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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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.

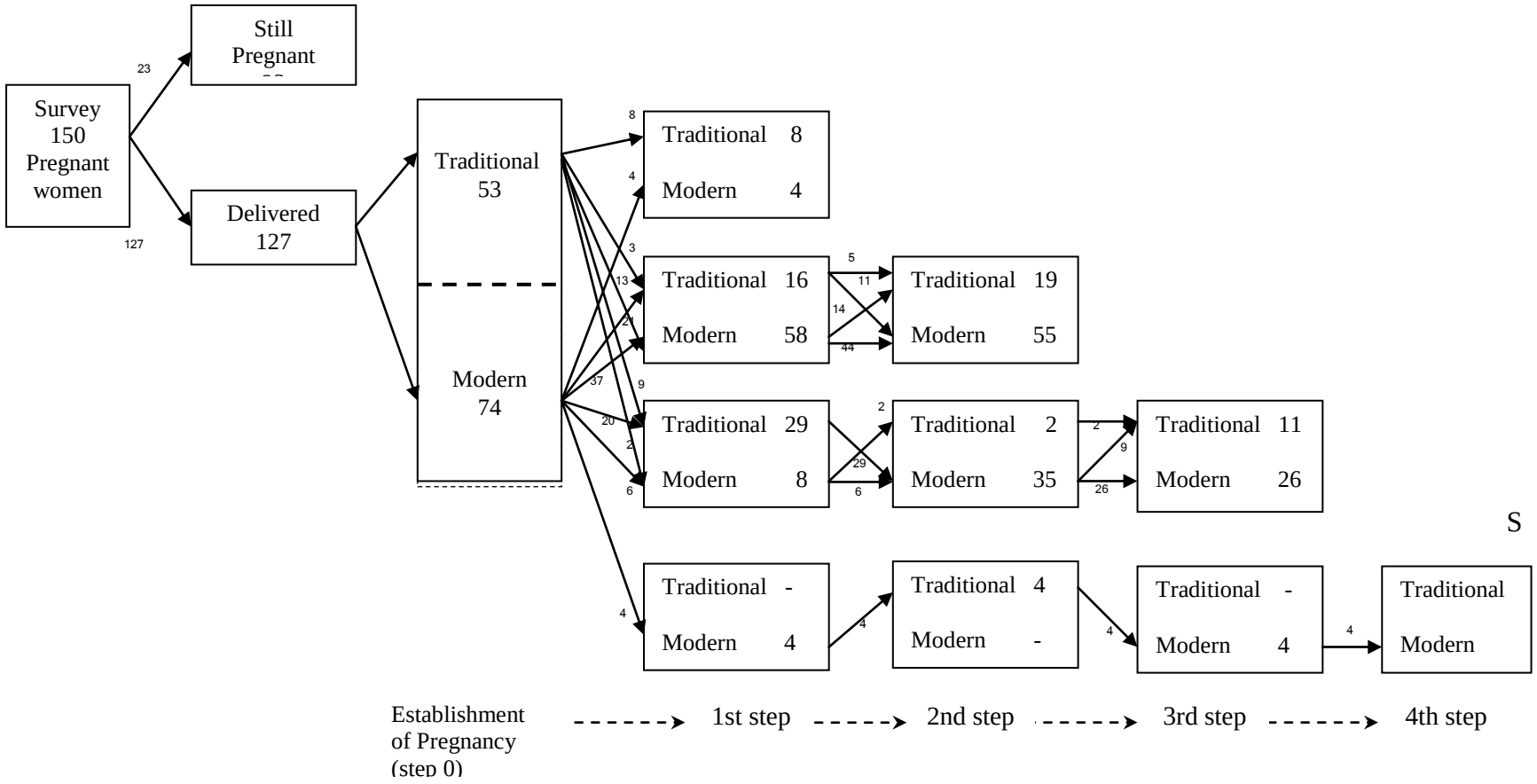
The Decision Tree illustrates the multiple-use strategy of pregnant women who use MCH systems. A woman's choices reflect not only her own beliefs and preferences but also those of her family, friends or neighbours. The more medically pluralistic a society is, the more considerably complex the relationship 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.