesters of pregnancy, delivery, and post-partum period. The data help illustrate that the sample respondents have naturally integrated the use of traditional and modern MCH systems during the stages of pregnancy, childbirth and post-partum period.

Notes

1. Since 'original responses' refers to the categorization of responses in the data set after the third entry, *i.e*. including the adjustment, special emphasis is placed on the determination of single responses for multi-answer questions. This is accomplished by re-calculating the response categories in order to obtain comparable categories.
2. Determination of single responses has been carried out as follows. Based on the frequencies of the categories, a weight from 1 to 3 is given to each response category for some questions comprising the newly assigned categories. A category is given a weight of '1' if the frequency of the response categories for all questions is 'very low' and a weight of '3' if that frequency is 'very high'. Therefore, it was decided to weight all categories with regard to frequency and to recalculate according to the ratio described above. The new single categories of the multi-response questions are a representation of the degree of a characteristic, *i.e*. *knowledge about pregnancy* (knopre), of a single respondent in relation to other respondents in the sample. The range of scores found within the sample, in fact, determines the range of the weights given. For each question, the sum is calculated for the appointed weights of the categories. The sum totals are recalculated as a ratio: '*x*' is to '*y*' as '3' is to 'the actual highest sum score of a question' (Σ). The recalculations have been introduced into the following categories:
   1: 'little' (0–1);
   2: 'average' (1–2);
   3: 'much' (2–3).
3. In view of the fact that the use of Pearson's χ^2 and Cramer's *V* could result in a mere dichotomy of 'significant' *versus* 'non-significant' associations between variables, the implementation of a classification of values for the chance of deviation can sometimes reach a more dissimilar assessment of the correlation between variables. In such cases, the categories of values for the chance of deviation include: >0.15 for 'non-significant'; 0.15–0.10 for 'indication of significance'; 0.10–0.05 for 'weakly significant'; 0.05–0.01 for 'strongly significant'; 0.01–0.001 for 'very strongly significant'; and <0.001–0.000 for 'mostly strongly significant' (Agung 2005).

Chapter IX CONCLUSIONS AND IMPLICATIONS

9.1 Conclusions

In 1978, the WHO Conference at Alma-Ata developed a new paradigm placing Primary Health Care (PHC) at the forefront of its global health-care strategies, with Maternal and Child Health (MCH) considered one of its most essential components from the onset. It is acknowledged that both primary and maternal and child health care are human rights which should be made accessible to all peoples globally, through their full participation and at a cost affordable at both community and national levels (*cf.* Chapter I). The Alma-Ata Convention emphasises that fully organized community participation is essential to achieve ultimate self-reliance, with individuals, families, and communities assuming more responsibility for their own health and well being. At its conclusion, the Alma-Ata Conference reformulated its policy with the goal "Health for All by the Year 2000". In order to validate Primary Health Care (PHC) and assure that it remains an integral part of community and national development, rather than become an isolated non-essential activity, the National Government will need to provide support not only at local but also at intermediate and central levels.

The Alma-Ata Conference (1978) set the scene for the mobilization of PHC movements, especially in developing countries. Governments, Non-Governmental Organisations (NGO), social institutions and researchers embarked upon a path to develop more effective programmes to eradicate poor health conditions in their individual countries. Health policy makers need to formulate credible objectives to integrate plural medical systems into the current context of local health care. Indeed, this is what was expected to happen. People need additional support from medical systems, such as improved health assessments for themselves and their families, in the community in which they live. Data illustrate the inter-relationship between health systems and peoples' needs. With an eye to Primary Health Care, popular reforms and PHC movements to reorganize community health services need to focus on the public's growing expectations when trying to integrate medical systems. One must examine public health policies across sectors as well as health policy reforms which replace unequal reliance on command and control, on one hand, or leadership reforms, on the other hand (*cf.* WHO 2008).

Moreover, the WHO Report (2008: 15–17) on Primary Health Care in well-resourced contexts has been oversimplified in resource-constrained settings. Primary Health Care is like an institution where patients are guided through the medical system. It is unacceptable that, in low-income countries. Primary Health Care becomes synonymous with low-tech, non-professional care for the rural poor who cannot afford a better option or is reduced to minimal treatment of priority diseases or is trimmed down to no more than a stand-alone health post or isolated community health worker. Primary Health Care facilitates ongoing patient–clinician relationships, in which patients participate in decision-making processes concerning their own health: *i.e.* early detection of disease, treatment of illness, and promotion of well-being. Primary Health Care requires teams of health professionals such as physicians, nursing practitioners, and assistants with specific sophisticated biomedical and social skills. During the Regional Consultation in Bangkok (WHO 2009) on the development and implementation of Traditional Medicine for self-care, the Indonesian delegation reported that the role of indigenous health care is still categorised as primary, although health centres and health providers cannot reach every corner of the country which stretches over 1.928.600 km^2 and is divided into 36 provinces and 349 districts with countless out-of-the-way areas. The cost of

health care, including medication, is a burden felt by most patients and their families seeking treatment. Public interest in Traditional Medicine for self-medication is growing, a fact that should be taken into consideration with regard to integration of ethno- and bio-medical systems.

Every community has its own cultural guidelines for pregnancy, parturition and post-partum care rooted in local systems of knowledge, beliefs, values and practices. Every culture has developed specific systems, sets of belief and techniques to explain phenomena occurring during the processes of human reproduction, *i.e.* conception, pregnancy, miscarriage, childbirth and the period thereafter. Development of Maternal and Child Health (MCH) systems in Indonesia has had an impact on reproductive health and the often unsafe conditions threatening women and their offspring. The National Ministry of Health has shown a tendency to ignore indigenous MCH systems, basing their policies on stereotypical suppositions that *paraji* (TBA) are unskilled, uneducated and incapable of providing for their clients adequately. The high Maternal (MMR) and Infant (IMR) Mortality Rates in Indonesia point to two health issues which usually occur during parturition. Indonesia has among the highest rates in Asia; West Java Province has one of the highest rates in Indonesia. Based on the Demographic and Health Survey in Indonesia, the MMR decreased from 373 deaths per 100.000 in 2002 to 307 deaths per 100.000 in 2003. Every hour, two women will die giving birth. Health conditions in Indonesia correlate with the high IMR numbering 20 deaths per 1000 live births. Indonesia's targets for 2015 are to achieve an MMR less than 125 deaths per 100.000 and an IMR less than 15 deaths per 1000. Reaching this rather ambitious goal will oblige plural MCH systems to work solidly together at all levels. Based on such aims and strategies, however, improvement of maternal and neonatal health is becoming a more strategic challenge within human resource development. In West Java (*cf.* Kurnia 2008) the MMR was recently said to be 300 deaths per 100.000; this figure shows a tremendous drop since 2002 when the MMR equalled 390 deaths per 100.000.

Consequently, the tragedy of maternal deaths can often be prevented through regular check-ups and good nutrition during pregnancy. This study recommends that current MCH practices undergo revision to a certain extent to create a medical system which generates alternative strategies for *development from the bottom up* through community participation. In revitalising MCH systems, special emphasis should focus on health-care financing and the quality and number of *bidan* (CMW) as part of the health workforce. Community-based indigenous healers and community health volunteers (*kader kesehatan*) need to rely more on each other to supplement the shortage of government-employed *bidan* (CMW). A mother's death or morbidity impacts the health and well-being of her offspring. When a mother dies, her remaining children will have a 3–10 times higher risks of dying at the young age of 2 years, compared to children who still have both parents (*cf.* Tinker 1997).

Despite the successful implementation of several approaches and strategies which were designed for an integrated plural medical system, one must nevertheless acknowledge that 'Health for All by the Year 2000' (WHO 1981) has missed its mark. Today, a large segment of rural populations in the tropics is still deprived of adequate health care, partly as the result of the lack of integration of traditional healing and midwifery. This indicates that current researchers should possibly re-assess, fine-tune and rectify the existing shortcomings and methodologies. Mainly because of the ongoing division and often discord between bio- and ethnomedicine – as ethnomedical systems negotiate present-day challenges presented by science and technology – several theoretical and methodological obstacles must still be surmounted before the anticipated integration becomes a reality (*cf.* Slikkerveer 2003).

This study is based on longitudinal fieldwork carried out between 1999 and 2003 with the topic 'Making Pregnancy Safer'. In 2005, collection of qualitative data recommenced for the study "*paraji* and *bidan* in Rancaekek: Integrated Medicine for Advanced Partnerships among *paraji* (TBA) and *bidan* (CMW) in the Sunda Region of Bandung, West Java, Indonesia". Then, in 2006, the findings were used to develop structured questionnaires to conduct a survey using a sample of 150 households in which women pregnant during the prior 12-month period were categorized retrospectively: 127 women had completed their pregnancy and given birth to a live offspring while 23 respondents were still pregnant. The population of the sample survey comprise 798 households. However, since the focus of the study is on utilisation of plural MCH systems, it is necessary for the analysis to retrace which actual steps the pregnant women had taken after receiving confirmation of pregnancy through childbirth. Therefore only 127 respondents were found suitable for inclusion in the analysis. The study of the women's health-seeking behaviour during all stages of their pregnancy and parturition reveals a pattern for the utilisation for existing MCH systems in the community; *i.e.* pregnant women who took 287 'external' actions to contact traditional and modern MCH systems.

The general objective of this study is to augment the body of knowledge and increase understanding about how the process of reproduction relates to utilisation of existent traditional and modern MCH systems in a rural environment. Research focuses on the assessment of active health-seeking behaviour and utilisation of plural MCH systems in the community by studying, *e.g.* the socio-demographic and psycho-social backgrounds of the sample survey; people's perceptions, knowledge and beliefs about pregnancy and childbirth; MCH practices in the local community; application of indigenous medicine in the research setting; 'enabling', 'institutional' and 'intervening' factors. In order to substantiate the theoretical orientation of the research in Rancaekek – a semi-urban area located on the periphery of Bandung and Sumedang in West Java – an overview is presented of relevant theoretical foundations of current ethnoscience research on plural medical systems.

Increased interest in traditional and modern MCH systems has led to attempts to revitalise and integrate them through advanced partnerships between *paraji* (TBA) and *bidan* (CMW). Such endeavours have come to be recognized as a potential opportunity to reduce maternal and infant deaths during pregnancy and delivery. What is now conceded as the *paraji*'s expertise – *i.e.* knowledge of important indigenous medicine, ability to communicate through 'home visits', and use of psychological approaches like touch to calm a woman's anxiety – is expected to enhance advance partnerships with *bidan* in Rancaekek. However, an experienced *paraji* must also be trained in the use of modern techniques in order to participate equally with *bidan*. Since *paraji* and *bidan* share the same objectives, integration through partnerships creates a potential synergy for assisting women through the process of pregnancy, delivery and post-partum care while, at the same time, reducing maternal and infant mortality.

In actual fact, a multivariate model should not only advance thoughtful understanding of interactions between distinct factors and their relative effects on utilisation of MCH systems but also include a predictive value for planning purposes. Consequently, in this study, a model is developed for the integration of traditional and modern MCH systems to present an alternative way to achieve a safe functional MCH system in the Rancaekek community in particular and Indonesia in general. In the long run, hopefully this study will help improve the use of human resources in Indonesia so that the entire population will gain access to affordable Maternal and Child Health care, whether provided by *paraji* and/or *bidan.*

After the theoretical orientation, a description is given of the selected qualitative and quantitative research methodologies and analysis techniques. An analytical model is designed and tested to enable the calculation of interactions between various independent and

intervening variables, in relation to two dependent variables *utilisation of traditional MCH* and *utilisation of modern MCH*, as scored by survey respondents in the research area. After data collection, through the application of qualitative research and quantitative surveys, a series of bivariate and multivariate analyses are run to identify various categories of significant factors involved in the utilisation of traditional and modern MCH systems. Remarkable findings have demonstrated that the 'invisible' factors concerning knowledge, beliefs and perceptions appear to play a determinant role in the explanation and prediction of utilisation behaviour. On the basis of implementation of selected research methodology, the main results derived from specific study objectives can be summarized as follows.

(1) Chapter IV gives a description of the research setting in terms of the social geography of Indonesia as a developing country in South-East Asia and the Sunda Region of West Java Province where research is carried out. Social geography includes a description of the climate and layout of the country, its population, economic condition, and environment. The overview of the Sunda region describes the ethnic Sundanese who live there.

(2) Health and healing in Indonesia, including traditional and modern medical systems, are described with special attention focused on Maternal and Child Health. In particular, the changing roles of *paraji* (TBA) and *bidan* (CMW) are described within the context of current National Government policies on Maternal and Child Health. Ethnomedicine with its deeply rooted traditional use of herbal medicine (*jamu*) and Western medicine introduced during the Dutch Colonial Era continue to exert influence in the health-care services after the independence of Indonesia in 1945. After the Alma-Ata Declaration in 1978, Primary Health Care gained a foothold in Indonesia with the introduction of *Bidan di Desa* (Community Midwives), *Puskesmas* (Community Health Centre) and *Posyandu* (Integrated Services Post) in rural areas. However, each community actually has its own local health system, with maternal and infant care being provided by Traditional Birth Attendants (*paraji*). To improve MCH services, cooperation between traditional and modern MCH systems is essential.

(3) Rancaekek as locality for both qualitative and quantitative surveys, the structure of the community, study population and sample survey are each discussed. An overview is given of the local MCH system, the role of Traditional Birth Attendants (*paraji*), and the ethnobotanical knowledge employed to prepare medicinal concoctions for use during pregnancy and parturition, but most often during the post-partum period. Their knowledge of and experience with specific plants and their functions is invaluable. Recording the taxonomies, functions and characteristics of indigenous plants in Rancaekek and how people relate to their use will increase our understanding about the role *paraji* play during and after pregnancy and childbirth. WHO's (1978) strategy for achieving 'Health for All' through the concept Primary Health Care is redefined by referring to: "*essential health care made accessible at a cost that the country and the community can afford*". The number of programmes aimed at health-care development has grown significantly, including integration of traditional MCH, *e.g.* training *paraji* to expand their understanding about attitudes and practices in the community and to supplement modern MCH systems still inaccessible in some rural areas (*cf.* Slikkerveer 2006). The *paraji*'s knowledge of medicinal plants and her ability to determine their efficacy illustrates just how specialized her skills are. Making use of a *paraji*'s expertise is in tune with WHO's promotion of Traditional Medicine in Primary Health Care.

(4) Plural MCH services, the MCH utilisation behaviour of pregnant and perinatal women, and the determination of pregnancy by *paraji* and/or *bidan* in the research area are discussed. The configuration of plural MCH systems in the research area is described in terms of knowledge, practices, beliefs, functions and medicine. In Rancaekek, as well as other communities offering plural health services, traditional MCH systems have developed within the society's cultural context, adapting to the specific environment and needs of its peoples. Because the social sciences have carried out little research on Maternal and Child Health in Indonesia, this study on the applicability of partnerships between MCH systems to reduce maternal and infant mortality is important. The country's social sciences are starting to become involved in the issue of Maternal and Child Health in order to deepen understanding about socio-cultural and socio-economic influences on utilisation of MCH systems in Indonesia. One can investigate health-seeking patterns for MCH utilisation behaviour based on individual characteristics such as ethnicity, religion, socio-economic status, educational and occupational backgrounds, knowledge about reproduction, religious and cultural beliefs affecting the decision-making process whether to use available MCH services (*cf.* Chapter VII). For the 127 households surveyed, women are categorized according to whether they were pregnant or had already given birth during the 12-month period prior to the survey, as discussed in detail earlier. The decision whether to seek help begins when a woman and her household become aware that she is pregnant. Subsequently, a series of decisions will be made either by the woman herself, by her nuclear family (husband and wife), by members of her extended family, sometimes including influential neighbours, or occasionally by volunteer health workers, religious or community leaders anxious to intervene. Table 7.1 shows women's role in the decision-making process to seek help during pregnancy and childbirth. When a young woman has little knowledge or experience with the total process of pregnancy and delivery, as well as how to care for an infant, she will frequently 'surrender' to the decisions taken by her husband, senior family members or people in the community.

(5) Patterns for utilisation of plural MCH systems by sample respondents in Rancaekek are analysed and the results interpreted using bivariate, multivariate and finally, multiple regression analyses. Development of a multivariate model for integrated health care in a population group (*cf.* Slikkerveer 1990) as well as discussion of several earlier theoretical models is part of medical anthropological and sociological research into the use of MCH systems available in the Rancaekek study area. Special attention is paid to the theoretical model from the 'Leiden Tradition', *i.e.* the *emic* or 'participant's view' to assess at individual and household levels; the 'Field of Anthropological Study' (FAS) perspective to interpret phenomena in the specific study area; and the Historical Dimensions perspective to enable historical analysis of complex contemporary configurations in MCH systems in the area. The multivariate model provides an analytical framework which accommodates predisposing and enabling factors together with perceived factors for reproductive processes as well as takes into account intervening factors such as each programme introduced in the study area as well as other above-mentioned factors which influence utilisation behaviour. Furthermore, the aim is to incorporate the results of this study into a more generally applicable, explanatory model for utilisation behaviour in Indonesia.

(6) Recommendations are made on the basis of research findings about the reinforcement, support and interaction between *paraji* (TBA) and *bidan* (CMW) with regard to their shared aim to improve MCH services in the community and to foster sustained partnership between

practitioners, and representatives, of traditional and modern medical systems in the research area.

The role of *paraji* (TBA) in Maternal and Child Health is changing both socially and culturally as a result of the continual dissemination of information by modern MCH providers on issues such as training to become a *paraji*; referral of high-risk pregnancies to *Puskesmas* and hospitals; introduction of Misoprostol tablets to stop haemorrhage; promotion of modern MCH care; and development of new programmes under the auspices of the community to supplement MCH medical systems such as *ambulans desa*, health insurance (TABULIN: *tabungan ibu bersalin*), etc. Interaction between all elements in the community working to achieve well-functioning plural medical systems is discussed to give credibility and support attempts to establish MCH systems in Rancaekek. The overall pattern for utilisation of plural MCH systems demonstrates the differing needs of pregnant and perinatal women, as seen from their 'external' actions taken during pregnancy. The Decision Tree in Fig. 7.1 shows the flow of pregnant and perinatal women surveyed through the plural MCH systems in Rancaekek. The flow of women seeking help, especially outside the family, has subsequently been examined as they pick and choose between different services offered by plural MCH systems.

The role of modern MCH services (*bidan*) extends to various 'Safe Motherhood' programmes such as: '*Gerakan Sayang Ibu*' (GSI), 'Making Pregnancy Safer' (MPS), '*Gerakan Pita Putih*' (MNH), *'Desa Siaga*' ('Village Alert'), that aim to improve health by training *paraji*, promoting MCH care, developing new programmes for *ambulans desa* (village ambulance), health insurance (TABULIN) and so forth. The overall pattern for utilisation of plural MCH systems varies greatly among diverse classifications of villages (see Chapter III, Table 3.1). The more developed the village, the greater the utilisation of modern MCH systems. Developed villages, generally located near main roads, have better access to existing infrastructures like public transportation, schools, health centres, etc. Although the role of Community Midwife (*bidan*) in the modern MCH system has grown in importance in Rancaekek (see Chapter VIII), this does not mean that the role of *paraji* (TBA) is disappearing; *paraji* have the specific talent for helping pregnant, parturient and post-partum women by providing massage and herbal remedies (*cf*. Chapter VI). The scale-up to *bidan* and continuing importance of the *paraji* is due to the development of integrated partnerships between plural MCH systems.

Both *paraji* and *bidan* should be encouraged to interact and collaborate to achieve the same objectives in promoting MCH services in the community. Establishing advanced partnerships between plural MCH systems will create synergy to overcome long-existent problems and reduce maternal and child mortality in the study area. The next step will be to decide whether the model is applicable in other societies or cultures in Indonesia, hopefully helping to reduce Maternal (MMR) and Infant (IMR) Mortality Rates in Indonesia. The model works well when fitted to insights on women's MCH utilisation behaviour during pregnancy and childbirth. The model not only correlates interactions between all categories or blocks of variables but also contributes to their predictive value. The calculated values for multiple correlation coefficients and relations between various blocks in the analytical model not only indicate the actual overall interaction between blocks of variables but also their remarkable predictive value for the utilisation of MCH systems in the study area. Respondents' socio-economic status demonstrates a very strong and significant 'impact' on their participation in MCH programmes and has a significant relationship with the reported utilisation of both traditional and modern MCH systems.

Bivariate cross-tabulation analysis yields scores to help identify and describe strongly significant relationships using Pearson's χ^2 and Phi-Cramer's in several factors with 0.000 and <0.005. Variables with a significant correlation to *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) are: *type of villages* (typvil), *education of women* (eduw), *occupations of women* (occuw), *education of husbands* (eduh), *occupations of husbands* (occuh), *knowledge about pregnancy* (knopre), *knowledge about miscarriage* (knomis), *socio-economic status* (SES), *opinion about TBA* [*paraji*] *skills* (opitba), *opinion about midwife* [*bidan*] *skills* (opimid), and *impact of MCH programmes through participation* (impac). Strong correlations between several factors with *utilisation of traditional MCH* (ustra) and *utilisation of modern MCH* (usmod) show that collaboration among such systems is needed by the community and should be translated into advanced partnerships to avoid low-tech and non-professional help for pregnant and parturient women. Integrative partnerships should be dedicated to achieving accessible and affordable Maternal and Child Health for all populations in Indonesia. In addition to bivariate analysis, initiation of a multivariate model for MCH utilisation was attempted on the strength of quantitative data from the household survey. A non-linear, CANALS, OVERALS and canonical correlation, developed at the University of Leiden, rendered practicable exposition of the interaction and total coherence of all background variables among themselves with reference to the utilisation of plural MCH systems. It then became evident that relatively high correlations (*r*) were achieved between independent and dependent variables: predisposing factor for *utilisation of traditional MCH* (ustra=0.686) and *utilisation of modern MCH* (usmod=0.468). Strong coherence was also found between the factor *perception of pregnancy* and the variables *utilisation of traditional MCH* (ustra=0.584) and *utilisation of modern MCH* (usmod=0.230). This result, incidentally, demonstrates that traditional Maternal and Child Health plays a strong role in the community and therefore cannot possibly be stripped of its socio-cultural role because its origin is rooted in their indigenous knowledge about the ways of life.

The 21 predictor and 2 utilisation variables are later presented in the form of a spatial projection onto canonical space, which further enhances predictive power. The outcome of the canonical correlation analysis enables a more detailed explanation of differential utilisation, summarized as follows. A strong correlation emerges between *belief in taboos during pregnancy* and *geographical accessibility* and *opinion about TBA skills versus utilisation of traditional MCH* as opposed to *utilisation of modern MCH*. The variables *education, occupation, socio-economic status, type of village, age,* and *perception* also show a strong coherence with *utilisation of traditional MCH* and *utilisation of modern MCH*. Section 9.2 will discuss the implications for such a policy in Indonesia, in addition to presenting an overview of the theoretical implications of the study.

9.2 Implications

In addition to the conclusions mentioned above, some implications on a theoretical, methodological and practical level will now be presented as this study's contribution to the body of knowledge in medical anthropology and sociology and in an endeavour to participate in the development of a safe improved medical system for MCH care and, in the long run, to better apply human resources in Indonesia.

9.2.1 Theoretical Implications

In order to contribute to the development of a theoretical framework for comparison of ethnomedical systems separately from biomedical systems in which pregnancy is seen in the context of socio-cultural beliefs and lifestyles, a primarily behavioural basis for comparing MCH utilisation is chosen within the socio-cultural context of the community. The results revealed in this study substantiate the body of indigenous knowledge and wisdom, passed down over many generations, on traditional MCH systems rooted in the community, in this case Rancaekek.

Moreover, the results also support international concerns regarding 'Health for All' based on the Alma-Ata Declaration acknowledged at an International Conference on Primary Health Care in 1978 as being the axis around which a country's medical systems revolve and an important component of its overall socio-economic development (*cf.* WHO 1998). The objective of the 'Health for All' strategy is to make Primary Health Care accessible for all peoples as well as affordable for communities and countries during every stage of their development. In addition, the Millennium Development Goals (MDG) have united the global community around a common agenda to reduce poverty and create an Asia-Pacific region free of poverty. It defines specific goals and targets with indicators for measuring and monitoring progress toward poverty reduction (*cf.* ADB 2005). The Millennium Development Goals represent a global partnership which has grown from shared commitments and targets established at the world summits during the 1990s. Responding to major global challenges and the call for a civil society, the Millennium Development Goals promote education, gender equality, the reduction of poverty as well as maternal and infant mortality, and eradication of HIV/AIDS and other diseases. Millennium Development Goals, set for the year 2015, are an agreed upon set of goals which can be achieved if all participants work together and do their part. Poor countries have pledged to improve governance and invest in human resources through improved health care and education. Rich countries have promised to support poorer nations by providing aid, debt relief, and fairer trade (*cf.* UNDP 2005). In their 2008 Report at Almaty, Kazakhstan, WHO acknowledges that Primary Health Care requires teams of health professionals (physicians, nurses and practitioners with specific sophisticated biomedical and social skills). However, WHO does not accept low income as a reason why countries fail to provide Primary Health Care, which would be synonymous with low-tech, non-professional care for the rural poor who cannot afford a better option. For a developing country like Indonesia, with an unequally distributed population, imbalance in income, development and medical services, particularly in remote areas where there are few health centres and practitioners, indigenous healers and birth attendants still provide people with Primary Health Care. Although such Primary Health Care remains low-tech and non-professional, it is in fact the only health services available and should be integrated into modern systems of medical care. Such a move requires additional education and training for, in this case, indigenous healers in order to cope with health problems in remote areas. Health illiteracy must be reduced to a minimum by promoting good health and well-being through various means of communication to the public and traditional health providers.

Interest in redefining community health entails treating not just the physical and mental aspects of an individual but also his/her whole being holistically (*cf.* Sofoluwe & Bennett 1985). It also necessitates learning more about the knowledge systems of indigenous people in order to protect and sustain their natural cultural heritage. In her survey on traditional midwifery in Indonesia, Niehof (1992) found that mediation has clearly failed in cases where the mother or her offspring dies. It is the task of *paraji* (TBA) to pilot a pregnant woman

through the perils of childbirth and help deliver a living newborn into the world. The *paraji* are expected to surmount any obstacle and find solutions when problems arise. The *paraji* has indigenous knowledge about the stages of pregnancy: *i.e.* about the foetal position inside the womb; about a woman's physical experiences and psychological emotions during pregnancy; about giving massage and preparing herbal concoctions; about healthy and nutritional foods to consume during pregnancy; about how to avoid 'evil' influences during her 'weak' condition.

'Traditional' and 'modern' societies are an antithesis as pointed out by Burke (1993); the hierarchy of a traditional society is based on ascription and low social mobility in contrast to that of a modern society based on achievement and high social mobility. This is demonstrated clearly in their attitudes (if not mentality) *e.g.* to change. In a traditional society in which change takes place slowly, people often remain unaware of the changes taking place around them. In contrast, in a modern society, change is rapid and continuous. Where a traditional society is religious, rife with magic, and moreover irrational, a modern society is seen as being secular, rational and scientific. In reality, Slikkerveer (2002) points out that: "… *a valuable aspect of traditional knowledge should be understood, respected and synthesized with global knowledge in a balanced, humane way*". When striving for 'Health for All' (WHO 1978) and Millennium Development Goals (MDG 2005), Primary Health Care should provide a choice among several options, not just an obligation to use modern systems of health care, particularly with regard to Maternal and Child Health. In view of the fact that each community has its own MCH system, integration between systems creates synergy between all interactive components of human society and plural medical systems. The concept 'partnership' requires that two or more aspects – here traditional and modern Maternal and Child Health – integrate equally and respect the other's strong points. As stated in Chapter II, traditional medical systems are not static, having developed over time through discovery, innovation, and adaptation as well as having been transformed through the process of trans-culturation or contact with other regional or foreign cultures. Traditional MCH systems still exhibit trans-cultural traces or influences derived from local, Hindu and Islamic beliefs. It is essential that full use of the synergy is made which advanced partnerships and integration of plural MCH systems are providing.

Maternal and Child Health (MCH) systems in Rancaekek are classified rather holistically, following the ethnomedical approach Slikkerveer (1990) uses to validate insights into cognitive aspects of the health-seeking process. Health-seeking behaviour refers to activities undertaken by clients to utilise one or more social system (organisation) in a health-care delivery system. In reality, it shows that health behaviour changes both over time and through cultural exchange in the community. Rubel and Hass (1996) emphasize how knowledge about illness influences health-seeking behaviour and how informants express a preference for an illness-specific strategy; observations brought to light that women's behaviour reflects a multiple-use strategy. Inconsistency may occur because therapeutic choices reflect the beliefs and preferences not only of the patient but of family and friends as well. During the regional consultation in Bangkok, Thailand, WHO–SEARO (2009) introduced the concept 'self-care' in the context of Primary Health Care. The PHC approach rests on four principles: universal coverage, community participation, multi-sectoral collaboration, and use of appropriate technology. Self-care can be translated as community participation through empowerment which necessitates involvement in sectors other than health care. Behavioural patterns during pregnancy and delivery closely resemble those presented during illness.

A process of change is requisite to the situation of the community with regard to existent plural (traditional and modern) MCH systems. There is no guarantee that all members of the community will recognize and use a modern MCH system because changing knowledge,

beliefs, and attitudes is a process which must pass through many stages over time. When information about modern Maternal and Child Health continuously filters through to village leaders and local government institutions by way of various 'Safe Motherhood' programmes, utilisation of MCH services will be affected slowly, albeit not easily, among members of the community.

9.2.2 Methodological Implications

The methodological implications in this study are: (1) the integrated qualitative and quantitative approaches, and (2) the 'participant's view', as mentioned in the 'Leiden Tradition' which includes the participant's or target population's point of view when planning and implementing processes of innovation and development. This approach has encouraged a new 'relativist' way of seeing other cultures and societies. Using this method to observe and describe a socio-cultural system, an individual's 'subjective' perceptions and attitudes develop into an 'objective' social system which represents an important and valuable added component in the study of ethnosystems – indigenous world view, perceptions, and decision-making systems. This approach provides an *emic* rather than *etic* view of cultures.

Firstly, many researchers in the social sciences are accustomed to using qualitative and quantitative approaches separately. These same strengths can also be weaknesses. It should be apparent that the strengths of one approach may potentially complement the weaknesses of the other, and *vice versa*. Many surveys are developed on the spot, with questions asked from the locations where findings will be administered. Although questionnaires are occasionally constructed before going into the field, the questions themselves are usually not first fixed using systematically collected insights from the survey area. In this study on the use of traditional and modern MCH systems in Rancaekek, the process of constructing questionnaires for the quantitative survey is based on qualitative research done in advance to note essential issues concerning the utilisation of traditional and modern MCH services in Rancaekek. The study shows that qualitative methods are available to develop research before exploring some of the ways in which they could be usefully incorporated into more comprehensive methods and strategies to achieve the general aim and specific objectives of the study.

The type of data and methods used for the data collection, make points of departure possible for thinking more systematically about the appropriate approach. Although most research calls for the use of either qualitative or quantitative methods, one should note that qualitative methods can also be used to collect quantitative data, as is shown by this study. Quantitative methods can be used to collect qualitative data; when open-ended questions receive many 'subjective' responses, then quantitative measures are derived from a large number of qualitative responses. The integration of qualitative and quantitative methodology in this study is sequential. Throughout the data collecting phase, varying degrees of dialogue are sought between qualitative and quantitative methods. The qualitative findings not only help to design a better survey; the open-ended questions are also full of information which enriches explanations for both qualitative and quantitative data. The sequential steps are as follow:

- Using qualitative baseline techniques: observation, in-depth interviews, focus-group discussions, and secondary data collection;
- Constructing a quantitative survey instrument based on findings from qualitative baseline data collection which integrate understanding from the field;

- Conducting a quantitative household survey using the survey as instrument;
- Quantitative data processing collected through use of a household survey;
- Quantification coding 'subjective' responses;
- Analyzing quantitative variables using SPSS 15.0 and then SPSS 17.0;
- Enriching quantitative findings by conducting qualitative in-depth interviews based on uncertain data.

There is clearly an important role for the development of complementary qualitative and quantitative approaches in the social sciences. Reliance on quantitative or qualitative methods alone will not help achieve a superior outcome; combining both types of methodologies will enable the selected sample to express maximum diversity, validity, and full local ownership (*emic*). The more narrative and personal information provided by open-ended focus-group discussions and in-depth interviews, the better researchers can understand and interpret quantitative results.

Secondly, one must learn the viewpoints of participants. Field research uncovered two cases of pregnant women referred to a health centre because of a health risk at delivery; therefore a special technical approach is used to collect data and detailed explanations. This approach tries to include the perspective of everyone who was knowledgeable about those events, *i.e.* witnesses, experiences, and interpretation of causes and responsibilities involved leading to the particular outcome – albeit death or survival of the mother. The technique in the qualitative study takes a specifically *emic* approach and perspective in data analysis and is an anthropological attempt to study indigenous concepts of health and illness. The sequence for data collection is: (1) concentration on a dramatic case in a shared moment*;* (2) non-judgmental in-depth interview to determine who played specific roles during the incident, to learn their personal interpretations of the incident; (3) data collection based on fact and witness reports to obtain individual evaluation and confirmation of witness sources; (4) to draw conclusions about the relevance of direct policy and its impact on the decision-making process during the incident.

Interviews are recorded accurately in full, avoiding leading questions. Researchers must be certain that the major issues of the case are brought before the witness. Instead, this approach attempts to understand people's varying perceptions during the decision-making process as to how to prevent the death of the pregnant woman at risk. In these two cases, the participants were: the husband of the pregnant woman at risk during delivery, her mother or mother-in-law, the *paraji*, health cadres, *bidan*, and modern health provider (medical doctor) who cared for the woman. The findings about these at-risk women referred for complications during delivery are included in the categories of pregnant women surveyed, with their 5th step during childbirth, distributed according to the reported type of MCH services sought to obtain treatment (*cf.* Chapter VII).

9.2.3. Practical Implications

In 1990, in Asia, data show that one out of sixty-five pregnant women are at risk during pregnancy and childbirth. In comparison, data for Europe (1 death per 1.400) demonstrates that the disparity is too extreme. Attempts to reduce maternal and infant death have been ongoing for a long time; however, prevention is not easy. In 1807, under Governor-General Daendels, *paraji* (TBA) were already being trained to help women during labour and delivery and reduce the infant mortality rate. However, this effort was not sustainable because midwifery trainees were rare at that time. The programme was picked up again in 1930, when

woman began registering as Traditional Birth Attendant (*paraji*/*dukun bayi*) to help with childbirth and post-partum care. In 1952, after Indonesia gained its independence, the training of *paraji* has been continuous (*cf.* Notoatmodjo 2003). Maternal deaths are caused by a complex of factors, *i.e.* social, culture, economic, and political, which are not easy to eradicate. No single intervention can prevent the tragedy of maternal death. Within the last decade, many strategies translate the lessons which have been learned: helping women avoid unwanted pregnancy through a family planning programme will reduce death related to pregnancy due to childbirth and abortions. However, family planning is not having an effect on Maternal Mortality Rates (MMR); therefore, certain MCH interventions are needed.

The complex nature of the problem means that MCH systems, under the 'Safe Motherhood' programmes, must respond with a comprehensive package of interventions. Certainly 'Safe Motherhood' programmes must work to improve the quality of health-care services and accessibility to those services. Just as critical is the attention paid to the socio-cultural context – mothers, families, social and physical structures which make up the community. In many settings, adequate MCH services will remain unavailable for many years to come. In other words, available services are under-utilized. Over one-half of all children in the developing world are born at home. Moreover, regardless of whether MCH services exist or are used, many activities which affect the health of a mother and her newborn take place within the home or community. In addition to providing services, strategies aimed at reducing maternal mortality must also involve individuals, families, and communities (*cf.* Nachbar, Baume & Parekh 1998).

For early detection of complications, antenatal care should be introduced to teach pregnant women to recognize the symptoms and dangers signs during pregnancy. In a number of African countries, the impact of antenatal care on maternal mortality is inconsistent. Evaluation of antenatal services in the Congo shows that such services have contributed to the drop in maternal deaths by reducing serious anaemia and prolonged labour. However, in Gambia and Tanzania, antenatal care has failed to reduce maternal deaths during pregnancy (*cf.* Greenwood *et al.* 1987; Moller *et al.* 1989; McDonagh 1996). Antenatal care differs between countries; for example, some countries offer extra services for pregnant women such as curing existing illnesses, treating complications and risk factors. Important components of antenatal care include: (1) screening for and treating. *e.g.* anaemia, malaria and sexually transmitted diseases; (2) early detection and treatment for complications, *i.e.* malpresentation, hypertension, oedema, and pre-clampsia; and (3) attention to potential complications, such as when and to whom to turn for referral.

In recent years an ideal standard (T7) has been developed for antenatal care in which the *bidan* should aim to reach a minimal of seven Ts (*Timbang* = weighing; *ukur Tekanan darah* = measuring blood pressure; *ukur Tinggi fundus uteri* = measuring the height of *fundus uteri*; *imunisasi Tetanus toxoid* = tetanus toxoid immunisation; *TT lengkap* = complete TT; *pemberian Tablet zat besi* = iron (Fe) tablets; *Tes terhadap penyakit menular seksual* = test for sexually transmitted diseases). During pregnancy, a woman should consult the *bidan* at least four times: once during the first trimester, once during the second trimester, and twice during the third trimester including delivery. A woman who adheres to the minimum of four standard consultations improves her chances for experiencing a safe pregnancy and delivery (*cf.* Chapter VI). Figure 7.1 and Table 7.13 (*cf.* Chapter VII) present data for Rancaekek from the household survey: of the 127 post-natal women surveyed, a total of 287 contacts or visits were made to traditional or modern MCH systems. Most consultations with modern MCH care took place in Steps 2 and 3, with only four women continuing to Step 4. These data

forecast less use of modern MCH services in Rancaekek. Improvement is thus needed to reach the ideal antenatal care standard.

