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Bakti and Sayan traditions among the Tenggerese people in East Java: the role of indigenous institutions in integrated elderly care development in Indonesia

Wiliandri, R.

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***Bakti* and *Sayan* Traditions among the Tenggerese People in East Java:**
The Role of Indigenous Institutions in Integrated Elderly Care Development in Indonesia

***Bakti* and *Sayan* Traditions among the Tenggerese People in East Java:**
The Role of Indigenous Institutions in Integrated Elderly Care Development in Indonesia

Proefschrift

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Ruly Wiliandri
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in 1983

Promotores:	Prof.dr. H.P. Spaink Prof.dr.dr. (H.C.) L.J. Slikkerveer
Overige Leden:	Prof. dr. A.H. Meijer Prof.dr. E. F. Smets Prof.dr. B. Gravendeel Prof.dr. P.J.A. Kessler Dr. E.F.L. Dubois (Hyperbaar Geneeskundig Centrum, Rijswijk) Dr. K. Saefullah (Universitas Padjadjaran, Bandung, Indonesië)

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Abbreviations

ADL	Activity of Daily Living
ASLUT	*Asistensi Sosial Lanjut Usia Terlantar* ('Assistance to Displaced Older People')
Balita	*Anak di Bawah Lima Tahun* ('Children under five years old')
BKKBN	*Badan Kependudukan dan Keluarga Berencana Nasional* ('National Population and Family Planning Board')
BKL	*Bina Keluarga Lansia* ('Elderly Family Development')
BPJS	*Badan Penyelenggara Jaminan Sosial* ('Government Social Security Agency')
BPNT	*Bantuan Pangan Non-Tunai* ('Non-Cash Food Assistance')
BPS	*Badan Pusat Statistik* ('Central Bureau of Statistics')
CCT	Conditional Cash Transfer
FES	Field of Ethnological Study
GDP	Gross Domestic Product
Gerbangmas	*Gerakan Membangun Masyarakat Sehat* ('Movement to Build a Healthy Society implemented')
HD	Historical Dimension
IADL	Instrumental Activities of Daily Living
ICMD	Integrated Community-Managed Development
ID	*Identitas Diri* ('Personal Identity Information')
IKSIM	Indigenous Knowledge Systems Integration Model
IMR	Infant Mortality Rate
Jamkesda	*Jaminan Kesehatan Daerah* ('Regional Health Insurance')
JHT	*Jaminan Hari Tua* ('Old Age Security')
JKK	*Jaminan Kecelakaan Kerja* ('Work Accident Security')
JKM	*Jaminan Kematian* ('Death Security')
JKN	*Jaminan Kesehatan Nasional* ('National Health Insurance')
KIP	*Kartu Indonesia Pintar* ('Smart Indonesia Card')
KIS	*Kartu Indonesia* Sehat ('Healthy Indonesia Card')
KK	*Kartu Keluarga* ('Family Card')
KMS	*Kartu Menuju Sehat* ('Health Cards')
KTP	*Kartu Tanda Penduduk* ('Resident's Identity Card')
LEAD	Leiden Ethnosystems and Development Programme
LKMD	*Lembaga Ketahanan Masyarakat Desa* ('Institution of Community Security at Village Level')
LPNK	*Lembaga Pemerintahan Non Kementerian* ('Non-Ministerial Institution')
LVRI	*Legiun Veteran Republik Indonesia* ('Legion of the Republic of Indonesia for War Veterans')
PBI	*Penerima Bantuan Iuran* ('Premium Assistance Beneficiary')
PEPABRI	*Persatuan Purnawirawan dan Warakawuri Angkatan Bersenjata Republik Indonesia* ('Union of Retired and Warakawuri of the Republic of Indonesia Armed Forces for retired civil servants of the armed forces')
PKH	*Program Keluarga Harapan* ('Hope Family Programme')
PMT	*Pemberian Makan Tambahan* ('Supplementary Feeding')
PNBP	*Penerimaan Negara Bukan Pajak* ('Non-tax revenue')
Polindes	*Poliklinik Desa* ('Village Clinic')

Poskesdes	*Pos Kesehatan Desa* ('Village Health Post')
Posyandu Lansia	*Pos Pelayanan Terpadu Lanjut Usia* ('Integrated Health Post for the Elderly')
Puskesmas Santun Lansia	*Pusat Kesehatan Masyarakat Santun Lanjut Usia* ('Age-Friendly Primary Health Care Centre')
Pustu	*Puskesmas Pembantu* ('Auxiliary Health Centre')
PV	Participants' View
PWRI	*Persatuan Wredatama Republik Indonesia* ('Union of the Republic of Indonesia for retired civil servants')
RT	*Rukun Tetangga* ('Sub-groups')
RW	*Rukun Warga* ('Groups')
SJSN	*Sistem Jaminan Sosial Nasional* ('National Social Security System')
Susenas	*Survei Sosial Ekonomi Nasional* ('National Socio-economic Survey')
TFR	Total Fertility Rate
TKSK	*Tenaga Kesejahteraan Sosial Kecamatan* ('District Social Welfare Workers')
TNBTS	*Taman Nasional Bromo Tengger Semeru* ('Bromo Tenggerese Semeru National Park')
WHO	World Health Organisation

CHAPTER I INTRODUCTION

1.1 Elderly Care of the Ageing Population in Indonesia

1.1.1 The Present Situation of the Ageing Population

The ageing population has become an important subject both in developed and developing countries [1.1]. The complexity of the subject is based on the fact that population ageing in developing countries is growing faster than in developed countries (*cf.* UN 2017). Recent studies show that in France, as a developed country, it took 115 years to increase the proportion of its population aged 65 or older, from 7 to 14% (*cf.* Kinsella & Phillips 2005). In contrast, in China as a developing country it only took 26 years to increase its ageing population to the same percentage as in France. Based on the data from *Badan Pusat Statistik* (BPS) ('Central Bureau of Statistics'), Indonesia, which is also a developing country, has experienced an increase from 7 to 15% in just 25 years (*cf.* BPS 2013).