Management of complications during pregnancy and childbirth is the main key to prevent maternal deaths. When situations arise which could not have been prevented or predicted, then solutions can be found if qualified medical services are available. In fact, when a pregnant woman's emergency condition has already been detected, then keeping her alive depends on the rapidity in which essential MCH services treat the high-risk pregnancy. The health services should make women themselves, as well as their families and community (neighbourhood), aware of self-care and promote their ability to detect high-risk symptoms during pregnancy (*cf.* WHO–SEARO 2009). Both the *paraji* and health volunteers should also be trained to identify a high-risk pregnancy, so together they will be ready to help a pregnant woman. Simultaneously, essential MCH services offer: 24-h health care for pregnant and perinatal women for: (1) Caesarean section, (2) important treatment (including anaesthesia, antibiotics and intravenous feeding), (3) blood transfusions, (4) manual expulsion of the placenta, and (5) vacuum aspiration for incomplete abortions (*cf.* Family Care International and Safe Motherhood Inter-Agency Group 1998). In the long run, essential MCH services can become the basic services offering skilled midwives and general practitioners. If a complication cannot be treated by a basic medical service, then a *bidan* or doctor at the *Puskesmas* should refer the pregnant woman to the nearest hospital as early as possible. It is expected that providing essential basic MCH services will help reduce maternal deaths.

Consequently, a formal attendant and health facility should be available to provide safe and clean services for perinatal women; however, the *bidan* or medical doctor (skilled helper) should be able to supplement complicated maternal health care (alone or referred) to eliminate maternal mortality. Transportation during emergency situations should be made available either from health centres or community maternity groups. Ironically, in Indonesia, the use of *bidan* (CMW) has not automatically reduced the number of maternal deaths because of the growth of woman using health centres. Actually, the *bidan* plays an important role in the sustainability of services for pregnant woman, through the available series of referrals during every important stage. A *bidan* will be the first person to whom a *paraji* (TBA) refers a woman in need of assistance.

With their knowledge of traditional herbal medicines, *paraji* fulfil a special social and cultural role as health consultant in Indonesia's rural areas, not only for pregnant and perinatal women but also for families. The loss of one *paraji* means that her knowledge about Maternal and Child Health and indigenous herbal remedies also disappears with her. Proponents of integrated knowledge as the key to sustainable development anticipate an increase in advanced partnerships between *paraji* (TBA) and *bidan* (CMW) in Rancaekek as well as in every Indonesian community. The protection of indigenous knowledge should be underwritten by Government policies and institutions at all levels in a country like Indonesia.

Trained *paraji* play a strategic role in encouraging community participation for 'Safe Motherhood'. In the 1980s, training for *paraji* as a strategy and way to reduce maternal morbidity and death has been accomplished globally. Recently, less instruction has been offered which has resulted in numbers of new *paraji* who have never been trained. This creates a hazardous situation for people living in remote communities which are rarely reached by health providers. Thus *paraji* play an essential role as intermediary between the community and formal medical systems (Minden and Levitt 1996). Although *paraji* are forbidden to inject medicines to prevent maternal death when complications arise during childbirth, they can, however, help save women's lives by referring them within the system. Teaching *paraji* about safe and hygienic childbirth, better delivery management, early

identification of complications, and how to save women's lives by referring them to accessible health centres is an essential part of MCH services. Therefore, *paraji* should be introduced to and become accustomed with places for referral and. most importantly, teach those officials at the primary place of referral to recognize and appreciate the strategic roles which *paraji* play. Ongoing partnerships between *paraji* (TBA) and *bidan* (CMW) indicate the integration and sharing of each other's knowledge and resources and a commitment to reach the same goals, *i.e.* 'Safe Motherhood'. Consequently, integrated medicine could be interpreted as collaboration between *paraji* and *bidan* in the form of partnerships which demands continuous respect. Sincerity, appreciation and balance among individuals.

In the late 1990s, the concept 'partnership' was introduced with regard to the issue of maternal health care and infant mortality, after most developing countries, including Indonesia, had ratified the Millennium Development Goals (MDG). Insight from findings on MCH utilisation behavioural patterns in this study, where the continuum between utilisation of traditional and modern MCH systems presents the community's perspective, policy makers have to establish approaches based on the community's point of view. Targets to reduce child mortality (Point 4, MDG) and improve maternal health (Point 5, MDG) have been translated into several national programmes in Indonesia. This means that targets for the Millennium Development Goals, as well as for the 'Safe Motherhood Initiative' (SMI), have been ratified and point the country in the right direction to reach its objectives.

Integrative partnerships in rural areas should be developed among stakeholders with an interest in community MCH services, such as: pregnant women and their families, the community itself. Traditional Birth Attendants (*paraji*), health cadres, *bidan* (CMW), *Puskesmas* and policy makers. That is, health cadres (which already exist at all local levels in Indonesia) within neighbourhoods because they are part of the community, living in the vicinity of pregnant women and *paraji*, who are better educated and, as mediators, can convey messages between women and *paraji* and pass on responses to the *Puskesmas*. One partnership effort, which pertains to training based on performance to enhance accessibility to early treatment for effective and safe MCH care, strongly affects the cause of maternal death and awareness of symptoms and critical complications during and after childbirth or post-abortion. In spite of working through professional organisations, the *bidan* should be able to cooperate with the community in which she works.

Unfortunately, the concept 'partnership' has been understood differently from place to place and within various MCH organisations. Different frameworks allow for diverse interpretations of the concept 'partnership' which is mirrored by dissimilar planning and implementation in the field by modern MCH providers. In Rancaekek findings show that partnerships among *bidan* (CMW) and Traditional Birth Attendants (*paraji* or *dukun bayi*) are expressed in structured relationships. Modern midwives are younger and more educated than *paraji* who are generally older and less educated (some cannot read Latin); they also come from different socio-economic backgrounds. This brings to the fore feelings of pride and self-importance on the 'modern' side which is reflected in the relationships between the two systems. Some midwives appear more 'bossy' towards *paraji*, although this situation does not always occur. More *bidan* are learning to cope with *paraji*; for instance, *Puskesmas* Nanjung Mekar conducts monthly meetings for *bidan* and *paraji* from the area where they share information, experiences and knowledge but, above all, build partnerships based upon trust between the plural MCH systems. Consequently, future national plans of action should approve pluralistic strategies to improve 'Safe Motherhood' and, at the same time, help sustain partnerships with traditional MCH systems. The proposed MCH service and pattern of referral based on partnerships between traditional and modern systems shows two types of

stakeholders: (1) at the village or community level, pregnant women and their families, the health cadre, and the *paraji* and *bidan desa* working together (*i.e*. the accent of this study); and (2) at the formal health-care level, *Puskesmas*, district and provincial hospitals.

The crucial path for partnership begins at the village level and represents two kinds of interests: *i.e.* traditional and modern MCH systems which should cooperate to achieve reduction in maternal and child deaths. Pregnant women and their families come from different backgrounds, as discussed in Chapter IV about factors in the analytical model (socio-demographic, psycho-social, socio-economic status, perceived pregnancy and institutional), which influence the way they make decisions concerning the utilisation of MCH systems. Pregnant women from different backgrounds should be educated using familiar media close to their roots: *i.e.* from their own community or by people close to their community.

In sum, insight into patterns of MCH utilisation as well as vivid proof from the community's perspective about the role of traditional and modern MCH systems in the study area illustrate clearly that integration or partnerships must be encouraged first at the central level of decision-making institutions, *i.e.* the National Ministry of Health in cooperation with provincial and district Health Offices, and second at the district level from *kecamatan* (sub-district) to *desa* (village) where community midwives are posted. Every programme connected with 'Safe Motherhood' should reflect the necessity for partnership. 'Safe Motherhood' programmes are obliged to collaborate with all stakeholders in the model, including formal and informal village leaders, which demonstrates that the programmes both implement and facilitate decision making. The traditional MCH system should be appreciated as comprising indigenous wisdom – both medical knowledge and practices – which has flowered, from the bottom up, out of the community's socio-cultural background.

Traditional or indigenous herbal concoctions, derived from local knowledge about medicinal plants for prevention of illness, are characterised as cheap, accessible, and revitalising by TOGA (*Tanaman Obat Keluarga*: Slikkerveer and Slikkerveer 1995) and *dasawisma* (10 neighbouring households). In addition, traditional knowledge about herbal medicine, as a potential instrument in bio-prospecting for useful medicinal plants, has increasingly become a source of interest. Efforts should be made to test traditional plant-based medicines in order to extend Primary Health Care within reach of all members of the community (*cf.* Quah and Slikkerveer 2003). Then through local institutions like TOGA and *dasawisma* broad understanding of health care and its practices can be disseminated among the community at large.

Appendix I: Declaration of Alma Ata (1978)

International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September 1978.

The International Conference on Primary Health Care in Alma-Ata (1978) this twelfth day of September in the year Nineteen hundred and seventy-eight, expressing the need for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all the people of the world, hereby makes the following

Declaration:

I
The Conference strongly reaffirms that health, which is a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector.

II
The existing gross inequality in the health status of the people particularly between developed and developing countries as well as within countries is politically, socially and economically unacceptable and is, therefore, of common concern to all countries.

III
Economic and social development, based on a New International Economic Order, is of basic importance to the fullest attainment of health for all and to the reduction of the gap between the health status of the developing and developed countries. The promotion and protection of the health of the people is essential to sustained economic and social development and contributes to a better quality of life and to world peace.

IV
The people have the right and duty to participate individually and collectively in the planning and implementation of their health care.

V
Governments have a responsibility for the health of their people which can be fulfilled only by the provision of adequate health and social measures. A main social target of governments, international organizations and the whole world community in the coming decades should be the attainment by all peoples of the world by the year 2000 of a level of health which will permit them to lead a socially and economically productive life. Primary Health Care (PHC) is the key to attaining this target as part of development in the spirit of social justice.

VI
Primary Health Care (PHC) is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost which the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's

medical system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national medical system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.

VII

Primary Health Care (PHC):

1. Reflects and evolves from the economic conditions and socio-cultural and political characteristics of the country and its communities and is based on the application of the relevant results of social, biomedical and health services research and public health experience;
2. Addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services accordingly;
3. Includes at least: education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs;
4. Involves, in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications and other sectors; and demands the coordinated efforts of all those sectors;
5. Requires and promotes maximum community and individual self-reliance and participation in the planning, organization, operation and control of Primary Health Care (PHC), making fullest use of local, national and other available resources; and to this end develops through appropriate education the ability of communities to participate;
6. Should be sustained by integrated, functional and mutually supportive referral systems, leading to the progressive improvement of comprehensive health care for all, and giving priority to those most in need;
7. Relies, at local and referral levels, on health workers, including physicians, nurses, midwives, auxiliaries and community workers as applicable, as well as indigenous healers as needed, suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community.

VIII

All governments should formulate national policies, strategies and plans of action to launch and sustain Primary Health Care (PHC) as part of a comprehensive national medical system and in coordination with other sectors. To this end, it will be necessary to exercise political will, to mobilize the country's resources and to use available external resources rationally.

IX

All countries should cooperate in a spirit of partnership and service to ensure Primary Health Care (PHC) for all people since the attainment of health by people in any one country directly concerns and benefits every other country. In this context the joint WHO/UNICEF report on Primary Health Care (PHC) constitutes a solid basis for the further development and operation of Primary Health Care (PHC) throughout the world.

X

An acceptable level of health for all the people of the world by the year 2000 can be attained through a fuller and better use of the world's resources, a considerable part of which is now spent on armaments and military conflicts. A genuine policy of independence, peace, détente and disarmament could and should release additional resources which could well be devoted to peaceful aims and in particular to the acceleration of social and economic development of which Primary Health Care (PHC), as an essential part, should be allotted its proper share. The International Conference on Primary Health Care (PHC) calls for urgent and effective national and international action to develop and implement Primary Health Care (PHC) throughout the world and particularly in developing countries in a spirit of technical cooperation and in keeping with a New International Economic Order. It urges governments, WHO and UNICEF, and other international organizations, as well as multilateral and bilateral agencies, nongovernmental organisations, funding agencies, all health workers and the whole world community to support national and international commitment to Primary Health Care (PHC) and to channel increased technical and financial support to it, particularly in developing countries. The Conference calls on all the aforementioned to collaborate in introducing, developing and maintaining Primary Health Care (PHC) in accordance with the spirit and content of this Declaration.

Appendix II: Millennium Development Goals (2010)

Goal 1: Eradicate Extreme Poverty and Hunger

Target 1A: Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day

- The global economic crisis has slowed progress, but the world is still on track to meet the poverty reduction target.
- Prior to the crisis, the depth of poverty had diminished in almost every region.

Target 1B: Achieve full and productive employment and decent work for all, including women and young people

- Deterioration of labour market, triggered by the economic crisis, has resulted in a decline in employment.
- As jobs were lost, more workers have been forced into vulnerable employment.
- Since the economic crisis, more workers find themselves and their families living in extreme poverty.

Target 1C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger

- Hunger may have spiked in 2009, one of the many dire consequences of the global food and financial crises.
- Progress to end hunger has been stymied in most regions.
- Despite some progress, one in four children in the developing world is still underweight.
- Children in rural areas are nearly twice as likely to be underweight as those in urban areas.
- In some regions, the prevalence of underweight children is dramatically higher among the poor.
- Over 42 million people have been uprooted by conflict or persecution.

Goal 2: Achieve Universal Primary Education

Target 2A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

- Hope dims for universal education by 2015, even as many poor countries make tremendous strides.
- Sub-Saharan Africa and Southern Asia are home to the vast majority of children out of school.
- Inequality thwarts progress towards universal education.

Goal 3: Promote Gender Equality and Empower Women

Target 3A: Eliminate gender disparity in primary and secondary education, preferable by 2005 and in all levels of education no later than 2015.

- For girls in some regions, education remains elusive.
- Poverty is major barrier to education, especially among older girls.
- In every developing region expect the CIS, men outnumber women in paid employment.
- Women are largely relegated to more vulnerable forms of employment.
- Women are over-represented in informal employment, with its lacks of benefits and security.
- Top-level jobs still go to men – to an overwhelming degree.
- Women are slowly rising to political power, but mainly when boosted by quotas and other special measures.

Goal 4: Reduce Child Mortality

Target 4A: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate.

- Childs deaths are falling, but not quickly enough to reach the target.
- Revitalizing efforts against pneumonia and diarrhea, while bolstering nutrition, could save millions of children.
- Recent success in controlling measles may be short-lived if funding gaps are not bridged.

Goal 5: Improve Maternal Health

Target 5A: Reduce by three quarters the maternal mortality ratio.

- Most maternal deaths could be avoided.
- Giving birth is especially risky in Southern Asia and sub-Saharan Africa. where most women deliver without skilled care.
- The rural–urban gap in skilled care during childbirth has narrowed.

Target 5B: Achieve universal access to reproductive health.

- More women are receiving antenatal care.
- Inequalities in care during pregnancy are striking.
- Only one in three rural women in developing regions receives the recommended care during pregnancy.
- Progress has stalled in reducing the number of teenage pregnancies, putting more young mothers at risk.
- Poverty and lack of education perpetuate high adolescent birth rates.
- Progress in expanding the use of contraceptives by women has slowed.
- Use of contraception is lowest among the poorest women and those with no education.
- Inadequate funding for family planning is a major failure in fulfilling commitments to improving women's reproductive health.

Goal 6: Combat HIV/AIDS, Malaria and other diseases.

Target 6A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS.

- The spread of HIV appears to have stabilized in most regions, and more people are surviving longer.
- Many young people still lack the knowledge to protect themselves against HIV.
- Empowering women through AIDS education is indeed possible, as a number of countries have shown.
- In sub-Saharan Africa, knowledge of HIV increases with wealth and among those living in urban areas.
- Disparities are found in condom use by women and men and among those from the richest and poorest households.
- Condom use during high-risk sex is gaining acceptance in some countries and is one facet of effective HIV prevention.
- Mounting evidence shows a link between gender-based violence and HIV.
- Children orphaned by AIDS suffer more than the loss of parents.

Target 6B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it.

- The rate of new HIV infections continues to outstrip the expansion of treatment.
- Expanded treatment for HIV-positive women also safeguards their newborns.

Target 6C: Have halted by 2015 and begun to reserve the incidence of malaria and other major diseases.

- Production of insecticide-treated mosquito nets soars.

- Across Africa, expanded use of insecticide-treated bed nets is protecting communities from malaria.
- Poverty continues to limit use of mosquito nets.
- Global procurement of more effective antimalarial drugs continues to rise rapidly.
- Children from the poorest households are least likely to receive treatment for malaria.
- External funding is helping to reduce malaria incidence and deaths, but additional support is needed.
- Progress on tuberculosis inches forward.
- Tuberculosis prevalence is falling in most regions.
- Tuberculosis remains the second leading killer after HIV.

Goal 7: Ensure Environmental Sustainability

Target 7A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.

- The rate of deforestation shows signs of decreasing, but is still alarmingly high.
- A decisive response to climate change is urgently needed
- The unparalleled success of the Montreal Protocol shows that action on climate change is within our grasp.

Target 7B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss.

- The world has missed the 2010 target for biodiversity conservation, with potentially grave consequences.
- Key habitats for threatened species are not being adequately protected.
- The number of species facing extinction is growing by the day, especially in developing countries.
- Over exploitation of global fisheries has stabilized, but steep challenges remain to ensure their sustainability.

Target 7C: Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation.

- The world is on track to meet the drinking water target, though much remains to be done in some regions.
- Accelerated and targeted efforts are needed to bring drinking water to all rural households.
- Safe water supply remains a challenge in many parts of the world.
- With half the population of developing regions without sanitation, the 2015 target appears to be out of reach.
- Disparities in urban and rural sanitation coverage remain daunting.
- Improvements in sanitation are bypassing the poor.

Target 7D: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

- Slum improvements, though considerable, are failing to keep pace with the growing ranks of the urban poor.
- Slum prevalence remains high in sub-Saharan Africa and increases in countries affected by conflict.

Goal 8: Develop a Global Partnership for Development

Target 8A: Develop further an open, rule –based, predictable, non-discriminatory trading and financial system.

- Developing countries gain greater access to the markets of developed countries.

- Least developed countries benefit most from tariff reductions, especially on their agricultural products.

Target 8B: Address the special needs of least developed countries.

- Aid continues to rise despite the financial crisis, but Africa is short-changed.
- Only five donor countries have reached the UN target for official aid.

Target 8C: Address the special needs of landlocked developing countries and small island developing states.

Target 8D: Deal comprehensively with the debt problems of developing countries.

- Debt burdens ease for developing countries and remain well below historical levels.

Target 8E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.

Target 8F: In cooperation with the private sector, make available benefits of new technologies, especially information and communications.

- Demand grows for information and communications technology.
- Access to the World Wide Web is still closed to the majority of the world's people.
- A large gap separates those with high-speed internet connections, mostly in developed nations, and dial-up users.

Glossary

A

Akupresuris	acupressurist
Akupunturis	acupuncturist
Allāh	God
Allāhuakbar	'Allāh is Great'
Alpuket	avocado
Amit-amit	expression voiced by a pregnant woman when she does or sees something bad or ugly so that her offspring's perfect form will not be adversely affected
Angkot (angkutan kota)	city transportation
Aqeqah	ritual expressing gratitude to God (slaughter of 2 male goats or sheep for a boy and 1 male goat or sheep for a girl)
Arisan	monthly gathering among neighbours, family members, and/or friends for collecting and sharing money by lottery
Arjuna	a hero of the epic *Mahabharata*
Asem Jawa	tamarind
Asrakal	ritual procession held 40 days after parturition to celebrate cutting of the infant's hair and tribute to Prophet Muhammad
Asuhan kebidanan	midwifery nurturing
Ayam kampung	local chicken

B

Baraya	kinship system (Sd.)
Basa ibu	mother tongue or first language (Ind.)
Basa indung	mother tongue or first language (Sd.)
Bawang	shallot (*Allium cepa L.)*
Bawang bodas	garlic (*Allium sativum*)
Bebengkung/gurita	long piece of cloth used to bind the waist and abdomen after birth
Becak	tricycle
Belut	eel (*Symbranchidae*)
Bengkel	workshop
Bhineka Tunggal Ika	'Unity in Diversity'
Bidan	Traditional Birth Attendant (*bideun* in Malay area)
Bidan Delima	professional private midwive
Bidan di Desa	community-based midwive
Bilik	bamboo woven mat
Bobok	sprinkled on arms and legs to relieve swelling, cramps, fatigue, and help blood circulation
Bonteng	cucumber (*Cucumis sativus L.*)
Bubur lolos	porridge made from rice flour and brown sugar, dressed with coconut milk

C

Cabe beureum	red chilly (*Capsicum*)
Cacar	*Variola postural* (smallpox)
Cai susu bari	spoiled milk
Cangkaruban	bowl containing water and coins in which people wash their hands during a ritual
Cempor	tiny kerosene light
Cupat pusuer	removed from the baby

D

Dari rakyat untuk rakyat	from people to people slogan
Dasawisma	neighbourhood health programme

Daun pisang	banana leaves
Desa maju	economically well-developed village
Desa sedang	economically moderately developed village
Desa Siaga	Village Alert
Desa tertinggal	economically less developed village
Di bedong	small birthing blanket
Dinas Kesehatan Propinsi	Provincial Health Department
Disamaraan	being spiced
Dukun	indigenous healer, shaman
Dukun bayi (Ind.)	*paraji* (Sd.), Traditional Birth Attendant
Dukun calak	circumciser
Dukun jampi	curer who employs herbs and other native medicines
Dukun japa	curer who relies on magical incantations
Dukun petungan	expert in numerical divination
Dukun pijet/urut	masseur
Dukun prewangan	medium
Dukun sihir	sorcerer
Dukun siwer	specialist in preventing natural misfortune
Dukun susuk	specialist who cures by inserting golden needles under the skin
Dukun temanten	wedding specialist
Dukun tiban	curer whose power is temporary, having been entered by a spirit
Dukun wiwit	harvest ritual specialist
Dulur	kinship terminology for relatives
Dulur pet ku hinis	brothers and sisters born from the same mother
Dulur teges	brothers and sisters born from one father and mother
E	
Empat Terlalu	four types of "Too" conditions for postponing childbirth
Endog	egg
G	
Gampong	village
Ganas	pineapple (*Ananas comosus*)
Gedang	papaya (*Carica papaya L.*)
Gemeente	*Kotamadya* (municipality)
Gula beureum	brown sugar
Gunung	mountain peaks
Gurah	person who prepares solutions from the bark of plants
H	
Hinis	bamboo knife
Hui	sweet potato (*Ipmoea batatas poir*)
I	
Ibu PKK	local woman's organization
Ibu RT	wife of a hamlet leader
Indung beurang	former name for *paraji*: '*indung*' = mother. '*beurang*' = day
J	
Jahe	ginger (*Zingiber officinale*)
Jamu	herbal medicine
Jamu galian singset	Traditional Medicine to keep a woman's body fit and slender
Jamu gendong	itinerate *jamu* vendor, carrying a basket filled with concoctions on her back
Jamu kuat lelaki	Traditional Medicine to strengthen men
Jamu opat puluh macem	after delivery forty kinds of Traditional Medicine
Jamu sari rapet	Traditional Medicine for healthy sexual organs (women)
Jamu sehat lelaki	Traditional Medicine for healthy body (men)

K

Kabupaten	Regency, district
Kader kesehatan	volunteer health worker
Kadu	*durian (Durio zibethnus*)
Kain batik panjang	long piece of batik cloth
Kanjut kundang	small cloth bag
Kebatinan	related to spiritualism
Kebaya	traditional blouse
Kecamatan	sub-district
Kedukunan	magical inherited knowledge
Keluarga miskin	impoverished households
Kemitraan	partnership
Kepala Dinas Kesehatan Propinsi	Provincial Health Officer
Kiropraksi	chiropractor
Kiyai	male Islamic leader
Kolera	cholera
Kuali	clay pot
Kunyit	turmeric

L

Lada	hot food
Lauk emas	gold fish (*Cyprinus carpio*)
Lontar	palm leaf upon which ancient recipes were written
Lumpang	small iron mortar

M

Masuk angin	not feeling well
Meurajah obat aneuk-aneuk	herbal concoctions for children (Aceh)
Mina-padi	combined fish and rice farming
Muslim	soul blown into foetus by Allāh

N

Nangka	jack-fruit (*Artocarpus heterophyllus*)
Nenjrag Bumi	ritual, the *paraji* places the infant on the floor, before stamping it 7times to frighten the baby
Ngabersihan (*sunat*/)	circumcision
Ngawinkeun	held when a person marries
Ngayun	swinging baby in a cradle constructed from *batik* cloth
Ngislamkeun)	circumcision, usually for boys but in some cases also girls
Nujuh bulan	7-month ritual
Nurunkeun	ritual, when the infant first touches the ground
Nurut buat	prohibitions for women while pregnant

O

Ojeg	rental motorbike

P

Pamali	prohibitions
Pang lay	to ward off evil spirits (*Zingiber gramenieum*)
Parahyangan	Place of the Gods
Paraji/peraji (Sd.)	*dukun bayi* (Ind.), Traditional Birth Attendant
Paraji sunat/bengkong	circumcisers for Muslim males
Parut	grater
Pasrah	to accept one's condition with patience
Patah tulang	broken bones
Pembangunan	development
Pendil	clay bowl

Pengajian	recites of the Holy Qur'ān
Perwanten	offer consisting of cake, rice, fish, and fruits
Peuyeum	preserved cassava
Pijat refleksi	reflection massage
Pilis	ointment to improve eyesight and relieve dizziness
Pipisan.	rubbing-stone
Pisang ambon	banana (*Musaceae*)
Pramuka	Scout Youth
Puputan (puput puseur)	ritual, umbilical cord falls off
Q	
Qigong	Chinese bio-energy
R	
Ramuan	herbal *jamu* concoction
Reiki master	Japanese bio-energy
Rhamadan	Islam fasting month
Romusha	forced-labour crews
Rontal leaf	leaves upon which ancient recipes were recorded
Rujak bebeg	fruit salad
Rukun Warga	neighbourhood
Rukun Tetangga	hamlet
S	
Salak	(*Salacca zalacca*)
Samak jarian	mat woven from *pandan* leaves (*Pandanus amaryllifolius)*
Samara	spices
Santen	coconut milk
Sedang	moderately developed (village)
Seja masrahkeun	would like to hand over
Sengguguh	tree, to cure breathing problems
Shinshe	Chinese healer
Si hurip	'the alive'
Sirih	betel leaves
Soleh (boy)*/solehah* (girl)	expectations for offspring
Stadsgemeente	city Municipality
T	
Tabib	Indian healer
Tal leaf	see *Lontar* (palm) leaf
Tali paranti	ritual knotting of a cord
Taleus	(*Colocasia giganteum Hook*)
Tali paranti	resembling a cord, with both ends meeting at the knot
Tapel	traditional ointment to relieve stomach ache, reduce stretch marks (striata) and firm flabby belly
Tatar	region
Tenaga dalam or *prana*	bio-energy, paranormal inner power to cure
Teumen	bamboo knife
Teungku ineung	woman teaching reading of the Holy Qur'ān, lays out bodies of the deceased (esp. women)
Tingkeban (nujuh bulan)	ritual, during 7th month of pregnancy
Tukang becak	tricycle driver
Tukang sayur	vegetables seller
Tutut	snail from the rice field
S	
Subadra	wife of Arjuna
Sumbu	wicks

Sunat	circumcision
Sunda Parahyangan	covers areas historically influenced by Javanese kingdom *Mataram-Sultan Agung*
Sūrat Lukman	Holy Qur'ān: *sūrah* 31, verse 14
Sūrat Maryam	Holy Qur'ān: *sūrah* 19, verses 1–5
Sūrat al-Mu'minūn	Holy Qur'ān: *sūrah* 23, verses 12–14
Sūrat ar-Rahmān	Holy Qur'ān: *sūrah* 55, verses 1–78
Surat Yusūf	Holy Qur'ān: *sūrah* 12, verses 1–16
Sumbu	wicks
Tabib	Indian healer
Tal leaf	see *Lontar* (palm) leaf
Tali paranti	ritual knotting of a cord
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Tali paranti	resembling a cord, with both ends meeting at the knot
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Tukang becak	tricycle driver
Tukang sayur	vegetables seller
Tutut	snail from the rice field
U	
Udang	shrimp
Undak usuk basa	taking account of another person's position when speaking
Ustadzah	female religious leader
V	
Variola postural	smallpox
W	
Warung	small time retailer
Wayang	traditional puppet
'*Wilujeng enjing*'	'good morning'
'*Wilujeng siang*'	'good afternoon'

Abbreviations

AMH	*Angka Melek Huruf* (Literacy Rate)
ASKESKIN	*Asuransi Kesehatan bagi Masyarakat Miskin* (Health Insurance for the Poor)
BDD	*Bidan di Desa* (Community Midwife)
BDD-PTT	*Bidan di Desa–Pegawai Tidak Tetap* (Community Midwife–Temporary Employee)
BKIA	*Balai Kesejahteraan Ibu dan Anak* (Bureau for Mother and Child Welfare)
BKKBN	*Badan Kependudukan dan Keluarga Berencana Nasional* (Demography and Family Planning Board)
BPS	*Biro Pusat Statistik* (National Bureau of Statistics)
CAM	Complementary and Alternative Medicine
CANALS	Canonical Data Analysis
CBHA	Community-Based Health Activities
CMW	Community Midwife
D-III	Three-Year Diploma Programme
EKS	Ethnobotanical Knowledge Systems
FAS	Field of Anthropological Study
FES	Field of Ethnological Study
GAKIN	*Keluarga Miskin* (poor households)
GDP	Gross Domestic Product
GSI	*Gerakan Sayang Ibu* ('Mother's Friendly Movement')
HDI	Human Development Index
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
ICLARM	International Centre for Living Aquatic Resources Management
ICPD	International Conference in Population and Development
IKOPIN	*Institute Koperasi Indonesia* (Indonesian Cooperative Institute)
IMF	International Monetary Fund
IMR	Infant Mortality Rate
JABAR	*Jawa Barat*, West Java
JPS-BK	*Jaring Pengaman Sosial–Bidang Kesehatan* (Social Safety Net–Health Department)
KIA	Health Care for Mother and Child
LKMD	*Lembaga Ketahanan Masyarakat Desa* ('Rural Community Resilience Institution')
LMK	*Lembaga Makanan Rakyat* ('Organisation for Public Food Supplies')
MAC	Medicinal, Aromatic and Cosmetic (plants)
MCH	Maternal and Child Health
MDG	Millennium Development Goals
MMR	Maternal Mortality Rate
MNH	*Gerakan Pita Putih* ('Maternal and Neonatal Health' or 'White Ribbon Movement')
MPS	*Menjamin Persalinan Sehat* ('Making Pregnancy Safer')
NKKBS	*Norma Keluarga Kecil Bahagia Sejahtera* ('Norm for Small Happy Family Welfare')
OVERALS	Optimal Scaling Nonlinear Canonical Correlation Analysis
PCHC	Partnership for Clear Health Communication
PHBS	*Perilaku Hidup Bersih dan Sehat* ('Clean and Healthy Life Behaviour')
PHC	Primary Health Care
PKBI	*Perkumpulan Keluarga Berencana Indonesia* (Association for Indonesian Family Planning)
PKK	*Pemberdayaan Kesejahteraan Keluarga* ('Family Welfare Empowerment')
Posyandu	*Pos Pelayanan Terpadu* (Integrated Services Post)
PPK-IPM	*Program Pendanaan Kompetisi – Indeks Pembangunan Manusia* (Programme for Fund Competition – Human Development Index)

PPS	probability proportionate to size
Polindes	*Pondok Bersalin Desa* (birthing hut or village maternity home)
Puskesmas	*Pusat Kesehatan Masyarakat* (community health centre)
Pustu	*Puskesmas Pembantu* (satellite community health centre)
PKBI	*Perkumpulan Keluarga Berencana Indonesia* (Association for Indonesian Family Planning)
Repelita V	*Perencanaan Lima Tahun ke V* (the fifth five-year plans)
RT	*Rukun Tetangga* (hamlet)
RW	*Rukun Warga* (neighbourhood)
SDKI	*Survey Demografi Kesehatan Indonesia* (Demographic Survey on Health in Indonesia)
SES	Socio-Economic Status
SMI	'Safe Motherhood Initiative'
SPSS	Statistical Packages for Social Sciences
STPDN	*Sekolah Tinggi Pemerintahan Dalam Negeri* (Home Affairs High School)
SUSEDA	*Sensus Ekonomi Daerah* (Local Economic Census)
TABULIN	*Tabungan Ibu Bersalin* (Savings for Pregnant Mother)
TBA	Traditional Birth Attendant (*paraji*. *dukun bayi*)
TOGA	*Taman Obat Keluarga* ('Medical Family Garden')
T7	*Timbang* (weighing), *Tekanan darah* (blood pressure), *Tinggi fundus uteri* (height of fundus uteri), *Tetanus toxoid, TT lengkap* (complete TT immunisation), *Tablet zat besi* (iron (Fe) tablets), *Tes terhadap penyakit menular* (contagious diseases test)
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNPAD	Universitas Padjadjaran
VOC	Verenigde Oost-Indische Compagnie (Dutch East India Company)
WHO	World Health Organization
WHO–SEAR	World Health Organization–South-East Asia Region
WHO–SEARO	World Health Organisation- South-East Asia Regional Organization
WHOCC–PMC	World Health Organization Collaboration Centre–Perinatal, Maternal and Child

Summary

This study focuses on the utilisation of plural (traditional and modern) Maternal and Child Health (MCH) systems in Rancaekek Sub-District, representative of the Sunda area in West Java. Indonesia. The general aim is to investigate how traditional and modern MCH systems interact and to examine how a community chooses between medical systems when several are accessible. To do this, the health-seeking behaviours of pregnant and perinatal women are analysed with regard to the 'external' steps or number of contacts they make with the community's plural MCH systems. In rural areas of Indonesia, *paraji* (*dukun bayi* - Traditional Birth Attendants) commonly provide health care for both pregnant women and their offspring. During pregnancy and parturition, traditionally considered an unsafe 'weak' period for the mother and her offspring, the *paraji* tends to the expectant mother's physical as well as mental and spiritual well-being.

Although in the recent past a number of garment factories have been built along the main road in Rancaekek, most villages in Rancaekek still depend on agriculture. Because by and large most households in these geographically remote villages are low-income and quite far from a *Puskesmas* (Community Health Centre), traditional *paraji* play a significant role in providing Maternal and Child Health care.

In order to realize the general aim of this study – and taking into consideration its three major components, namely community health, MCH systems and utilisation of plural MCH systems – six specific points of interest are researched and documented:

(1) To describe briefly Indonesia, as both research setting and developing country in South-East Asia, and the Sunda Region of West Java Province where research has been carried out;

(2) To describe health and healing in Indonesia, including both traditional and modern medical systems, with a focus on Maternal and Child Health. In particular, the changing roles of Traditional Birth Attendants (*paraji*/*dukun bayi*) and Community Midwives (*bidan*) are described within the context of the Indonesian Government's current MCH policies;

(3) To describe the community of Rancaekek as the locality where both the qualitative and quantitative surveys are carried out. In addition to describe the Rancaekek community itself: *e.g.* details about the study population and sample survey as well as an overview of the local MCH system and related knowledge about the use of Medicinal, Aromatic and Cosmetic (MAC) plants.

(4) To describe plural MCH systems in the research setting, including the roles of paraji (TBA) and *bidan* (CMW) during pregnancy, labour and delivery as well as the MCH utilisation behaviour of pregnant women in their choice of health care;

(5) To present behavioural patterns and interpret results for the utilisation of a plural MCH system by pregnant women in the sample survey in Rancaekek, implementing bivariate analysis, multivariate analysis and multiple regression analysis.

(6) To formulate recommendations, based on research findings, on how to strengthen and sustain advanced partnerships and collaboration between *paraji* (TBA) and *bidan* (CMW) with regard to their shared interest in improving MCH in the community.

Chapter I discusses Maternal and Child Health *which* the *Alma*-Ata Confer*ence i*n 197*8 dec*lared to be one of the most important sectors of Primary Health Care (PHC) worldwide. WHO emphasizes that Maternal and Child Health is an essential component of public health care that should be made universally accessible to individuals and families by means acceptable to them, through their full participation, and at a cost affordable to communities and countries alike. Maternal and Child Health should become an integral part of every country's medical system and nucleus for comprehensive socio-economic development policies in the community. The Alma-Ata Conference reformulated WHO's health-care policy in the slogan "Health for All by the Year 2000", in order to ensure that Primary Health Care becomes an integral part of community and national development and not just an isolated peripheral phenomenon. Action, promotion, coordination, and support of the administration are required, not only at local but also at intermediate and central levels of government. Primary Health Care must make full use of all available resources, *i.e.* it must mobilize the community's entire human potential. Unfortunately, more than 10 years later, not every country that ratified the Alma-Ata Declaration has succeeded in reaching its goal; Indonesia is one such country the target of which is set for the year 2015. In 2009 the WHO–SEAR Report has renewed its definition of 'Health for All', in which individuals should try to maintain good health by practicing self-care while, at the same time, being given access to adequate medical services – although this is only part of the larger picture. A medical system includes organisations, institutions and resources in public health. The Alma-Ata Declaration emphasizes the importance of fully organised community participation and ultimate self-reliance, with individuals, families and communities assuming more responsibility for their own health.

Indonesia presented "The Development and Implementation of Traditional Medicine for Self-Care" based on the country's growing interest in indigenous medicine in the context of self-care (2002-2005). The statement supports this study on the issue of integrating both Traditional Birth Attendants (*paraji* or *dukun bayi*) and *bidan* (CMW) as respective representatives of traditional and modern MCH systems at the national level, rather than marginalizing *paraji* as the cause for high Maternal (MMR) and Infant (IMR) Mortality Rates in Indonesia. The integration proposed in this study is through advanced partnerships between plural MCH systems. Because the traditional MCH system is based on indigenous knowledge handed down over generations, such knowledge will disappear if the *paraji* cease to function.

Recently, Indonesia has ratified a further commitment to implement, execute and monitor the Millennium Development Goals (MDG – *Tujuan Pembangunan Milenium*) that should be achieved by 2015. In 2005 the Asian Development Bank has stated that MDGs have united international programmes for development around a common global agenda aimed at reducing poverty worldwide. The Bank is dedicated to its vision of an Asia–Pacific region free of poverty. It defines specific goals and targets, providing indicators for measuring and monitoring progress towards the decrease in poverty levels. The MDGs represent a global partnership which has developed from the commitments and targets established at the world summits in the 1990s. Responding to the world's main developmental challenges and to calls for a civil society, the MDGs promote increased education and gender equality, on one hand, and strive to reduce poverty, maternal deaths, infant mortality, HIV/AIDS and other diseases, on the other hand. Set for the year 2015, the MDGs are an agreed upon set of goals can be achieved if all participants work together and take their part seriously.

In Chapter II, important research in health-care utilisation carried out around the globe is discussed in order to show why so many scholars in the recent past have been attracted to this

topic. Although pregnancy is not formally recognised as an illness, the dependency of pregnant women during childbirth resembles that of patients undergoing medical treatment. Therefore, the discussion will seek to contribute to existing knowledge and understanding about the relationship between the processes of pregnancy and parturition and the utilisation of available medical systems in rural communities. While the model for medical pluralism encompasses traditional, transitional and modern medical systems, here it is used to describe Maternal and Child Health in Rancaekek. The traditional and modern MCH systems are represented by *paraji* (TBA) and *bidan* (CMW) respectively, while the transitional medical system is under-represented in the plural MCH system.

Historically, developing countries have experienced an ongoing process of acculturation, where populations encountered foreign medical systems introduced by migrants arriving from distant lands such as India, Arabia and China. The modern Western or cosmopolitan medical system was first introduced in Indonesia as part of the Dutch Colonial Rule established by the end of the 19th century. Currently, health care in the developing countries is typified by different traditional, transitional, and modern medical systems that have developed from within the country and overlap both in theory and practice. Some of the related methodological complications basically refer to the difficulty that certain Western scientists have in understanding indigenous and ethnobotanical knowledge systems, in particular that value of belief systems as part of the indigenous 'knowledge–practice–belief' complex, regarding the systems of indigenous peoples. Medical systems are basically complex and have included local approaches within the socio-cultural life of developing countries long before the introduction of modern medical systems.

In this study, the concept 'traditional' as well as 'indigenous' and 'modern' are used to describe differences between plural MCH systems within the community. Indigenous peoples, community or nation, share a historical continuity with pre-invasion and pre-colonial societies which have developed within their territory, and they consider themselves distinct from other sectors of the societies now prevailing in those territories, or parts thereof. At present ethnicities represent non-dominant sectors of society determined to preserve, develop and transmit to future generations their ancestral territories and ethnic identity as basis for their continuing right to exist as indigenous peoples, in accordance with their own cultural patterns, social institutions and legal systems. 'Traditional' knowledge does not imply that it is antiquated but rather refers to the way in which it is acquired and put to use. In other words, the social process of learning and sharing knowledge, which is unique to each indigenous culture, lies at the very heart of its 'traditionality'. Much of such knowledge is actually quiet new, but it has a social connotation and legal character entirely unlike other systems of knowledge. Traditional livelihood systems are constantly adapting to changing socio-economic and environmental conditions. They are dynamic, but – no matter the change – embrace principles of sustainability. However, the modern Western bio-medical system was introduced by the National Government to local communities. In this way a plural medical configuration takes root within the community which defines such systems as follows:

(a) *Traditional system* embraces local perceptions, practices and beliefs, developed over generations in a particular culture or region;
(b) *Transitional system* includes drug vendors who represent the final link in the sales chain within the modern pharmaceutical industry, which has discovered a profitable market among populations in developing countries;
(c) *Modern medical system* is governed by biomedical in contrast to ethnomedical paradigms.

In the case of Maternal and Child Health, traditional MCH systems are embodied by *paraji* (TBA), while the modern MCH system is represented by *bidan* (CMW). However, an indigenous culture is neither isolated nor immune to the influences of other cultures and develops through cultural contacts between countries within a global world. Traditional culture should be interpreted as continuing phenomena with differing ideas, organisations and collection of innovations. Generally, the indigenous healer holds a respectable position in the community because of her expertise in the use of Traditional Medicine. In many communities, indigenous healers have a variety of specialisations, such as fixing bones, birth attendant, circumciser, supernatural healer, etc. An indigenous healer is generally held in high esteem by the community because of his/her knowledge and wisdom about health and healing accrued over many generations. While many people believe that they gain their abilities through spirit possession and trance, in reality, most indigenous healers acquired their knowledge through their parents and other senior healers or from personal experience. Initially, an indigenous healer was thought to be a mediator between the human and spirit worlds, through their ability to cure sick members of the community. In recent years, the role of indigenous healer, in particular that of *paraji* (TBA), is also seen as mediator between the community, traditional belief systems and modern MCH care.

Indonesia is a country which has acknowledged the importance of ethnomedicine and has allowed it to be an integral part of modern MCH care. However, not all aspects of the plural medical systems are fully integrated and there is still inadequate synergy in the way they interact from day to day. As already indicated, Primary Health Care is in need of reform if the Government indeed hopes to attain its aspired level of public health for all. *Paraji* (TBA)The plays a lesser role during childbirth because, in contrast to the *bidan* (CMW), she has received no formal education. In some parts of West Java, *paraji* still assist during pregnancy and after childbirth, but not during the actual delivery. Only skilled *bidan* are allowed to assist a woman during labour and parturition because of the possible risks involved. Families should learn how to make choices which are relevant to their health. For example, the expectant woman with the help of a health care provider can discuss expectations and make contingency plans for childbirth. Relevant issues include where the birth will take place and who will organise the household chores and manage other children during delivery. Such discussions might address how to cover expenses and pay for medical supplies, how to arrange for transportation to a health facility or hospital as well as whether a blood donor should be tested for compatibility in case of haemorrhage.

Pregnancy is usually suspected when a woman initially experiences physical signs and symptoms such as nausea, vomiting, and headache. However, deciding whether to make use of MCH services depends on how the pregnant woman and her family interpret and experience her physical condition during pregnancy. A woman, who for the first time is pregnant, is generally more concerned about her condition than someone who has been pregnant before. A newly pregnant woman might seek information from family or friends who are more experienced. The use of a health-care system involves a complex decision-making process. Because socio-economic conditions differ for any individual or household, there will always be varying reasons for deciding which health system to approach, if at all. For example, while some people are insured and can afford modern MCH care, other families from a lower socio-economic background will have no alternative but to use the local medical system, although they may get social security.

Although pregnancy is not considered an illness, while some women experience no untoward effects, others might feel simply dreadful. Those women who feel poorly will most likely consult friends and family to learn how to restore their sense of well-being. The

decision where to seek help, however, will not only depend on the family's budget but also on the choices her husband and family make, often based on customs, beliefs and experiences. Even when the family realizes that choosing a modern *bidan* (CMW) might be preferable, their financial situation could compel them to seek out a *paraji* (TBA) instead. The traditional medical system is considered cheaper, more readily available and culturally more acceptable compared to modern MCH care. When discussing medical pluralism, the use of terms like 'traditional', 'modern' or 'indigenous' and 'Western' medicine is unavoidable; each medical system has its own advocates and users. In a pluralistic society such as Indonesia, Traditional Medicine still provides ethnobotanical herbal remedies called *jamu* concocted at home or packaged industrially. In 1983, WHO began promoting the use of ethnomedical systems, including indigenous practices, healers and birth attendants, as a form of primary health care for all peoples, thus enabling poor populations around the world the opportunity to lead healthier, more productive lives.

Indonesia is an archipelago composed of thousands of islands which have been inhabited since time immemorial by various ethnic groups, each with its own social and cultural ways of life. Each ethnic group has its own local medical system, including ways of caring for pregnant and post-natal women and their newborns. Throughout history, as migrants from areas as distant as South Asia, China, Portugal and Great Britain ventured out seeking new opportunities, they brought with them aspects of their own culture, including local medical systems. Indonesia which became a country during the 350-year Dutch Colonial Rule has formally adopted modern European medical systems, although traditional ways of providing health care are still practiced today. The public's health-seeking behaviour is relevant for any medical system. When an individual makes a decision with regard to his/her health, potential risks and/or benefits are weighed, based on issues such as environment, socio-cultural background and general view on life. When properly understood with regard to disease and illness, health-seeking behaviour could reduce delay to diagnosis, improve treatment compliance and promote health strategies in a variety of contexts. This study demonstrates that MCH utilisation behaviour is a process of engagement with a particular medical channel and is influenced by a variety of socio-economic variables such as gender, age, social status particularly of women, access to MCH systems, and perceived quality of services. When illustrating the factors which determine such patterns, one should observe carefully which barriers pregnant and perinatal women must surmount to reach MCH services in their community. A conceptual model should elucidate the inter-relation and influence between different factors on MCH utilisation behaviour at the household level, from the onset of pregnancy through to post-partum care. Using such an approach, one will encounter a variety of categorisations and terminologies which, when one scrutinizes them more closely, all tend to fall into similar slots: *e.g.* as psycho-social, perception, belief, geographical, socio-economic or institutional factors. The relevancy of these factors is not always immediately apparent for women's health-seeking behaviour during and after pregnancy, but they are, however, inherent to that act and must be acknowledged as such.

During pregnancy, childbirth and the post-partum period, focus is on the woman. Her ability to obtain treatment will be affected by a number of factors in her life such as actual financial income, social status, networks, autonomy and liability. Such issues clearly help demonstrate the complexity of decision-making processes, often aggravated by her gender, which women face on a daily basis. Moreover, many such factors can lead to three types of health-threatening delays. The *first delay* involves being too late in identifying the danger signs of pregnancy, which reflects a woman's lack of empowerment to decide for herself or with other family members who may be unaware of the risks a pregnancy presents or who fail

to pay attention to warning signals during childbirth. The *second delay* is mainly related to financial or geographical issues. Once a family realises that medical assistance is essential, then they will need money to pay for transportation to an appropriate health facility, if roads are accessible or public transportation is available. Unfortunately, especially in hilly and mountainous areas, transporting a pregnant or parturient woman means carrying her by foot for many hours to reach the nearest health facility. More community and financial support is needed, not just for available transportation. The *third delay* can occur once a woman reaches the health facility itself. She might not be attended to promptly, the quality of health care might be inadequate, or the health facility might not be equipped with the necessary staff, drugs, blood transfusions and equipment. Therefore, to ensure safe and healthy pregnancy and childbirth, an effort must be made at the community level to improve conditions.

Implementation of a modern MCH system, supported by the National Ministry of Health, actually entails a process of socio-cultural change in the area. Cultural contact with the prevalent modern medical system affects one's perspective about traditional health systems within the community. In the case of traditional MCH care, when *paraji* are the only 'system' responsible for managing pregnancy and childbirth in usually remote communities, then her role must be transformed into one of mediator between traditional and modern MCH systems. The *paraji* must learn to adopt certain aspects of modern health care such as knowledge about high-risk pregnancy, hygiene, medicines, techniques and tools.

In Maternal and Child Health, such knowledge includes how to make pregnancy and childbirth safer as well as which specific methods apply to MCH care. Communication can also help introduce new as well as change existing value systems. For example, communication can help empower woman to decide which MCH service to use during pregnancy and delivery, under specific conditions. Communication can teach how others behave, for example, which relatives and neighbours can help a woman during pregnancy. Understanding how other people think, behave and make choices can affect how a woman learns to make her own decisions when the time is ripe. Integrated information systems can produce a consolidated record; the exchange of health information is multi-directional. The information needed is available to authorized recipients in 'real time', *i.e*. at the point where service is being provided. A system for communicating information about Maternal and Child Health functions by bringing together the perspectives of all relevant participants such as community representatives. P*araji* (TBA), volunteer health-care cadres, *bidan* (CMW), medical doctors, *Posyandu* and *Puskesmas* staff.

Chapter III discusses the fieldwork as a follow-up study of applied research carried out by the WHO Collaborating Centre–Perinatal Maternal and Child (WHOCC–PMC) Universitas Padjadjaran in collaboration with WHO South-East Asia Regional Office (WHO–SEARO) on the 'Making Pregnancy Safer' (MPS) Programme conducted in 2001–2002. It encompasses two main complementary approaches in research methodology: qualitative and quantitative. The method used is participatory observation through living in the community for an extended period of time, while at the same time conducting interviews and holding discussions with key informants and various community representatives such as *paraji*, *bidan*, and medical doctors at the Community Health Centre (*Puskesmas*) together with all sections involved in providing MCH services. The follow-up study examines an integrated medical system in Rancaekek which employs advanced partnerships between *paraji* (TBA) and *bidan* (CMW). Further information is needed about how they can work together to integrate traditional and modern MCH systems.

An attempt to integrate traditional and modern MCH systems in Indonesia began before the country gained its independence on 17 August 1945, and can be seen chronologically in

MCH programmes from time to time. The norms for traditional knowledge and practices are in sharp contrast to the ethos of modern science, rendering the unification of both systems at different levels still problematic. It is clear that, at the epistemological level, the option of integration is as yet largely constrained by the cognitive heterogeneity among different medical systems, despite recent attempts to adapt and transform the underlying local and global knowledge systems. In 1937, during the Dutch Colonial Era training of *paraji* (TBA) began in Purwokerto (Middle Java). The Health Service plan was to send more and well-trained *bidan* (CMW) to rural areas to take up private practice. To help the population temporarily and to bridge this initial period, the Health Services used community health centres (*Puskesmas*) and government-employed Community Midwives (*bidan*) to teach *paraji* about the necessity of hygiene. In 1950, the *Lembaga Makanan Rakyat Institute* was established to encourage people to consume healthy food, using the still memorable slogan: *Empat Sehat Lima Sempurna* ('Four is Healthy and Five is Perfect'). The slogan is meant to remind the public that a healthy diet should consist of four components: carbohydrates, proteins, fats and vitamins, complemented with milk for calcium intake. Specifically, the Ministry of Health's objective was to stress that a well-rounded nutritional intake was imperative for both maternal survival and child development. Such welfare programmes require community participation. According to the *Orde Lama* ('Old Order' or social political system under Soekarno), the best way to improve the health status of both mother and child was best expressed in the slogan '*dari rakyat untuk rakyat*' ('From People to People'). This slogan echoed the formal policy found in almost all of Soekarno's development programmes.

Since Soeharto's era, which began in 1965, the paradigm of health approaches has changed. Previous policies were inadequate to create a sustainable level of welfare for the Indonesian people. Therefore, the Family Planning Programme (*Program Keluarga Berencana*) was set up to reduce the number of births using the slogan '*small family norms*' to build better lives (NKKBS/*Norma Keluarga Kecil Bahagia Sejahtera*). The Family Planning Programme which was rejected by the *Orde Lama* Government was only applied by the NGO *Perkumpulan Keluarga Berencana Indonesia* (PKBI) an Association for Indonesian Family Planning. However, in 1965, the Family Planning Programme became an integral part of Indonesia's national development policies. In 1991, in the *Repelita I*/ *Rencana Pembangunan Lima Tahun Pertama* (First Five-Year Plan) the objective of the Family Planning Programme was to increase the general health status and welfare of mother and child. family and nation. All activities and health programmes were firmly integrated in community health centres, namely *Puskesmas* (*Pusat Kesehatan Masyarakat*). *Puskesmas* is a health facility in outreach, located in every sub-district (*kecamatan*). However, not all populations living in rural areas could make use of such facilities. Geographical, social and cultural distances between *Puskesmas* and local communities are part of the problem. To overcome the situation, in *Repelita III* (Third Five-Year Plan, 1979–1984), the idea to stimulate public participation in the implementation of activities on prevention and promotion of health under the Primary Health Care strategy was introduced by the Government. The strategy introduced the concept of 'volunteer health worker' (*kader kesehatan*) as key to improving public health. Justification for the concept is that health volunteers selected from within a community will understand its health issues far better. Health volunteers must mediate between the *Puskesmas* and the public to persuade resisting community members to use health-care facilities and willingly accept programmes for promotion of better health. Programmes promoting public participation continued to become the main policy for *Repelita IV* (Fourth Five-Year Plan. 1984–1989). By establishing a health section in village organisations for national village community resilience (LKMD/*Lembaga Ketahanan Masyarakat Desa*) and the sub-section of

family welfare establishment (PKK/*Pemberdayaan Kesejahteraan Keluarga*), health volunteers are required to bring social programmes designed by the Health Department to the people. In the conceptual framework, special emphasis is placed on the *Posyandu* (Post of Integration Health, *Posyandu*/*Pos Pelayanan Terpadu*), the prime activities of which are expected to be carried out by the community with the support of paramedics, specifically to serve mother and child, Health care for mother and child (KIA) was designed separately and then introduced to the community simultaneously as one integrated package.

In 1989, a policy for placing *bidan* (CMW) in rural areas, namely *Program Bidan Desa* (Community Midwives Programme), was established. A *bidan* would be the key person to handle problems arising during pregnancy, childbirth, and the post-partum period. During the Five-Year Plan, the Department of Health planned to re-locate 18.900 *bidan* in rural areas across Indonesia. In 1995/1996, 5.285 midwives were placed in West Java, meaning that 90% of the rural areas were then provided with midwives. Data from the West Java Health Office show that, in 2000, 5.513 midwives had already been sent to West Java (Profile West Java Health Office 2000). Placement of *bidan* in rural areas was strengthened by Presidential Decree No. 23 in 1994; when Community Midwives were appointed non-permanent government officers (Agenda of Community Midwives 1997). The main causes of maternal death in Indonesia are post-partum haemorrhages mostly due to placenta retention, infections, pre-eclampsia, prolonged labour, and complications during abortus. Maternal deaths which usually occur during delivery can in reality often be avoided through routine examination and the intake of proper nutrition during pregnancy. A high-risk pregnancy can usually be detected during the third-stage examination by a skilled health provider. A pregnant woman who visits an antenatal care facility will undergo the following procedures; she will be weighed, examined and given consultation by a Community Midwife (*bidan*) who will provide her with iron tablets and TT immunizations.

Only few health facilities in rural areas can operate properly for emergency obstetric and neonatal care. An effort was made to set-up birthing homes (*Pondok Bersalin Desa* or *Polindes*) as a community-based programme for obstetric and neonatal care run by Community Midwives (*bidan di desa*). *Polindes* are houses which have a spare room specifically for obstetric and neonatal care at the village level, especially in remote areas. However, only 50% of all villages in Indonesia have been provided such coverage, and not all facilities are functioning successfully. The *top-down* method during interventions applied by the Government may affect and divided community behaviour according to antenatal, perinatal and post-partum stages further sub-divided into three groups. respectively: (1) the group which uses only a traditional medical system for every stage of pregnancy through to childbirth; (2) the group which uses plural medical systems: *i.e*. modern medical facility for antenatal care, and a preference for a traditional medical system when pregnancy appears safe; (3) the group which uses only the modern medical system for every stage of pregnancy.
In the past decade, the Indonesian Government has undergone decentralisation which has given its provinces more independence to create their own policies. Because the province of West Java is autonomous, it now has the opportunity to write its own policies on Maternal and Child Health issues. However, decentralisation has not yet been implemented with a good understanding of what autonomy actually entails, because for more than 30 years (during the *New Order* Government) various organisations have developed into uniform centralized systems. All regulations should come from the Central Government in Jakarta. In recent years, after implementation of decentralisation, the mentality of a uniform and centralised system is still retained by the provincial government offices.

Paraji is a Sundanese term for indigenous midwife or Traditional Birth Attendant who is generally an older woman, who understands the same language spoken in the community in which she lives and works. She will most likely be unable to read the Latin alphabet, although she might read Arabic, and be less able to communicate in Indonesian. Although often illiterate, the *paraji* speaks the local language and is an integral part of the religious and cultural community. She will practice midwifery as a part-time occupation. Her socio-economic status is considered poor, since her main occupation is labouring in the fields for which she receives a very low pay from the landlord. A *paraji* has not been given any formal training; she has learned through experience and by observing senior practitioners, perhaps her mother, grandmother, a relative, or a neighbour who used to help pregnant, parturient and post-partum women. *Paraji* have been found to be mediators par excellence. Furthermore, they have usually given birth to live offspring themselves. *Paraji* are generally wise women who are preferred by families in their village for their practical approach and experience. Many *paraji* have dynamic personalities and are accepted as figures of authority by the community. *Paraji* are private indigenous healers whose main concern is assisting their clients without first negotiating their own fees. Sometimes they receive payment in the form of cash or gifts but usually their compensation includes acknowledgement of their favoured status in the community.

To reduce the Maternal (MMR) and Infant (IMR) Mortality Rates, the National Department of Health through Provincial Health Offices has conducted a number of training programmes for *paraji* to broaden and update their knowledge about pregnancy and childbirth, especially how to detect a high-risk pregnancy, how to refer a woman to a medical facility should an untoward situation occur, and the importance of maintaining hygiene and proper treatment of the umbilical cord. After completing a training course, a *paraji* is awarded a UNICEF '*Dukun Kit'*. A *paraji* is considered part of an extended family in the community because of her role in public health. When a *paraji* has successfully assisted a woman (*cocok*) through childbirth, then later the client's daughters and grand-daughters will also choose the same traditional system when they become pregnant. There is trust in maintaining a good relationship between client and *paraji*.

The *paraji* (TBA) not only offers health care during and after pregnancy and childbirth but also conducts traditional rituals during pregnancy and the post-partum period. *First*, one must consider a woman's health-seeking or MCH utilisation behaviour during pregnancy and childbirth at an individual level; here focus is on management of pregnancy which is divided into trimesters according to biomedical science. These three periods parallel foetal development and the steps ('external actions') taken by pregnant women to contact traditional and/or modern MCH systems available in the study area. It is remarkable that both ethno- and bio-medical MCH systems use almost identical estimations to pinpoint foetal development. Within 8–12 weeks of pregnancy, an expectant mother will begin to experience a fluttering sensation as the foetus grows and begins to move in the womb. In Rancaekek knowledge about foetal development is based on locals' beliefs as well as on Islam. Thus when a pregnant woman begins to feel the foetus move at ca. 4 months gestation, tradition indicates that Allāh (God) has blown the soul into the body of the foetus to create a new life (*cf.* Chapter VI). To honour this phenomenon, traditionally the pregnant woman's family holds a group ritual or *pengajian* or reading of the Holy Qur'ān by inviting a religious leader to conduct the ceremony. When pregnancy reaches the seventh month, modern bio-medical techniques and intensive care are frequently able to keep alive infants born during the 28th week. In contrast, traditional knowledge indicates that the 7th month of pregnancy is consider 'mature'; if a baby is born at this time, s/he will grow to lead a normal life if it is strong

enough to survive childbirth. Because there is always the possibility that a pregnancy will terminate in childbirth during the 7th month, the family will perform a ritual called *nujuh bulan* for a safe delivery and continued good health for mother and newborn (*cf.* Chapter VI). *Second*, patterns for MCH utilisation behaviour in Rancaekek's plural medical systems generally show which are determining factors which affect a woman's external actions during the process of pregnancy under varying socio-economic conditions. Analysis does not, however, include an assessment of the quality and range of MCH services offered. Although self-treatment ('internal' actions) is also included in the analysis, focus is on 'external' actions which lead to the utilisation of plural MCH systems in the study area. Thus, research into the utilisation of MCH systems concentrates on the number of contacts, expressed as scores; (*cf.* Chapter VII) which pregnant and perinatal women make after confirmation of pregnancy with components of plural MCH systems.

Although the study in Rancaekek collects data from 150 women (*cf.* Chapter III) who were pregnant during the 1-year period prior to the survey, only 127 women had actually given birth. As a consequence, only these 127 women, who completed the steps and made contact with traditional and/or modern MCH systems during the course of pregnancy and delivery, are followed individually, according to their external actions after confirmation of pregnancy. The 23 women who were still pregnant at the time of the survey are excluded from the survey sample. Based on the importance of women's total MCH utilisation behaviour for this study, preference was given to the 127 respondents who had completed the entire process.

The way in which women choose to use antenatal, perinatal and post-partum Maternal and Child Health care has a considerable impact not only on their own lives but also on the lives of their children. Therefore, further research is needed on MCH utilisation behaviour directed specifically at women. One problem has been identified in Rancaekek where women usually rely on the male head of the household to make not only financial decisions but also choices which will affect all their lives. As wife and mother, a woman will also require support from other family members to help with household chores and childcare while she is incapacitated during parturition. Although pregnancy is an individual concern, in the case of Maternal and Child Health issues, other family members generally become involved, offering advice and expressing empathy for a pregnant woman. They will share concern for her physical and emotional well-being, help prepare her for childbirth, hold appropriate rituals during and after pregnancy, and perhaps even help pay her expenses. Family members, neighbours and other relations will most likely offer suggestions when time comes to choose between MCH systems. The entire experience of pregnancy and the period which follows childbirth is socially constructed. The expectations of family, friends and close neighbours will affect the expectant mother even during childbirth when people in her close surroundings try to interpret her symptoms and provide solace.

MCH utilisation behaviour includes all steps taken by women from the first symptoms, diagnosis or confirmation of pregnancy until delivery. The MCH utilisation process describes her range of health-seeking actions supported by members of her household, labelled as 'no action', 'internal actions', and 'external actions'. Actions refer to the utilisation of the plural MCH system, according to a woman's needs during specific periods of pregnancy. A woman's utilisation behaviour is dependent on a number of factors such as trust, financial status of the household and socio-cultural background. In accordance with the conceptual model of analysis presented in Chapter III, the method of research of the utilisation of different components of the plural MCH system in Rancaekek is discussed. Seniority brings social privileges to the decision maker, in this case elder women experienced in the use of

MCH systems available in the area. Gender will be a determining factor when the time comes for a husband and/or his spouse and family members to decide whether to seek help during pregnancy; in Sundanese culture, regardless of whether the pair has discussed matters beforehand, it is still the husband and head of the household who generally has the final word regardless of the issue. A husband should ideally be older than his wife and treated as her 'elder brother', which demonstrates that the status of the husband and his wife is structured by the family's socio-cultural values

Chapter VII presents the Decision Tree which illustrates the flow of pregnant and parturient women within plural MCH systems in Rancaekek, marking subsequent health-seeking steps taken by pregnant women during the 12-month period prior to the survey. In the survey a woman's actions are categorised according to four steps taken from the onset of pregnancy through childbirth. Utilisation of traditional and/or modern MCH systems is very much dependent on predisposing, enabling and institutional factors. The final step in each category, which marks childbirth, shows the number of women who are giving birth using traditional or modern MCH systems available in Rancaekek. (*cf*. Figure 7.1. Decision Tree).

The Decision Tree shows the ways in which a pregnant or perinatal woman seeks help in a multiple-use strategy. Her choices reflect not only her own beliefs and preferences but also those of her family, friends or neighbours. The relationship between knowledge about pregnancy and childbirth and social context becomes considerably more complicated the more medically pluralistic traditional and modern system the society becomes. A community which offers plural medical systems stimulates its members to make choices regarding their own health and well-being. The opportunity to choose between plural medical system available in the area leads to integration of traditional and modern systems.

In addition the flow of respondents in the sample surveyed through plural MCH systems in Rancaekek demonstrates their health-seeking choices, with regard the variables in the conceptual framework, include independent variables in the conceptual framework:
(1) predisposing socio-demographic variables (*e.g*. age, marital status, place of birth, ethnicity, educations, occupations) (2) predisposing psycho-social variable at the individual level (*e.g*. knowledge, opinions, beliefs,); (3) enabling variables (*e.g.* socio-economic characteristics at the individual level); (4) perceived variables of pregnancy at the individual level (*e.g.* opinion about the *paraji* and *bidan*); (5) institutional variables geographical accessibility of the health services; (6) intervening variables on MCH introduced from outside the community, (*e.g.* government policies and promotions); (7 and 8) the independent variables concerning had reported utilisation of the respectively traditional and modern system of the MCH.
The multivariate model employed in this study is based on the Leiden Concept of 'ethnosystems' which not only broadens one's perspective on culture but also enables assessment of the cognitive and behavioural components of particular groups or communities as 'systems' in a rather *holistic* mode. More importantly, such a definition of ethnosystems furthermore facilitates elaboration of the concept of culture as the result of the historical process of acculturation in a more dynamic way. As such, the model proves to be well suited for the previously mentioned analysis of MCH utilisation behaviour in the plural MCH systems in Rancaekek.

(1) *Participants' View*
The decision to include the points of view of participants, or the target population, when planning and implementing innovative and developmental processes has encouraged a new relativist perspective on other cultures and societies.

(2) *Field of Ethnosystems Study*
The Field of Ethnosystems Study (FES) refers to the concept 'culture area'. In the case of Indonesia, certain features such as kinship classifications, patterns of social organisation, ornaments on bronze kettle drums, patterns of woven cloths, and perceptions and practices in medical systems, which as pan-Indonesian characteristics are spread over what is called a field of ethnological study of Indonesia.

(3) *Historical Dimension*
When studying and analyzing complex configurations, albeit in medicine, religion or agriculture, strict contemporary-oriented approaches have failed to highlight the dynamics of origins and developmental processes, which have led to present-day complexes. In sum, these aspects of the study and analysis of other cultures have helped to define the new approach to ethnosystems in a broader sense and have stimulated the recent reappraisal of the 'cultural dimension of development' in international cooperative efforts.

In the case of *paraji* (TBA) and *bidan* (CMW) in Indonesia, integrated medicine for advanced partnerships among *paraji* and *bidan* in Rancaekek, Bandung, West Java, and the population are women who have been pregnant or given birth during the prior 12-month period will make up the study population. To show that all groups with a specific background – such as ethnicities, education, occupation, religion, socio-economic status, and so forth – are represented in the sample, a decision was made to select villages categorized according to the local government.

During the research on the use of the plural system of MCH system in Rancaekek on the basis of the analytical model also the interaction and changes in the behaviour of the *paraji* and *bidan* were involved.
The multivariate model seeks to describe and explain the interactions among different determinants of the use of Maternal and Child Health (MCH) in Rancaekek. In case of the use of Maternal and Child Health (MCH) by pregnant women, attention is also paid on the external influence of government policies on the behaviour of women in the local MCH of the community.

In Chapter VIII, the way in which the bivariate analysis identifies the significant relations and interactions among variables which influence the utilisation of the plural MCH system. In this analysis, the independent and intervening variables are distributed over the two dependent variables of the use of modern and traditional systems of MCH, as reported by respondents pregnant during the 12-month period of time preceding the surveys in the research area. The bivariate analysis also indicates the significance of the relations and interactions between the variables, showing for the predisposing socio-demographic variables that the richer the community is, the less important the role of the *paraji* (TBA) is. Also, the education and occupation of women and their husbands influence the use of traditional or modern MCH systems. The relationships between variables in the predisposing psycho-social variables show that knowledge about pregnancies, high-risk deliveries and miscarriages reveal a significant relation with the utilisation of the traditional MCH; while opinions about *paraji* (TBA) and *bidan* (CMW), and beliefs in taboos during and after pregnancy and delivery also show a significant relation with utilisation of both MCH systems. Socio-economic status and geographical accessibility also show a significant relationship with the utilisation of traditional and modern MCH systems in Rancaekek.

Consequently, the second step of the analysis reflects the overall influence of all independent and intervening variables on the dependent variables in relation to and among each other. The OVERALS multivariate analysis not only identifies specific determinants for the utilisation of MCH systems, but also facilitates the measurement of the effects of different variables within the overall patterns of MCH utilisation behaviour during pregnancy and delivery. The final step using a multiple regression analysis illustrates additional relationships between groups of variables, represented as 'blocks' in the model, by pointing to relevant regression coefficients (*r*). These analyses have provided deeper insight and new knowledge which help to elucidate the prediction of the values for the overall interaction between relevant variables in the behaviour of pregnant women in Rancaekek. The chapter is concluded with an interpretation and discussion of the outcomes of the analysis in relation to the structure of the model.

Paraji (TBA) with their knowledge of traditional herbal remedies play a special socio-cultural role in remote areas of Indonesia, not only when they provide care to pregnant and perinatal women, but also when they act as health consultants for families. The loss of one *paraji* means that indigenous knowledge systems of Maternal and Child Health issues, pregnancy, delivery and knowledge of herbal medicine (*jamu)* will disappear as well. Proponents of integrated indigenous and modern knowledge as the key to sustainable development support the concept of advanced partnerships between *paraj* (TBA) and *bidan* (CMW) in both Rancaekek as well as in the other local communities in Indonesia. The protection and revaluation of the traditional knowledge has to be strongly supported by government policies at all levels in a multi-cultural country such as Indonesia.

Although the WHO Report (2008) indicates that the focus is shifting from the health of mother and child to that of the entire community, the policy makers should pay more attention to human resources for in government health policies with regard to the future generations. Integration of human and material resources in Maternal and Child Health systems is essential if conditions in the country are to be improved. In the indigenous MCH systems, *paraji* still plays an important role, while in modern MCH systems, the educated certified *bidan* (CMW) who are formally assigned by the Ministry of Health, provide health care for mother and child in the community. After being trained, the *paraji* can play a strategic role in stimulating community participation in *'Safe Motherhood'* programmes. Training *paraji*, which began in the 1980s as a strategy and a way to reduce maternal morbidity and mortality has since then been accomplished worldwide. In recent years, however, fewer *paraji* have been trained, which presents a potentially hazardous situation for people living in remote areas who are rarely reached by modern health care. Moreover, the *paraji* can become important intermediaries in the relation between the community and its formal medical system and help integrate traditional and modern systems of MCH through the creation of partnerships aimed at reducing maternal and infant mortality.

Instead of pointing an accusatory finger at Traditional Birth Attendants (*paraji*) as the 'cause' of relatively high maternal and infant mortality, it would be far better not only to enhance the role of the *paraji* by providing them with education, but also enable them to share their unique local knowledge and practice with the *bidan* in order to sustain advanced partnerships among both functionaries in the plural MCH system in Indonesia. Similarly, in such partnerships the *paraji* and *bidan* could share and exchange their specific knowledge and practise in pregnancy and delivery, so that mutual respect, understanding and cooperation will lead to a new form of comprehensive MCH throughout the country. Moreover, not only the women, households and communities should be educated to understand and better support MCH programmes introduced by national and international institutions, but also the formal

health providers should learn from the particular knowledge, experience and practise of the *paraji*.

It is equally important to improve the MCH systems in local communities with specific reproductive health care services, and to recognize both the *bidan* and *paraji* as skilled birth attendants, and stimulate the community and its inhabitants to participate together in order to achieve safe pregnancy and childbirth. Educational programmes for Community Midwives (*bidan*) should also include information about community development, in particular how to motivate the community to become involved and participate in local ways of life.

A chain of participation "from the bottom" from individuals who link up with the entire community, starting at the individual household level and progressing through the neighbourhood and the involvement of *bidan*, *paraji*, health centres and health volunteers towards the local and national governments, will provide a major contribution to the improvement and sustainability of the integrated traditional and modern MCH systems in Rancaekek and thereafter, throughout entire Indonesia in the future.

Samenvatting

Deze studie is gericht op het gebruik van de plurale (traditionele en moderne) Moeder- en Kindzorg (MCH) systemen in Rancaekek, een Sub-district in de Sunda regio van West Java, een provincie van de Republiek Indonesië. De algemene doelstelling is om de relaties tussen traditionele en moderne systemen van Moeder- en Kindzorg (MCH) te onderzoeken en beter te begrijpen, en na te gaan hoe een gemeenschap gebruik maakt van elk type van die zorg, indien beide systemen toegankelijk zijn. Teneinde dit uit te voeren. is het gedrag van zwangere en barende vrouwen geanalyseerd in relatie tot de contacten die zij gemaakt hebben met diensten van de beschikbare Moeder en Kindzorg (MCH) van de gemeenschap. Op het platteland van Indonesië voorzien doorgaans de *dukun bayi* (TBA: traditionele vroedvrouwen) in de behoefte aan gezondheidszorg van de gemeenschap voor zowel vrouwen als hun pasgeborenen. Vanwege de overweging dat de periode tijdens en na de zwangerschap fysiek en geestelijk gevaarlijk is voor moeder en kind, behartigt de *dukun bayi* niet alleen de fysieke behoeften van de vrouw, maar ook haar mentale en spirituele welzijn. Rancaekek, een Sundanese gemeenschap, voorziet ook in dergelijke eigenschappen van Moeder- en Kindzorg voor reproductieve vrouwen. In het Sundanees is de term *paraji* het equivalent van *dukun bayi* in de Indonesische taal (Bahasa Indonesia).

Ofschoon in het recente verleden een aantal kledingindustries gevestigd zijn langs de hoofdweg van Rancaekek, zijn de meeste dorpen nog steeds afhankelijk van de landbouw en liggen een aantal dorpen geografisch ver weg van het gezondheidscentrum van de gemeenschap. Daarom is de rol van *paraji* zeer belangrijk in die regio's waar in het algemeen de huishoudens een laag inkomen hebben. Om de algemene doelstelling van deze studie te bereiken – en het overwegen van drie belangrijke aspecten van de studie, namelijk gemeenschappelijke gezondheid, Moeder en Kindzorg (MCH) stelsels, en het gebruik van traditionele en moderne Moeder- en Kindzorg (MCH) systemen – zijn zes specifieke doelstellingen in deze studie onderzocht en geanalyseerd:

Ten eerste, om een korte beschrijving van Indonesië te presenteren, zowel van het onderzoeksgebied als van het land als ontwikkelingsland in Zuidoost-Azië, en de Sunda regio van West-Java, de provincie waar het onderzoek is uitgevoerd

Ten tweede, om de gezondheid en genezing in Indonesië te beschrijven, inclusief de beide traditionele en moderne medische systemen, met een focus op Moeder and Kindzorg (MCH). In het bijzonder, is de veranderende rol van de *paraji/dukun bayi* (traditionele vroedvrouwen) en *bidan* (moderne verloskundigen) beschreven in de context van het huidige beleid van Moeder en Kindzorgs van de Indonesische regering.