Demographic ageing is usually a result of two trends: declining fertility and increasing life expectancy [1.2]. In the context of the declining fertility, Indonesia has successfully implemented *Program Keluarga Berencana* ('Family Planning Programme') which reduces the number of babies born into a typical Indonesian family during the past four decades [1.3]. In early 1975, the average Indonesian family consisted of approximately 4.7 children and their parents, whereas in 2005 to 2015 it consisted of approximately 2.5 children and their parents (*cf.* UN 2015). The impact of the Indonesian governmental policy to reduce birth rates reduces the Total Fertility Rate (TFR) (*cf.* UNFPA 2014) [1.4]. On the other hand, the second trend in demographic ageing is increasing life expectancy, which is related to the mortality rate. Studies on mortality have focused on trends in the Infant Mortality Rate (IMR) [1.5]. With increased access to quality health care services, the IMR has decreased (*cf.* UNFPA 2014). As a result, declining mortality will increase life expectancy.

The growth of the older population in developing countries, which is more rapid than in developed countries, has important implications for government policies such as provision of social security, *i.e.* pension schemes, provision of health services, and access to care, particularly for older people. Every country, both developed and developing, has a policy to deal with their ageing population. Economic conditions are one of the factors that can affect the readiness of those countries to face population ageing. As Brundtland in Sciubba (2010:77) and in ECLAC (2003:1) stated at the World Assembly on Ageing in Madrid in 2002: '*We must be fully aware that while the developed countries became rich before they became old, the developing countries will become old before they become rich.*'

As regards economic growth and the ageing population, social security such as public pensions and health care are seen as important matters. Governments in developed countries, therefore, allocate large budgets from the Gross Domestic Product (GDP) [1.6]. As Dethier (2007:288) contends: '*In developed countries, social security grew massively after World War II, in times of prosperity.*' On the contrary, in developing countries such as Indonesia, the notion of social security drew the government's attention at the beginning of the twenty-first century where only a small amount from GDP was allocated. For instance, social security ranged from 31% of GDP in Sweden to 16% in the United States in the past 30 years (*cf.* Dethier 2007). Meanwhile, the Government of Indonesia spent a tiny amount for both health and social protection from GDP, *i.e.* less than 2% for health and 1% for social protection between 2010 and 2014. However, the Government of Indonesia allocated a considerable amount of the budget in 2016: 12% for social protection and 5% for health (*cf.* ADB 2016), meaning that the Indonesian ageing population has emerged before the country was even ready to allocate sufficient resources to ensure the elderly's well-being (*cf.* UNFPA 2014). Thus, all parties, including the government and the society, need to prepare for the care of the ageing population.

On the one hand, the elderly should have achieved economic stability before entering old age, so that their quality of life will be maintained. On the other hand, the Government of Indonesia also needs to make various interventions to improve the elderly's well-being. Social security is one of the government interventions which covers all Indonesians including formal and informal sector workers,

the unemployed, and the poor. In Indonesia, social security was initiated in 2004 through *Sistem Jaminan Sosial Nasional* (SJSN) ('National Social Security System'). The social security schemes include pensions, old-age savings, national health insurance, work injury insurance, and death benefits (*cf.* Bappenas & GTZ 2008; Widjaja & Simanjuntak 2010). As reported by BPS (2017), the elderly households who are protected under social security accounted for 18.83% in the cities and 6.47% in the villages. Social security includes the pension system which still exists but with limited coverage. For many elderly people who receive a pension, the amount of pension allowance is relatively insufficient for them.

Moreover, nearly half (48%) of all people of pensionable age do not receive a pension. As a result, the majority of the world's older women and men have no income security nor the right to retire. They have to continue working as long as they can, even though they are badly paid and in precarious conditions (*cf.* ILO 2014). That is why some older people still need to continue engaging in income-earning activities to meet basic needs (*cf.* UNFPA 2014). It is reported that 46.53% of Indonesia's older people aged 60 years and above were still active in the labor force (*cf.* BPS 2015). Moreover, a report from UNFPA (2014) shows that nearly 90% of older people who reported being economically active were employed in the informal sectors. These informal sectors, including self-created employment, are forms of employment associated with income uncertainties and lack of social protection [1.7]. Informal employment is indicated by the high proportion of older people working in agriculture (about 70%). Particularly those who live in rural areas are engaged in unpaid family work including older people working on their own family farms or those of their children or neighbours as helpers. Consequently, the percentage of elderly who have social security is low, particularly in rural areas.

Besides social security, the Government of Indonesia also provides social assistance. Social protection includes social security and social assistance. On the one hand, social security is similar to insurance whose payment is mainly made by participants. On the other hand, financing for social assistance is mainly taken from taxes which are distributed to the poor, elderly, and disabled (*cf.* Widjaja & Simanjuntak 2010; Bappenas & GTZ 2008). Social insurance is based on contributions whereas social assistance is based on non-contribution (*cf.* Adioetomo *et al.* 2013). There are several social assistance programs for the elderly, such as *Program Keluarga Harapan* (PKH) ('Hope Family Programme'), and *Asistensi Sosial Lanjut Usia Terlantar* (ASLUT) ('Assistance to Displaced Older People') [1.8]. BPS (2017) reports that there were 2.99% elderly living in urban areas and 5.50% in rural areas who accepted PKH. Moreover, as many as 30,000 elderly ASLUT recipients are found throughout all provinces in Indonesia. However, these programs should be expanded to cover more poor and vulnerable older people.

Social security also covers health insurance which can provide protection of health needs for elderly people. BPS (2017) reports that the health insurance of the elderly reached 63.24%. The largest percentage went to *Penerima Bantuan Iuran* (PBI) ('Premium Assistance Beneficiary') from *Badan Penyelenggara Jaminan Sosial* (BPJS) ('Government Social Security Agency') as much as 33.47% and 17.08% for non-PBI, whereas *Jaminan Kesehatan Daerah* (Jamkesda) ('Regional Health Insurance') reached 12.88%, private insurance 0.83%, and company or office insurance 1.51%. The large percentage of PBI BPJS recipients indicates that the elderly in Indonesia are still dependent on health insurance provided by the government. The largest use of health insurance for the elderly was the PBI for 21.45%, whereas non-PBI spent 13.96%, Jamkesda 4.46%, Private Insurance 0.49%, and company or office insurance 1.11%. Only 41.29% out of 63.24% elderly use health insurance. It shows a lack of accessible health services and support for the elderly as they get older. One of the reasons is because formal sector workers can access social insurance, while the poor have limited access to social assistance and health services. Still, large population groups including informal sector workers have not been covered. Based on those facts, there are still many elderly people who have not been covered either by social security ('social insurance') or social assistance. In the absence of adequate social protection programs, most elderly decide to continue working or rely on their family or community support.