Ten derde, om de gemeenschap van Rancaekek te beschrijven, als de plaats waar zowel de kwalitatieve en kwantitative onderzoeken zijn uitgevoerd. In aansluiting daarop om de Rancaekek gemeenschap zelf te beschrijven; zoals de details over de studie populatie en steekproef, alsook om een overzicht te geven van de lokale MCH systeem en de bijhorende kennis over het gebruik van Medicinale, Aromatische en Cosmetische (MAC) planten;

Ten vierde, om de plurale MCH systemen te beschrijven in het onderzoeksgebied, inclusief de rol van *paraji* (traditionele vroedvrouwen) en *bidan* (moderne verloskundigen) tijdens de

zwangerschap, de (barens) weeën, en de bevalling, alsook het gebruik van het MCH systeem door de zwangere vrouwen in hun keuze van gezondheidszorg;

Ten vijfde, om de resultaten te presenteren van de gedragspatronen van het gebruik van het plurale MCH systeem door zwangere vrouwen in de steekproef, het uitvoeren van de bivariate analyse, de multivariate analyse en de meervoudige regressie-analyse;

Ten zesde, om aanbevelingen te formuleren op basis van onderzoeksresultaten, op welke wijze de niewe samenwerking tussen de *paraji* (traditionele vroedvrouwen) en *bidan* (moderne verloskundigen) met betrekking tot hun gemeenschappelijk belang in het verbeteren van MCH in de gemeenschap te versterken en te ondersteunen.

In Hoofdstuk I wordt de Moeder- en Kindzorg (MCH) behandeld als een van de belangrijkste sectoren van de gezondheidszorg ter wereld; het is een deel van de *Primary Health Care* (PHC) aanvaard in de Alma Ata Conferentie in 1978. De Wereldgezondheidsorganisatie (WHO) omschrijft Moeder- en Kindzorg (MCH) als een essentiele sector van de publieke gezondheidszorg (*Primary Health Care* – PHC) die universeel toegankelijk dienen te zijn voor individuen en gezinnen door middel van voor hen aanvaardbare middelen, met hun volledige participatie, en tegen een kostprijs die betaalbaar is voor gemeenschappen en landen wereldwijd. Het dient een integraal onderdeel van het gezondheidssysteem van het land te zijn, waarvan het de kern vormt, en van de algemene sociaal-economische ontwikkeling van de gemeenschap. De Alma Ata Conferentie heeft het beleid van de gezondheidszorg geherformuleerd in de doelstellig "Gezondheid voor Iedereen in 2000" ("Health for All by the Year 2000"), om vast te stellen dat *Primary Health Care* (PHC) een integraal onderdeel wordt van de nationale ontwikkeling en niet slechts een geisoleerd randverschijnsel. De regering wordt daarbij verplicht tot het ondernemen van actie: promotie, coordinatie en ondersteuning, niet alleen op het lokale maar ook op het midden en centrale niveau van de regering. *Primary Health Care* (PHC) dient ten volle gebruik te maken van alle beschikbare middelen, d.w.z. het dient de menselijke potentie van de hele gemeenschap te mobiliseren. Helaas, blijkt na 10 jaar, dat niet alle landen, die voordien het beleid van de Alma Ata Conferentie (1978) hebben geratificeerd, ook hun doelstelling hebben bereikt; Indonesië is een van deze landen, die de doelstelling thans op 2015 heeft vastgesteld. Na 20 jaar heeft het Rapport van WHO–SEAR (2009) de definitie van *Health for All* hernieuwd, waarin individuen dienen te proberen om goede gezondheid te behouden door het beoefenen van zelfzorg en het verkrijgen van gelijke toegang tot adequate gezondheidsdiensten, dat slechts een deel van het geheel vormt. Een systeem van gezondheidszorg omvat de organisaties, instellingen en middelen in de volksgezondheid. Het beleid van de Alma Ata Conferentie (1978) benadrukt ook de belangrijke participatie van de volledige georganiseerde gemeenchappen en de uiteindelijke zelfstandigheid van individuen, gezinnen en gemeenschappen die meer verantwoordelijkheid voor hun eigen gezondheid nemen.

Indonesië heeft het beleidsplan "De Ontwikkeling en Implementatie van Traditionele Geneeskunde voor Zelfzorg" ("*Development and Implementation of Traditional Medicine for Self-Care*") gepresenteerd, dat gebaseerd is op de groeiende belangstelling voor traditionele geneeskunde in de context van zelfzorg. Deze verklaring ondersteunt deze studie op het vraagstuk van de integratie van de beide systemen van Moeder- en Kindzorg (MCH), d.w.z. van de *paraji* (*dukun bayi* – TBA, of traditionele vroedvrouw) als vertegenwoordiger van het tradionele systeem en de *bidan* (moderne vroedvrouw) als vertegenwoordiger van het moderne systeem van MCH gezondheidszorg, in plaats van de traditionele vroedvrouwen

(TBA) ten onrechte aan te wijzen als de oorzaak van de hoge MMRs en IMRs in Indonesië. De integratie die in deze deze studie voorgesteld wordt, gaat daarbij uit van een nieuw samenwerkingsverband binnen de systemen van plurale Moeder- en Kindzorg (MCH). Aangezien het traditionele systeem van Moeder- en Kindzorg (MCH) gebaseerd is op de lokale kennis die is doorgegeven over vele generaties, zal deze kennis verdwijnen als de rol van de tradionele vroedvrouw (TBA) zal afnemen.

Onlangs heeft Indonesië de verdere bepalingen geratificeerd om de *Millenium Development Goals* (MDG 2005) uit te voeren zodat deze bereikt worden in 2015. De *Asian Development Bank* (2005) benadrukt, dat de MDGs de internationale programma's voor de ontwikkeling verenigd heeft rond een gemeenschapplijke globale agenda, die gericht is op het verminderen van de armoede wereldwijd. Het is opgedragen aan de visie van een Aziatische Pacific Region, die vrij van armoede zal zijn.. Het bepaalt de specifieke doelstellingen en indicatoren voor het meten en monitoren van de vorderingen die in het terugdringen van de armoede gemaakt worden. De MDGs vertegenwoordigen een globaal samenwerkingsverband dat zich ontwikkeld heeft uit de engagementen en doelstellingen van de topconferenties in de negentiger jaren, en dat inspeelt op de belangrijkste uitdagingen van de wereldontwikkeling en de oproep tot een burgerlijke gemeenschap. De 'MDG's bevorderen enerzijds meer onderwijs en gelijkheid van man en vrouw, en streven anderzijds naar het verminderen van armoede, moeder- en kindersterfte, HIV/AIDS en andere ziekten. De MDGs vormen nu een set van doelstellingen die in 2015 bereikt kunnen worden als alle deelnemers samen werken.

In Hoofdstuk II zijn discussies weergegeven van belangrijke onderzoeken naar het gebruik van gezondheidszorg, zoals dat is uitgevoerd over de hele wereld om aan te tonen waarom zoveel onderzoekers in het recente verleden door dit onderwerp aangetrokken waren. Hoewel zwangerschap niet officieel wordt erkend als een ziekte, lijkt de afhankelijkheid van de zwangere vrouwen tijdens de bevalling op dat van patienten, die een medische behandeling ondergaan. Daarom zal deze studie een bijdrage leveren aan de bestaande kennis en inzicht in de relatie tussen de processen van zwangerschap en bevalling, en het gebruik van de beschikbare gezondheidszorg in de plattelandsgemeenschappen. Hoewel het betreffende model voor medische pluralisme de traditionele, transitionele en moderne medische systemen omvat, is het hier vooral gebruikt om de toestand van de Moeder- en Kindzorg (MCH) in Rancaekek te analyseren. De traditionele en moderne systemen van Moeder- en Kindzorg (MCH) worden vertegenwoordigd door de *paraji* (TBA) en *bidan* (moderne verloskundige), terwijl het transitionele medische systeem hier in het Moeder- en Kindzorg (MCH) ondervertegenwoordigd is.

In historisch opzicht ervaren ontwikkelingslanden een voortdurend proces van acculturatie, waarbij de lokale bevolking met de externe medische systemen in aanraking kwamen met de komst van migranten uit verre landen zoals India, Arabië en China. Het moderne westerse medisch systeem werd pas later in Indonesië geïntroduceerd als onderdeel van het Nederlandse koloniale systeem aan het einde van de 19e eeuw. Tegenwoordig wordt de gezondheidszorg in de ontwikkelingslanden gekenmerkt door verschillende traditionele, transitionele en moderne medische systemen, die ontwikkeld zijn in het land, en elkaar zowel in theorie als in de praktijk overlappen. Sommige van de daarmee verband houdende methodologische complicaties bij het onderzoek hebben hoofdzakelijk betrekking op de moeilijkheid, die sommige Westerse wetenschappers hebben bij het begrijpen van de inheemse en ethnobotanische kennissystemen, in het bijzonder het systeem van het lokale geloof als onderdeel van het inheemse 'Kennis–Praktijk–Geloof' complex. Medische systemen zijn in principe ingewikkeld en dienen ook met behulp van inheemse traditionele benaderingen binnen de sociaal-culturele leven van de ontwikkelingslanden onderzicht te

worden, die daar reeds lang hebben bestaan, voordat de moderne medische systemen ingevoerd werden.
In deze studie is het begrip 'traditioneel' alsmede ‘inheems’ en 'modern' gebruikt om de verschillen tussen het pluralistische syteem van Moeder- en Kindzorg (MCH) binnen de lokale gemeenschap te beschrijven. Inheemse volkeren, de gemeenschap of de natie delen samen een historische continuïteit met de pre-koloniale samenlevingen die zich op hun grondgebied hebben ontwikkeld, en onderscheiden zichzelf van andere sectoren van de huidige samenlevingen in die gebieden, of in delen daarvan. Tegenwoordig vormen zij de niet-overheersende sectoren van de samenleving, maar zijn zij vastbesloten om hun voorvaderlijke grondgebied en etnische identiteit als de basis van hun voortbestaan te behouden, te ontwikkelen en door te geven aan de toekomstige generaties in overeenstemming met hun eigen culturele patronen, sociale instellingen en rechtssystemen. Traditionele kennis impliceert niet dat deze verouderd is, maar verwijst veeleer naar de manier waarop deze wordt verkregen en gebruikt. Met andere woorden, het sociale proces van leren en delen van kennis, die uniek is voor elke inheemse cultuur, vormt het hart van haar ‘traditionaliteit’. Veel van deze kennis is stellig nieuw, maar het heeft een sociale inslag en juridisch karakter geheel in tegenstelling tot andere systemen van kennis. Traditionele levensonderhoud systemen zijn voortdurend aangepast aan veranderende sociaal-economische en ecologische omstandigheden. Ze zijn dynamisch, maar – ongeacht de wijzigingen – omvatten principes van duurzaamheid. Het moderne westerse medische systeem wordt echter geintroduceerd door de nationale regering aan de lokale gemeenschap. Vervolgens verschijnt een plurale medische configuratie in de gemeenschap die dergelijke systemen als volgt definieert:

a. Het traditioneel systeem omvat lokale percepties en praktijken, ontwikkeld over generaties in een bepaalde cultuur of regio;
b. Het overgangs systeem omvat drug verkopers, die de laatste schakel representeert in de handels-schakel in de moderne farmaceutische industrie, die een winstgevende markt ontdekt heeft onder de bevolking van ontwikkelde landen;
c. Het moderne medische systeem wordt geregeld door de biomedische in tegenstelling tot de ethnomedische paradigma’s.

In het geval van Moeder- en Kindzorg (MCH) systemen, is de traditionele Moeder- en Kindzorg (MCH) verwezenlijkt door de *paraji* (Sd.) of *dukun bayi* (Ind.), terwijl de moderne Moeder- en Kindzorg (MCH) door *bidan* (moderne vroedvrouw) wordt vertegenwoordigd. Een traditionele cultuur is echter niet geisoleerd of immuun voor de invloeden van andere culturen en ontwikkelt zich door middel van culturele contacten tussen landen binnen een geglobaliseerde wereld. De traditionele cultuur dient te worden geinterpreteerd als een voortzetting van fenomenen met verschillende ideeën, organisaties en innovaties. In het algemeen bezit de traditionele genezer een hoge positie in de gemeenschap vanwege haar/zijn expertise in het gebruik van traditionele geneeskunde. In veel gemeenschappen bezitten traditionele genezers een verscheidenheid van specialismen, zoals de behandeling van botbreuken, de begeleiding van geboorte en besnijdenis, en de beheersing van bovennatuurlijke krachten. De status en de rol van traditionele genezers maken een sterke indruk op de gemeenschap vanwege hun kennis en wijsheid over gezondheid en genezing, die zij hebben opgebouwd over vele generaties. Veel mensen geloven dat een traditionele genezer haar/zijn capaciteiten door middel van een geest bezit en door trance heeft verworven. Dikwijls hebben veel traditionele genezers hun kennis echter van hun ouders en andere oudere

genezers of uit eigen ervaring verworven. Aanvankelijk wordt de rol van de traditionele genezer geconceptualiseerd als bemiddelaar tussen de menselijke en spirituele werelden door hun vermogen om zieke leden van de gemeenschap te genezen. Sinds kort wordt de rol van de traditionele genezer, in het bijzonder die van de traditionele vroedvrouw (TBA) niet alleen gezien als een bemiddelaarster tussen de gemeenschap en het lokale geloof systeem, maar ook met het moderne systeem van Moeder- en Kindzorg (MCH).

Hoewel het concept van PHC in Indonesië ook de belangrijke rol van etnogeneeskunde heeft aanvaard, bestaat er nog steeds onvoldoende synergie in de dagelijkse werkelijkheid tussen de verschillende plurale medische systemen en is, zoals aangegeven, PHC aan hervorming toe met het oog om het verbeterde niveau te bereiken. Indonesië is een land waar het traditionele systeem een integraal onderdeel van de moderne Moeder- en Kindzorg (MCH) is, hoewel beide systemen nog niet volledig in alle aspecten van de gezondheidszorg zijn geintegreerd. De *paraji* speelt een minder belangrijke rol tijdens de bevalling, omdat in tegenstelling tot de *bidan*, ze geen formele onderwijs in verloskunde heeft genoten. In sommige delen van West-Java helpt de *paraji* nog steeds de vrouwen tijdens de zwangerschap en na de bevalling, maar niet tijdens de bevalling zelf. Alleen bekwame verloskundigen worden toegestaan om een vrouw tijdens haar bevalling te helpen, als gevolg van mogelijke risico's. Gezinnen kunnen een keuze maken, die relevant is voor hun gezondheid. Geboorte is op de gezamenlijke beslissingen van zowel de aanstaande moeder als het medische personeel gebaseerd. Relevante onderwerpen zijn de keuze van de locatie waar de geboorte zal plaats vinden en wie het huishoudelijk werk en de verzorging van de kinderen tijdens de bevalling zal organiseren. Zo'n discussie omvat doorgaans de betaling van de kosten en medische benodigdheden, het regelen van vervoer, alsmede de identificatie van een geschikte bloeddonor voor het geval dat er bloedingen optreden.

Zwangerschap wordt meestal herkend als een vrouw in eerste instantie fysieke symptomen en verschijnselen ervaart, zoals misselijkheid, overgeven, hoofdpijn, etc. De beslissing om gebruik te maken van de diensten van Moeder- en Kindzorg (MCH) hangt er echter vanaf hoe de vrouw en haar familie haar fysieke conditie tijdens de zwangerschap interpreteren en ervaren. Een vrouw, die voor de eerste keer zwanger is, is in het algemeen meer bezorgd over haar zwangerschap dan een vrouw die ooit zwanger is geweest. De vrouw, die voor het eerst zwanger is kan inlichtingen krijgen van familie of vrienden die ervaringen hebben gehad. Het gebruik van een systeem van gezondheidszorg omvat een complex besluitvormingsproces. Geen social-economische situatie is identiek, dus elk huishouden of individu zal verschillende redenen hebben om te besluiten om hulp te zoeken bij een gezondheidsdienst. Hetzelfde geldt wanneer een vrouw zwanger wordt: sommige vrouwen die verzekerd zijn kunnen zich de moderne Moeder- en Kindzorg (MCH) veroorloven, terwijl anderen van een lagere sociaal-economische klasse geen andere keus hebben dan de traditionele zorg, hoewel ze wel een sociale verzekering hebben.

Hoewel zwangerschap niet als een ziekte wordt beschouwd, kan de biologische en fysieke toestand tussen vrouwen verschillend zijn. Terwijl sommige vrouwen geen ongewenste effecten ervaren, kunnen anderen zich juist heel ziek voelen. Diegenen die zich onwel voelen zullen hoogst waarschijnlijk vrienden en familie raadplegen om te weten te komen wat ze moeten doen om deze symptomen te verlichten. Meestal weten ze waar ze hulp kunnen verkrijgen, maar de beslissing hangt af van de sociale omstandigheden van het huishouden. Het besluit om een bepaalde gezondheidsdienst te selecteren hangt niet alleen af van de keuzes van de zwangere vrouw, maar ook van die van haar echtgenoot, van oudere vrouwen en gezinsleden, evenals van hun gewoonten, geloof en financiële situatie. Zelfs wanneer een zwangere vrouw en haar gezinsleden beseffen dat een moderne verloskundige beter zou zijn.

zal hun financiële situatie hen dwingen om naar een traditionele vroedvrouw (TBA) te gaan. Traditionele geneeskunde is dikwijls goedkoper, gemakkelijker beschikbaar en cultureel meer aanvaardbaar in vergelijking met de moderne Moeder- en Kindzorg (MCH).
Wanneer medische pluralisme besproken wordt, is het gebruik van termen als ’traditionele’ of ’inheemse’ en ’Westerse’ geneeskunde onvermijdelijk; elk medisch systeem heeft zijn eigen voorstanders en gebruikers. De inheemse geneeskunde in een pluralistische samenleving zoals Indonesië wordt nog voortdurend gebruikt in de vorm van kruiden, huisgeneesmidelen, of verpakt als industriële *jamu*. In 1983 begon de WHO met het bevorderen van het gebruik van de traditionele geneeskunde, inclusief inheemse praktijken en diverse categorieën van traditionele genezers en vroedvrouwen, met het doel om het maatschappelijk en economisch productieve leven voor alle mensen te verwezenlijken.

Historisch gezien is Indonesië een archipel die uit duizenden eilanden bestaat, die worden bewoond door een grote diversiteit van etnisch-culturele groepen, elk met hun eigen sociaal en cultureel leven. Elke etnisch-culturele groep heeft zijn eigen lokale medische systemen, inclusief Moeder- en Kindzorg (MCH). Door de geschiedenis heen hadden verschillende handelsreizigers hun invloed gebracht, toen migranten van Zuid-Azië, China, Portugal en Groot-Brittannië op zoek naar nieuw land gingen, en hun eigen cultuur met inbegrip van de gezondheidszorg met zich mee brachten. Indonesië die tijdens het 350-jarige Nederlandse koloniale bewind een staat volgens het moderne Europese zorgstelsels formeel had gevormd, kent vandaag nog steeds de lokale systemen van traditionele gezondheidszorg. Het gebruik van de gezondheidszorg vormt een onderdeel van het medisch systeem. Wanneer een individu een beslissing neemt die relevant voor haar/zijn gezondheid is, weegt zij/hij de mogelijke risico's of voordelen van bepaald gedrag af, afhankelijk van de praktische aspecten van haar/zijn omgeving, sociaal-culturele achtergrond en de algemene levensbeschouwing. Een goed begrip van ziekte kan het gedrag van het zoeken naar hulp van medische zorg de vertraging van de diagnose verminderen, en de verbetering van de therapie, en daarmee de gezondheidsstrategieën onder verschillende omstandigheden bevorderen. Deze studie demonstreert dat het gedrag van hulp zoeken in de systemen van de Moeder- en Kindzorg (MCH) een proces van betrokkenheid bij een bepaald medische systeem is, en door een verscheidenheid van socio-economische factoren wordt beinvloed, zoals geslacht, leeftijd. socio-economische status van vrouwen, toegang tot Moeder- en Kindzorg (MCH), en de waargenomen kwaliteit van de dienstverlening. Bij het bescxhrijven van de factoren achter deze gedragspatronen dient men te zien, welke obstakels er tussen zwangere en barende vrouwen en de MCH diensten binnen de gemeenschap liggen. Het conceptueel model dient de interrelatie en de invloed van de verschillende factoren op het gedrag van het zoeken naar medische hulp op het niveau van het huishouden te meten, nadat een vrouw zwanger is geworden tot en met de bevalling en de postnatale zorg. Binnen deze benadering variëren veel categorieen en concepten, maar deze vallen uiteindelijk allemaal onder de categorieen van demografische en psycho-sociale factoren, percepties, geloof, sociaal-economische status en institutionele factoren te vallen. De relevantie van deze factoren is niet altijd direct duidelijk bij het onderzoek naar het gedrag van het zoeken van medische zorg van vrouwen tijdens en na de zwangerschap, maar deze is echter inherent aan de betreffende activiteiten en dient als zodanig onderkend te worden.

Tijdens de zwangerschap, de bevalling en na de bevalling ligt de focus op de betreffende vrouwen. Sommige elementen van hun middelen van bestaan zijn van invloed op hun vermogen om zorg te verkrijgen: het werkelijke financiële inkomen, de sociale status, de netwerken, *de* autonomie en de aansprakelijkheid. Dit toont ook de complexiteit aan van het besluitvormingsproces waarmee vrouwen dagelijks worden geconfronteerd als gevolg van de

relaties tussen de geslachten. Dergelijke factoren leiden tot vertraging in de besluitvorming tot het zoeken van zorg, vooral als de zwangerschap moeilijk is, tot vertraging in het bereiken van de juiste gezondheidsdienst, en vertraging bij het werkelijk verkrijgen van een behandeling bij de gezondheidsdienst. *De eerste vertraging* treedt op bij het te laat identificeren van mogelijke risico's bij de zwangerschap. Dit heeft te maken met de onmacht van vrouwen om voor zichzelf te beslissen. De beslissing wordt genomen tezamen met andere familieleden: de echtgenoot, vader of moeder, schoonvader of schoonmoeder die zich niet bewust zijn van de risico's van zwangerschap of meer aandacht aan de bevalling besteden. *De tweede vertraging* ontstaat meestal vanwege financiële of geografische problemen. Zodra de familie beseft dat hulp nodig is, en dan besluit om zorg te zoeken bij een geschikte gezondheidsdienst, zullen zij geld nodig hebben voor transport waar openbaar vervoer inderdaad beschikbaar zijn. Echter, waar het terrein ontoegankelijk is, zoals in heuvelachtige en bergachtige gebieden, betekent het vervoeren van een zwangere vrouw in barensnood dat zij vaak te voet gedurende vele uren naar de dichtstbijzijnde medische faciliteit gebracht dient te worden. Daarbij komt niet alleen steun voor de beschikbare transportmiddelen, maar ook gemeenschappelijke en financiële steun van pas.. *De derde vertraging* ontstaat in de gezondheidsdienst zelf. Zodra een vrouw de gezondheidsdienst bereikt heeft, kan ze niet altijd snel worden geholpen; de kwaliteit van de dienstverlening kan ontoereikend zijn, of de dienst niet uitgerust met het benodigde personeel, medicijn, bloed en apparatuur. Vamwege deze situatie dient de gemeenschap zich in te spannen voor een veiliger bevalling.

Uitvoering van een moderne systeem van Moeder- en Kindzorg (MCH) is eigenlijk een proces van sociaal-culturele verandering van traditionele systemen in de regio. Enerzijds is het moderne systeem van Moeder- en Kindzorg (MCH), gesteund door het Ministerie van Nationale Volksgezondheid, het traditionele gezondheidssysteem binnengedrongen en heeft daar een sociaal-culturele verandering veroorzaakt in relatie tot het systeem van de volksgezonheid. Cultureel contact met het huidige moderne gezondheidssysteem beinvloedt het systeem van traditionele geneeskunde binnen de gemeenschap. Bij de traditionele Moeder- en Kindzorg (MCH). verleent de *paraji* (TBA) de enige dienst, en is zij verantwoordelijk voor zwangerschap en bevalling binnen de lokale gemeenschap, meestal in afgelegen gebieden. Vervolgens dient haar rol te worden veranderd tot die van bemiddelaarster tussen de traditionele en moderne systemen van Moeder- en Kindzorg (MCH). De *paraji* (TBA) dient ook te leren om verscheidene aspecten van het moderne systeem van Moeder- en Kindzorg (MCH) te aanvaarden, zoals kennis van risicovolle zwangerschappen, hygiëne, medicijnen, technieken en apparatuur.

De systemen van Moeder- en Kindzorg (MCH) beschikken over dergelijke kennis om zwangerschap en bevalling veiliger te maken en om specifieke methoden voor Moeder- en Kindzorg (MCH) te gebruiken. Communicatie kan ook nieuwe wijziging van bestaande waarden introduceren. Zo kan communicatie zwangere vrouwen helpen bij het maken van de keuze welke diensten tijdens de zwangerschap te gebruiken. Communicatie kan verklaren hoe anderen zich gedragen, zoals op welke wijze familieleden en buren een vrouw tijdens de zwangerschap kunnen helpen. De perceptie van hetgeen anderen doen kan ook het besluitvormingsproces van vrouwen tijdens hun zwangerschap en bevalling beinvloeden. Geintegreerde informatiesystemen kunnen een juist beeld vormen, aangezien de uitwisseling van gezonheidsinformatie multi-directioneel is. De benodigde informatie is dan beschikbaar om clienten in '*real time*' toe te laten, d.w.z. op het punt waar de service wordt verleend, en niet achteraf. Een dergelijk informatie systeem van Moeder- en Kindzorg (MCH) kan alleen functioneren als rekening wordt gehouden met alle partijen, zoals: de gemeenschap, de

traditionele vroedvrouwen (TBA), de gezondheidvrijwilligers, de verloskundigen, artsen, *Posyandu* en *Puskesmas*.
Hoofdstuk III behandelt het veldwerk als een follow-up studie van toegepast onderzoek dat uitgevoerd werd door het WHO Collaborating Centre voor Perinatale Moeder- en Kindzorg (*Perinatal Maternal and Child Care*) WHOCC–PMCO *Universitas Padjadjaran* in samenwerking met het WHO Zuidoost-Azië Regionaal Bureau (WHO–SEARO) voor het programma van*"Veiliger Zwangerschap"* dat werd uitgevoerd van 2001 tot 2002. Het omvat twee belangrijke complementaire benaderingen in de onderzoeksmethodologie: de kwalitatieve en kwantitatieve benadering. De gebruikte methode is participerende observatie waarbij de onderzoeker voor een langere periode in de gemeenschap verblijft, terwijl tegelijkertijd de interviews met de sleutelinformanten en verschillende vertegenwoordigers van de gemeenschap worden uitgevoerd, zoals *paraji, bidan* en artsen in het gezondheidscentrum (*Puskesmas*) samen met alle betrokken afdelingen van de Moeder- en Kindzorg (MCH). Daarna wordt de volgende studie van een geintegreerd medisch systeem beschreven, dat de gevorderde samenwerking tussen de traditionele vroedvrouwen (TBA) en de moderne verloskundigen in Rancaekek onderzoekt. De *paraji* en *bidan* vertegenwoordigen in Rancaekek respectievelijk het traditionele en moderne systeem van Moeder- en Kindzorg (MCH).

Een poging om de traditionele en moderne Moeder- en Kindzorg (MCH) in Indonesië te integreren begon reeds voordat het land onafhankelijk werd en kan chronologisch in Moeder- en Kindzorg (MCH) programma's worden herkend. De normen voor de traditionele kennis en praktijken zijn in contrast met het ethos van de moderne wetenschap, waardoor de unificatie van beide systemen op verschillende niveaus nog steeds problematisch is. Het is duidelijk dat op het epistemologische niveau, de optie van integratie nog grotendeels door de cognitieve heterogeniteit tussen de verschillende medische systemen beperkt is, ondanks recente pogingen om de onderliggende lokale en globale kennis systemen aan te passen en te transformeren. In 1937 startte tijdens het Nederlandse koloniale bestuur een opleiding van traditionele vroedvrouwen (TBA) die in Purwokerto (Midden-Java) werd georganiseerd. Het plan van de Gezondheidsdienst was om meerdere goed-opgeleide vroedvrouwen naar het platteland te zenden om de prive praktijken te versterken. Om de bevolking tijdelijk te helpen en de periode te overbruggen gebruikte de Gezondheidsdienst deze praktijken en hun vroedvrouwen om de *dukun bayi* (TBA) in de principes van moderne hygiëne te onderrichten. In 1950 werd het Instituut voor Volks-voedselvoorziening (*Lembaga Makanan Rakyat*) opgericht om de bevolking te stimuleren om gezond voedsel te consumeren met behulp van de bekende slogan: *Empat Sehat Lima Sempurna* (*'Vier is gezond en vijf is perfect'*). De slogan betekent, dat een gezonde voeding uit vier elementen dient te bestaan: koolhydraten, eiwitten, vetten en vitaminen, aangevuld met melk voor de inname van calcium. De doelstelling van het Ministerie van Volksgezondheid was specifiek om de waarde van de voeding van zowel moeder als kind te verhogen met het oog op de ontwikkeling van het kind en het overleven van de moeder. Dergelijke welzijnsprogramma's vereisen de participatie van de gehele gemeenschap. Volgens de *Orde Lama* (het oude socio-politieke systeem tijdens het regime van President Soekarno) was het beste programma om de gezondheidstatus van moeder en kind te verhogen *'Van het volk voor het volk'* (*'Dari rakyat untuk rakyat'*). De slogan *'Van het volk voor het volk*' werd een formeel beleid van vrijwel alle ontwikkelingsprogramma's tijdens het bewind van Soekarno.

Sinds het tijdperk van Soeharto, dat in 1965 begon, is het paradigma van het gezondheidsbeleid veranderd. Vorige beleidsprogramma's bleken onvoldoende om een duurzaam niveau van welzijn voor de Indonesische bevolking te creëren. Daarom werd het

Programma voor Family Planning (*Program Keluarga Berencana*) opgericht om het aantal kinderen te verminderen door middel van de "norm van de kleine familie " teneinde een beter leven te bouwen (NKKBS/*Norma Keluarga Kecil Bahagia Sejahtera*). Het Family Planning Programma, dat afgewezen werd door de *Orde Lama* regering, werd alleen toegepast door de NGO *Perkumpulan Keluarga Berencana Indonesia* (PKBI), de Vereniging voor Indonesische Family Planning. In 1965 werd het Family Planning Programma echter een integraal onderdeel van het beleid van nationale ontwikkeling. In 1991, in het *Repelita I/Rencana Pembangunan Lima Tahun Pertama* (Eerste Vijf-Jaren Plan) werd de doelstelling van het Family Planning Programma gericht op de verbetering van de gezondheidstatus en het welzijn van moeder en kind, van het gezin en van de gehele natie. Alle activiteiten en gezondheidsprogramma's werden sterk geïntegreerd in de gezondheidscentra, de *Puskesmas* (*Pusat Kesehatan Masyarakat*). De *Puskesmas* is een medische dienst op het platteland, gelegen in elke sub-district (*kecamatan*). Niet alle bewoners van het platteland kunnen echter gebruik maken van dergelijke faciliteiten. Geografische sociale en culturele afstanden tussen *Puskesmas* en de lokale gemeenschappen zijn deel van het probleem. Om de situatie te boven komen, heeft de regering het idee geintroduceerd om de bevolking te laten deelnemen aan de uitvoering van activiteiten voor preventie en bevordering van de gezondheid te stimuleren volgens de strategie van de PHC. De strategie installeert het concept van "gezondheids vrijwilliger" of *kader kesehatan* als sleutel om volksgezondheid te verbeteren. Rechtvaardiging voor het concept is dat gezondheids-vrijwilligers die geselecteerd zijn uit de gemeenschap, de gezondheid condities van de gemeenschap kunnen begrijpen. De gezondheidsvrijwilligers moeten tussen de *Puskesmas* en het publiek bemiddelen om de gemeenschap die zich verzet te bewegen om de gezondheidsdiensten te gebruiken, en vrijwillig de programma's ter bevordering van een betere gezondheid te aanvaarden. Programma's ter bevordering van de participatie van de bevolking bleef het belangrijkste beleid van *Repelita IV* (Vierde Vijfjaar Plan 1984–1989). Met de oprichting van een sectie van de gezondheidsdienst in de dorpsorganisaties als de "Weerbaarheid van de Dorps Gemeenschap" (*Lembaga Ketahanan Masyarakat Desa*/LKMD) en de "Bevordering van het Familie Welzijn" (*Pemberdayaan Kesejahteraan Keluarga*/PKK) werden de gezondheids-vrijwilligers verplicht om de sociale programma's van het Ministerie van Gezondheid naar de bevolking toe te brengen. In het conceptueel kader werd daarbij bijzonder de nadruk op "Post van Gezondheids Integratie" (*Pos pelayanan terpadu – Posyandu*) gelegd, waarbij verwacht werd dat de voornaamste activiteiten uitgevoerd zouden worden door de gemeenschap zelf met de steun van de paramedische staf, specifiek om voor moeders en kinderen te zorgen. Gezondheidszorg voor moeder en kind (KIA) werd afzonderlijk ontworpen en vervolgens bij de gemeenschap als een integraal pakket geïntroduceerd.

In 1989 werd de *Program Bidan Desa* (Programma van Verloskundigen) opgericht als een beleid voor de plaatsing van de moderne verloskundigen in plattelandsgebieden. De verloskundige zou de belangrijkste persoon zijn om problemen van zwangerschap te helpen oplossen en bevalling en kraamzorg te behandelen. Tijdens het Vijf-Jaren Plan heeft het Ministerie van Gezondheidzorg plannen ontworpen om 18.900 verloskundigen opnieuw in de plattelandse gebieden van Indonesië te plaatsen. In 1995/1996 werden 5.285 verloskundigen in West-Java geplaatst, wat betekent dat 90% van de plattelandsgebieden van deze verloskundigen werd voorzien. Uit gegevens van het Gezondheidsbureau van West-Java blijkt dat in 2000 reeds 5.513 verloskundigen naar West-Java waren gezonden (*Profile West Java Health Office* 2000). De plaatsing van verloskundigen op het platteland werd ondersteund door het Presidentieel Decreet Nr. 23 (1994), *waarbij moderne verloskundigen benoemd werden tot non-permanente overheidsofficieren (Agenda of Community Midwives* 1997).

Belangrijke oorzaken van de moedersterfte in Indonesië zijn: post-partum bloedingen meestal te wijten aan de retentie van de placenta, infecties, euclamsia, een langdurig bevallingsprocess, en complicaties tijdens de abortus. Moedersterfte, die meestal voorkomt tijdens de bevalling kan in werkelijkheid vaak worden voorkomen door routine onderzoeken en goede voeding tijdens de zwangerschap. Een risicovolle zwangerschap kan worden vastgesteld tijdens de derde fase van het medisch onderzoek door een deskundige zorgverlener. Een zwangere vrouw die een bezoek brengt aan een prenatale zorg (*Antenatal Care* – ANC) zal onderzocht worden door een moderne verloskundige of *bidan*, die het lichaamsgewicht nakijkt, ijzertabletten verstrekt, TT vaccinaties toedient en consultaties verricht.

Slechts weinig medische diensten op het platteland kunnen in noodgeval van de obstetrische en neonatale zorg naar behoren functioneren. Een poging werd ondernomen om een 'geboorte hut' (*Pondok Bersalin Desa* of *Polindes*) op te zetten als een *community-based programme* voor obstetrische en neonatale zorg door moderne verloskundigen (*bidan di desa*). Deze *Polindes* werden opgericht in of nabij huizen met een kamer voor de obstetrische en neonatale diensten op dorpsniveau, voornamelijk in afgelegen gebieden. Slechts 50% van alle dorpen in Indonesia hebben echter degelijke voorziening, en niet alle faciliteiten functioneren goed. De *top-down* methode, die tijdens dit beleid door de regering werd toegepast kan het gedrag van de gemeenschap in de stadia van prenatale zorg, bevalling en post-natale zorg beinvloeden en verdelen over de volgende drie groepen:

(1) de groep die alleen het tradionele medisch systeem gebruik voor elk stadium van de zwangerschap tot en met de bevalling;
(2) de groep die de plurale medische systemen gebruikt: zowel de moderne medische dienst voor prenatale zorg, als het traditionele medische systeem bij ongecompliceerde zwangerschap;
(3) de groep die gebruik maakt van alleen het moderne medische systeem voor elk stadium van de zwangerschap.

Onlangs heeft de Regering van Indonesië het beleid van decentralisatie ingevoerd om de provincies meer onafhankelijk te maken. Aangezien de Provincie van West-Java autonoom is, heeft het de mogelijkheid om haar eigen beleid voor Moeder en Kindzorg (MCH) vast te stellen. Desondanks is de decentralisatie echter nog niet volledig uitgevoerd in de zin van werkelijke autonomie, want voor meer dan 30 jaar (tijdens de *Nieuwe Orde*) hebben verscheidene organisaties zich ontwikkeld tot uniforme en gecentraliseerde systemen. Alle regelingen dienen van de centrale regering in Jakarta te komen. Na de recente invoering van decentralisatie in elke provincie wordt de mentaliteit van een uniform en gecentraliseerd systeem nog steeds door de provinciale overheidskantoren gehandhaaft. Dat is de reden waarom de huidige decentralisatie nog niet geheel zelfstandig is uitgevoerd, ook voor de gezondheid met de specifieke plurale medische systemen, die kenmerkend voor Indonesië zijn.