Thus, the Government of Indonesia faces the challenge of increasing needs and demands for care of the elderly for their health and well-being. It is therefore important to conduct user-oriented ethnoscience research for 'bottom-up' policy planning and implementation to improve the care of the elderly in Indonesia.

1.1.2 Current Challenges of Population Ageing

Indonesia is one of the South Asian countries which will soon face an ageing population. *Survei Sosial Ekonomi Nasional* (Susenas) ('National Socio-economic Survey') in BPS (2017) reports that five provinces in Indonesia are heading towards ageing population, *i.e.* DI Yogyakarta (13.90%), Central Java (12.46%), East Java (12.16%), Bali (10.79%), and West Sulawesi (10.37%). Three of those provinces are located in Java. For this reason, this research focuses on East Java where the Javanese population is in the majority. The Eastern world has different social values with respect to elderly care compared to the West (*cf.* Qu 2014) [1.9].

Embarking on the basic working definition of *care* of the elderly as is further elaborated in Chapter II, it suffices here to establish that *care* serves the needs of the elderly *clients*, encompassing assisted living, adult daycare, long-term care, residential care of the elderly or elderly care, hospice care and home care (*cf.* Kim & Antonopoulos 2011). It is relevant to underscore the basic difference in focus with the definition of *nursing* which refers to a way of providing help to elder *patients* as they seek to cope with their status of illness or disability (*cf.* Petiprin 2020; Susanti 2023).

In order to understand the needs and perspectives of the users of elderly care among the Tenggerese population in the communities in East Java, this study describes the results of a qualitative and quantitative research based on a user-centered methodology carried out by implementing the applied ethnoscience approach as a basis for the development of integrated elderly care in Indonesia. The present study in East Java is the first research of user-oriented behaviour of elderly care in the transcultural setting of the plural elderly care system in Indonesia, following the pioneering research by Slikkerveer (1995) on transcultural health care utilisation in the Horn of Africa.

Developing countries in Asia, such as Indonesia, represent various cultural practices with regard to elderly care. Indonesia's largest ethno-cultural group, the Javanese, has a bilateral kinship system which supports the elderly (*cf.* Niehof 1995) [1.10]. Moreover, the Javanese kinship system is characterised by the values of showing *hormat* ('respect') and maintaining *rukun* ('harmony') towards senior relatives (*cf.* Geertz 1961; Koentjaraningrat 1957; Keasberry 2002). In the traditional Indonesian culture, Javanese children are obligated to take care of their parents (*cf.* Koentjaraningrat 1957). In East and South-East Asia, family care of older people is provided informally within the household, specifically by adult children, children-in-law, the spouse, and the grandchildren.

Moreover, caring for older people is considered a priority family responsibility to provide care in the traditional way at home (*cf.* Help Age International 2015). Xu & Chow (2011) state that the traditional care of older people in China has been provided at home by the spouse, children, in-laws, particularly the daughter-in-law, and extended family members. Likewise, in Indonesia, family is the largest resource to support the elderly especially for social informal care and living arrangements (*cf.* UNFPA 2014). In the Javanese culture, the elderly used to live with their children, siblings' children, or grandchildren when they grew older, and had no young children rendering them no longer being the head of the household (*cf.* Geertz 1961).

The choice of living arrangements of the elderly can be influenced by cultural norms and values, and by economic and social conditions (*cf.* UN 2005). Susenas in BPS (2017) reports that living arrangements for the elderly in Indonesia is arranged by those who live within the extended families either living in two or three generations. The meaning of living in two generations refers to the elderly who live with children/daughters-in-law or with parents/in-laws in one household. Living in three generations refers to elderly who live with their children/daughter-in-law and grandchildren or with children/daughter-in-law and parents/in-laws in one household. Moreover, BPS (2017) also reports that the majority (62.64%) of the elderly live with their family, including their three generations. Only 9.80% of them live alone whereas 18.89% prefer to live with their spouse. This shows that the majority

of Indonesian elderly are under their children's care. Moreover, those who have no children live with other relatives (*cf.* Keasberry 2002). The traditional kinship system allows a child to take care and support the elderly, usually the adult daughter. Similarly, the Chinese system places more responsibility on the sons (*cf.* HelpAgeInternational 2015). Xu & Chow (2011:375) highlight a Chinese proverb: '*having a son makes one's old-age secure*' to describe common expectations and obligations of the Chinese children to their parents.

For most Indonesian families, children are still very much valued and parents look to them for help. They emphasise that having children is an attempt to ensure their care at old age. They have a proverb: '*banyak anak, banyak rezeki'* ('many children bring prosperity'). Nowadays, however, many people prefer to have fewer but healthier and better-educated children as the result of family planning programmes. Children who are healthy and well-educated will provide a better guarantee for giving adequate care to their parents (*cf.* Niehof 1995). It is related to the 'Value of Children' referring to the importance of relations between parents and children over the lifespan in different cultures (*cf.* Albert *et al.* 2005) [1.11]. In their study of the value of children in Indonesia, Albert *et al.* (2005), mention three main values of children: emotional, social-normative, and old-age security. Chou (2010) reports the same situation for Chinese parents, that elderly people in China also believe that raising and investing in children is an effort to ensure care of their old age. Similar to the condition of most Indonesian people, Indrizal (2004:51) argues that: '*no matter how kind other people are, in old age it is your children who will make you more comfortable.*' Having several children offers more choices of care for the elderly, and gives a secure feeling in their old age.

Moreover, kinship and family organisations have a more important role, particularly in South-East Asia such as Indonesia, than in the West where they have a value system which refers to Familism. Holmes & Holmes (1995:113) conclude that: '*familism is primarily a characteristic of societies wherein kinship is stressed over other forms of relationship and affiliation is with larger groups such as clans, lineages, kindreds, or extended-family household groups.*' Kin underlies family relations in Indonesia, where children are supposed to show respect to their parents, acknowledge their authority, and take care of their parents in their old age (*cf.* Koentjaraningrat 1957) As will be documented in this research, the Tenggerese people practice the local traditions of *bakti* ('filial piety') and *sayan* ('mutual aid') as important institutionalised socio-cultural principles guiding their behaviour and their way of community life.