Paraji is een Sundanese term voor lokale of traditionele vroedvrouw (TBA) die over het algemeen een oudere vrouw is, die dezelfde taal als in de gemeenschap spreekt, en vaak analfabeet is, d.w.z. in het Latijnse alfabet. Zij beheerst soms wel het Arabisch schrift, maar is dikwijls minder in staat om de Indonesische taal (*Bahasa Indonesia*) te spreken. De *paraji* voert haar praktijk van verloskundige in het algemeen als een parttime bezigheid uit. De socio-economische status van de *paraji* wordt als laag beschouwd, omdat haar voornaamste bezigheid de arbeid op het bouwland omvat, waarvoor zij een zeer lage loon van de

werkgever ontvangt. Hoewel de traditionele vroedvrouw (TBA) géén formele training heeft gekregen, beschikt zij over veel kennis en ervaring door het observeren van ouderen, haar moeder, grootmoeder, een familielid of een buurvrouw die vrouwen tijdens de zwangerschap, bevalling en post-partum hebben geholpen. De traditionele vroedvrouw (TBA) is meestal een vrouw die ook zeer bekwaam is om als bemiddelaarster op te treden. Bovendien heeft de traditionele vroedvrouw (TBA) zelf meestal ook kinderen gebaard. Ze is een lid van de gemeenschap waarin ze woont. Zij spreekt en begrijpt de lokale taal uitstekend en is een integraal onderdeel van het religieuse en culturele systeem. Traditionele vroedvrouwen (TBA) zijn over het algemeen verstandige en intelligente vrouwen die gekozen zijn door vrouwen uit hun familie of dorp vanwege hun praktische aanpak en ervaring. Veel traditionele vroedvrouwen (TBA) hebben een dynamische persoonlijkheid en worden als figuren van gezag in de gemeenschap aanvaard. Traditionele vroedvrouwen (TBA) hebben een privé praktijk die met hun clienten over hun eigen compensatie onderhandelen. Soms ontvangen ze betalingen in de vorm van geld of geschenken, maar meestal omvat hun compensatie een bevoorrechte positie in de gemeenschap. Om de sterftecijfers van moeder en kind (MMR & IMR) te verminderen, heeft het Ministerie van Nationaal Gezondheid via de Provinciale Gezondheidsbureaus in elke district een aantal trainingen opgezet voor de traditionele vroedvrouwen (TBA) om hun kennis van zwangerschap en bevalling verder te verbeteren. Dit omvat voornamelijk lessen hoe je een risicovolle zwangerschap kan opsporen, en hoe een vrouw dient te worden verwezen als zich ongewenste situaties voordoen, en om hen te onderwijzen in het belang van hygiënische behandeling van de navelstreng. Na het volgen van een opleiding wordt de traditionele vroedvrouw (TBA) met een ’*dukun* kit’ beloond. Ze wordt als deel van een uitgebreide familie in de gemeenschap beschouwd vanwege hun rol in de openbare gezondheid. Wanneer een *paraji* een vrouw met succes (*cocok*) met de bevalling heeft geholpen, dan zullen later de dochter en kleindochter van die client van dezelfde traditionele diensten gebruik maken als zij zwanger worden. Er bestaat veel vertrouwen in het behouden van een goede relatie tussen cliënt en *paraji*.

De *paraji* biedt niet alleen haar diensten voor de bevalling aan, maar ook tijdens de gehele zwangerschap en na de bevalling, meestal door rituelen uit te voeren. *Ten eerste* is er het proces van het gedrag van hulpzoeken van de vrouw tijdens de zwangerschap en de bevalling op individueel niveau. Hier ligt de focus op het beheer van de drie fasen van de zwangerschap. die parallel lopen met de ontwikkeling van de foetus. Vervolgens de stappen (‘*external actions*’), die door zwangere en barende vrouwen worden genomen om contact met het traditionele en/of moderne systeem van Moeder- en Kindzorg (MCH) op te nemen. Het is opmerkelijk dat zowel het tradionele als het moderne systeem gebruikt wordt voor vrijwel dezelfde raming bij het identificeren van de ontwikkeling van de foetus tijdens de zwangerschap. Zwangerschap kan verdeeld worden in drie fasen volgens de biomedische wetenschappen: binnen 8–12 weken van de zwangerschap begint de baby te bewegen die de vrouw als een zachte vibratie ervaart. Lokale kennis in de gemeenschap van Rancaekek en die van de *paraji* zijn op de Islam gebaseerd, waarbij het gevoel van beweging na ongeveer vier maanden zwangerschap betekent, dat *Allāh* (God) de geest in de foetus heeft geblazen om een nieuw leven te beginnen (*cf.* Hoofdstuk VI).

Ter ere van dit fenomeen is het een traditie dat de familie van de zwangere vrouw een *pengajian* of het lezen van de Heilige Koran houdt door een religieuze leider uit te nodigen om de ceremonie uit te voeren. De biomedische wetenschap heeft aangetoond, dat als de zwangerschap de zeven maanden heeft bereikt, sommige babies, die in de 28ste week met behulp van intensieve medische zorg zijn geboren, kunnen overleven. In tegenstelling daarmee toont traditionele kennis aan, dat als een kind in de zevende maand van de

zwangerschap wordt geboren, het beschouwd kan worden als ‘volwassen’, en zij/hij sterk genoeg is om te overleven. Traditionele berekeningen tonen aan dat in de zevende maand, hoewel de baby nog niet volledig is ontwikkeld, toch sterk genoeg is om door de moeder te worden gebaard.
Aangezien er een mogelijkheid bestaat, dat de bevalling in de zevende maand zal plaatsvinden, dient er een ritueel, genaamd *nujuh bulan* te worden gehouden voor een veilige bevalling en voor de gezondheid van moeder en kind (*cf*. Hoofdstuk VI).

Ten tweede tonen de patronen van het gebruik van het plurale systeem van Moeder- en Kindzorg in Rancaekek vooral het gebruik aan van zorg, en de determinanten die het proces beinvloeden tijdens de perioden van de zwangerschap en onder verschillende socio-economische omstandigheden in het huishouden. De analyse bevat evenwel geen beoordeling van de kwaliteit van de Moeder- en Kindzorg (MCH). Hoewel zelf-behandeling (‘interne’ acties) tijdens de zwangerschap ook in de analyse is opgenomen, is de aandacht vooral op ‘externe’ acties gevestigd, die tot het gebruik van plurale Moeder- en Kindzorg (MCH) in het studiegebied leiden. Het onderzoek naar het gebruik van de systemen van Moeder- en Kindzorg (MCH) concentreert zich dus op het aantal contacten, die zwangere en barende vrouwen na vaststelling van de zwangerschap met onderdelen van het plurale systeem van Moeder- en Kindzorg (MCH) in de voorafgaande periode van 12 maanden hebben gemaakt. (*cf.* Hoofdstuk VII). Deze contecten worden uitgedrukt in scores met het ene of met het andere systeem. De studie in Rancaekek heeft gegevens verzameld van 150 vrouwen, die zwanger en bevallen waren tijdens de periode van een jaar met terugwerkende kracht, waarbij 127 vrouwen het proces van externe acties tot de bevalling hebben voltooid (*cf.* Hoofdstuk III).

Al deze 127 vrouwen, die in de loop van de zwangerschap en de bevalling de stappen voltooiden en contact hebben gemaakt met het traditionele en/of moderne systeem van Moeder- en Kindzorg (MCH), werden individueel bestudeerd volgens hun externe acties na bevestiging van hun zwangerschap. Hierbij werden de 23 vrouwen die nog zwanger waren, van de steekproef uitgesloten. De analyse van het gebruik van Moeder- en Kindzorg (MCH). geeft het volledige proces weer, waarbij de voorkeur is gegeven aan de stappen, die genomen zijn met betrekking tot Moeder- en Kindzorg (MCH), die de vrouwen hebben gedaan tijdens het verloop van het proces van zwangerschap en bevalling.

Gezondheid van moeders en gedrag van het zoeken van hulp van zwangere, barende en post-partum vrouwen hebben een aanzienlijke impact, niet alleen op het leven van de vrouwen, maar ook op het leven van hun kinderen. In dit verband is er nog een aanzienlijke hoeveelheid werk nodig om dergelijk gedrag, specifiek gericht op vrouwen, te verbeteren. Een moeilijkheid doet zich in Rancaekek vooral bij vrouwen voor die vertrouwen op het mannelijke hoofd van het huishouden om beslissingen te nemen voor zowel de financiële als voor het zoeken naar hulp. Vrouwen in hun status als echtgenote en moeder kunnen ook steun nodig hebben van andere familieleden om de huishoudelijke taken en kinderopvang te verrichten. Hoewel zwangerschap in het geval van het proces van hulpzoeken voor zwangere en barende vrouwen een individuele zaak is, zijn andere familieleden ook daarbij betrokken en tonen emphatie voor de vrouw, hetgeen bewijst dat ze enthousiast zijn bij het vernemen van het nieuws over haar zwangerschap. Dit zal worden gevolgd door een gedeelde zorg voor het fysieke en emotionele welzijn van de zwangere vrouw, de voorbereidingen voor de bevalling, de rituelen die gehouden worden tijdens en na de zwangerschap en het betalen van de kosten. Veel familieleden, buren en andere relaties doen dikwijls ook suggesties tijdens de zwangerschap en bevalling. Ze zullen ook bij de keuze van het systeem van Moeder- en Kindzorg (MCH) worden betrokken, afgezien van de voorkeur van de vrouw of na het nemen

van beslissingen door de echtgenoot en andere familieleden. De ervaring van zwangerschap, bevalling en de periode na de bevalling - de kraamtijd - is sociaal bepaald. Verwachtingen van familie, alsook van de naaste buren zal invloed hebben op de zwangere vrouw tijdens het proces van de geboorte. Wanneer een vrouw afhankelijk wordt tijdens de bevalling, zullen de de mensen om haar heen proberen om haar symptonen te interpreteren in een poging om de vrouw te troosten tijdens de bevalling.

Het proces van het gedrag van hulpzoeken omvat alle acties vanaf de eerste symptomen, de diagnose of de bevestiging van de zwangerschap tot en met de bevalling. Het proces van het gedrag van hulpzoeken beschrijft de reeks inspanningen van de zwangere vrouw die wordt ondersteund door de leden van haar huishouding, waaronder gerekend worden *géén actie, interne actie,* en *externe actie*, die verwijst naar het bezoeken van verschillende traditionele en moderne systemen van Moeder- en Kindzorg (MCH), volgens de behoeften in een bepaalde periode van de zwangerschap, en op basis van het vertrouwen en de financiële status van het huishouden in relatie tot de verschillende socio-culturele factoren.

In overeenstemming met het conceptuele model van analyse, dat gepresenteerd wordt in Hoofdstuk III, wordt de methode van onderzoek van het gebruik van de verschillende componenten van het plurale systeem van Moeder- en Kindzorg in Rancaekek beschreven. Senioriteit verleent bepaalde sociale rechten aan de persoon - in dit geval oudere vrouwen die ervaren zijn in het gebruik van Moeder- en Kindzorg - die besluit van welke zorg gebruik dient te worden gemaakt. De rol van het geslacht van man en vrouw zal invloed hebben op het besluitvormingsproces bij het zoeken naar hulp, die door de echtgenoot als het hoofd van het huishouden dient te worden genomen. Bijgevolg dient een echtgenoot ouder dan de vrouw te zijn, omdat de man als een ’oudere broer’ dient te worden behandeld. Op deze wijze wordt de positie van man en vrouw door de socio-culturele waarden van het gezin bepaald. Hoewel besluitvorming tussen man en vrouw wel wordt besproken, is het laatste woord berust in alle opzichten bij de man als hoofd van het huishouden.

Hoofdstuk VII presenteert de ’beslissingsboom’ die een illustratie geeft van de stroom van zwangere en barende vrouwen binnen het plurale systeem van Moeder- en Kindzorg (MCH) in Rancaekek, waarbij de elkaar opeenvolgende ’stappen’ tijdens het gebruik van de diensten door zwangere vrouwen in de voorafgaande periode van 12 maanden worden aangegeven. Het toont de stappen aan die genomen zijn door de zwangere vrouwen vanaf het moment dat ze de eerste symptomen van de zwangerschap hebben opgemerkt tot het nemen van beslissingen om hun zwangerschap te behandelen, gevolgd door stappen 1–4 die genomen zijn tot het bereiken van de laatste stap van de bevalling (*cf.* Figure 7.1).

De ‘beslissingsboom’ laat ook het gedrag zien van zwangere en barende vrouwen die hulp zoeken bij hun strategie van meervoudig gebruik. Hun keuzes weerspiegelen de opvattingen en voorkeuren van niet alleen de zwangere vrouwen, maar ook van hun familie, vrienden en buren. De relatie tussen kennis over zwangerschap en bevalling, en de sociale context zijn aanzienlijk ingewikkelder, naarmate er sprake van medisch pluralisme in een samenleving is. Een gemeenschap, waarin plurale medische systemen voorkomen, stimuleert haar leden om meer keuzes te maken voor hun eigen gezondheidszorg. De mogelijkheid om te kiezen uit de componenten van het beschikbaar plurale medische systeem in het gebied leidt tot een proces van geïntegreerd gebruik van dergelijke traditionele en moderne systemen.

Daarnaast wordt de stroom van zwangere vrouwen uit de steekproef door het plurale systeem van Moeder- en Kindzorg in Rancaekek weergegeven aan de hand van de door zwangere vrouwen bij het zoeken naar Moeder- en Kindzorg genomen stappen, met inachtneming van de onafhankelijke variabelen in het conceptuele kader.

De variabelen in het model omvatten onafhankelijke variabelen: (1) predisponerende socio-demographic variables, *e.g.* leeftijd, huwelijkse staat, geboorteplaats, etniciteit, onderwijs en professsie; (2) predisponerende psycho-sociale variabelen op het individuele niveau, *e.g.* kennis, meningen, en geloof; (3) instaatstellende variabelen, *e.g.* socio-economische kenmerken op het individuele niveau; (4) gepercipieerde variabelen van zwangershap op het individuele niveau, *e.g.* meningen over de *paraji* en *bidan*; (5) institutionele variabelen, *e.g.* geografische toegankelijkheid van de gezondheidsdienst; (6) interveniërende variabelen in de Moeder- en Kindzorg (MCH), geintroduceerd van buiten de gemeenschap, *e.g.* overheidsbeleid en promotie van programma's; (7) en (8) de afhankelijke variabelen betreffende het gerapporteerde gebruik van respectievelijk het traditionele en het moderne systeem van de Moeder- en Kindzorg (MCH) in Rancaekek.

Het multivariate model is op het Leidse concept van 'ethnosystems' gebaseerd, die niet alleen het perspectief op de betreffende cultuur verbreedt, maar ook de beoordeling van de cognitieve en gedragsmatige componenten van bepaalde groepen of gemeenschappen als 'systemen' in een eerder holistische benadering mogelijk maakt. Hetgeen echter nog belangrijker is, is dat een dergelijke definitie van *'ethnosystems'* ook de uitwerking van het concept van de cultuur als het resultaat van het historische proces van acculturatie op een meer dynamische wijze kan onderzoeken en interpreteren. Door gebruik van dit concept wordt dan ook de eerdergenoemde analyse van de processen van het gebruik van de traditionele en moderne Moeder- en Kindzorg (MCH) door zwangere vrouwen in Rancaekek verder uitgewerkt:

1. *Participants' View /Deelnemers' Standpunt*
De overweging om de standpunten van de deelnemers, of doelgroep bij de planning en uitvoering van de processen van innovatie en ontwikkeling te betrekken heeft een nieuw relativistisch standpunt over andere culturen en samenlevingen gestimuleerd.

2. *Field of Ethnological Study* (FES)/*Gebied van Ethnologische Studie*
FES verwijst naar het concept van het 'cultuurgebied', dat in het geval van Indonesië. bepaalde algemene culturele kenmerken omvat, zoals verwantschapsclassificaties, patronen van sociale organisatie, ornamenten op bronzen keteltrommen, patronen van geweven doeken, en percepties en praktijken in de geneeskunde die als pan-Indonesische kenmerken verspreid over de regio voorkomen, dat als "Veld van Ethnologische Studie van Indonesië" wordt gedefinieerd.

3. *Historical Dimension /Historische Dimensie*
Bij het bestuderen en analyseren van complexe configuraties, zij het in de geneeskunde, religie of landbouw, hebben de vaak beperkte hedendaagse benaderingen gefaald om de dynamiek van de oorsprong en ontwikkeling, die tot de hedendaagse complexen hebben geleid, procesmatig te analyseren. Deze aspecten van de studie en analyse van andere culturen hebben veel bijgedragen tot de nieuwe aanpak van de *ethnosystems* in brede zin, en zo mede tot de recente herwaardering in internationale verband van de 'culturele dimensie van ontwikkeling' geleid.

In de studie van de *paraji* en *bidan* in Indonesië vormen de geintegreerde geneeskunde van de vooruitstrevende samenwerking tussen de traditionele vroedvrouw (TBA) en de moderne verloskundige in Rancaekek het uitgangspunt, waarbij de studiepopulatie wordt gevormd door vrouwen die zwanger zijn geweest of hebben gebaard tijdens de voorafgaande periode van 12

maanden. Teneinde aan te tonen dat alle groepen met een specifieke achtergrond in de steekproef zijn vertegenwoordigd – zoals etniciteit, opleiding, beroep, godsdienst, socio-economische status, – is besloten om de dorpen volgens de categorieën van de lokale overheid te selecteren.
Bij het onderzoek om op basis van het analytische model het gebruik het plurale system van Moeder- en Kindzorg (MCH) in Rancaekek te beschrijven en te verklaren worden ook de relaties en veranderingen in het gedrag van *paraji* en *bidan* betrokken. Het multivariate model tracht de interacties te beschrijven en te verklaren tussen de verschilende determinanten van het gebruikvan het plurale systeem van Moeder- en Kindzorg in Rancaekek In het geval van het gebruik van Moeder- en Kindzorg (MCH) door zwangere vrouwen wordt de aandacht ook gericht op de externe invloed van het overheidsbeleid op het gedrag van vrouwen in de lokale Moeder- en Kindzorg (MCH) van de gemeenschap.

In Hoofdstuk VIII wordt de wijze behandeld, waarop de bivariate analyse de significante relaties en interacties tussen variabelen geidentificeerd, die het gebruik van traditionele en moderne MCH systemen beïnvloeden. In deze analyse zijn de onafhankelijke en interveniërende variabelen over twee afhankelijke variabelen van het gebruik van traditionele en moderne systemen van Moeder- en Kindzorg (MCH) verdeeld, zoals door respondenten is gerapporteerd over de periode van 12 maanden, voorafgaand aan de surveys in het onderzoeksgebied. De bivariate analyse toont ook de significantie van de relaties en intercaties tussen variabelen aan, waaruit blijkt, dat ten aanzien van de predisponerende socio-demografische variabelen naar voren komt, dat hoe rijker de gemeenschap is, hoe minder belangrijk de rol van de traditionele vroedvrouw (TBA) is. Ook variabelen zoals het genoten onderwijs en het beroep van vrouwen en van hun echtgenoten blijken het gebruik van de traditionele, of moderne Moeder- en Kindzorg (MCH) te beinvloeden. De relaties tussen variabelen in de predisponerende psycho-sociale factoren en gedrag blijken eveneens significant, en geeft het belang aan van de kennis over het proces van zwangerschap, risicovolle zwangerschappen en miskramen blijken een significante relatie te vertonen met het gebruik van traditionele Moeder- en Kindzorg (MCH); terwijl opinies over *paraji* en *bidan* en het geloof in taboes tijdens de zwangerschap en de bevalling ook een significante relatie vertonen met het gebruik van beide systemen van Moeder- en Kindzorg (MCH). Socio-economiche status en geografische toegankelijkheid vertonen eveneens een significante correlatie met het gebruik van traditionele en moderne Moeder- en Kindzorg (MCH) in Rancaekek.

De daarop volgende tweede stap van de analyse geeft de totale invloed weer van alle onafhankelijke en interveniërende variabelen op de afhankelijke variabelen in relatie met en onder elkaar. De multivariate analyse, OVERALS is niet alleen in staat om de specifieke determinanten van het gebruik van Moeder- en Kindzorg (MCH) te identificeren, maar biedt ook de mogelijkheid om de relatieve effecten van verschillende variabelen binnen de algemen patronen van het gedrag van hulpzoeken tijdens zwangerschap en bevalling te meten. De laatste stap van de analyse met behulp van de multipele regressie analyse toont verder de specifieke relaties aan tussen de groepen van variabelen, die als ‘blokken’ in het model worden aangegeven, door de gecalculeerde regressie-coëfficiënten op te voeren. De analyses hebben in feite een rol gespeeld bij de uitleg van de gevonden resultaten en hebben bijgedragen tot de voorspelling van bepaalde waarden binnen de totale interactie tussen alle variabelen in het model van analyse van het gedrag van het hulp zoeken bij Moeder- en Kindzorg (MCH) Rancaekek. Het hoofdstuk wordt afgesloten met de interpretatie en discussie over de resultaten van de analyse in relatie tot de structuur van het model.

De traditionele vroedvrouwen (TBA) met hun kennis van lokale kruiden-geneesmiddelen op het platteland van Indonesië spelen een bijzondere socio-culture rol, niet alleen voor zwangere en barende vrouwen, maar ook als adviseur voor de gezondheid van de gezinnen. Het verlies van een *paraji* betekent, dat tegelijkertijd lokale kennis over Moeder- en Kindzorg (MCH), zwangerschap, bevalling en kennis van kruidengeneeskunde (*jamu*) zal verdwijnen. Voorstanders van geïntegreerde traditionele en moderne kennissystemen als de sleutel tot duurzame ontwikkeling ondersteunen de vooruitstrevende samenwerkings-verbanden tussen *paraji* en *bidan* in zowel Rancaekek als in alle andere gemeenschappen in Indonesië. De bescherming en herwaardering van traditionele kennis dient door het politieke beleid van de regering en op alle niveaus in een multicultureel land als Indonesië met kracht to worden ondersteund.

Hoewel het WHO Rapport (2008) benadrukt, dat de focus van gezondheid van moeder en kind naar de gezondheid van de gehele gemeenschap verschuift, moeten de beleidsmakers meer aandacht besteden aan *human resources* in de gezondheidsplannen behoeve van de ontwikkeling van toekomstige generaties. Integratie van menselijke en materiele bronnen in de systemen van Moeder- en Kindzorg (MCH) is van essentieël belang indien de omstandigheden in het land verbeterd dienen te worden. In de traditionele Moeder- en Kindzorg (MCH) vervult de traditionele vroedvrouw *paraji* (TBA) nog steeds een belangrijke rol, terwijl ook in de moderne Moeder- en Kindzorg (MCH) bekwame en door het Ministerie van Gezondheid opgeleide verloskundigen de gezondheidszorg voor moeder en kind binnen de gemeenschap verzorgen. Na training kunnen *Paraji* (TBA) een strategische rol spelen in het stimuleren van de participatie van de lokale gemeenschappen in *Safe Motherhood* programma's. De training van de traditionele vroedvrouwen *paraji* (TBA), die in de tachtiger jaren begon als een strategie om mortaliteit en morbiditeit van de moeders terug te dringen, is sedertdien op wereldschaal gerealseerd. De laatste jaren werd echter een kleiner aantal traditionele vroedvrouwen *paraji* (TBA) getraind, hetgeen een potentieel gevaarlijke situatie veroorzaakt voor de bevolking in afgelegen gebieden, die zelden door de modern zorg wordt bereikt. Bovendien kan de traditionele vroedvrouw *paraji* (TBA) ook als bemiddelaarster een zeer belangrijke rol spelen in de relatie tussen de gemeenschap en de formele gezondheidsdienst, met name om de lokale bevolking in het plurale systeem van Moeder- en Kindzorg (MCH) te helpen integreren door middel van het creëren van samenwerkings-verbanden die gericht is op het reduceren van de moeder- en kindersterfte.

In plaats van met een beschuldigende vinger naar de traditionele vroedvrouw *paraji* (TBA) te wijzen als de 'oorzaak' van de relatief hoge moeder- en kindsterfte zou het niet alleen veel beter zijn om haar rol te versterken door hen onderwijs te geven, maar hen ook in staat te stellen om huh unieke locale kennis en praktijken te delen met de *bidan* teneinde de vooruitstrevende samenwerkingsverbanden tussen beide functionarissen in het plurale systeem van Moeder- en Kindzorg in Indinesie te ondersteunen. Eveneens kunnen de *paraji* en *bidan* in dergelijke samenwerkingsverbanden hun specifieke lokale kennis en pratijken inzake zwangerschap en geboorte delen en uitwisselen, zodat wederzijds respect, begrip en samenwerking tot een nieuwe vorm van een allesomvattende Moeder- en Kindzorg in het gehele land zal leiden. Bovendien dienen niet alleen de huishoudens en de gemeenschappen geleerd te worden om de van overheidswege ingevoerde programma's van Moeder- en Kindzorg (MCH) te begrijpen en te ondersteunen, maar zou ook het formele gezondheidpersoneel moeten leren van de specifieke kennis, ervaring en praktijken van de *paraji*.

Nog belangrijker is het om de verbetering van Moeder- en Kindzorg (MCH) in de lokale gemeenschappen met specifieke diensten voor reproductieve gezondheidszorg te bereiken, en

de *bidan* en de *paraji* beiden te erkennen als bekwame verloskundigen, en de gehele gemeenschap te stimuleren om daaraan mee te werken om op die wijze veilige zwangerschappen en bevallingen te realiseren. Onderwijsprogramma's voor de *bidan* als een moderne verloskundige dient ook informatie te verschaffen over gemeenschapsontwikkeling, in het bijzonder over de wijze waarop de gemeenschap gemotiveerd kan worden om meer betrokken te raken en deel te nemen in de lokale levenswijze.

Een keten van participatie van "vanaf de basis" van individuen, die zich aansluiten bij de gehele gemeenschap, en die begint op het niveau van het individuele huishouden en voortgaat via de buurtschappen en de betrokkenheid van de *bidan, paraji,* gezondheidsvrijwilligers, en gezondheidscentra naar de lokale en nationale overheden toe, zal een belangrijke bijdrage leveren aan de verbetering en duurzaamheid van het geintegreerde systeem van Moeder- en Kindzorg in Rancaekek en daarna in geheel Indonesië in de toekomst.

Ringkasan

Kajian ini memusatkan perhatian kepada kemajemukan sistem Kesehatan Ibu dan Anak (KIA) di Rancaekek, sebuah daerah yang termasuk ke dalam wilayah kebudayaan Sunda, di Jawa Barat, Indonesia. Tujuan kajian ini adalah meneliti hubungan antara kemajemukan sistem KIA dan bagaimana komunitas memanfaatkan beragam sumber layanan kesehatan (modern dan tradisional) bagi ibu dan anak di dalam komunitasnya. Perilaku ibu hamil dan ibu melahirkan diulas berdasarkan kontak mereka dengan keragaman layanan KIA yang ada. Di wilayah pedesaan Indonesia, dukun bayi adalah bagian dari keragaman sumber layanan kesehatan bagi ibu melahirkan dan bayi baru lahir. Mereka dianggap penting semenjak masa kehamilan hingga pascakelahiran, bukan hanya terkait dengan kebutuhan fisik perempuan, tetapi juga kebutuhan mental dan spiritual ibu sebagai anggota komunitas yang sehat. Di Rancaekek, keragaman sumber layanan kesehatan bagi ibu hamil dan melahirkan merupakan hal yang lumrah. Di dalam kebudayaan orang Sunda di Rancaekek, dukun bayi biasa disebut *paraji*.

Rancaekek merupakan salah satu wilayah kantong industri terpenting di Jawa Barat. Meski demikian, sebagian besar penduduk aslinya masih tinggal di wilayah pedesaan dan bergantung kepada pertanian dalam sumber penghidupannya. Sebagian penduduk malah tinggal di wilayah yang terhitung jauh dari layanan kesehatan modern: Pusat Kesehatan Masyarakat (Puskesmas). Oleh karena itu peran *paraji* mempunyai arti penting, terutama bagi rumahtangga-rumahtangga berpendapatan rendah.

Agar tujuan utama penelitian ini tercapai, dengan memperhatikan ketiga aspek kajian: kesehatan masyarakat, sistem pelayanan KIA, dan penggunaan sistem KIA modern dan tradisional—tujuan-tujuan khusus dalam kajian ini didokumentasikan sebagai berikut:

Pertama, memberikan deskripsi tentang Indonesia yang merupakan suatu negara berkembang di Asia Tenggara, khususnya wilayah Sunda di Jawa Barat, dimana penelitian ini dilakukan;

Kedua, menjelaskan tentang kesehatan dan pengobatan di Indonesia, meliputi sistem medis tradisional dan modern, dengan perhatian utama pada Kesehatan ibu dan anak. Khususnya. perubahan peran dari penolong persalinan tradisional (*paraji*) dan penolong persalinan modern (*bidan*) yang dijelaskan dalam konteks kebijakan-kebijakan pemerintah di Indonesia;

Ketiga, menjelaskan mengenai komunitas lokal Rancaekek dimana penelitian kualitatif dan kuantitatif dilakukan. Dalam hal ini, selain menjelaskan struktur komunitas Rancaekek, juga menjelaskan mengenai populasi dan sampel survai, sedangkan gambaran mengenai sistem pelayanan kesehatan ibu dan anak (KIA) yang berkaitan dengan penggunaan tanaman obat, kosmetik dan aromatik (TOKA);

Keempat, mendeskripsikan pelayanan KIA majemuk dalan area penelitian dan proses kehamilan dan melahirkan, demikian pula proses perilaku penggunaan pelayanan KIA pada perempuan hamil dan ketika memastikan status kehamilan seorang ibu oleh *paraji* atau *bidan* yang tersedia dalam komunitas tersebut;

Kelima, menyajikan pola-pola penggunaan sistem KIA bagi ibu hamil dalam sampel survai di Rancaekek, menerapkan analisis bivariat, multivariat dan analisis multi-regresi, diikuti dengan interpretasi dan hasil analisis.

Keenam, memformulasikan rekomendasi yang didasari oleh temuan penelitian untuk meningkatkan dan mendukung interaksi dan kerjasama antara *paraji* dan *bidan* dalam kaitannya dengan tujuan bersama dalam meningkatkan pelayanan KIA dalam komunitas yang bersangkutan, dalam rangka mendorong kemitraan yang berkelanjutan antara keduanya adalah perwakilan sistem medis tradisional dan modern di daerah penelitian.

Bab I mendiskusikan layanan KIA sebagai salah satu sektor terpenting pelayanan kesehatan di seluruh dunia. KIA merupakan salah satu bagian dari sistem Kesehatan Masyarakat Primer/*Primary Health Care* (PHC) yang dicanangkan dalam Konferensi Alma-Ata 1978. WHO mendefinisikan layanan KIA sebagai sektor inti Kesehatan Masyarakat yang seharusnya dapat diakses dan diterima oleh semua individu dan keluarga melalui kesertaan penuh dan bisa dijangkau biayanya baik oleh komunitas maupun negara. Layanan KIA semestinya menjadi bagian dari satu kesatuan integral sistem kesehatan suatu negara dan merupakan inti pembangunan sosio-ekonomi secara menyeluruh dalam suatu komunitas. Kebijakan kesehatan "Kesehatan untuk Semua pada Tahun 2000" yang diformulasikan Konferensi Alma-Ata merupakan upaya memastikan bahwa kesehatan primer menjadi bagian integral suatu komunitas dan pembangunan negara dan bukan sekadar proses yang terisolasi di pinggiran. Pelaksanaan, promosi, koordinasi, dan dukungan secara administrasi sangat diperlukan, tidak hanya di tingkat lokal tetapi juga di tingkat menengah dan pemerintahan pusat. Kesehatan primer harus dapat menggunakan berbagai sumberdaya yang tersedia secara penuh; harus dapat memobilisasikan seluruh potensi manusia di berbagai komunitas. Sayangnya, setelah 20 tahun, WHO-SEAR (2009) melaporkan pembaruan definisi "Kesehatan untuk Semua", yang di dalamnya menyatakan bahwa setiap individu harus mencoba memelihara kesehatannya dengan mempraktekkan pelayanan bagi diri sendiri, dan pada saat bersamaan, juga memiliki akses pelayanan kesehatan yang memadai, namun, hal itu hanya merupakan sebagian gambaran saja dari gambaran seharusnya. Sistem kesehatan termasuk di dalamnya organisasi, lembaga dan sumber daya dalam kesehatan masyarakat. Keputusan Alma-Ata menekankan pentingnya partisipasi masyarakat dan kemandirian yang diorganisasikan secara penuh, dengan individu, keluarga, dan komuniti untuk bertanggung-jawab pada kesehatannya masing-masing.

Indonesia mengajukan program "Pengembangan dan Pengobatan Tradisional untuk Penanganan Diri Sendiri" berdasarkan kepada berkembangnya perhatian Negara kepada pengobatan tradisional dalam kaitannya dengan penanganan diri sendiri. Pernyataan ini mendukung kajian ini berkenaan dengan persoalan daripada memarjinalisasikan *paraji* dengan memandangnya sebagai penyebab tingginya AKI dan AKB di Indonesia, lebih tepat ialah pengintegrasian kedua sistem KIA, yakni *paraji*/dukun bayi (atau TBA) yang mewakili KIA tradisional dan *bidan* sebagai wakil sistem KIA modern pada tingkat nasional. Integrasi dua sistem kesehatan yang diajukan dalam kajian ini didasari pengetahuan lokal yang diwariskan dari generasi ke generasi dan yang akan lenyap seiring disingkirkannya peran *paraji*.

Kini, Pemerintah Indonesia telah meratifikasi kesepakatan menerapkan, menjalankan, dan meninjau Tujuan Pembangunan Milenium (MDG) yang harus bisa dicapai pada tahun 2015. Bank Pembangunan Asia (2005) menyatakan bahwa MDG telah menyatukan berbagai program internasional untuk pembangunan di sekitar agenda tujuan global bersama melalui pengurangan angka kemiskinan di seluruh dunia. Hal tersebut ditujukan kepada visinya tentang wilayah Asia Pasifik yang bebas kemiskinan. MDG juga menjuruskan tujuan-tujuan dan capaian-capaian khusus, menyediakan seperangkat indikator pengukuran dan pengawasan kemajuan ke arah penurunan tingkat kemiskinan. MDG mencerminkan sebuah kemitraan

global yang berkembang dari komitmen dan capaian-capaian yang ditetapkan pada pertemuan dunia pada 1990-an. Menanggapi tantangan-tantangan perkembangan utama dunia dan untuk menggugah masyarakat sipil, MDG pada satu sisi mendorong peningkatan pendidikan dan kesetaraan jender, dan pada sisi lain berkeras untuk mengurangi kemiskinan, kematian ibu, mortalitas anak, HIV/AIDS dan penyakit lainnya. Dirancang untuk tercapai pada tahun 2015, MDG merupakan seperangkat kesepakatan tujuan-tujuan yang bisa dicapai apabila semua peserta bekerja bersama dan mengerjakan bagiannya secara sungguh-sungguh.

Bab II, penelitian-penelitian penting dalam penggunaan pelayanan kesehatan di seluruh dunia didiskusikan, agar tergambarkan, mengapa begitu banyak peneliti tertarik pada isyu tersebut. Walaupun kehamilan tidak dinyatakan secara formal sebagai penyakit, namun ketergantungan seorang perempuan yang sedang hamil ketika melahirkan menyerupai pasien yang memerlukan penanganan medis. Oleh sebab itu, diskusi dalam studi ini mencoba mencari kontribusi pada pengetahuan dan pemahaman mengenai hubungan antara proses kehamilan dan melahirkan dengan penggunaan pelayanan kesehatan yang ada di komunitas pedesaan. Sehingga model medis majemuk mencakup sistem medis tradisional, transisional dan modern, dalam hal ini digunakan untuk menjelaskan kondisi KIA di Rancaekek. Sistem KIA tradisional dan modern yang diwakili oleh *paraji* dan *bidan*, sedangkan sistem medis transisional tidak terwakili dalam sistem KIA.

Secara historis, Indonesia mengalami proses akulturasi tiada henti. Penduduknya berhadapan dengan jenis-jenis sistem medis asing ketika masuknya pendatang dari India, Timur Tengah, dan Tiongkok. Kemudian sistem medis modern dari Barat diperkenalkan pada akhir abad ke-19, ketika dikuasai pemerintah kolonial Belanda. Sekarang, layanan kesehatan di Indonesia dicirikan oleh perkembangan serta saling tumpang-tindihnya antara teori dan praktik dari beragam sistem medis, yakni tradisional, transisional, dan modern. Beberapa kerumitan metodologis secara mendasar terkait dengan pemahaman ilmuwan Barat terhadap sistem pengetahuan lokal, khususnya bahwa nilai sistem kepercayaan merupakan bagian dari kompleksitas dari ‘pengetahuan-praktik-kepercayaan’ lokal, terkait dengan sistem asli masyarakatnya sendiri. Sistem-sistem medis secara mendasar memang rumpil dan didalamnya mencakup pendekatan lokal tradisional dari kehidupan sosial budaya negara-negara berkembang jauh sebelum diperkenalkannnya sistem medis modern.

Di dalam penelitian ini, konsep ‘tradisional’, ‘lokal’, dan ‘modern’ digunakan untuk menggambarkan perbedaan antarsistem KIA majemuk di dalam suatu komuniti. Masyarakat lokal, komuniti atau bangsa, berbagi pengalaman historis yang berkesinambungan dengan masyarakat pra-penaklukan dan pra-penjajahan yang berkembang dalam wilayahnya, dan mereka menganggap diri mereka berbeda dari masyarakat lain yang sekarang ada di wilayah tersebut atau bagiannya. Sekarang ini, etnisitas mewakili berbagai sektor yang tidak dominan dari masyarakat dengan tetap mempertahankan,mengembangkan dan melanjutkan pada generasi berikutnya wilayah leluhurnya dan identitas etnisnya sebagai landasan haknya sebagai masyarakat lokal, sesuai dengan pola-pola budaya, pranata sosial, dan sistem legal mereka sendiri. Pengetahuan ‘tradisional’ tidak berarti bahwa pengetahuan tersebut kuno, tetapi lebih merujuk pada cara mendapatkan dan menggunakan pengetahuan tersebut. Dengan kata lain, proses sosial pembelajaran dan berbagi pengetahuan yang unik bagi kebudayaan-kebudayaan lokal, terdapat pada inti ‘ketradisionalannya’. Banyak dari pengetahuan semacam itu yang sebenarnya terbilang baru, tetapi memiliki konotasi sosial dan sifat legalnya secara keseluruhan tidak sama dengan sistem pengetahuan lainnya. Sistem penghidupan tradisional secara terus-menerus mengadaptasikan diri terhadap perubahan sosial ekonomi dan lingkungan. Mereka dinamis, tetapi—tak peduli bentuk-bentuk perubahannya—mencakup prinsip-prinsip berkelanjutan. Namun, sistem bio-medis modern Barat

diperkenalkan oleh pemerintah nasional kepada komunitas lokal. Dengan demikian, konfigurasi kemajemukan medis mencabut akar di dalam komunitas dan mencirikan sistem tersebut bisa dibatasi sebagai berikut:

a. Sistem tradisional mencakup pandangan, praktik, dan kepercayaan lokal yang berkembang dari generasi ke generasi di dalam suatu kebudayaan atau wilayah;
b. Sistem transisional mencakup penjaja obat-obatan yang mewakili bagian akhir di dalam rantai penjualan industri farmasi modern, yang menemukan pasar menguntungkan di dalam masyarakat di negara-negara berkembang;
c. Sistem medis modern ditata oleh sistem biomedis modern yang bertentangan dengan paradigma etnomedis.

Dalam kaitannya dengan sistem KIA, layanan KIA tradisional mewujud ke dalam *paraji* (dalam Bahasa Sunda) atau dukun bayi (dalam Bahasa Indonesia) atau TBA, sementara KIA modern diwakili oleh *bidan* desa. Walaupun demikian, kebudayaan tradisional tidaklah terkungkung, tidak pula kebal terhadap pengaruh kebudayaan lain dan berkembang melalui kontak budaya antarnegara di dunia global. Kebudayaan tradisional mestilah dipahami sebagai fenomena berkelanjutan dengan seperangkat gagasan, organisasi, dan kumpulan yang berbeda. Secara umum, penyembuh tradisional menempati kedudukan yang dihormati dalam komunitasnya karena keahlian mereka dalam menggunakan pengobatan tradisional. Pada banyak komunitas, penyembuh tradisional digolong-golongkan ke dalam beragam spesialisasi seperti ahli patah tulang, pembantu persalinan, tukang sunat, penyembuh supranatural, dan sebagainya. Kedudukan dan peran penyembuh tradisional berpengaruh kuat di dalam komunitasnya karena dianggap memiliki pengetahuan dan kebijaksanaan berkenaan dengan kesehatan dan praktik penyembuhan lintas generasi dari pengalamannya sendiri. Banyak orang percaya bahwa penyembuh tradisional adalah perantara dunia manusia dan dunia halus, melalui kemampuan mereka dalam menyembuhkan anggota komunitas yang sakit. Akhir-akhir ini, peran penyembuh tradisional, khususnya terkait dengan *paraji*, juga dilihat sebagai perantara antara komunitas dan sistem kepercayaan tradisional sekaligus dengan sistem KIA modern.

Indonesia termasuk negara yang menghargai pentingnya etnomedisin dan memperbolehkan hal tersebut menjadi bagian integral dari pelayanan KIA modern. Meskipun demikian, tidak semua aspek dari sistem medis majemuk sepenuhnya terintegrasi dan masih ada sinergi yang kurang sesuai dalam interaksi dalam kesehariannya. Seperti yang sudah disebutkan terdahulu, layanan kesehatan primer memerlukan reformasi dalam rangka menyesuaikan dengan tingkat kesehatan publik bagi semua. *Paraji* berperan lebih sedikit dalam menolong persalinan, karena bila dibandingkan dengan *bidan* desa, ia tidak memiliki pendidikan formal. Pada beberapa bagian dari propinsi jawa Barat ,*paraji* masih membantu dalam kehamilan dan pasca-persalinan, akan tetapi tidak dalam persalinan. Hanya *bidan* yang dianggap ahli diperkenankan membantu perempuan dalam persalinan karena kemungkinan dapat terjadi resiko. Keluarga harus mempelajari bagaimana membuat keputusan yang relevan dengan kesehatannya sendiri. Proses kelahiran dan rencana penanganannya, misalnya, didasarkan kepada pilihan yang diambil bersama-sama baik oleh ibu hamil dan staf kesehatan dalam mempertimbangkan kelahiran dengan baik. Persoalan yang terkait mencakup di mana proses melahirkan akan dilakukan dan siapa yang akan menangani pekerjaan rumahtangganya dan memelihara anak-anaknya ketika seorang ibu melahirkan. Diskusi sekitar masalah ini juga mencakup rancangan pembayaran biaya bantuan medis, pengaturan transportasi, dan juga mengidentifikasi pendonor darah yang cocok apabila ada kasus pendarahan. Biasanya,

gejala-gejala yang menandai suatu kehamilan mencakup rasa mual-mual, muntah, sakit kepala, dan sebagainya yang dirasakan perempuan. Pengambilan keputusan untuk menggunakan layanan KIA bergantung kepada bagaimana perempuan dan keluarganya menafsirkan pengalaman gejala-gejala fisik kehamilannya. Bagi mereka yang pertama kali mengalami, perhatian terhadap gejala-gejala ini lebih tinggi dibandingkan bagi mereka yang sebelumnya pernah mengalami kehamilan. Salah satu bentuk perhatian itu ialah upaya pencarian keterangan dari orang-orang terdekat: keluarga dan teman-teman yang dianggap memiliki pengalaman lebih. Dari antara keterangan-keterangan itulah pengambilan keputusan untuk memilih layanan kesehatan kemudian diambil. Jadi, dapat dikatakan bahwa pengambilan layanan perawatan kesehatan akan melibatkan proses pengambilan keputusan yang rumpil (*complex*). Setiap individu akan memadukan berbagai keterangan dari jaringan sosialnya. Tidak ada kondisi sosial budaya dan ekonomi yang betul-betul sama untuk setiap perempuan, sehingga setiap rumahtangga atau perempuan akan memiliki alasan dan pembenaran yang berbeda dalam pengambilan keputusan dalam pemanfaatan beragam layanan kesehatan terkait, termasuk dalam hal kehamilan. Sebagian perempuan memiliki saluran sosial dan ekonomi memadai untuk memanfaatkan layanan KIA modern, dan sebagian lainnya tidak memiliki sumberdaya cukup selain mengambil layanan tradisional meski mendapatkan jaminan sosial.

Meskipun kehamilan tidak dianggap sebagai sakit, namun, perempuan hamil mengalami perubahan-perubahan fisik dan kondisi biologis. Sementara sebagian perempuan mengalami gejala-gejala yang kurang baik, sedangkan sebagian lainnya hanya biasa-biasa saja. Mereka yang merasa kurang sehat, akan berkonsultasi kepada teman atau anggota keluarga yang dianggap memahami gejala kehamilan dan mendapatkan saran supaya keadaannya menjadi lebih baik. Biasanya perempuan yang sedang hamil, tahu kepada siapa dirinya akan meminta pertolongan. Meski demikian, keputusan tetap saja bergantung kepada kondisi sosial-ekonomi rumahtangganya. Pemilihan layanan KIA tidak hanya diambil oleh seorang perempuan yang sedang hamil, tetapi juga suami, orangtua, mertua, dan anggota keluarga lain yang dianggap sudah berpengalaman. Selain itu, kebiasaan setempat, kepercayaan, dan keadaan keuangan rumahtangga juga turut mempengaruhi. Meskipun perempuan yang sedang hamil dan keluarganya menyadari bahwa menggunakan pelayanan *bidan* lebih baik, namun, keadaan keuangan dapat memaksa mereka memilih pelayanan *paraji*. Selain dianggap lebih murah dan selalu siap sedia setiap saat; layanan KIA tradisional secara budaya lebih mudah diterima dibandingkan pelayanan KIA modern. Dalam konteks inilah, penggunaan istilah “tradisional”, “modern”; atau “asli” dan “barat” dalam memahami keragaman layanan kesehatan tidak dapat dihindari. Setiap sistem kesehatan memiliki pendukung dan pengguna masing-masing. Pemanfaatan layanan kesehatan tradisional atau lokal dalam masyarakat majemuk seperti Indonesia, masih berlangsung seperti penggunaan tumbuhan obat, pengobatan sendiri di rumah, atau paket obat dari industri jamu. Pada 1983, WHO mulai menggalakkan pemanfaatan kesehatan tradisional, termasuk praktik-praktik pengobatan lokal dan berbagai jenis pelayan kesehatan yang mencakup pertolongan persalinan tradisional untuk meningkatkan produktivitas hidup secara sosial dan ekonomi bagi
semua.

Secara kesejarahan, Indonesia merupakan negeri kepulauan yang terdiri atas ribuan pulau yang dihuni oleh beragam sukubangsa, kehidupan sosial dan budaya masing-masing. Tiap-tiap sukubangsa memiliki sistem kesehatannya sendiri, termasuk cara perawatan untuk perempuan hamil dan pasca melahirkan. Sepanjang sejarah, beragam tradisi dari Asia Selatan, Tiongkok, Portugis, dan Inggris mempengaruhi kehidupan sosial dan budaya di Indonesia, mereka membawa serta berbagai aspek kebudayaannya sendiri, termasuk sistem perawatan

kesehatannya. Indonesia yang kemudian menjadi negara setelah selama 350 tahun menjadi wilayah jajahan yang dikenal sebagai Hindia Belanda, secara formal meng-adopsi sistem kesehatan Eropa modern warisan pemerintah Hindia Belanda. Meski demikian sistem-sistem pengobatan dan perawatan tradisional masih berlaku hingga sekarang. Perilaku pencarian pertolongan kesehatan, hingga kini masih relevan bagi semua sistem medis. Ketika individu memilih pelayanan yang terkait dengan kesehatan mereka; mereka akan mempertimbangkan berbagai potensi resiko atau untung-rugi dari tindakannya tersebut. Pertimbangan ini dipengaruhi oleh lingkungan, latar belakang sosial budaya dan pandangan hidup mereka. Jika memahami dengan baik mengenai sakit dan penyakit, perilaku mencari pelayanan dapat mengurangi kelambatan diagnosis, meningkatkan pelaksanaan penanganan dan meningkatkan strategi kesehatan dalam berbagai konteks.

Penelitian ini menunjukkan bahwa perilaku penggunaan pelayanan ibu dan anak adalah sebuah proses yang berkaitan dengan saluran medis tertentu dan hal tersebut dipengaruhi oleh oleh beragam variabel sosial ekonomi seperti jenis kelamin, usia, kedudukan sosial khususnya perempuan, akses pelayanan KIA, dan penilaiannya pada kualitas pelayanan tersebut. Ketika menggambarkan faktor-faktor yang dipengaruhu oleh pola-pola tertentu, perlu diperhatikan dengan seksama hambatan-hambatan apa yang harus diatasi oleh perempuan-perempuan hamil dan melahirkan untuk mencapai pelayanan KIA di komunitasnya. Sebuah model konseptual harus dapat menerangkan hubungan antar dan pengaruh antara berbagai faktor terhadp perilaku penggunaan KIA pada tingkat rumah tangga, dalam kaitannya dengan pelayanan kehamilan sampai pasca melahirkan. Penggunaan pendekatan ini membutuhkan banyak penggolongan dan peristilahan, tetapi semuanya menjurus ke pemahaman: psikososial, persepsi, kepercayaan, geografis, kedudukan sosial ekonomi, dan kelembagaan. Faktor-faktor ini tidak selalu memiliki relevansi terhadap perilaku perempuan hamil dalam mencari bantuan kesehatan selama dan setelah kehamilan.

Selama hamil, melahirkan dan pasca-melahirkan, fokus diberikan kepada perempuan. Beberapa kemampuan dalam kehidupannya akan mempengaruhi kebutuhannya untuk mendapatkan perawatan: seperti, pendapatan, status sosial, jaringan sosial, kemandirian dan pertanggungjawaban. Hal ini menjelaskan betapa rumpilnya proses pengambilan keputusan yang dihadapi oleh perempuan yang didasari relasi gender, dalam kesehariannya. Terlebih lagi, faktor-faktor semacam itu dapat mengarah pada keterlambatan dalam memutuskan kapan harus mencari bantuan perawatan, khususnya bila kehamilan mengalami komplikasi, menunda mencapai fasilitas kesehatan yang memadai, dan menunda mendapatkan perawatan di fasilitas kesehatan. *Keterlambatan pertama*, menunjukan kelambatan dalam mengidentifikasi tanda-tanda bahaya suatu kehamilan yang berresiko. Hal ini berkaitan dengan ketakberdayaan perempuan untuk memutuskan sendiri atau bersama anggota keluarga lainnya: misalnya, suami, ayah atau ibu, ayah dan ibu mertua yang mungkin tidak menyadari akan resiko kehamilan atau kurang memperhatikan selama proses melahirkan. *Keterlambatan kedua*, banyak berkaitan dengan isyu pendanaan dan kondisi geografis. Ketika keluarga menyadari bahwa pertolongan dibutuhkan, dan kemudian memutuskan mencari perawatan pada fasilitas kesehatan yang memadai, mereka membutuhkan uang untuk kendaraan dimana jalan dan transportasi umum sangat dibutuhkan. Walaupun demikian, sulitnya akses, khususnya di area yang berbukit dan pegunungan, membawa seorang perempuan yang hendak melahirkan berarti membawanya dengan berjalan kaki untuk beberapa jam agar dapat mencapai fasilitas kesehatan terdekat. Lebih banyak orang dan dukungan dana sangat dibutuhkan, selain sarana transportasi. *Keterlambatan ketiga*, dapat terjadi di fasilitas kesehatan itu sendiri. Ketika perempuan dalam proses melahirkan mencapai fasilitas kesehatan, ia mungkin tidak datang di saat yang tepat, kualitas pelayanan mungkin tidak

memadai, atau fasilitas kesehatan mungkin saja kurang memiliki sarana yang dibutuhkan seperti pelaksana, obat-obatan, peralatan dan ketersiaan darah. Oleh sebab itu, untuk persalinan yang aman, upaya harus dibuat dan dilakukan di tingkat komunitas.

Implementasi sistem KIA modern, yang di dukung oleh Kementerian Kesehatan Nasional sesungguhnya menghadapi suatu proses perubahan sosio-budaya dari sistem tradisional di area tersebut. Kontak kebudayaan dengan sistem medis yang memiliki berkuasa mempengaruhi pandangan mengenai sistem kesehatan tradisional dalam suatu komunitas. Dalam kasus pelayanan KIA tradisional, ketika *paraji* adalah satu-satunya sistem yang bertanggungjawab untuk menolong kehamilan dan kelahiran dalam komunitas masyarakat yang sulit di jangkau, maka pernannya berubah menjadi mediator antara sistem KIA tradisional dan modern. *Paraji* harus mempelajari aspek-aspek tertentu dari pelayanan kesehatan modern misalnya pengetahuan tentang kehamilan yang berresiko tinggi, higienis, pelayanan pengobatan, teknik dan sarananya.

Dalam sistem KIA, pengetahuan mengenai kesehatan ibu termasuk bagaimana kehamilan dan melahirkan menjadi lebih aman begitu juga metoda-metoda tertentu yang digunakan dalam perawatan KIA. Komunikasi juga dapat membantu memperkenalkan nilai-nilai baru, misalnya, cara berkomunikasi dapat membantu memberdayakan perempuan untuk memutuskan pelayanan mana yang akan digunakan dalam merawat kehamilan dan persalinan, dalam kondisi tertentu. Komunikasi dapat mengajarkan bagaimana seseorang berperilaku, contohnya, bagaimana keluarga dan tetangga dapat membantu perempuan hamil. Persepsi seseorang terhadap apa yang dilakukan orang lain dapat mempengaruhi proses pengambilan keputusan dalam kehamilan dan persalinan. Sistem informasi yang terintegrasi dapat menghasilkan rekaman yang terkonsolidasi; pertukaran informasi kesehatan memiliki banyak keuntungan. Informasi yang dibutuhkan tersedia bagi penerima dalam ‘waktu yang tepat’, seperti, di saat layanan dibutuhkan. Fungsi sistem informasi KIA adalah menyertakan berbagai pihak, seperti: komunitas, *paraji*, kader kesehatan, *bidan*, dokter, Posyandu dan Puskesmas.

Bab III mendiskusikan penelitian dalam studi ini sebagai kelanjutan penelitian terapan yang telah dilakukan oleh WHO *Collaborating Centre – Perinatal Maternal and Child Care* (WHOCC–PMC), Universitas Padjadjaran bekerjasama dengan WHO *South-East Asia Regional Office* (WHO–SEARO) dalam program *Making Pregnancy Safer* yang dilakukan pada 2001–2003. Penelitian ini, meliputi dua pendekatan metodologi penelitian yang saling melengkapi: kualitatif dan kuantitatif. Teknik yang digunakan adalah observasi partisipasi dengan cara tinggal beberapa lama di komunitas yang di teliti, dimana pada saat yang sama melakukan wawancara dan menyelenggarakan diskusi dengan informan-informan kunci dan beberapa perwakilan dari komunitas seperti *paraji*, *bidan* dan dokter di Puskesmas bersama dengan semua seksi yang terlibat dalam perawatan KIA. Setelah itu, studi dilanjutkan dengan mempertimbangkan sistem integrasi medis tradisional dan modern, dengan menggunakan kemitraan lebih lanjut antara *paraji* dan *bidan* desa di Rancaekek. Informasi lebih jauh dibutuhkan dalam menyusun cara agar mereka dapat bekerjasama dalam layanan KIA yang terintegrasi.

Usaha untuk mengintegrasikan layanan KIA tradisional dan modern di Indonesia di mulai sebelum kemerdekaan, dan secara kronologis dalam program-program KIA dari waktu ke waktu. Norma-norma pengetahuan dan pelaksanaan tradisional adalah kontras dengan etos ilmu modern, membuat integrasi antara kedua sistem dalam tahapan yang berbeda tersebut masih merupakan suatu permasalahan. Cukup jelas bahwa, dalam tingkat epistemologi, memilih integrasi masih menghadapi hambatan yang sangat besar dengan keanekaragaman kognisi antara sistem medis yang berbeda, meskipun usaha yang dilakukan saat ini dalam

menyesuaikan dan mengubah sistem pengetahuan berdasarkan pengetahuan lokal dan global. Awal 1937 (dalam administrasi kolonial Belanda), memberikan pelatihan kepada dukun bayi di mulai di Purwokerto (Jawa Tengah). Selanjutnya, perencanaan pelayanan kesehatan mengirimkan terus menerus *bidan* yang sudah terlatih ke pedesaan untuk menyelenggarakan layanan KIA. Sementara itu, untuk membantu masyarakat dalam periode tersebut, pelayanan kesehatan menggunakan pusat-pusat pelayanan dan *bidan* yang bertugas untuk melatih dukun bayi tentang perawatan yang higienis. Pada tahun 1950, sebuah lembaga untuk mensuplai makanan bagi masyarakat (Lembaga Makanan Rakyat) di bentuk untuk mendorong masyarakat mengkonsumsi makanan sehat dengan slogan: 'Empat Sehat, Lima Sempurna'. Slogan tersebut berarti bahwa diet sehat harus terdiri dari empat elemen: karbohidrat, protein, lemak dan vitamin, ditambah dengan susu sebagai masukan kalsium. Secara khusus, tujuan Kementrian Kesehatan adalah meningkatkan asupan nutrisi bagi baik ibu untuk kepentingan perkembangan anak dan kelangsungan hidup ibunya. Program Kesejahteraan semacam itu membutuhkan partisipasi masyarakat. Pada masa itu, program terbaik untuk meningkatkan status kesehatan ibu dan anak adalah 'dari rakyat untuk rakyat'. Slogan tersebut, menjadi kebijakan formal untuk hampir semua program pembangunan masa Soekarno.

Semenjak era Soeharto, yang di mulai tahun 1965, paradigma pendekatan kesehatan berubah. Kebijakan kesehatan terdahulu di anggap kurang memadai untuk menciptakan kesinambungan tingkat kesejahteraan bagi masyarakat Indonesia. Oleh sebab itu, Program Keluarga Berencana (KB) dikembangkan untuk mengurangi jumlah anak dengan menggunakan 'norma keluarga kecil' agar dapat mengembangkan kehidupan yang lebih baik norma NKKBS/*Norma Keluarga Kecil Bahagia Sejahtera* menjadi slogan baru. Program KB yang di tolak oleh pemerintahan orde lama dan hanya diaplikasikan oleh Lembaga Sosial Masyarakat (LSM) yaitu Perkumpulan Keluarga Berencana Indonesia (PKBI), sebuah asosiasi KB di Indonesia. Namun demikian, pada tahun 1965, Program Keluarga Berencana menjadi bagian integral dalam pembangunan nasional di Indonesia. Pada tahun 1971, Repelita I/Rencana Pembangunan Lima Tahun Pertama tujuan program KB adalah untuk meningkatkan derajat kesehatan dan kesejahteraan bagi ibu dan anak serta nasional. Semua aktivitas dan program kesehatan secara utuh diintegrasikan dalam pusat-pusat kesehatan yaitu Puskesmas. Puskesmas adalah fasiltas kesehatan di daerah, bertempat di setiap kecamatan. Walaupun, tidak semua populasi di pedesaan menggunakan fasilitas tersebut. Jarak geografis, sosial dan kultural antara Puskesmas dan komunitas lokal adalah bagian dari permasalahan tersebut. Jalan keluar dari situasi tersebut, pada Repelita III (1979-1984), pemerintah memperkenalkan ide untuk menstimulasi partisipasi masyarakat dalam implementasi aktivitas yang berkaitan dengan pencegahan dan pemasyarakatan kesehatan dengan strategi Perawatan Kesehatan Primer (*Primary Health Care*). Strategi tersebut memperkenalkan konsep 'pekerja kesehatan sukarela' atau kader kesehatan, sebagai kunci untuk meningkatkan kesehatan masyarakat. Pertimbangan yang digunakan dalam memperkenalkan konsep tersebut, adalah karena sukarelawan (kader) kesehatan di pilih dari dalam komunitas, dapat memahami kondisi kesehatan komunitasnya sendiri. Kader kesehatan, harus menjadi mediator antara Puskesmas dan masyarakat, agar dapat meyakinkan anggota masyarakat yang belum dapat menerima penggunaan fasilitas kesehatan, dan mau menerima program dalam mensosialisasikan dan mempromosikan kesehatan yang lebih baik. Program-program promosi berdasarkan partisipasi masyarakat berlanjut menjadi kebijakan utama dari Repelita IV (1984–1989). Pengembangan seksi kesehatan dalam organisasi Lembaga Ketahanan Masyarakat Desa/LKMD) dengan sub-seksi Pembinaan Kesejahteraan Keluarga (PKK), dimana kader kesehatan wajib memasyarakatkan program-program sosial yang dikembangkan oleh Departemen Kesehatan kepada masyarakat. Kerangka konseptualnya, secara khusus,

menekankan pada pos integrasi kesehatan (Pos Pelayanan Terpadu/Posyandu) dimana aktivitas utamanya adalah: dilaksanakan oleh komunitas dan di dukung oleh paramedis. khususnya untuk melayani ibu dan anak. Perawatan kesehatan bagi ibu dan anak (KIA), disusun terpisah dan diperkenalkan kepada komunitas secara bersama sebagai satu paket terintegrasi.

Pada tahun 1989, kebijakan untuk menempatkan *bidan* di desa, atau Program *Bidan* Desa, dikembangkan. *Bidan-bidan* tersebut akan menjadi ujung tombak untuk menangani permasalahan dalam perawatan kehamilan, melahirkan, dan pasca-melahirkan. Direncanakan selama lima tahun, Departemen Kesehatan menempatkan 18.900 *bidan* di pedesaan di seluruh Indonesia. Tahun 1995/1996, 5.285 *bidan* sudah ditempatkan di Jawa Barat, berarti 90% dari desa yang ada sudah memiliki *bidan*. Data dari Kantor Wilayah Kesehatan Jawa Barat menunjukkan bahwa, pada tahun 2000, 5.513 *bidan* sudah ditempatkan di seluruh Jawa Barat (Profil Kesehatan Kanwil Jawa Barat, 2000). Penempatan *bidan* di pedesaan diperkuat oleh Peraturan Pemerintah No. 23, 1994; ketika di tunjuk *bidan-bidan* tersebut di angkat sebagai pegawai pemerintah tidak tetap (Agenda *Bidan* Desa, 1997). Penyebab utama kematian ibu di Indonesia adalah: pendarahan setelah melahirkan karena ari-ari/plasenta yang tidak keluar, infeksi, pendarahan, lamanya persalinan, dan komplikasi pada aborsi. Kematian ibu, yang biasanya terjadi pada saat melahirkan seharusnya dapat dihindarkan melalui pemeriksaan dan kecukupan gizi pada saat kehamilan. Kehamilan yang berresiko tinggi dapat di deteksi ketika melakukan pemeriksaan pada tahapan kehamilan ketiga. Seorang perempuan hamil yang memeriksakan kehamilannya pada fasilitas perawatan pra-melahirkan akan di periksa oleh *bidan*: berat tubuhnya, pemeriksaan, mendapat distribusi tablet besi, imunisasi TT dan konsultasi.

Hanya beberapa fasilitas kesehatan di pedesaan dapat beroperasi dengan baik untuk perawatan ke*bidan*an dan bayi baru lahir. Upaya untuk mengembangkan Pondok Bersalin Desa atau Polindes, sebagai program berdasarkan komunitas bagi perawatan ke*bidan*an dan bayi baru lahir oleh *bidan* desa. Polindes, ditempatkan di rumah-rumah terdekat yang memiliki sedikit kelebihan ruang untuk pelayanan kehamilan dan bayi baru lahir di tingkat desa, terutama daerah terpencil. Namun demikian, hanya 50% dari pedesaan di Indonesia yang tersedia pelayanan semacam itu, dan tidak semua fasilitas berfungsi dengan baik. Metoda *top-down* selama intervensi, yang diterapkan oleh pemerintah dapat mempengaruhi dan memisahkan perilaku masyarakat dalam tahapan pra-melahirkan, melahirkan dan pasca-melahirkan dalam tiga kelompok, yaitu: (1) kelompok yang hanya menggunakan sistem medis tradisional bagi setiap tahapan kehamilan sampai melahirkan; (2) kelompok yang menggunakan sistem medis majemuk; seperti fasilitas medis modern untuk perawatan pre-natal, dan memilih sistem medis tradisional ketika kehamilan dinyatakan aman; (3) kelompok yang menggunakan sistem medis modern untuk setiap tahapan kehamilan.

Saat ini, Indonesia menerapkan desentralisasi agar supaya setiap propinsi dapat lebih mandiri. Kemandirian propinsi Jawa barat, dapat memberikan peluang dan kesempatan untuk menentukan kebijakan KIA secara mendiri. Namun demikian, desentralisasi belum sepenuhnya diterapkan dengan pemahaman penuh tentang arti kemandirian, karena lebih dari 30 tahun (masa orde baru) berbagai organisasi dikembangkan dalam sistem yang dikendalikan oleh pusat secara seragam. Semua peraturan harus datang dari pemerintah pusat di Jakarta. Kini, setelah diimplementasikannya desentralisasi bagi setiap propinsi, mentalitas keseragaman dan sistem terpusatkan masih tetap digunakan oleh kantor-kantor pemerintahan propinsi. Alasan tersebut menjawab mengapa desentralisasi saat ini belum secara mandiri diterapkan, begitu juga dengan kesehatan dengan spesifikasi sistem medis majemuk, apalagi Indonesia memiliki etnis yang majemuk pula.

Paraji, adalah istilah Sunda untuk penolong persalinan lokal yang umumnya seorang perempuan yang berusia lanjut, menggunakan bahasa yang sama dengan komunitasnya, kebanyakan buta huruf (Latin, tapi mungkin dapat membaca huruf Arab), kurang dapat berbahasa Indonesia, dan melakukan perawatan kehamilan dan pertolongan persalinan bukan sebagai pekerjaan utama. Status sosio-ekonomi *paraji* biasanya termasuk miskin, karena pekerjaan utamanya adalah buruh tani yang mendapat upah kecil dari pemilik tanah garapannya. Sebagai *paraji*, ia tidak pernah melalui pelatihan formal; ia belajar melalui pengalaman dan melalui observasi dari *paraji* yang lebih senior, mungkin ibunya, neneknya, saudaranya, atau tetangga yang biasa membantu perempuan dalam kehamilannya, melahirkan dan pasca melahirkan. *Paraji* umumnya memiliki kemampuan sebagai perantara yang baik. Lebih jauh lagi, *paraji* itu sendiri biasanya mempunyai orang-orang yang akan melanjutkan profesinya. Ia adalah anggota komunitas yang dilayaninya. Walaupun banyak *paraji* yang buta huruf, ia berbicara dan memahami bahasa yang sama dengan komunitasnya dan menjadi bagian dari sistem kepercayaan dan kebudayaan. Umumnya, seorang *paraji* adalah perempuan yang bijak dan pandai, yang dipilih oleh perempuan-perempuan dalam keluarganya atau desanya karena pendekatan praktisnya dan pengalamannya. Banyak *paraji* memiliki kepribadian yang dinamis dan figur pemimpin yang dapat diterima oleh komunitasnya. *Paraji* adalah praktisi mandiri yang melakukan negosiasi pembayarannya bersama kliennya. Kadang-kadang mereka menerima upahnya dalam bentuk tunai atau hadiah; biasanya kompensasi yang diberikan termasuk status yang dihormati oleh komunitas. Untuk mengurangi AKI dan AKB, Departemen Kesehatan Nasional melalui Dinas Kesehatan Propinsi, untuk setiap kabupaten melakukan sejumlah pelatihan untuk dukun bayi untuk meningkatkan pengetahuannya mengenai kehamilan dan melahirkan, khususnya, bagaimana mengenali kehamilan dengan resiko tinggi, bagaimana merujuk bila situasi semacam itu terjadi, dan mengajarkan pentingnya tindakan yang higienis terhadap tali pusat. Setelah mengikuti pelatihan, dukun bayi terlatih di beri '*Dukun Kit'*. *Paraji* dianggap sebagai bagian dari Keluarga luas dalam komunitas karena perannya dalam kesehatan keluarga. Ketika *paraji* berhasil membantu seorang perempuan (cocok) melalui melahirkan, kemudian anak perempuan klien dan cucu perempuannya akan tetap memakai layanannya ketika mereka hamil. Ada kepercayaan, dalam memelihara hubungan yang baik antara klien dan *paraji*.

Paraji tidak hanya memberikan pelayanan pada saat melahirkan tetapi juga pada masa kehamilan dan pasca-melahirkan terutama melalui upacara-upacara kehamilan dan pasca persalinan. *Pertama*, adalah pada perempuan yang mencari bantuan selama kehamilan pada tingkat individu; pada saat itu penekanan adalah pada pengelolaan kehamilan pada setiap tri-semester, yang paralel dengan perkembangan janin dan langkah-langkah (aksi eksternal) yang dilakukan oleh perempuan hamil dan melahirkan untuk menghubungi sistem KIA tradisional atau modern yang tersedia di daerah penelitian. Sangat menarik, bahwa kedua sistem KIA menggunakan perhitungan yang sama dalam melakukan identifikasi perkembangan janin selama dalam kandungan. Kehamilan terbagi dalam tiga trimester menurut ilmu bio-medis; kehamilan 8-12 minggu. janin akan mulai bergerak yang dirasakan oleh ibunya seperti getaran yang halus. Pengetahuan lokal di masyarakat Rancaekek dan juga *paraji* berdasarkan kepercayaan Islam; sensasi getaran pada 4 bulan kehamilan berarti Allāh meniupkan ruh masuk ke dalam janin sebagai tanda mulai ada kehidupan (*cf*. Bab VI). Untuk menghormati fenomena tersebut, tradisi yang dilakukan oleh keluarga perempuan yang sedang hamil melakukan ritual atau pengajian dengan mengundang tokoh agama untuk memimpin upacara tersebut. Ketika kehamilan mencapai usia 7 bulan, ilmu biomedis memperlihatkan bahwa menggunakan pelayanan medis intensif, beberapa bayi dilahirkan dalam minggu ke 28 akan bertahan hidup. Sementara pengetahuan tradisional menjelaskan bahwa pada bulan ke tujuh

dari suatu kehamilan sudah dianggap ‘cukup usia’; bila bayi terlahir pada saat itu, ia akan dapat bertahan hidup. Perhitungan tradisional menyatakan bahwa pada usia 7 bulan, bayi sudah cukup kuat untuk dilahirkan walaupun perkembangannya belum lengkap. Karena kemungkinan dapat lahir pada usia 7 bulan, maka sebuah ritual yang disebut nujuh bulan harus dilakukan agar proses melahirkn itu selamat baik bagi ibunya maupun bayinya (*cf.* Bab VI). *Kedua*, pola penggunaan sistem KIA di rancaekek terutama menunjukkan penggunaan pelayanan dan faktor-faktor yang menentukan proses selama periode kehamilan dan rumah tangga yang memiliki kondisi sosio-ekonomi yang berbeda. Penilaian kualitas dan jarak pelayanan kesehatan tidak disertakan dalam analisis. Walaupun perawatan yang dilakukan sendiri (aksi internal) selama kehamilan juga termasuk dalam analisis, fokus lebih ditekankan pada aksi eksternal yang akan mengarahkan pada penggunaan perawatan KIA majemuk di daerah penelitian. Sehingga, konsentrasi penelitian dalam penggunaan sistem KIA adalah pada jumlah kontak (*cf*. Bab VII) yang dilakukan oleh perempuan hamil dan melahirkan setelah ditetapkan bahwa dirinya hamil oleh komponen sistem KIA majemuk dalam periode 12 bulan, yang dinyatakan dalam angka berapa kali kontak dilakukan oleh satu atau beberapa sistem.

Walaupun studi di Rancaekek ini melakukan pengumpulan data dari 150 perempuan (*cf*. Bab III), yang hamil dan melahirkan dalam jangka waktu retrospektif 1 tahun, 127 perempuan lengkap menjalani proses aksi eksternal sampai melahirkan. Konsekuensinya, 127 perempuan yang lengkap memenuhi langkah-langkahnya dan melakukan kontak dengan sistem KIA tradisional dan/atau modern selama kehamilan dan melahirkan secara individual diikuti kontaknya dengan layanan KIA, khususnya berdasarkan aksi eksternalnya setelah kehamilannya ditetapkan; 23 perempuan yang pada saat penelitian masih hamil kemudian dikeluarkan dari sampel survai. Berdasarkan pada penggunaan pelayanan KIA, proses yang lengkap di pilih sehubungan dengan langkah-langkah yang dilakukan dalam kontak dengan pelayanan KIA yang dibutuhkan oleh perempuan tersebut ketika hamil dan melahirkan.

Kesehatan ibu dan perilaku mencari bantuan oleh seorang perempuan ketika hamil. Melahirkan, dan pasca-melahirkan memiliki pengaruh yang kuat tidak hanya pada kehidupannya dan anak-anaknya. Berkaitan dengan itu, jelas dibutuhkan pada saat seorang perempuan hamil. Melahirkan, dan pasca-melahirkan membutuhkan bantuan baik untuk dirinya maupun bantuan pada sejumlah pekerjaan yang secara khusus dilakukan perempuan dalam rumah tangganya. Satu kesulitan dirasakan perempuan di Rancaekek, yang menyandarkan diri pada laki-laki kepala rumah tangga dalam finansial sekaligus juga keputusan dalam mencari bantuan. Perempuan hamil dan melahirkan dalam statusnya sebagai istri dan ibu juga membutuhkan dukungan dari anggota keluarga yang lain untuk melakukan pekerjaannya di rumah dan mengasuh anak-anaknya. Walaupun kehamilan bersifat individual, dalam proses mencari bantuan untuk perempuan yang sedang hamil dan melahirkan, anggota keluarga lain juga menjadi terlibat dan menunjukkan simpatinya kepada perempuan tersebut, sehingga banyak yang menunjukkan perhatiannya ketika mengetahui kondisi kehamilannya. Hal ini, kemudian akan diikuti dengan berbagi perhatian pada keadaan fisik dan emosi perempuan hamil juga sekaligus mempersiapkan untuk: melahirkan, upacara yang harus dilakukan selama kehamilan dan setelah melahirkan, serta dana yang dibutuhkan. Banyak anggota keluarga, tetangga, dan kerabat lain akan memberikan saran-saran selama kehamilan dan melahirkan. Mereka juga mau terlibat dalam pemilihan pelayanan KIA yang dipilih oleh perempuan secara individual, atau setelah keputusan di ambil oleh suami dan anggota keluarga lainnya. Pengalaman mengalami kehamilan, melahirkan dan pasca-melahirkan di bangun secara sosial. Keinginan keluarga dan juga tetangga dekat akan memberikan pengaruh pada perempuan hamil dalam proses melahirkannya. Ketika seorang perempuan menjadi

tergantung pada saat proses akan dan melahirkan berlangsung, orang-orang disekitarnya akan mencoba menginterpretasikan gejala-gejala sebagai upaya mencari jalan keluar bagi perempuan tersebut selama proses melahirkan.

Proses perilaku mencari bantuan layanan termasuk semua aksi yang di ambil semenjak gejala pertama dirasakan, diagnosa atau konfirmasi mengenai kehamilan dan melahirkan. Proses mencari bantuan digambarkan sebagai berbagai upaya yang di ambil oleh perempuan hamil yang di dukung oleh semua anggota keluarga, termasuk: tidak melakukan apapun, melakukan aksi internal, dan aksi eksternal yang berarti mengunjungi sistem KIA, dari tradisional ke modern dan sebaliknya, tergantung pada periode khusus dari kehamilannya, juga pada latar belakang kepercayaan dan status keuangan rumah tangga yang berkaitan dengan beberapa faktor sosio-kultural. Berkaitan dengan model analitik yang disajikan dalam Bab III, didiskusikan penggunaan aspek yang berbeda dari sistem KIA majemuk di Rancaekek.