In particular, *bakti* and *sayan* represent two of the vital local traditions of the indigenous institutions which have been regulating the practice of care of the elderly in the communities over many generations. The discourse on filial piety is also held in several Asian countries, such as China, where cultural context of elderly care is grounded in the Confucian tradition [1.12]. Several studies in other Asian societies also describe the significance of filial piety such as Beh & Folk (2013) in Malaysia, Qu (2014) in China, The Philippines and Japan, and Setiyani & Windsor (2019) in Indonesia. India as part of the Hindu culture also practices filial piety, where the value of filial piety in relation to the family and their community is extremely important and strong (*cf.* Beh & Folk 2013).

In this research, *bakti* and *sayan* are documented and analysed in relation with the various categories of factors influencing the traditional provision of care to older people, especially to elderly parents at the community level. The practical significance and crucial role of both traditions for the care of the elderly will be described from the users' perspective of young adults, particularly adult children, in providing care to their elder parents among the Tenggerese people in East Java. Sung (2005) defines filial piety as the practice of filial respect and care to parents, which includes a normative duty and obligation of adult children. In Asian countries, filial piety still has strong roots in their daily rituals and norms which are based on the cultural values of each country. Sung (1994) also states that it is important to have greater knowledge of the provision of elderly care in different cultures, where change has a significant effect on the care of the elderly (*cf.* Sung 1994, 2004). Similarly, social change such as modernisation and urbanisation could also affect the type of care of the elderly. Modernisation encourages young people to move out from their parent's home, often to the cities for employment opportunities and an independent life. Higher rates of migration tends to reduce the possibility that an elderly person will have a child living close by.

Mason (1992:7) states that: '*although family support and care of the elderly are unlikely to disappear in the near future, family care of the elderly seems likely to decrease as the countries and areas of Asia develop economically and modernise in other respects.*'

However, Qu (2014) concludes that children and relatives have a concrete role in supporting the patterns of living arrangements among the elderly in most Asian countries. Nevertheless, the type of support for the elderly is shifting from personal to financial. In other words, personal, emotional, and physical contacts with the elderly are diminishing and substituted by financial support. Personal care is replaced by financial support or substituted by other people or institutions, such as hiring nurses, domestic help, or placing the elderly in care institutions (*cf.* Koesoebjono & Sarwono 2003).

1.2 The Importance of Culturally Appropriate Elderly Care

Warren, Slikkerveer, & Brokensha (1995) initiate the importance of incorporating cultures into development which underscores the approach of sustainable development. Moreover, they also highlight the cultural situations from the 'emic' perspective on development. In this context, the 'emic' view also refers to how adult children perceive the care of their elderly and their preferences to utilise traditional elderly care institutions. Those perceptions can only be understood and evaluated in terms of the cultural contexts where adult children provide care of their elderly. The kinship and residence patterns are tangible manifestations of more individuals or collective cultural orientations (*cf.* Keith 1992). Moreover, Olson *et al.* (2011) state that cultural norms influence the concepts of lineage which is important to determine membership of a particular kinship group, patterns of inheritance, and kinship obligations and responsibilities. The cultural context does influence a wide variety of aspects, such as family values and behaviours, communication between parents and children, power and gender roles, work and the family, ethical and religious values, and the role of the extended family and people outside the immediate family in helping out in family matters (*cf.* Olson *et al.* 2011).

Population aging is expected to have a deep effect on the support ratio for the elderly, as the potential support ratio indicates the available support for older people [1.13]. This ratio tends to decrease in Indonesia. In 2010, the potential support ratio was 13.1 and is projected to decrease to 6.4 in 2035 (*cf.* UNFPA 2014). It means that every six working people have to financially support one elderly person. Kadar *et al.* (2013) state that the family has been the most important support system for older people in Indonesia, both in rural and urban areas. The elderly live mostly with their children and other family members, and only a small number of elderly lives alone.

In urban areas, most older people live together with at least one of their children, while the elderly are less likely to live with their children in rural areas. Home is considered to be an ideal place where care will be provided for the elderly and caregivers will stay with them. Zhang *et al.* (2014) show that stronger filial piety is expressed by adult children who live with their parents. There is a clear filial boundary, depending on who provides care and where it takes place. Setiyani *et al.* (2019) state that to be a filial child, one will need to provide care of their parents during their old age, and commit to become providers of direct care at home and assume clear gendered caring roles to parents in the future provide. However, recently, social change has challenged the traditional practices of filial piety. According to Chen (2011), adult children continue to be less available to be directly present with the elderly. Similarly, Chan (2017) confirms that increased urban and labour migration, especially for adult daughters, has affected the practice of filial duty in several ways such as financial remittance and regular communication. However, sometimes families cannot provide specific care to the elderly. It is mainly because not all families have the skill or the experience to look after the elderly. By consequence, the need of provision of care from the community tends to increase.

1.2.1 The Need of Integrated Care for the Elderly

Community-based care includes practical and financial support for older people and their family members within the community. It emphasises reinforcing and complementing traditional forms of informal care (*cf.* HelpAge International 2015). Family home care includes informal care. Xu & Chow

(2011) state that for providing care and support to the elderly, family members remain the primary caregivers, while communities offer supplementary care for the elderly and their families who cannot provide it because they live far away. Community-based care can provide not only care and health services, but also social support for the elderly, and can be provided by public and private civil society organisations, which often work with professionals or community volunteers. Community volunteers may also be trained and supported by local Non-Government Organisations (NGOs), religious organisations or local authorities. HelpAge International (2015) underscores that role of the community to provide support and care not only to primary caregivers among the family's elderly, but also for the elderly themselves, with a view to encourage the elderly to continue living as long as possible in their own home and community.

The government care of the elderly focuses on the various forms of care provided in the *Pusat Kesehatan Masyarakat Santun Lansia* (*Puskesmas Santun Lansia*) ('Age-Friendly Primary Health Care Centre for the Elderly'), the *Posyandu Lansia* ('Integrated Health Post for the Elderly'), and in hospitals. The health care services are controlled by the Ministry of Health, while the social care services for the elderly are provided in the *Karang Werda* ('Well-Being Centre for the Elderly') and *Panti Jompo* ('Old-Age Homes').