Senioritas memberikan keuntungan sosial sebagai pengambil keputusan, dalam kasus ini perempuan yang dituakan dan dianggap telah berpengalaman dalam penggunaan dan pemilihan layanan KIA yang tersedia di area penelitian. Peran gender, antara suami dan istri juga mempengaruhi proses pengambilan keputusan ketika mencari bantuan yang harus diputuskan oleh kepala keluarga yang dalam budaya Sunda adalah suami. Konsekuensinya, seorang suami secara ideal haruslah lebih tua dalam usia daripada istrinya karena suami harus diperlakukan sebagai ‘kakak laki-laki’. Oleh sebab itu, kedudukan suami dan istri dalam keluarga adalah terstruktur oleh nilai-nilai sosio-kultural keluarga. Pengambilan keputusan dalam berbagai hal, walaupun melalui diskusi antara suami dan istri, kata keputusan terakhir adalah suami sebagai kepala rumah tangga.

Bab VII, menyajikan ‘pohon keputusan’ yang menggambarkan alur perempuan hamil dan melahirkan dalam sistem KIA majemuk di Rancaekek dalam langkah-langkah berurutan sepanjang penggunaan pelayanan kehamilan dalam periode 12 bulan yang lalu. Langkah-langkah yang di lakukan oleh perempuan digambarkan sejak ia merasakan gejala kehamilan, sampai mengambil keputusan untuk memastikan kehamilannya. Penggunaan perawatan KIA baik traditional maupun modern sangat tergantung pada pandangan, kemampuan dan faktor-faktor kelembagaan. Langkah terakhir dari setiap kategori, yang paralel dengan proses melahirkan, dalam proses yang rumit menggambarkan perempuan yang melahirkan dengan menggunakan sistem KIA traditional atau modern yang terdapat di komunitas Rancaekek. Tambahan lagi (*cf*. Figur 7.1. pohon keputusan), aliran mencari layanan perempuan hamil dalam sampel penelitian melalui sistem pelayanan KIA majemuk di Rancaekek menggambarkan keputusan yang di ambil oleh perempuan hamil dalam mencari perawatan KIA, berkaitan dengan variable-variabel bebas dalam kerangka konseptual. Variabel-variabel bebas dalam studi ini adalah: (1) variabel-variabel yang mempengaruhi (*predisposing*) di tingkat individual, seperti: pengetahuan, pandangan, pengambilan keputusan dan kepercayaan; (2) variabel-variabel yang dirasakan (*perceived*), seperti: persepsi mengenai pengalaman selama kehamilan; (3) variabel-variabel yang memungkinkan (*enabling*), seperti: karakteristik sosio-ekonomi di tingkat individual; (4) variabel institusi seperti:akses geografi, seperti jarak ke pelayanan kesehatan; (5) variabel pengaruh, seperti: karakter pengaruh pada tingkat individu melalui pengaruh sistem perawatan KIA yang diperkenalkan dalam komunitasnya. Faktor-faktor bebas mempengaruhi penggunan pelayanan KIA selama kehamilan.

Pohon keputusan menggambarkan cara perempuan hamil dan melahirkan mencari bantuan dalam berbagai strategi penggunaan pelayanan KIA. Pilihan mereka menunjukkan kepercayaan dan pilihan tidak hanya dari perempuan hamil tersebut dan juga keluarganya,

teman dan tetangganya. Kaitan antara pengetahuan mengenai kondisi kehamilan dan persalinan dan konteks sosial yang pada dasarnya rumit, semakin suatu masyarakat menjadi lebih majemuk dalam pengobatan. Suatu komunitas yang menyediakan sistem pengobatan majemuk membuat anggota masyarakatnya dapat memilih perawatan kesehatannya masing-masing. Kesempatan untuk dapat memilih antara sistem medis yang tersedia di wilayahnya yang mengarahkan pada proses integrasi dalam penggunaan sistem-sistem tersebut.

Model *multivariate,* dalam studi ini berdasarkan konsep 'etnosistem', yang tidak hanya memperluas perspektif mengenai kebudayaan akan tetapi juga memungkinkan penilaian komponen kognitif dan dan perilaku dari suatu kelompok tertentu sebagai sistem dalam mode yang lebih *holistic*. Lebih penting lagi, definisi etnosistem, lebih jauh memberikan kemungkinan memperluas konsep kebudayaan sebagai hasil proses historis dari akulturasi secara lebih dinamis. Hal ini mengakomodasikan analisis yang telah dinyatakan terdahulu mengenai penggunaan pelayanan KIA tradisional dan modern.

1. Pandangan Partisipan (*Participants' View*)
   Pertimbangan untuk menyertakan pandangan partisipan, atau populasi sasaran, ketika merencanakan dan menerapkan suatu proses inovasi dan pembangunan yang memberikan mendorong pandangan relativisme baru terhadap budaya dan masyarakat lain.

2. *Bidan*g Studi Etnosistem (*Field of Ethnosistems Study/*FES)
   *Bidan*g studi etnosistem merujuk pada konsep 'kultur area', dalam kasus Indonesia, budaya tertentu dapat menggambarkan juga mengenai: klasifikasi kekerabatan, pola-pola organisasi social, ornamen pada gendang kuningan, pola-pola pakaian tenun dan persepsi serta pelaksanaan pengobatan yang tersebar di wilayah tertentu yang biasa di sebut sebagai '*Bidan*g Studi Antropologi' (*Field of Anthropological Study*).

3. Dimensi Historis (*Historical Dimension*)
   Ketika mempelajari dan melakukan analisis suatu konfigurasi yang kompleks, misalnya medis, kepercayaan atau pertanian, pendekatan yang berorientasikan pada masa kini sering gagal menunjukkan pentingnya proses dinamis dari asal mulanya sampai ke perkembangannya, yang menyebabkan kompleksitas masa kini. Kesimpulannya, aspek-aspek studi dan analisis dari kebudayaan lain membantu mendefinisikan pendekatan baru dalam etnosistem dalam arti yang lebih luas dan memberikan stimulasi pada penilaian ulang pada masa kini dalam 'pembangunan dimensi kultural' (*cultural dimension of development*) dalam upaya kerjasama internasional.

Dalam kasus *paraji* dan *bidan* di Indonesia, integrasi medis untuk kemitraan lebih lanjut antara dukun bayi dan *bidan* desa di Rancaekek, Bandung, Jawa Barat. Populasi penelitian adalah perempuan yang mengalami kehamilan atau melahirkan dalam jangka waktu periode 12 bulan. Semua perempuan dalam kategori tersebut menjadi populasi studi, semua kelompok dengan latar belakang khusus tersebut ter-representasi dalam sampel penelitian – seperti suku bangsa, pendidikan, pekerjaan, kepercayaan, status sosio-ekonomi, dan sebagainya – keputusan untuk memilih desa-desa sampel berdasarkan kategorisasi pemerintahan lokal.

Upaya untuk menggambarkan dan menjelaskan model penggunaan sistem KIA di Rancaekek dapat memperlihatkan hubungan dan perubahan perilaku antara *paraji* dan *bidan,* membedakan berbagai sifat dari pelaku sosial dan sistem sosial yang tergabung dalam cara-cara tertentu dan pada kurun waktu tertentu pula. Model *multivariate* mencoba menggambarkan dan menjelaskan bagaimana seseorang atau perubahan sistem sosial

sepanjang waktu. Dalam kasus penggunaan pelayanan KIA, pertanyaan tentang bagaimana perubahan dalam kekuatan yang memaksa suatu negara melalui intervensi sistem KIA modern ke dalam perawatan KIA lokal yang tumbuh secara alamiah di Rancaekek mempengaruhi diterimanya dan penolakan dalam komunitas.

Dalam Bab VIII, analisis *bivariate* membantu memastikan hubungan antar variabel-variabel yang mempengaruhi penggunaan sistem KIA tradisional dan modern. Dalam tabulasi silang, variabel bebas dan variabel pengganggu (*intervening*) terdistribusi dalam dua variable bergantung untuk sistem penggunaan KIA tradisional dan modern. Variabel bergantung (*dependent*) menunjukkan secara tepat angka-angka untuk pelayanan KIA, seperti yang dilaporkan oleh responden dalam periode 12 bulan sebelum survai dilakukan di area penelitian. Fakta yang dijelaskan dalam analisis bivariate menunjukkan asosiasi yang kuat antara berbagai variable yang mempengaruhi faktor-faktor sosio-demografis: semakin maju suatu desa semakin minim peran yang dimainkan oleh *paraji*; latar belakang pendidikan dan pekerjaan perempuan dan suaminya mempengaruhi penggunaan pelayanan KIA tradisional atau modern. Asosiasi antara variable dalam faktor-faktor yang mempengaruhi psiko-sosial menunjukkan bahwa pengetahuan mengenai proses kehamilan, kehamilan beresiko tinggi dan keguguran menunjukkan korelasi yang kuat dengan penggunaan perawatan KIA tradisional; dan pendapat tentang *paraji* dan *bidan* dengan kepercayaan mengenai tabu selama kehamilan, melahirkan dan pasca melahirkan juga menunjukkan korelasi kuat dengan penggunaan kedua sistem KIA. Status sosio-ekonomi dan akses geografis menunjukkan korelasi yang kuat dengan penggunaan sistem KIA tradisional dan modern di Rancaekek.

Akibatnya, langkah kedua dari analisis merefleksikan pengaruh secara menyeluruh dari seluruh faktor-faktor bebas dan pengganggu dalam hubungannya dengan dan antara satu sama lain. Analisis multivariate yang disebut OVERALS tidak hanya dapat mengidentifikasikan determinan untuk penggunaan perawatan KIA saja, tetapi juga memungkinkan untuk mengukur pengaruh relatif dari berbagai variable dalam pola-pola menyeluruh dari perilaku mencari bantuan selama kehamilan dan melahirkan. Langkah terakhir dari implementasi menggunakan analisis regresi menunjukkan hubungan-hubungan lebih jauh antara kelompok variable, menandakan dan diwakili sebagai ‘blocks’ dalam model, dengan menuunjuk pada hubungan perhitungan koefisien regresi. Analisis secara esensial memiliki peran dalam memberikan penjelasan mengenai pengetahuan dan membantu memahami prediksi nilai-nilai terhadap interaksi menyeluruh antara variabel-variabel dalam perilaku KIA di Rancaekek. Bab tersebut menyimpulkan dengan sebuah interpretasi dan diskusi dari keluaran dari analisis dalam hubungannya dengan struktur dari model penggunaan medis.

Paraji dengan pengetahuannya mengenai pengobatan herbal di pedesaan Indonesia memainkan peran khusus secara sosio-kultural, tidak hanya untuk perempuan hamil dan melahirkan tetapi juga menjadi konsultan kesehatan keluarga. Kehilangan seorang *paraji* berarti kehilangan perawatan tardisional mengenai KIA, kehamilan, melahirkan dan pengobatan herbal yang akan hilang bersama dirinya. Penganjur pengetahuan terintegrasi sebagai kunci pembangunan dalam mengantisipasi peningkatan kemitraan antara *paraji* dan *bidan* di Rancaekek begitu juga dalam setiap komunitas di Indonesia. Mempertahankan pengetahuan tradisional harus di dukung oleh kebijakan politis dari pemerintah dan dalam semua tingkatan dari lembaga-lembaga terkait di negara seperti Indonesia.

Walaupun laporan WHO pada tahun 2008, menekankan pergeseran perhatiannya dari kesehatan ibu dan anak kepada kesehatan komunitas secara menyeluruh, dengan memperhatikan pengembangan sumber daya manusia pada generasi yang akan datang membutuhkan perhatian lebih lanjut pada kebijakan kesehatan. Sumberdaya untuk melakukan

integrasi dalam sistem KIA sangat penting bila kondisi kesehatan dalam suatu negara harus ditingkatkan. Dalam perawatan KIA tradisional, *paraji* masih memiliki peranan yang kuat, dan dalam pelayanan KIA modern, *bidan* ahli dan terdidik yang secara formal ditugaskan oleh Kementerian Kesehatan menyediakan perawatan kesehatan untuk ibu dan anak dalam komunitas. *Paraji* yang sudah terlatih memiliki peran strategis dalam menstimulasi partisipasi masyarakat dalam program-program *Safe Motherhood*. Pelatihan dukun bayi, yang sudah di mulai sejak tahun 1980-an, sebagai strategi dan cara untuk menurunkan morbiditas dan kematian ibu telah berhasil secara global. Dewasa ini, pelatihan dukun bayi sangat terbatas, yang menunjukkan situasi yang potensial dengan resiko bagi masyarakat di daerah terpencil yang jarang dijangkau oleh pelaksana kesehatan. *Paraji* memiliki peran yang sangat penting sebagai perantara antara masyarakat dan sistem kesehatan formal, membantu mengintegrasikan mereka dalam sistem KIA mejemuk melalui kreasi kemitraan yang akan menurunkan kematian ibu dan bayi. Daripada menunjuk *paraji* sebagai penyebab tingginya kematian ibu dan bayi, akan jauh lebih baik meningkatkan perannya dengan menyediakan pendidikan dan melestarikan kemitraan lebih lanjut antara sistem KIA di Indonesia. Lebih lanjut, rumah tangga dan komunitas harus mendapatkan pendidikan untuk memahami dan mampu secara mandiri mendukung program KIA yang diintroduksikan oleh lembaga-lembaga nasional dan internasional.

Lebih penting lagi, untuk memperbaiki perawatan KIA dalam komunitas dengan spesifikasi perawatan dan pelayanan kesehatan reproduksi, *bidan* sebagai tenaga kesehatan bagi ibu dan anak dan *paraji* yang ahli, perlu memberikan stimulasi dan menggerakkan semua komponen dalam komunitas untuk berpartisipasi, untuk mencapai kehamilan dan melahirkan yang aman. Pendidikan ke*bidan*an sebagai *bidan* desa sebaiknya menyertakan dalam kurikulumnya pengetahuan mengenai pembangunan masyarakat, hal itu amat berguna dalam meningkatkan partisipasi masyarakat. Rantai partisipasi menghubungkan komunitas secara keseluruhan dari tingkat yang paling bawah (’akar rumput’ = *bottom*), di mulai di tingkat rumah tangga, meningkat ke lingkungan ketetanggaan, *paraji*, kader kesehatan, pusat kesehatan masyarakat, pemerintahan lokal dan seluruh masyarakat, akan meningkatkan fungsi pelayanan KIA di Indonesia untuk masa yang akan datang.

BIBLIOGRAPHY

Adams, W.M. & L.J. Slikkerveer (Eds.), (1996) *Indigenous Knowledge and Change in African Agriculture, Studies in Technology and Social Change*, No. 26, TSC Programme, Ames, IO: Iowa State University.

Adimihardja, K. (1999) "Indigenous Agricultural Knowledge in Mount Halimun Area, West-Java", INDAKS Project Report, Bandung: INRIK.

Adimihardja, K. (2007) "Sinergi Kreativitas, Inovasi Dengan Budaya", in: *Pikiran Rakyat*, 24/3/2007, p. 28.

Adisewoyo, S. & S. Tjokronegoro (1984) "Natural Biological Compounds Traditionally Used as Pesticides and Medicines", in: Hanks J. (Ed.), *Traditional Lifestyles, Conservation and Rural Development*, IUCN Commission on Ecology Development, Paper 7, pp. 11–14.

Afdhal, A.F. and R.L. Welsch (1991) "The Rise of the Modern *Jamu* Industry in Indonesia: A Preliminary overview", in: S. van der Geest and S.R. Whyte (Eds.), *The Context of Medicines in Developing Countries, Studies in Pharmaceutical Anthropology*, Amsterdam: Het Spinhuis.

Aguirre, A.D.M. & C.C. Veneracion (1999) *Life Cycle Approach to Health Service Delivery: The Bataraza Experiment*, Institute of Philippine Culture, Manila: Ateneo De Manila University.

Agung, A.A.G. (2005) *Bali Endangered Paradise? Tri Hita Karana and the Conservation* of the Island's Biocultural Diversity, PhD Thesis, Universiteit Leiden.

Ahmed, S.M. *et al*., "Gender, Socio-Economic Development and Health- Seeking Behaviour in Bangladesh", *Social Science and Medicine*, 51/3 (2000) 361–371.

Albrecht, G.L. *et al*. (Eds.) (2000) *The Handbook of Social Studies in Health & Medicine*, London: Sage Publication.

Alcorn, J.B. (1999) "Indigenous Resource Management Systems", in: D.A. Posey (Ed.), *Cultural and Spiritual Values of Biodiversity: A Complementary Contribution to the Global Biodiversity Assessment*, London: Intermediate Technology Publication, pp. 203–206.

Alfian (Ed.) (1977) *Segi-segi Sosial Budaya Masyarakat Aceh: Hasil-hasil Penelitian dengan Metode Grounded Research*, Jakarta: Lembaga Penelitian dan Penerangan Ekonomi dan Sosial.

Alisjahbana, A.D. (1993) *The Implementation of the Risk Approach on Pregnancy Outcome by Traditional Birth Attendants, The Tanjungsari Study in West-Java, Indonesia*, Rotterdam: Erasmus Universiteit.

Alisjahbana, A.D. *et al*., "An Integrated Village Maternity Service to Improve Referral Patterns in Rural Area in West-Java", *International Journal of Gynecology & Obstetrics*, Suppl. 48 (1995) S83–S94.

Amar, S.C.D. (2010) *Gunem Catur in the Sunda Region of West Java:Indigenous Communication in the MAC Plant Knowledge and Practice within the Arisan in Lembang, Indonesia*, Leiden Ethnosystems and Development Programme (LEAD) Studies No. 6, Leiden: Leiden University.

Ambaretnani, P. (1999) "*Pelatihan Wanita dan Kesehatan bagi Tenaga Kerja Indonesia Wanita*", *Warta Demografi UI*, Issue: ke 29, No. 2.

Ambaretnani, P. (2002) *Operational Research on Community and Facility Based Interventions for Making Pregnancy Saver in Rancaekek, West Java*, WHOCC-PMC, Bandung: Universitas Padjadjaran.

Ambaretnani, P. (2002) *Preventing Post-partum Hemorrhage from Research to Practice in Bale Endah District, West Java*, WHOCC-PMC UNPAD and JHPIEGO, Bandung–Baltimore, MD.

Ambaretnani, P. and S. Riawanti (1995) "Local Maternal Health Care in Tanjungsari, Sumedang, West Java", in: *Adaptation and Development, Interdisciplinary Perspectives on Subsistence and Sustainability in Developing Countries*, Proceedings International Seminar on Indigenous Knowledge (Bandung: UPT INRIK – Padjadjaran University).

Ambaretnani, P. & S. Riawanti (1996) *Focus Group Discussions and In-depth Interviews in Women and Health for Women Migrant Worker*, Center for Woman's Study and Health Research Unite (Bandung: Medical Faculty Padjadjaran University).

Ambaretnani, P. & S. Riawanti (1999) *Upaya Meningkatkan dan Melindungi Kesehatan Reproduksi TKIW* (Yogyakarta: Galang Press).
Ambaretnani, P. & R. Sitaresmi (2003) *Post-Partum Haemorrhage and Pregnant Women in Bale Endah, Bandung – West Java*, WHO-CC Universitas Padjadjaran, in collaboration with JHPIEGO, Baltimore, MD.
Anderson, E.N. (1996) *Ecologies of the Heart: Emotion, Belief, and the Environment* (New York: Oxford University Press).
Anderson, R. & J. Newman, "Societal and Indivdual Determinants of Medical Care Utilization in the United States", *Milbank Memorial Fund Quarterly*, 51 (1973) 95–124.
Anggorodi, R. (2009) "Dukun Bayi dalam Persalinan oleh Masyarakat Indonesia", *Makara Kesehatan*, 13/1 (2009) 9–14.
Arce, W.F. (2001) *Systematic Qualitative Data Research: An Introduction for Filipino Practitioners*, Office of Research and Publications (Manila: Ateneo de Manila University).
Ayalew, S., "The Drug Business and its Implications for the Development of Health Services in Ethiopia", *Ethiopian Journal of Development Research*, 3/1 (1979).
Babbie, E. (2004) *The Practice of Social Research*, 10th edn. (Orange, CA: Chapman University, Thomson Wadsworth).
Baer, H.A. *et al.* (2003) *Medical Anthropology and the World System* (Westport, CT: Greenwood Publishing Group).
Bale, J.R. *et al.* (Eds.) (2003) *Improving Birth Outcomes, Meeting the Challenge in the Developing World* (Washington, DC: National Academic Press).
Bannermann, R.H. (1983) "The Role of Traditional Medicine in Primary Health Care", *Traditional Medicine and Health Care Coverage* (Geneva: WHO).
BPS (2010) Hasil Sensus Penduduk 2010, Data Agregat per Provinsi.
Berkes, F. (1999) *Sacred Ecology: Traditional Ecological Knowledge and Resource Management* (Philadelphia, PA: Taylor & Francis).
Bernard, H.R. (1988) *Research Methods in Cultural Anthropology* (London: Sage Publications).
Bernstein & Miller, "The Core Competencies for Basic Midwifery Practice", *Journal of Midwifery & Women's Health*, 47/6 (2002) 518–529.
Bibeau, G. (1981) *Social Science and Medicine, Part A*: *Medical Sociology*, Vol. 15, Issue 3, Part 2, pp. 357–370.
Bibeau, G. in: M. Nichter (Ed.) (1989) *Anthropology and International Health, South East Asian Case Studies* (Dordrecht: Kluwer Academic Publishers).
Bodeker, G.C. (1994) "Traditional Health Care and Public Policy: Recent Trend", *Traditional Medical Systems in Public Policies, Proceedings of an International Workshop*, Ottawa, Canada, pp. 96–109.
Bodeker, G.C. (1997) "Introduction", in: *Medicinal Plants for Forest Conservation and Health Care*, Non-Wood Forest Products, Food and Agriculture Organization of the United Nations.
Bogers, R.J., L.E. Craker & D. Lange, (2006) *Medicinal and Aromatic Plants, Agricultural, Commercial, Ecological, Legal, Pharmacological and Social Aspects*, Wageningen, The Netherlands.
Brokensha, D., D.M. Warren & O. Werner (1980) *Indigenous Knowledge Systems and Development* (Washington, DC: University Press of America).
Browner, C.H. & C.F. Sargent (1996) "Anthropology and Studies of Human Reproduction", in: *Medical Anthropology, Contemporary Theory and Method* (London: Praeger).
Bruner, E.M. & J.O. Becker (Eds.) (n.d.) *Art, Ritual and Society in Indonesia, Ohio University Papers in International Studies*, Southeast Asia Series No. 53 (Athens OH: University Center for International Studies).
Buono, B.D., "Influence of Maternal Health Literacy on Child Participation in Social Welfare Programs", *American Journal of Public Health*, 100/9 (2008) 1662–1665.
Burke, P. (1993) *History and Social Theory* (Ithaca, NY: Cornell University Press).
Bushkens, W.F.L., in: B. Helander (1990) "Getting the Most Out of It: Nomadic Health Care Seeking and the State in Southern Somalia", *Nomadic Peoples*, No. 25/27, pp. 122–132.

Buschkens W.F.L. & L.J. Slikkerveer (1982) *Health Care in East Africa, Illness Behaviour of the Eastern Oromo in Hararghe (Ethiopia)* (Assen: Van Gorcum).

Campbell, O. *et al.* (1997) *Lessons Learnt: A Decade of Measuring the Effects of Safe Motherhood Programmes*, DFID Research Work Programme on Population and Reproductive Health Maternal and Child Epidemiology Unit, London School of Hygiene & Tropical Medicine.

Carlson, T.J.S. & L. Maffi (2004) "Introduction: Ethnobotany and Conservation of Biocultural Diversity", in: T.J.S. Carlson & L. Maffi (Eds.), *Ethnobotany and Conservation of Biocultural Diversity* (Bronx, NY: New York Botanical Garden Press) pp. 1–6.

Chofyan, I. (2005) *The Change of Farmer's Work Due to the Conversion of Agricultural Land into Industrial Land*, Case Study in Rancaekek Sub-District, Departemen Teknik Planologi, ITB.

Cockerham, W.C. (1978) *Medical Sociology* (Englewood Cliffs, NJ: Prentice-Hall).

Cohen, M.H. (2000) *Beyond Complementary Medicine: Legal and Ethical Perspectives on Health Care*, University of Michigan Press.

Colfer, C.J.P. (Ed.) (2008) *Human Health and Forests, A Global Overview of Issues, Practices and Policy, People and Plants International*, Conservation Series (London: Earthscan).

Colson, A.C. & K.E. Selby (1974) "Medical Anthropology", in: B.J. Siegel *et al*. (Eds.), *Annual Review of Anthropology*, Vol. 3 (Palo Alto, CA: Annual Review Inc.).

Comelles, J M. (1996) "Da superstizioni a medicina popolare: La transizione da un concetto religioso a un concetto médico", *AM Rivista Italiana di Antropologia Medica*, 1–2 (1996) 57–58.

Costa-Pierce, B.A. & Soemarwoto, "Integration of Aquaculture Ecosystems in the Development of Hydropower Dams in Asia: An Indonesian Case Study", *Journal of Environmental and Development* (1998).

Cotton, C.M. (1996) *Ethnobotany, Principles and Applications* (New York: John Wiley & Sons).

Damodar, M.H.N., P.N. Sharma & T.P. Jain, "The impact of training traditional birth attendants on the utilisation of maternal health services", *Journal of Epidemiology and Community Health* 33/2 (1979) 142–144.

Denzin, N.K. & K.E. Ryan (2007) "Qualitative Methodology (Including Focus Group)", in: W. Outhwaite & S.P. Turner (Eds.), *Social Science Methodology* (Los Angeles, CA: Sage Publications).

DePadua, L.S., B. Nanthawan, R.H.M.J. Lemmens & J.L.C.H. van Valkenburg (1999) *Medicinal and Poisonous Plants. Plant Resources of South-East Asia*, No. 12 (Leiden: Backhuys).

Departemen Kesehatan RI (1978) *Materia Medika Indonesia*, Jilid II, Jakarta, Departemen Kesehatan RI.

Departemen Kesehatan (2003) *Penyelenggaraan Pengobatan Tradisional:* Keputusan MenKes RI, No: 1076/MenKes/SK/VII/2003.

Departemen Kesehatan RI (2007) *Kebijakan Obat Tradisional Nasional*, Jakarta, Departemen MenKes, VII.

Djajanegara, S. (1991) *Program Keluarga Berencana dan Pembangunan di Indonesia*, Paper Series 1 (Jakarta: Lembaga Demografi).

Djajasudarma, F. (2007) "Bahasa Sunda Kini", in: *Pikiran Rakyat*, 24 February 2007, p. 17.

Dunn, F.L. (1976) "Traditional Asian Medicine and Cosmopolitan Medicine as Adaptive Systems", in: C. Leslie (Ed.), *Asian Medical Systems: A Comparative Study* (Berkely, CA: University of California Press), pp. 133–158.

Dunnewold, A. & D.G. Saford (1994) *Postpartum Survival Guide* (Oakland, CA: New Harbinger Publications).

Dwiyanto, A. & M. Darwin (Eds.) (1996) *Seksualitas, Kesehatan Reproduksi, dan Ketimpangan Gender*, Implementasi Kesepakatan Konferensi Kependudukan Kairo bagi Indonesia, Jakarta: Pustaka Sinar Harapan bekerjasama dengan Pusat Penelitian Kependudukan Universitas Gadjah Mada dan The Ford Foundation.

Edgren, L., "The Meaning of Integrated Care: a System Approach", *International Journal of Integrated Care*, 8 (2008).

Eisenberg, L. & Kleinman (1981) *The Relevance of Social Science for Medicine* (Dordrecht: D. Reidel Publishing).

Environmental Contaminants and Pollutants – Group B3 (http://www.afbini.gov.uk/).
Ernst, E. (2005) "Second Thoughts on Integrative Medicine", *Journal of Family Practice*, 54/2 (2005).
Etkin, N.L. (1996) "Ethnopharmacology: The Conjunction of Medical Ethnography and Biology of Therapeutic Action", in: *Medical Anthropology Contemporary Theory and Method* (Westport, CT: Praeger).
Fabrega, H. (1974) *Disease and Social Behavior: An Interdisciplinary Perspective* (Cambridge, MA: The MIT Press).
Family Care International and Safe Motherhood Inter-Agency Group, in: *Safe Motherhood Fact Sheets*: 11 fact sheets prepared from the Safe Motherhood Technical Consultation in Sri Lanka, 18–23 October 1997, Family Care International.
Farmer, R.D.T. & D.L. Miller (1977) *Lecture Notes on Community Medicine* (Oxford: Blackwell Scientific Publications).
Farnsworth, N.R. (1994) *Ethnopharmacology and Drug Development*, CIBA Foundation Symposium 185, DOI: 10.1002/9780470514634.ch.4.
Farnsworth, N.R., O. Akerele, A.S. Bingel *et al*., "Medicinal Plants in Therapy", *Bulletin of the World Health Organization*, 63/6 (1985) 965–981.
Fauveau, V. *et al.*, "The Effect of Maternal and Child Health and Family Planning Services on Mortality: Is Prevention Enough?", *British Medical Journal*, 301 (1990) 103–107.
Ferzacca, S., "A Javanese Metropololis and Mental Life", *Ethos*, 30/1–2 (2002), 95–112.
Fink, R. (1969) "The Measurement of Medical Care Utilization", in: Merwyn R. Greenlick (Ed.), *Proceedings of a Conference on Conceptual Issues in the Analysis of Medical Care Utilization Behavior*, Portland, OR, Oct. 29–31.
Fortney, J.A., "The Importance of Family Planning in Reducing Maternal Mortality", *Studies in Family Planning*, 18/2 (1987) 109–114.
Foster, G.M., "Relationships between Theoretical and Applied Anthropology: a Public Health Program Analysis", *Human Organization*, 11/3 (1952) 5–16.
Foster, G.M. (1958) *Problems of Intercultural Health Programs*, Social Science Reasearch Council, Pamphlet 12, New York.
Foster, G.M. (1983) "An Introduction to Ethnomedicine", in: *Traditional Medicine and Health Care Coverage* (Geneva: WHO).
Foster, G.M. & B.G. Anderson (1978) *Medical Anthropology* (New York: Alfred A. Knopf).
Foucault, M. (1991) "Governmentality" (trans. Rosi Braidotti, revised by C. Gordon), in: G. Burchell, C. Gordon & P. Miller (Eds.), *The Foucault Effect Studies in Governmentality* (Chicago. IL: University of Chicago Press) pp. 87–104.
Fowler, C. (2008) "National Public Health Initiatives that Integrate Traditional Medicine", in: C.J.P. Colfer (Ed.), *Human Health and Forests, A Global Overview of Issues, Practices and Policy*, People and Plants International, Conservation Series (London: Earthscan).
Future Search Conference Report (1998–1999) *Lives not Valued Deaths not Mourned Bangladesh*: UNICEF.
Geertz, C. (1960) *The Religion of Java* (Chicago, IL: University of Chicago).
Geertz, C. (1983) *Abangan, Santri, Priyayi dalam Masyarakat Jawa* (Jakarta: Pustaka Jaya).
Geertz, H. (1983) *Keluarga Jawa* (Jakarta: Grafiti Pers).
Geest, S. vd (1991) "The Context of Medicines in Developing Countries", *Studies in Pharmaceutical Anthropology* (Amsterdam: Het Spinhuis).
Gifi, A. (1981) *Non-Linear Multivariate Analysis* (Leiden: Leiden University, Department of Data Theory).
Glick, L., "Medicine as Ethnographic Category: the Gimi of the New Guinea Highlands", *Ethnology*, 6 (1967) 31–56.
Gollin, L.X.,"Apotik Hidup: Indonesia's Living Apothecary", *HerbalGram*, 29 (1993).
Good, G.M. & V.N. Kimani, "Urban Traditional Medicine: A Nairobi Case Study", *East African Medical Journal*, 57/5 (1980) 301–316.

Goodenough, W.H., "Componential Analysis and the Study of Meaning", *Language*, 32 (1956) 195–216.
Google Search, tatiksblasipsstu.blogspot.com/2010/10/kebudayaan mitoni.

Graham W., "Now or Never: the Case for Measuring Maternal Mortality, *Lancet*, 359/9307 (2002) 701–704.
Gray, A. (1999) "Indigenous Peoples, Their Environments and Territories", in: D.A. Posey (Ed.), *Cultural and Spiritual Values of Biodiversity: A Complementary Contribution to the Global Biodiversity Assessment* (London: Intermediate Technology Publications), pp. 59–118.
Greenlick, M. *et al.* (1973) *Health Care Utilisation Research* (Portland, OR: Kaiser Health Services Research Centre).
Greenwood, A. *et al.*, "A Prospective Survey of the Outcome of Pregnancy in Rural Area of Gambia", *Bulletin of the World Health Organization*, 65/5 (1987) 635–643.
Grimm, L.G. & P.R. Yarnold (1995) *Reading and Undersyanding Multivariate Statistics* (Washington, DC: American Psychological Association).
Hahn, R.A. (Ed.) (1999), *Anthropology in Public Health*, (Oxford: Oxford University Press).
Hardon, A. *et al.* (1995) *Applied Health Research Manual: Anthropology of Health and Health Care* (Amsterdam: University of Amsterdam: Medical Anthropology Unit).
Hargono, J. (2008) *History of Jamu*, *The Indonesian Medical Observer*, Admin Sidomuncul.
Harsojo, (1979) "Kebudayaan Sunda", in: Koentjaraningrat (Ed.), *Manusia dan Kebudayaan di Indonesia* (Jakarta: Penerbit Djambatan).
Hart, D.V. *et al.* (1965) *Southeast Asian Birth Customs, Three Studies in Human Reproduction* (New Haven, CT: Human Relations Area Files).
Helman, C.G. (2000) *Culture, Health and Illness*, 4th edn. (Oxford: Butterworth Heinemann).
Hidding, K.A.H. (1948) *Indonesische Mystiek*, Indonesie, 1ste jrg.
Higginbotham, N., S. Freeman & G.A. Albrecht, "Complexity an Human Health: The Case for a Transdisciplinary Paradigm", *Culture, Medicine and Psychiatry*, 22 (1998) 55–92.
Hiroko, H.R., "Asrama: An Islamic Psychiatric Institution in West Java", *Soc. Sci. & Med.*, 14b/3 (1980) 157–167.
Holden, P. & J. Littlewood (1991) *Anthropology and Nursing* (London: Routledge).
Hughes, C.C. (1968) "Ethnomedicine", in: *International Encyclopedia of the Social Sciences* (New York: Macmillan) pp. 87–93.
Hull, T.H. (1989) "Roots of Primary Health Care Institutions in Indonesia" in: J. Caldwell *et al.* (Eds.), *Health Transistion: the Cultural, Social and Behavioral Determinants of Health*; *Proceedings of International Workshop*, Vol. II, Canberra, pp. 500–508.
Hull, T.H. *et al.* (1996) "The Rashomon Technique in Indonesia: Innovations in Qualitative Data Collection", Paper presented to *Population Association of America Annual Meeting*, May 9–11, New Orleans, LA.
Hurgronje, C.S. (1883) *De Beteekens van den Islam voor Zijne Belijders in Oost-Indie*, Leiden.
Hydrick, J.L. (1942) *Intensive Rural Hygiene Work in the Netherlands East Indies* (New York: The Netherlands Information Bureau).
Ibui, A.K. (2007) *Indigenous Knowledge, Belief and Practices of Wild Plants among the Meru of Kenya: Past and Present Human-Plant Relations in East Africa*, PhD Thesis, Leiden University, The Netherlands.
IIRR, Plan and SCF (2000) *Indigenous Knowledge and Practices on Mother and Child Care*, Experiences from Southeast Asia and China, International Institute of Rural Reconstruction, Plan International and Save the Children Federation, Inc., Philippines.
Illich, I. (1976) *Limits to Medicine, Medical Nemesis: Expropriation to Health* (UK: Marion Boyars).
ILO (1989) *Concerning Indigenous Peoples in Independent Countries*, Convention 169.
Iskandar, M.B. & T.H. Hull (1996) *Re-examining the Witnesses of Maternal Death in Indonesia: Was it Simply Because Her Time Had Come?*, Working Paper, Seminar on Innovative Approaches to the Assessment of Reproductive Health, Organized by Reproductive Health of the International Union for the Scientific Study of Population, 24–27 September, Manila.

Iskandar, M.B. & S.R. Darwisyah (1998) *Dampak Krisis Ekonomi terhadap Kesehatan Masyarakat Rentan*, Prosiding Lokakarya Nasional, Yayasan Lembaga Konsumen Indonesia, Pusay Komunikasi Kesehatan Berperspektif Jender, dan The Ford Foundation.

Islam, A. (1994) "Understanding Traditional Medical Systems: A Sociological Perspective, Traditional Medical Systems and Public Policy", *Proceedings of an International Workshop*, Ottawa, Canada, pp. 71–85.

Islam, A. & R. Wiltshire (1994) "Traditional Medical Systems and Public Policy", *Proceedings of an International Workshop*, Ottawa, Canada.

Istiarti, T. (1998) *Pemanfaatan Tenaga Bidan Desa*, Yogyakarta: Pusat Penelitian Kependudukan Universitas Gadjah Mada.

Jamu after Birth, http://www.thejamushop.com/jamu_slimming_set.htm (accessed 23 September 2008).

Janzen, J.M. (1978) *The Quest for Therapy: Medical Pluralism in Lower Zaire* (Berkeley, CA: University of California Press).

Jha, P.M.A., K. Hanson *et al*., "Improving the health of the global poor", *Science*, 295 (2002) 2036–2039.

Jocano, F. Landa (1973) *Folk Medicine, in Philippine Municipality* (Philippines: PUNLAD Research House).

Joglo Semar, www.JogloSemar.co.id.

Jordaan, R.E. (1985) *Folk Medicine in Madura (Indonesia)*, PhD Thesis, Leiden.