The activities in the *Karang Werda* generally focus on five aspects: spiritual, health, welfare, empowerment, and sports including the arts and recreation. The East Java Provincial Regulation Number 5 of 2007 for the elderly's welfare manages the activities carried out at *Karang Werda* to include (1) religious, mental and spiritual, (2) health, (3) employment opportunities, (4) education and training, (5) public facilities and infrastructure, (6) legal services and assistance, (7) sports, arts, and recreation, (8) social protection for non-potential elderly, and (9) social assistance for potential elderly people. Additional care and support of the elderly refers to residential centres such as *Panti Jompo*, classified into two types: (1) old-age homes managed by the government, and (2) old-age homes managed by the private sector (*cf.* HelpAge International 2015). *Dinas Sosial* ('Social Affairs Office') is managing, supporting and controlling the implementation of care and support provided in the government old-age homes. *Dinas Sosial* also has the responsibility to supervise and control the implementation of the provision of care and support in private old-age homes.

The elderly also receive social assistance from the ASLUT and PKH Programme arranged by the Ministry of Social Affairs. The *Badan Penyelenggara Jaminan Sosial* (BPJS) ('Government Social Security Agency') carries out the distribution of social security for the elderly, such as pensions, old-age savings, health insurance, working accident protection, and death benefits. The *Badan Kependudukan dan Keluarga Berencana Nasional* (BKKBN) ('National Population and Family Planning Board') also provides social support for the elderly through the *Bina Keluarga Lansia* (BKL) ('Elderly Family Development'). Care and support services for the elderly involves many ministries and agencies from the central to the provincial, district, sub-district, urban-village, or village level, substantiating that each ministry and agency has a programme for the elderly. Unfortunately, the programme implementation for the elderly results in the unequal distribution of the available resources. Kadar *et al.* (2013) report that many health care staff who provide services for the elderly in the community health centres have limited knowledge, about elderly care. There are no clear directions from the central government to the various levels of health service providers on how to meet the elderly's needs in Indonesia. Inadequate staff and lack of directions from the government can reduce the effectiveness of the governmental programmes.

Knowledge of local people about care of the elderly is important to study as Indigenous Knowledge Systems (IKS) link up with the cognitive aspects of investigating local systems of knowledge, practices, and beliefs in relation with the behavioural aspects in the development process of the community. More specifically, the Leiden Ethnosystems And Development Programme (LEAD) developed the relevant IKS-based Integration Model (IKSIM). Slikkerveer (2019:15) emphasises that IKSIM: '*embarks on the integration and interaction of local and global systems of knowledge, practices and institutions as a stepping stone for the newly-developing concept of Integrated Community-Managed Development (ICMD).*' In Indonesia, the community-based activities are guided by the institution of *gotong royong*. The term refers to the Javanese words *'ngotong'* and '*royong*.'

The word *ngotong* means 'several people carrying out some task,' while *royong* means 'together.' Hence, *gotong royong* can be defined as an institutionalised activity practiced communally by several people (*cf.* Slikkerveer 2019b). Slikkerveer (2019b:309) further highlights, that several studies describe *gotong royong* as: *'an extension of the meaning of communality in Indonesia, as it not only refers to the joint participation of individuals to provide a collective contribution to their community, but also to individual assistance to fellow members in need in the community in the form of either material, financial, physical, mental and spiritual help.*' His definition underscores that *gotong royong* refers to a pan-Indonesian institutionalised traditional principle of mutual aid and communal work on a voluntary non-profit basis (*cf.* Slikkerveer 2019b).

In Indonesia, the implementation of community initiatives for the elderly is also guided by the organisation of *Karang Werda,* a group activity for the elderly in East Java Province, and the *Pos Pelayanan Terpadu Lanjut Usia* (*Posyandu Lansia*) in some other areas of Indonesia (*cf.* Kadar *et al.* 2013). *Karang werda* focuses on social support including assistance to foster greater social interaction and emotional well-being within the community, while *Posyandu Lansia* implements programmes for health care of the elderly conducted by volunteers in the villages, assisted by health care staff. As a result, community participation will improve the health and well-being of older people in Indonesia. Hahn (1999) in Slikkerveer (2019b:309) highlights the non-material aspects of *gotong royong* in Java, pointing to the fact that the traditional Javanese culture does not emphasise material wealth, but that there is: '*respect for those who contribute to the general village welfare over personal gain. And the spirit of gotong royong or volunteerism, is promoted as a cultural value.*'

Although community-based care of the elderly should be considered a priority, and as such merit more attention from the policy makers, some additional types of care beyond the capacity of the communities are still needed, such as hospitals' health care or old-age homes for social care of the elderly. However, organisations such as old-age homes are not popular among older people who still have a family to live with. It is also considered disgraceful to send the elderly to old-age homes (*cf.* Kadar *et al.* 2013). In a similar case in Japan, Kono (1994) mentions, that sending aged parents to modern elderly care organisations is viewed as undutiful and unethical. *Gotong royong,* as an indigenous institution, is also grounded in the indigenous knowledge systems and cosmologies at the community level, which allow for a 'bottom-up' orientation to achieve sustainable development. Slikkerveer (2019:317) highlights that: '*Integrated Community-Managed Development (ICMD) is embodied in its 'bottom-up' orientation, in which the indigenous institutions and cosmologies are functionalised by the integration of local and global knowledge systems in order to achieve poverty reduction and sustainable community development in Indonesia and beyond.*' In this research, the integration-approach of the ICMD model is used to achieve improved care of the elderly and as such sustainable community development in East Java, Indonesia.

1.2.2 Case Management and Sustainable Development of Elderly Care

Although care and support services schemes for the elderly, including health, social care and security are provided by many ministries and agencies, these schemes need to be managed on the basis of what the elderly themselves need and want in the community. A popular model of integrated care for the formal service delivery level is case management. You *et al.* (2012) state that many developed countries, such as England, Canada, and Australia attempt to integrate case management approaches in order to provide comprehensive services for community-based older people. The Case Management Society of America (CMSA) (2010:8) defines case management as: *'a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual's and family's comprehensive health needs through communication and available resources to promote quality cost-effective outcomes.'* According to Long (2002), case management focuses on two primary purposes: quality and cost of care.