Josselin De Jong, J. De *et al.* (1980) Sickness as a Metaphore in Indonesian Political Myths, *Journal of Immunoligical Methods*, 80/1 (1980) 1–6.

Kalangie, N.S. (1994a) *Kebudayaan dan Kesehatan*, Pengembangan Pelayanan Kesehatan Primer melalui pendekatan Sosio-budaya, Jakarta: Megapoin.

Kalangie, N.S. (1994b) *Kebudayaan and Kesehatan*, Jakarta: Kesaint Balac Indah Corp.

Kaplan, R.M. *et al.* (1993) *Health and Human Behavior* (New York: McGraw-Hill).

Kar, S.B., R. Alcalay & S. Alex (2001) *Health Communication: A Multicultural Perspective* (London: Sage Publications).

Katz, R. (1982) *Boiling Energy, Community Healing Among the Kalahari Kung* (London: Harvard University Press).

King, M. (1966) *Medical Care in Developing Countries, a Primer on the Medicine of Poverty and a Symposium from Makarere, Nairobi* (Oxford:: Oxford University Press).

Klein, J.T. (2007) "Interdisciplinary Approaches in Social Science Research", in: W. Outhwaite & S.P. Turner (Eds.), *Social Science Methodology* (Los angeles, CA: Sage Publications).

Kleinman, A. (1995) *Writing at the Margin, Discourse between Anthropology and Medicine* (Berkeley, CA: University of California Press).

Koblinsky, S.A. & S.M. Randolph (2003) "Infant Mental Health in African American Families: A Sociocultural Perspective", in: G. Bernal, J. Trimble, A. Burlew & F. Leong (Eds.), *Handbook of Racial and Ethnic Minority Psychology* (Thousand Oaks, CA: Sage Publications) pp. 307–326.

Koblinsky, S.A, K.M. Morgem & E.A. Anderson, Parenting Practices and Residential Environments of Homeless and Housed Families with Preschool Children, *American Journal of Orthopsychiatry*, 67/1 (1997) 37–47.

Koblinsky, S.A., O. Campbel & J. Heichelheim, "Organizing Delivery Care: What Works for Safe Motherhood?", *Bulletin of the World Health Organization*, 77 (1999) 399–406.

Koentjaraningrat & A.A. Loedin (1985) *Ilmu-ilmu Sosial dalam Pembangunan Kesehatan*, (Jakarta: Penerbit PT Gramedia).

Koesoebjono, S.S. (1993) *Community Participation in Primary Health Care in an Indonesian Setting*, PhD Thesis, Leiden University, Leiden.

Kohn, R. & K.L. White (eds) (1976) *Health Care. An International Study*, Oxford University Press, London.

Kollman, N. (1990) *Primaire Gezondheidzorg in Indonesie; Opzet van Posyandu and the Participatie van Vrouwen in dit Programma*, Master Thesis, Universiteit van Amsterdam.
Kroeger, A. (1983) "Anthropological and Socio-Medical Health Care, Research in Developing Countries", *Social Science and Medicine*, Vol. 17, pp. 147-161.
Kuhn, T.S., "The Function of Measurement in Modern Physical Science", *Isis*, 52 (1961) 166–193.
Kurnia, G. 2008, *Grounded Theory as Research Method in Padjadjaran University*, Seminar & Lokakarya Metode Penelitian dalam *Bidan*g Kesehatan Pangan dan Gizi Masyarakat, Serbaguna UNPAD, Bandung.
Kurtz, S. *et al*. (1998) *Teaching and Learning Communication Skills in Medicine*, UK: Radcliffe Medical Press.
Kusin, J.A., & S. Kardjati (eds) (1994) *Maternal and Child Nutrition an Madura, Indonesia*, The Netherlands: Royal Tropical Institute.
Kyomya, S.A. (1994) Medical system – Traditional/Western Dichotomy, Traditional Medical systems and the Conventional System in Uganda, in *Traditional Medical systems and Public Policy*, Proceedings of an International Workshop, Ottawa, Canada.
Lambert H. (1996) *Encyclopaedia of social and cultural anthropolog*, *Medical anthropology* (London: Routledge) pp. 358–361.
Landy, D. (Ed.) (1977) *Culture, Disease, and Healing, Studies in Medical Anthropology* (London: Collier Macmillan Publisher).
Lap, B. (1998) "Partnership, niet dan een illusie?", in: Lieten, Kristoffel & F. Van Der Velden (Eds.), *Grenzen aan de Hulp, Belid en Effecten van Ontwikkelingssamenwerking* (Amsterdam: Het Spinhuis) pp. 291–313.
Lash, S. (2000) "Risk Culture", in: B. Adam, U. Beck & J. van Loon (Eds.) *The Risk Society and Beyond Critical Issues for Social Theory* (London: Sage Publishers), pp. 47–62.
Last, M. (1996) *The Professionalization of Indigenous Healers in Medical Anthropology, Contemporary Theory and Method* (London: Praeger).
Leakey, R.E. & L.J. Slikkerveer (Eds.) (1991) "Agrohistory and Anthropology in Africa: the Wageningen SADH/HODA Approach Related to The Leiden Ethnosystems Perspective", in: *Origins and Development of Agriculture in East Africa: The Ethnosystems Approach to the Study of Early Food Production in Kenya, Studies in Technology and Social Change*, No. 19, Technology and Social Change Program, Iowa State University, Ames, IO.
Leech, N. L. *et al*. (2005) *SPSS for Intermediate Statistics, Use and Interpretation*, 2nd edn., (Mahwah, NJ: Lawrence Erlbaum Associates).
Lefèber, Y. (1994) *Midwives Without Training, Practical and Beliefs of Traditional Birth Attendants in Africa, Asia and Latin America* (Assen: Van Gorcum).
Lefèber, Y. & H.W.A. Voorhoeve (1998) *Indigenous Customs in Childbirth and Child Care* (Assen: Van Gorcum).
Leslie, C. (Ed.) (1976) *Asian Medical Systems a Comparative Study* (Berkeley, CA: University of California).
Leslie, C. (1977) "Pluralism and Integration in the Indian and Chinese Medical Systems", in: D. Lany (Ed.), *Culture, Disease, and Healing, Studies in Medical Anthropology* (London: Collier Macmillan Publisher).
Leslie, C., "Theoretical Foundations for the Comparative Study of Medical Systems", *Social Science and Medicine*, Special Issue, 12 (1978) 2B.
Leslie, C., "Medical Pluralism", *Social Science and Medicine*, Special Issue, 14B (1980).
Leurs, L.N. (2009) *Medicinal, Aromatic and Cosmetic (MAC) Plants for Community Health and Bio-Cultural Diversity Conservation in Bali, Indonesia*, PhD Thesis, Leiden University.
Liendenbaum, S. & M. Lock (Eds.) (1993) *Knowledge, Power & Practice, The Anthropology of Medicine and Everyday Life* (Berkeley, CA: University of California Press).
Limyati, D.A. & B.L.L. Juniar, "*Jamu gendong*: a Kind of Traditional Medicine in Indonesia: the Microbial Contamination of its Raw Materials and Endproduct", *Ethnopharmacology*, 63 (1998) 201–208.

Lorber, J. & L.J. Moore (2002) *Gender and the Social Construction of Illness* (New York: Altamira Press).
Lupton, D. (2003) *Medicines as Culture* (London: Sage Publications).
MacKian, S. (2003) *A Review of Health Seeking Behaviour: Problems and Prospects*, Medical System Development Programmes, University of Manchester.
Maglacas, A.M. & J. Simons (1986) *The Potential of the Traditional Birth Attendant*, WHO Offset Publication No. 95 (Geneva: WHO).
Martin, G.J. (1996) *Ethnobotany* (London: Chapman & Hall).
Mays N. & C. Pope (Eds.) (1996) *Qualitative Research in Health Care* (London: BMJ Publishing).
McDonagh, M. (1996) "Is Antenatal Care Effective in Reducing Maternal Morbidity and Mortality?", *Health Policy and Planning*, 11/1 (1996) 1–15.
McElroy, A. & P.K. Townsend (1979) *Medical Anthropology in Ecological Perspective* (Pacific Grove, CA: Duxbury Press).
McClain C.S. (Ed.) (1989a) *Women as Healers, Cross Cultural Perspectives* (New Brunswick: Rutgers University Press).
McClain, C.S (Ed.) (1989b) Sigerist, H.E. (1977) "The Special Position of the Sick", in: D. Landy, *Culture, Disease, and Healing*, *Studies in Medical Anthropology* (London: Collier Macmillan Publisher).
Micozzi, M. (Ed.) (2006) *Fundamentals of Complementary and Integrative Medicine* (Missouri: Saunders Elsevier).
Millenium Development Goals Summit, 20–22 September 2010.
Miller, R.L. *et al.* (2002) *SPSS for Social Scientists* (New York: Palgrave Macmillan).
Millon, T. (Ed.) (1975) *Medical Behavioral Science* (Philadelphia, PA: W.B. Saunders Company).
Minden, M. & M.J. Levitt (1996) "The Right to Know: Women and Their Traditional Birth Attendants, in: S.F. Murray (Ed.), *Midwives and Safer Motherhood* (London: Mosby) pp. 103–113.
Ministry of Health, Republic of Indonesia (2009) *Indonesia Country Profile 2008*, Center for Data and Information.
Moller, B. *et al*., "A Study of Antenatal Care at Village Level in Rural Tanzania", *International Journal of Gynecologists and Obstetricians*, 30 (1989) 123–131.
Monteiro, A.C. (1998) The Netherlands Association of Non Government Organizations (NGOs) for Personnel Service Overseas (PSO).
Morley, D. *et al.* (1983) *Practicing Health for All* (Oxford: Medical Publications).
Mukti, A.G. (1998) *Menjaga Mutu Pelayanan Bidan Desa* (Yogyakarta: Pusat Penelitian Kependudukan, Universitas Gadjah Mada).
Mumtazah H. http//www.islamonline.net>health and science>nature.
Muzaham, F. (1995) *Memperkenalkan Sosiologi Kesehatan* (Jakarta: UI Press).
Nachbar, N., Baume & Parekh (1998) *Assessing Safe Motherhood in the Community, A Guide to Formative Research*, Mother Care/John Snow Inc., Virginia.
National Network of Libraries of Medicine (2008) *Health Literacy*, National Library of Medicine, Maryland, nnlm.gov.
Niechter, M. & M. Lock (Eds.) (2002) *New Horizons in Medical Anthropology*, Essays in Honour of Charles Leslie, Theory and Practices in Medical Anthropology and International Health (New York: Routledge).
Niehof, A. (1991) *Mediating Roles of the Traditional Birth Attendant in Indonesia, in Women and Mediation in Indonesia* (Leiden: KITLV Press).
Noe, J.E. (2006) *Natural Family Health & Integrative Medicine* (Westerly, RI).
Nolan, M., *et al.* (2003) *Partnerships in Family Care: Understanding the Care-giving Career* (Philadelphia, PA: Open University Press).
Noorduyn, J. & A. Teeuw, "A Panorama of the World from Sundanese Perspective", *Percee Scientific Journals*, 57/57 (1999) 209–221.
Notoatmodjo, Soekidjo (2003) *Ilmu Kesehatan Masyarakat: Prinsip-prinsip Dasar* (Jakarta: Rineka Cipta).

Nyonya Meneer, www.nyonyameneer.com/indonesia/produk3.
Outhwaite, W. & S.P. Turner (Eds.) (2007) *Social Science Methodology* (London: Sage Publications).
Pambudi, I., "Percepatan Penurunan Angka Kematian Ibu, Pengakuan Hak Reproduksi Kaum Perempuan", *Medika*, 9 (2003).
Pedersen, P.B. & A. Ivey (1993) *Culture-Centered Counseling and Interviewing Skills* (London: Praeger).
Pei, W. (1983) "Traditional Chinese Medicine", in: *Traditional Medicine and Health Care Coverage* (Geneva: WHO).
Peters, D. & A. Woodham (2000) *Integrative Medicine, The Best of Alternative and Conventional Care* (London: Dorling Kindersley).
Phillips, D.R. (1990) *Health and Health Care in the Third World*, Longman Development Studies, Longman Scientific & Technical, Co. published in the United States with John Wiley & Sons, New York.
Pikiran Rakyat (2007) *Kematian Ibu di Jawa Barat Tertinggi*, http://www.pikiran-rakyat.com (accessed 1 April 2007).
Piotrow, P.T. *et al.* (1997) *Health Communication: Lessons from Family Planning and Reproductive Health*, Under the Auspices of the Center for Communication Programs (Baltimore, MD: John Hopkins School of Public Health).
Popay J.A.R. & G. Williams, "Rationale and standards for the systematic review of qualitative literature in health services research", *Qual. Health Res*., 8 (1998) 341–351.
Posey, D.A. & G. Dutfield (1996) *Beyond Intellectual Property, Toward Traditional Resource Rights for Indigenous Peoples and Local Communities* (Ottawa: International Development Research Centre.
Posey, D.A. & G. Dutfield (1997) *Indigenous Peoples and Sustainability: Cases and Actions* (Utrecht: IUCN and International Books).
Posey, D.A. (1999) Introduction: Culture and Nature – The Inextricable Link, in *Cultural and Spiritual Values of Biodiversity*, A Complementary Contribution to the Global Biodiversity Assessment, IT & UNEP.
Postel-Coster, E. (1985) *Het Omheinde Kweekbed, Mactsverhoudingen in de Minangkabause Familieroman* (Delft: Eburon).
Postel-Coster, E. (1992) *Man as Bread Winner*, article as handout in Women and Development Trainning, Vrouwen en Autonomie (VENA), Leiden University, The Netherlands.
Prance, G.T., D. Chadwick & J. Marsh (1994) *Ethnobotany and the Search for New Drugs, Ciba Foundation Symposium*, Vol. 185 (Chichester, NY: John Wiley).
Prayudha, Y. (2003) Paradigma Sakit dan Soal Kesehatan lainnya, *Pikiran Rakyat*, Bandung.
Press, J., "Problems in the Definitionn and Classification of Medical Systems", *Social Science and Medicine*, 14B (1980) 45–57.
Profile West Java Head Office (2000), www.bi.go.id.
Publichealth's Blog (2010) http://publichelath.wordpress.com/2010/04/16/evaluasi-Indonesia-sehat-2010.
Quah S.R. & L.J. Slikkerveer (Eds.) (2003) *Traditional Healing Systems: Negotiating Science and Technology Challenges*, Special Issue: Medical Social Science Research Symposium Singapore, LEAD & The NUS/UL R&T Project, Singapore–Leiden.
Rapp, R. (2000) *Testing Women, Testing the Fetus, The Social Impact of Amniocentesis in America* (New York: Routledge).
Redfield, R. (1956) *Peasant Society and Culture. An Anthropological Approach to Civilization* (Chicago: University of Chicago Press).
Research for Soil Development and Agroclimate (2001) ejournal,unud.ac.id/.
RHO Archives (2005) *Topics: Safe Motherhood*, PATH.
Rikin, M.W. (1973) *Ngabersihan als knoop in de Tali Paranti, Bijdrage tot het Verstaan van de Besnijdenis der Sundanezen*, PhD Dissertation, Leiden University, Leiden.
Rikin, M.W. (1994) *Telling the Landscape: Place and Meaning in Sunda*, the KIB's papers, galuh-purba.com.

Rivers, W.H.R. (1924) *Medicine, Magic and Religion* (Oxford: Harcourt Brace).
Rogers, E.M. (1973) *Communication Strategies for Family Planning* (New York: Free Press).
Ronsmans, C. *et al*., "Evaluation of a Comprehensive Home-based Midwifery Programme in South Kalimantan, Indonesia", *Tropical Medicine and International Health*, 6/10 (2001) 799–810.
Ronsmans, C. *et al*., "Professional Assistance during Birth and Maternal Mortality in Two Indonesian Districts", *Bull. World Health Organ*, 87 (2009) 416–423.
Roosita, K. *et. al*., "Medicinal Plants Used by the Villagers of a Sundanese Community in West Java, Indonesia", *Ethnopharmacology*, 115 (2008) 72–81.
Rubel, A.J. & M.R. Hass (1996) "Ethnomedicine", in: C. Sargent & T. Johnson (Eds.), *Medical Anthropology: Contemporary theory and Method*, revised edn. (Westport, CT: Praeger), pp. 113–130.
Salant, P. (1994) *How to Conduct Your Own Survey* (Canada: John Wiley & Sons).
Saptari, R. (2001) *Gender, Family & Labour*, IIAS Newsletter Online, No. 26.
Sargent, C.F. & T.M. Johnson (1996) *Medical Anthropology, Contemporary Theory and Method* (London: Praeger).
Sastroamidjojo, A.S. (1967) *Obat Asli Indonesia, Chusus daripada Tumbuh^{2}an yang terdapat di Indonesia* (Jakarta: Dian Rakyat).
Saud, A.J., "The Immediate and Long-Term Outcomes of New Borns with Congenital Diaphragmatic Hernia", *Pediatric Surgery International*, 22/4 (2006) 335–340, DOI: 10, 1007/s00383-006-1643-6.
Savage J., "Ethnography and health care", *BMJ*, 31 (2000) 1400–1402.
Schefold, R. (1988) *Lia: Das Grosse Ritual Auf Den Mentawai-Inseln (Indonesien)*, (Berlin: D. Reimer).
Schefold, R., "Three Sources of Ritual Blessings in Traditional Indonesian Societies", *Bijdragen tot de Taal-, Land- en Volkenkunde*, 157 (2001) 359–381.
Schoute, D. (1937) *Occidental Therapeutic in the Netherlands East Indiesduring Three Centuries of Netherlands Settlement (1600-1900)*, pp. iv + 214.
Schwartz, H.D. & C.S. Kart (1978) *Dominant Issues in Medical Sociology* (Massachusetts: Addison-Wesley Publishing).
Sciortino, R.M.E. (1992) *Care-Takers of Cure, A Study of Health Center Nurses in Rural Central Java*, PhD Dissertation, University of Amsterdam.
Sciortino, R.M.E. (1995) *Care-Takers of Cure, An Anthropological Study of Health Centre Nurses in Rural Central Java*, Yogyakarta: Gadjah Mada University Press.
Sciortino, R.M.E. (1999a) *Menuju Kesehatan Madani, Gugus Opini*, Yogyakarta: Pustaka Pelajar.
Sciortino, R.M.E. (1999b) *Caretaker of Cure*, Yogyakarta: Pustaka Pelajar.
Semar, J. (2000) Sangga Sarana Persada, Webmaster@joglosemar.co.id.
Seri Kesehatan Reproduksi, Kebudayaan, dan Masyarakat (1996) *Seksualitas, Kesehatan Reproduksi, dan Ketimpangan Gender* (Jakarta: Pustaka Sinar Harapan).
Sesia, P.M. (1986–1988) "Women come here on their own when they need to", *Prenatal Care, Authoritative Knowledge and Maternal Health*, Oaxaca.
Setiawan, H. (2010) *The Name of Priangan Land of Sunda*, Sundacorner.org.
Silvey, R.M., "Migration under Crisis; Household Safety Nets in Indonesia's Economic Collapse", *Geoforum*, 32/1 (2001) 33–45.
Singer, P. (Ed.) (1977) *Traditional Healing, New Science or New Colonialism, Essays in Critique of Medical Anthropology* (London: Couch Magazine Ltd.).
Slikkerveer, L.J. (1982) "Rural Health Development in Ethopia, Problems of Utilisation of Traditional Healers", *Social Science and Medicine*, 16/21 (1982) 1859–1872.
Slikkerveer, L.J. (1990) *Plural Medical Systems in the Horn of Africa, The Legacy of 'Sheikh' Hippocrates* (Monographs from the African Studies Center), (London: Routledge).
Slikkerveer, L.J., "Building Bridges with Traditional Knowledge", *Indigenous Knowledge and Development Monitor*, 8/2 (2001) 21–22.
Slikkerveer, L.J. (2003) "Traditional Medical Systems and the Challenge of Validation: Towards a Model of Transcultural Medicinal Plant Use in Indonesia", in: S. Quah & L.J. Slikkerveer

(Eds.), *Traditional Healing Systems: Negotiating Science and Technology Challenges*, Indigenous Knowledge Systems Research & Development Studies, No. 4, Singapore/Leiden.
Slikkerveer, L.J., "A Multivariate Model of Biocultural Conservation of Medicinal, Aromatic and Cosmetic (MAC) Plants in Indonesia", *Ethnobotany Journal*, 3 (2005) 127–138.
Slikkerveer, L.J. (2006) "The Challenge of Non-experimental Validation of MAC Plants: Towards a Multivariate Model of Transcultural Utilisation of Medicinal, Aromatic, and Cosmetic Plants", in: R.J. Bogers, L.E. Craker & D. Lange (Eds.), *Medicinal and Aromatic Plants, Agricultural, Commercial, Legal, Pharmacological and Social Aspects* (Netherlands: Springer).
Slikkerveer, L.J. (2007) *Integrated Microfinance Management and Health Communication in Indonesia*, Cleveringa Lecture under the auspices of the Leidse Universiteits Fonds, Jakarta, Indonesia.
Slikkerveer, L.J. & R.E. Leakey (1995) *Phithecanthropus: Kisah Manusia Purba dari Indonesia, Penemunya Dubois dan Arti Penemuan itu bagi Asal-usul Manusia* (Leiden: Richard Leakey Foundation for Anthropological Research).
Slikkerveer, L.J. & Ch. Lionis (1996) *Traditional Medical Beliefs and Practices in Rural Crete: The Persistence of Philosophical and Cosmological Views of the Universe in the Hippocratic-Galenic Humoral System* (Heraklion: University of Crete, Department of Social Medicine).
Slikkerveer, L.J. & S.R. Quah (Eds.) (2003) *Traditional Healing Systems: Negotiating Science and Technology Challenges* (Leiden: LEAD, Leiden University).
Slikkerveer, L.J. & M.K.L. Slikkerveer (1995), "Taman Obat keluarga (TOGA): Indonesian Medicine for Self-Reliance", in: D.M. Warren, L.J. Slikkerveer & D. Brokensha (Eds.) *The Cultural Dimension of Development: Indigenous Knowledge Systems* (London: Intermediate Technology Publications).
Smith, C. S. (1986) *Macmillan Dictionary of Anthropology* (London: Macmillan Press).
Sobary, M. (2003) *Fenomena Dukun dalam Budaya kita* (Jakarta: Pustaka Firdaus).
Sofoluwe, G.O. (1985) "The African Concept of Community Health", in: G.O. Sofoluwe & F.J. Bennett (Eds.) *Principles and Practice of Community Health in Africa* (Ibadan: University Press), pp. 3–5.
Spencer, R.F. (1977) "Embryology and Obstetrics in Preindustrial Societies", in D. Landy (Ed.), *Culture, Disease, and Healing, Studies in Medical Anthropology* (London: Collier Macmillan Publisher).
Spradley, J.P. & D. McCurdy (1972) *Culture Experience: Ethnography in Complex Society* (Chicago: Science Associates).
Steele, F., I. Moustaki & J.L. Galbraith (2002) *The Analysis and Interpretation of Multivariate Data for Social Scientists* (London: Chapman & Hall/CRC).
Stepan, J. (1983) Legal Aspects, Patterns of Legislation Concerning Traditional Medicine, in R.H. Bannerman *et.al* (editors), *Traditional Medicine and Health Care Coverage*, World Health Organization, Geneva.
Stieg, R.L. (2005) *Modern vs Traditional Medicine*, National Pain Foundation.
Streetland, P. & J. Chabot (Ed.) (1990) *Implementing Primary Health Care, Experiences since Alma-Ata*, Royal Tropical Institute, Amsterdam.
Suchman, E.A. (1964) "Sociomedical Variations among Ethnic Groups", *American Journal of Sociology*, 70 (1964) 319–331.
Suchman, E.A., "Social Patterns of Illness and Medical Care", *Journal of Health and Human Behavior*, 6 (1965) 2–16.
Suchman, E.A., 'Social Medical Variations Among Ethnicgroups', *Health Education Behavior*, 6/2 (1978) 177–257.
Sudibyo, M. (1984) *Traditional Medical Philosophy.* Paper in Second International Congress on Traditional Asian Medicine, Surabaya, 2–7 September.
Sudirdja, R. (2006) Kekalahan Sektor Pertanian di Rancaekek, *Pikiran Rakyat*, 4 December 2006, p. 22.
Sumardjo, J. (2003) *Simbol-simbol Artefak Budaya Sunda* (Bandung: Kelir).

Suseda Provinsi Jawa Barat 2004, http://bapeda.go.id/docs.
Susser, M.W. & M. Watson (1971) *Sociology in Medicine* (Oxford: Oxford University Press).
Szazs, T.S. & M.H. Hollander, "The Basic Model of the Doctor–Patients Relationships", *Social Science and Medicine*, 19 (1978) 291.
Tan, M.L., article in *Social Science Medicine*, 29/3 (1989) 301–307.
Taylor, C.E. (1977) "The Place of Indigenous Medical Practitioners in the Modernisation of Health Services", in: C. Leslie (Ed.), *Asian Medical Systems: a Comparative Study* (Berkeley, CA: University of California Press), pp. 285-299.
Tilaar, M. (1985) *Perawatan Kecantikan Tradisional*, Paper in Seminar Dermatologi, Universitas Sumatra Utara, Medan.
Tilaar, M. *et al*. (2010) *The Green Science of Jamu* (Jakrta: Dian Rakyat).
Timmermans, K., "Intellectual Property Rights and Traditional Medicine: Policy Dilemmas at the Interface", *Social Science & Medicine*, 57 (2003) 745–756.
Tinker, A. (1997) *Safe Motherhood as an Economic and Social Investment*. Presentation at Safe Motherhood Technical Consultation in Sri Lanka, 18–23 October.
Titaley, C.R. *et al*., "Why do some women still prefer traditional birth attendants and home delivery?: A qualitative study on delivery care services in West Java Province, Indonesia", *BMC Pregnancy and Childbirth*, 10/43 (2010).
Tuma, N.B. (1984) *Social Dynamics Models and Methods* (Massachusetts: Academic Press).
UNDP (2005) *Strengthening Health Systems to Meet MDGs* (Geneva: WHO.
UN–ECOSOC (1980) www.un.org/docs/res/1998/eres1998-40.htm.
UNICEF (2011) At Glance: Indonesia, http://www.unicef.org/infobycountry/indonesia_statistics.html#80.
Unschuld, P.U. (1992) "Epistemological Issues and Changing Legitimation: Traditional Chinese Medicine in the Twentieth Century" in: C. Leslie & A. Young (Eds.), *Paths to Asian Medical Knowledge* (Berkeley, CA: University of California Press), pp. 44–61.
UR Frontis Series (2006) Vol. 17, Wageningen University and Research Centre, The Netherlands.
Van der Burg, E. (1983) *Nonlinear Canonical Correlation and Some Related Techniques* (Leiden: Leiden University, DSWO Press).
Van der Burg, E. & J. De Leeuw, "Non-Linear Canonical Correlation", *British Journal of Mathematical and Statistical Psychology*, (1983).
Van Wouden, F.A.E. (1935) *Types of Social Structure in Eastern Indonesia*, English translation by Rodney Needham at Nijhoff.
Van Etten (1976) *Tanzanian Rural Health Care Delivery System*, Church: Studies of African Independent Churches.
Ventevogel, P. (1996) *Whiteman's Things, Training and Detraining Healers in Ghana* (Amsterdam: Het Spinhuis).
Voorhoeve, H.W.A., "Traditional Native and Western Medicine Side by Side in Tropical Countries", *Trop. Geogr. Med.*, 18/77 (1966).
Voorhoeve, H.W.A. & Y. Lefeber (1998), *Indigenous Customs in Childbirth and Child Care* (The Netherlands: Van Gorcum).
Warren, D.M., L.J. Slikkerveer & D. Brokensha (1999) *The Cultural Dimension of Development, Indigenous Knowledge Systems* (London: Intermediate Technology Publications).
Wells, M., "Social-Economic Strategies to Sustainability Use, Conserve and Share the Benefits of Biodiversity", in: V.H. Heywood (Ed.) *Global Biodiversity Assessment*, (Cambridge, UK: Cambridge University Press) pp. 1016–1036.
West Java Family Planning Coordinator (2002) http://www.bkkbn.jawa_barat.htm
West Java (2000-2008) Projection MMR per 100.000 http://www.west_java.health/
West Java at Glance (2010) http://www.00cities.org/dpcujabar/summary.htm.

Wigboldus, J.S. & L.J. Slikkerveer (1991) "Agrohistory and Anthropology in Africa: The Wageningen SADH/HODA Approach Related to the Leiden Ethnosystems Perspective", in: R.E. Leakey & L.J. Slikkerveer (Eds.), *Origins and Development of Agriculture in East Africa: The Ethnosystems Approach to the Study of Early Food Production in Kenya*, Studies in Technology and Social Change, No. 19, Technology and Social Change Program (Ames, IO: Iowa State University).

Wikipedia, the Free Encyclopedia, www.wikipedia.org/.

Williams, G. & Satoto, "Socio-Political Constraints on PHC: A Case Study from Java", *Development Dialogue*, (1980) 85–101.

Winick, C. (1970) *Dictionary of Anthropology* (NJ: Helix Books, Rowman & Allanheld).

Wolffers, I. (1988) "Traditional Practitioners and Western Pharmaceuticals in Sri Lanka", in: D. van Geest & S.R. White (Eds.), *The Context of Medicines in Developing Countries* (Dordrecht: Kluwer Academic Publishers), pp. 47–56.

Wolffers, I. (1990) "The Role of Traditional Medicine in Primary Health Care", paper presented at a workshop at the Third International Conference on Traditional Asian Medicine in Bombay, India, January 1990.

World Bank (2010) siteresources.worldbank.org/data statistic/resources/GDP.pdf

World Health Organization (1978) *Primary Health Care*, Report of the International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September, Geneva.

World Health Organization (1993) A Tabulation of Available Information. Division of Family Health: Coverage of Maternity Care, Geneva.

World Health Organization (1994) *WHO Mother Baby Package: Implementing Safe Motherhood in Countries*, Geneva.

World Health Organization, Division of Health Situation and Trend Assessment (1996) *Catalogue of Health Indicators*. *A Selection of Important Health Indicators Recommended by WHO Programmes*, Geneva.

World Health Organization (1997) Report on the Safe Motherhood Technical Consultation, *The Safe Motherhood Action Agenda: Priorities for the Next Decade*, Colombo, Sri Lanka.

World Health Organization (1997) *A Global Study*: *Strengthening Nursing and Midwifery*, Geneva.

World Health Organization (1998) *Improve Access to Maternal Health Services,* Geneva.

World Health Organization (1999) *Reduction of Maternal Mortality: A Joint WHO / UNFPA / UNICEF / World Bank Statement*, Geneva.

World Health Organization (2000) *Tradional and Modern Medicine, Harmonizing the Two Approaches*, Report for Regional Consultation, Western Pacific Region.

World Health Organization (2000) Operational Research on Community and Facility Based Interventions for Making, *Pregnancy Safer*, New Delhi: WHO Regional Office for South-East Asia.

World Health Organization Media Centre (2000).

World Health Organization, South-East Asia Region (2004) *Health Situation in South East Asia*, Regional Office for South-East Asia.

World Health Organization, (2005) Indonesia Annual Report.

World Health Organization Report (2008) *Primary Health Care. Now, more than ever.*

World Health Organization Regional Office for South-East Asia (2009) *Self-Care in the Context of Primary Health Care*, Report of the Regional Consultation, Bangkok, Thailand.

WHOCC–PMC (2000a) Making Pregnancy Saver, Preliminary Report.

WHOCC–PMC (2000b) *Annual Report I in Making Pregnancy Safer in Rancaekek*, Universitas Padjadjaran, Bandung.

WHOCC–PMC (2001) *Annual Report II in Making Pregnancy Safer in Rancaekek*, Universitas Padjadjaran, Bandung.

Yanagi, I. (2007) *Induction of Conjugation by Methyl Cellulose in Paramenium*, http://onlinelibrary.wiley.com/.

Young, A., "The Relevance of Traditional Medical Cultures to Modern Primary Health Care", *Social Science Medics*, 17 (1983) 120–111.

Young, D.E., "Models of Health Care Pluralism", *Traditional Medical systems and Public Policy*, Proceedings of an International Workshop, Ottawa, Canada (1994) pp. 62–70.
Zakaria, Y., "Pilihan Pertolongan Persalinan pada Dukun Beranak: Suatu Penjelasan Konseptual", *Berita Antropologi*, 46 (1989) 11–46; Jakarta: Jurusan Antropologi, FISIP,UI.

Curriculum Vitae

Prihatini Ambaretnani was born on the 9th March 1948 in Yogyakarta, Indonesia. After completion of her high school education, she joined Universitas Padjadjaran in Bandung, Indonesia and completed the Bachelor programme at the Department of Anthropology, at the Faculty of Arts in January 1977. She had been selected as a Lecturer at the same Department. During 1978–1979, she followed a short course at the Southeast Asia Rural Social Leadership Institute (SEARSOLIN), Xavier University, Ateneo de Cagayan in The Philippines as a Junior Lecturer. In August 1981, she joined the Post-Graduate MSc. Course on Rural Development Planning, Department of Human Settlements Development, at the Asian Institute of Technology in Bangkok, Thailand and graduated there in December 1982. She had also participated in other short courses on Gender Studies in 1992, namely Women and Development, and then in 1994 on Gender Research Management Training, both at the *Vrouwen en Autonomie* Programme (VENA) at Universiteit Leiden, The Netherlands.

Ms. Ambaretnani was in charge as Secretary of the Department of Anthropology, which was relocated from the Faculty of Arts (*Fakultas Sastra*) to the Faculty of Social and Political Sciences (*Fakultas Ilmu Sosial dan Politik*) in Universitas Padjadjaran (1984–1992). There after, she has been elected as Director of the *Center for Women Studies* at the same University for two periods (1992–1994 and 1994–1998). Subsequently in 1999–2002, she was Head of the Department of Anthropology.

Ms. Ambaretnani also participated in many fieldwork projects *i.e. The Motivation of Women Labor Workers to Saudi Arabia*; *Women Labor Workers and Reproductive Health*; *The Impact of Dam Development on the Role of Women in Saguling, West Java*; *Maternal Morbidity in Tanjungsari Sub-District, Sumedang, West Java*; *Making Pregnancy Safer in Rancaekek Sub-District, Bandung, West Java*; *Qualitative Research of Post-Partum Haemmorhage Study on PAS-Bayi, Phase II, Bale Endah District, Bandung*; *Early Child Care Development in Indonesia*; *Knowledge, Attitude and Practice Study as Support for the Development of Comprehensive Early Child Care and Early Learning Model in Poor Rural Areas in Indonesia;* and recently, she is conducting research in *Community Care of HIV/AIDs in Bandung.* During her working career as Lecturer and Researcher, she has travelled to many countries to join courses, seminars, and conferences. In 2001, she joined the LEAD Programme as a participant as exchange staf in TWINMAP Programme, as part of the Bilateral Cooperation Agreement between Universiteit Leiden in The Netherlands and Universitas Padjadjaran in Bandung, Indonesia in order to assist MSc. students from Indonesia in their study in Medical Ethno-Botani and Anthropology (MEA) in Leiden. In 2003, together with a number of colleagues with an interdisciplinary background from Universitas Padjadjaran she developed a foundation called '*Frontiers for Health'* to empower communities for improve their health and well being.

Ms. Ambaretnani also published her research in many ways: *Fokus Group Diskusi dan Wawancara Mendalam dalam Pelatihan Wanita dan Kesehatan bagi TKIW*, Pusat Penelitian Peranan Wanita & Unit Penelitian Kesehatan-FK-Unpad, Bandung; *Upaya Meningkatkan dan Melindungi Kesehatan Reproduksi TKIW,* Galang Press, Yogyakarta; *Impian yang Terhempas,* Pusat Penelitian Peranan Wanita, Unpad; *Malaysia oh Malaysia*, Pusat Penelitian Peranan Wanita. Unpad; *Pelatihan Wanita dan Kesehatan bagi Tenaga Kerja Indonesia Wanita*, Warta Demografi UI, issue: ke 29 no.2; *Partisipasi Masyarakat dalam Program Asuhan Dini Tumbuh Kembang Anak* (*ADITUKA*), WHO-CC Universitas Padjadjaran in collaboration with Pawitra Foundation dan UNICEF, Edisi 1; *Partisipasi Masyarakat dalam Program Asuhan Dini Tumbuh Kembang Anak* (*ADITUKA*), Frontiers for Health Foundation

in collaboration with UNICEF, Edisi 2; *Post-Partum Haemorrhage and Pregnant Women in Bale Endah, Bandung – West Java*, WHO–CC UNPAD in collaboration with JHPIEGO Baltimore USA; *KAP Study to Support the Development of Comprehensive ECD and Early Learning Model in Poor Rural Areas in Indonesia*; *Microfinance for Partnerships among Paraji (Traditional Birth Attendant) and Bidan (Community Midwife) in West Java*.

During her PhD study in The Netherlands, she worked under the guidance of Prof. Dr.Dr. (h.c.) L. Jan Slikkerveer, Director of the *Leiden Ethnosystems and Development Programme* (LEAD) of Leiden University, and participated in numerous lectures for post-graduate students on Anthropology and Sociology of the Developing Countries, and lately, in the MSc Course on Ethnobotanical Knowledge Systems (EKS) at Universiteit Leiden, The Netherlands. In the context of the LEAD Programme, she has contributed to several International Workshops and *Jamu* Exhibitions in Bandung, The Netherlands and Singapore. Recently, she became a Member of the IMM Project Development of a New Master Programme in Integrated Microfinance Management a collaborative educational programme between Universiteit Leiden, The Netherlands and Universitas Padjadjaran, Indonesia together with Gema PKM and MAICH Institute of Chania, Greece, and lately she was elected as secretary general of the *Indonesian Resource Centre of Indigenous Knowledge* (INRIK) at Universitas Padjadjaran in Bandung.