Case management aims to improve the coordination of modern health and social care which needs interventions from case managers, coming from health professionals or social workers (*cf.* Long 2002). Keigher (2000) found that health professionals face more constraints in coping with unmet social needs

for the elderly than social workers who are well trained, and are more likely to encourage cooperation among family, friends and the community to make independent living for the elderly possible (*cf.* Early & GlenMaye 2000).

The challenges of an ageing population have also implications for all societal sectors, including demand for goods and services such as housing, transportation, social protection, family structures, and inter-generational ties. Social change may not only threaten family care, but also the financial support of the elderly. This condition may harm the poorest countries of Asia where many elderly people experience poverty. Priebe & Howell (2014) show that in Indonesia the incidence of poverty among older people is high and increases with age. Moreover, Priebe (2017) reveals that about one-third of the elderly population is currently vulnerable to poverty in Indonesia, where the Javanese provinces show relatively high old-age poverty rates compared to poverty among the non-elderly people.

In 2002, the Madrid International Plan of Action on Ageing adopted the second World Assembly on Ageing, paid special attention to three priority areas *i.e.* older people and development, advancing health and well-being into old age, and ensuring enabling and supportive environments (*cf.* UN 2002; UN 2017a). Likewise, the 2030 Agenda for Sustainable Development of the United Nations (2015a) supports the Madrid International Plan of Action on Ageing. The Sustainable Development Goals (SDG) of the 2030 Agenda for Sustainable Development are also addressing the rights and needs of the elderly, including social security, health, inequality, and poverty. These SDG's are also related to nutrition, resource use, health care, accessibility, security and specific data collection for the elderly (*cf.* UN 2017). The factors determining the social and economic well-being of older people worldwide, including income security, health status, capabilities, and enabling environment aspects are also documented by the Global Age Watch Index.

1.2.3 Income Security

Income security is related to the elderly's access to their income. Some indicators used in income security are pension coverage, poverty rate in old age, the relative welfare of the elderly, and living standards using GNI per capita (*cf.* HelpAge International 2015a). From an economic perspective, the government also plays a major role in providing income security for the elderly in their old age. Pension and old age savings are programmes in the social security scheme for the elderly. Social security is only given to participants based on their contributions; it is in the form of premiums or savings paid, such as pension guarantees, and old age, work accident, and death insurance.

For the elderly who during their productive age have planned their living in old-age and taken insurance including pension, they will receive a pension every month during their retirement age to meet their daily needs. It also applies to those who have old age savings. This situation is typical of the elderly who previously worked in formal sectors where employers require their employees to have insurance. In contrast, for the elderly who work in the informal sectors, their income tends to be relatively uncertain.

It is primarily because the majority of them work as farmers whose income is unstable due to seasonal factors (*cf.* Jutting 2000). Moreover, informal workers are also indicated by the high proportions of elderly who worked in agriculture, particularly in the rural areas (*cf.* UNFPA 2014). BPS (2017) reports that the elderly who work in the agricultural sector amount to 55.18%. Furthermore, BPS (2017) also reports that the percentage of the elderly who work as formal workers is 48.17%, while the remaining elderly as informal workers, is 51.83%. The large number of elderly who work in informal sectors influence the amount of elderly who cover social security.

In developing countries, such as Indonesia, financial security for the elderly can be achieved through pension schemes in the social security programme and social assistance schemes from the government. However, the number of Indonesian elderly who already have social security remains low with only 18.83% of those living in cities while it is only 6.47% in villages (*cf.* BPS 2017). It is because almost half of the elderly working in the informal sector receive income of less than one million rupiah per month (*cf.* BPS 2017). The uncertain income is the reason why only a few of the informal sector

workers have social security, such as pensions and old age savings. Hu & Stewart (2009) conclude that informal sector workers do not want to participate in pension systems due to the strict criteria, such as contribution requirements, investing policies, and government requirements for pension funds itself. It may be necessary to relax some requirements to a level which is more consistent with the situation related to informal sector workers such as flexibility of contributions (irregular contributions) and withdrawals. For example, when there is a good harvest due to good weather conditions, farmers can afford larger pension contributions than normal. However, if bad weather conditions occur, farmers may not have sufficient funds to pay the contributions.

Although informal workers are required to plan finances well, such as preparing savings and pension for their old age to maintain their well-being, social assistance from the government is crucial for the elderly who are neglected or poor so that the elderly can improve well-being in their old age. The capability of the elderly having income security may affect the type of care provider and support service they will receive in their old age. This research tries to show that the elderly who have income security can live independently, and are able to meet their needs and to sustain a sense of well-being.

1.2.4 Health Status

Health status refers to the condition of the elderly's health in old age *i.e.* life expectancy and health status at the age 60, and psychological well-being (*cf.* HelpAge International 2015a). The elderly are prone to develop health complaints from medical or psychological disorders due to illness and accidents. They should control both their physical and mental health, and when they develop problems, they need to be treated immediately.

The elderly can obtain various treatments ranging from self-treatment to visiting a medical functional at an outpatient centre, but most prefer to get self-treatment. BPS (2017) reports that the elderly decide not to have outpatient treatment for many reasons: 64.79% felt satisfied with self-treatment, whereas 25.39% felt that their health complaints were not disrupting their activities, so they did not need any outpatient treatment. Moreover, around 5% of the elderly chose not to become outpatients because there is no money to cover the medical expenses and operational costs. The rest, almost 5% of the elderly decide not to receive outpatient treatment because of their lack of transportation, or the absence of someone to accompany them, or their wish to avoid long queues for treatment.

Still, the government needs to provide improved health facilities and services particularly for the elderly so that they are encourages to visit the health facilities, especially for the poor, since it is also important, to control and check their health status regularly. The elderly's condition can affect the type of care and support service, because of the fact that if elderly are healthy, they will choose to receive care at home, either self-care or family care.

1.2.5 Capability

The capability of the elderly is measured from their employment and education levels, as proxies for engagement and human capital in older age. The level of employment includes access to the labour market and income. Furthermore, the level of education includes the ability to take up job opportunities, and to claim their social and economic rights (*cf.* HelpAge International 2015a). The elderly can decide if they still want to work or not depend on the motivation that drives the elderly to work. On the one hand, some elderly are still working because they will earn their self-esteem, be more independent, and be able to participate in economic activities.

On the other hand, the elderly's motivation to work is due to economic pressures both to meet their needs and pay health care costs. BPS (2017) reports that almost half the elderly who work (47.92%) fulfil their daily needs or actualise themselves. Furthermore, the percentage of elderly who work in rural areas (55.34%) is higher than those in urban areas (40.93%). It is due to the availability of informal employment in rural areas, especially in the agricultural sector. About 55.18% of the elderly work in the agricultural sector, which accounts for a higher number in rural areas (74.25%) than in

urban areas (30.95%) based on the type of areas (*cf.* BPS 2017). According to Giles *et al.* (2011), the elderly in rural areas tend to continue working in old age because their accumulated wealth is lower than those living in urban areas.

Most of them are working as farmers with no specific age limit for retirement. As long as older people think they can work, they will continue to work in the field, particularly in rural areas. In contrast, many elderly are absorbed in the trade business field about 19.85%, which accounts for a higher number in urban areas (31.49%) than in rural areas (10.70%) based on the type of areas (*cf.* BPS 2017).

Meanwhile, the gender distribution shows that the percentage of elderly men who work is 63.29%, which is almost two times higher than the percentage of women (33.79%). Elderly women (50.06%) prefer to take care of their household (*cf.* BPS 2017). In Indonesia, the majority of household heads are a man. One of the reasons is the cultural influence, especially in Javanese culture. The man tends to be responsible both as the family leader and the decision-maker and to practice work in order to meet the family needs.

Based on the education aspects, the percentage of elderly with a university education level, who are still working is only 31.70%. In contrast, the elderly with elementary education who work is higher, 56.31% (*cf.* BPS 2017). This may occur because the elderly who have higher education levels may have more knowledge and skills related to their old age preparation. For example, they have finances, assets, savings and insurance which they have prepared during their productive year.

The elderly's capability consisting of employment levels and education status will affect the type of care and services they need. It can be assumed that the elderly who have higher education levels earn sufficient income to support their life, tend to be independent and in a position to choose the care and support services of their preference.

1.2.6 Enabling Environment

An enabling environment refers to the attributes of the communities in which the elderly live. Indicators of the enabling environment are the levels of the elderly's engagement within the community, freedom of movement, autonomy, and choice of living arrangements (*cf.* HelpAge International 2015a). The enabling environment also refers to the availability of potential social support for the elderly. Providing social support to the elderly, such as companionship, community interaction, and emotional reassurance, should be an important part of the care needs (*cf.* HelpAge International 2015). It is also regarded crucial for Asian countries which have a variety of cultural practices related to social support networks community-based care of the elderly.

Family is the main resource of material, emotional and social support to the elderly. For such kind of support of older people, the choices of their living arrangements are also involved. Living arrangements refer not only to those with whom the elderly are living, but also how the elderly plan, prepare, and agree to live together. The choice of living arrangements are influenced by cultural norms and values, and by economic and social conditions (*cf.* UN 2005). The living arrangements are also related to the care of older people, *i.e.* the distribution of care among the different care providers (*cf.* Keasberry 2002). Intergenerational relationships are mostly practiced in this kind of living arrangements of which the outcome is the household composition. (*cf.* UNFPA 2014).

Based on the data from *Survei Sosial Ekonomi Nasional* (*Susenas*) in BPS (2017), the living arrangements for the elderly in Indonesia are dominated by those who live with extended families, such as children, daughter-in-law or the parents/in-laws, and those with three generations, such as children, daughter-in-law, grandchildren, or the parents/in-laws. BPS (2017) reports that most elderly living with their family including their three generations are about 62.64%. Only 9.80% of the elderly live alone and 18.89% of them prefer to live with their spouse. The result is also consistent with the results of Keasberry's (2002) study, that the majority of elderly people in Indonesia receive care from their children, while those who have no children are living with other relatives.

The majority of the elderly in Indonesia live in extended multi-generational households and rely on the financial support and personal care of their adult children. BPS (2017) reports that 77.82% of the

elderly obtain funding from the household members who are working, *i.e.* 14.97% from money or transfer of goods, 0.76% from investment, and 6.46% from pension. More specifically, the number of elderly households who receive more financial support from household members is higher in rural than urban areas: 81% compared to 77.82%. In contrast, the source of funding received by the elderly comes from their retirement pension which accounts for a far higher percentage in urban areas than in the rural area (10.09% compared to 2.85%). However, this percentage is still lower than the percentage of source funding received from working family or household members (*cf.* BPS 2017).

It is interesting that the largest bearers of the financial burden from household members are the elderly (50.94%). More specifically, the elderly who play a role backer in funding the households show a higher percentage in rural than urban areas (55.90% compared to 45.52%). The elderly are still the backbone of their household, as the majority of Indonesian elderly are actively working to meet their basic needs (*cf.* BPS 2015; UNFPA 2014).

The enabling environment is also related to the social connection. In Indonesia, the social connection is usually based on the above-mentioned traditional institution of *gotong royong*, described as an Indonesian traditional institution characteristic for the 'village culture' (*cf.* Barnouw 1946; Warren, Slikkerveer & Brokensha 1995). Particularly in East Java, the elderly have the *Karang Werda*, a place for the elderly to participate in the community activities. These activities are aimed at social support for the elderly and include sports, arts, and spiritual activities. The implementation of the enabling environment for the elderly will affect the type of care and support services which they need.

1.3 The Plural Elderly Care System

1.3.1 The Concept of the Plural Elderly Care System

The context of care in this research focuses also on the provision of health and social care to the elderly. Institutions and organisations are providing different forms of care of the elderly, both formally and informally. Locations where the care of the elderly is provided include the home, the community such as the *Karang Werda*, and organisations such as the *Panti Jompo*.

In addition to the above-mentioned working definition by Kim & Antonopoulos (2011) of elderly care encompassing serving the needs of old adults in assisted living, adult daycare, long-term care, residential care, hospice care and home care, the care of the elderly are in general provided by family, volunteers, state, or private sectors (*cf.* HelpAge International 2013).

The term 'care' is defined as behaviours shown by care providers in each type of care for the elderly. The concept of care of the elderly in this research focuses on its institutions and organisations, based on Slikkerveer's (2014:1) definition of institutions: '*institutions encompass different social and individual formations in the community or society created by people over generations in order to structure their collective rules, norms, beliefs, values, interactions, and behaviours.*' While definitions of institutions and organisations are sometimes used interchangeably and overlapping, Slikkerveer (2014:1) contends that: '*organisations basically refer to structures of accepted roles and rules in the community and may operate in a formal or informal way. Organisations may become institutions (that is 'institutionalised') if they acquire peoples' value and special legitimacy for satisfying peoples' needs over time.'*

Some institutions may have an organisational form with roles and structures, whereas other entities are just influencing the behaviour of their participants (*cf.* Uphoff 1984). Huntington (1965) also underscores that institutions are stable, valued, having recurring patterns of behaviour.

This research considers the working definitions of the institutional and organisational basis of care of the elderly as mentioned above by Slikkerveer (2014), underscoring that these institutions refer to culture-oriented norms and behaviours of valued, non-commercial purpose over time, while organisations refer to the structures of recognised and accepted roles in the society, generally based on commercial objectives.

Furthermore, this research embarks on the concept of the 'plural system' sub-divided into various sub-systems, introduced by Slikkerveer (1990) in his research introducing the concept of a plural

medical system with the utilisation of traditional, transitional, and modern medical systems by various ethno-cultural groups in the Horn of Africa. He classified the plural medical system into three types: (1) the 'traditional medical sub-system' encompassing indigenous institutions; (2) the 'transitional medical sub-system' encompassing transitional organisations, and (3) the 'modern medical sub-system' encompassing modern organisations, which also applies for the study of care of the elderly (*cf.* Figure 1.1).

The useful conception of a plural system consisting of institutions and organisations can be applied in different settings. The concept of the plural system is later onwards also successfully applied in comparative research in Africa by Ibui (2007); Chirangi (2013); De Bekker (2020), the Mediterranean Region by Slikkerveer (1996); Aiglsperger (2014); and in South-East Asia by Agung (2005); Leurs (2010); Djen Amar (2010); Ambaretnani (2012); Erwina (2019); Saefullah (2019); and Febriyanti (2021). In this context, it is similarly useful to conceptualise the configuration of the plural elderly care system in East Java, particularly in the Tenggerese and Javanese cultures.

Plural Elderly Care System	Traditional Elderly Care Institutions
	Transitional Elderly Care Organisations
	Modern Elderly Care Organisations

Figure 1.1 Schematic representation of the organisational structure of the plural elderly care system encompassing the traditional elderly care institutions, and the transitional and modern elderly care organisations in East Java.
Source: Adapted from Slikkerveer (1990).

Figure 1.1 provides a schematic representation of the organisational structure of the plural elderly care system in East Java, encompassing the traditional elderlty care institutions, and the transitional and modern elderly care organisations, providing care and support services to maintain the health and well-being of the elderly in the communities. The conception of the plural elderly care system facilitates the formulation of the appropriate working definitions of the various concepts used in the research in East Java. As Slikkerveer (2019) argues, the selected working definitions of the two basic concepts, '*indigenous institutions'* and '*exogenous organisations',* important for the comparison of different forms of care of the elderly care, have become the subject matter in the international debate on the role of indigenous institutions in the socio-economic development process. In this debate, the crucial differentiation, developed in the recent theory between '*indigenous institutions'* and '*exogenous organisations'* in relation to sustainable development has also been the subject of several Workshops of the LEAD Programme since 2017.

Embarking on a reference to the essence of institutions, provided by *Leach et al.* (1999: 237), who state that these institutions are: '*regularized patterns of behaviour that emerge from underlying structures or sets of ''rules in use*", the conceptualisation of indigenous institutions by Blunt & Warren (1996) refers to: *'those often invisible local-level institutions which are indigenous as opposed to exogenous organisations in the community and which are based on the principles of non-profit mutual aid and communal work at the community level'*. In this way, endogenous organisations are defined as profit-making externally-introduced associations of Western-oriented agencies, credit unions, cooperatives, rotary clubs etc. as part of technical assistance provided in the socio-economic development process (*cf.* Slikkerveer, Baourakis & Saefullah 2019).

From the plural elderly care systems approach, Slikkerveer (2017) introduces a definition of the indigenous institutions being rather useful for the study of the traditional elderly care institutions in East Java as: *'a set of local norms, values, cultural and traditional settings of the community, based on the principles of non-profit making mutual aid and communal work of the people'*.

By contrast, the directly related working definition of the exogenous organisations 'provides a similarly useful working definition for the 'modern elderly care organisations', which would very well relate to the definition by Blunt & Warren (1996) to encompass: '*exogenous organisations established through forces external in the community', which are characterised by profit-making objectives*'.

Within this context, the third manisfestation of care of the elderly in an intermediate position between the traditional institutions and modern organisations is represented in the 'transitional elderly care organisations', operated by local community members, but introduced from outside and as profit-making organisations financed from outside national or international resources. In sum, the plural elderly care system in the study area of East Java can usefully be conceptualised to include three components, for which the following working definitions for the research have been selected:

- *traditional elderly care instiutions,* representing a set of norms, values, cultural and traditional settings of the community, based on the indigenous principles of non-profit making mutual aid and communal work of the people, often located in the community and focused on the provision of elderly care;

- *transitional elderly care organisations,* representing a set of norms, values, and rules, based on the principles of profit making introduced from outside the communities, often located in the community and focused on the provision of elderly care;

- *modern elderly care organisations,* representing a set of norms, values, and rules, based on the principles of profit making introduced from outside the communities, often located outside the community and focused on the provision of elderly care.

The related development approach refers to the 'emic' and 'etic' views of development, as mentioned above. Warren, Slikkerveer, & Brokensha (1995) document ample empirical evidence for the importance of adopting an 'emic' approach to sustainable development, based on cultural incorporation. In order to fully understand the local cultures as they are related to the care of the elderly, it should be based on an 'emic' or insider's view, rather than an 'etic' or outsider's view. In addition, Uphoff (1992) states that an 'emic' approach in development involving cultural aspects is considered as the 'universe of experience' which could provide many experiences for mobilising and sustaining collective actions for self-help and self-management in the modern world. Another approach is to compare the 'top-down' and 'bottom-up' development approaches, where increasing research underscores the importance of the 'bottom-up' strategy for sustainable development. In the context of the plural elderly care system, the traditional elderly care institutions in development refer to the 'emic' view and the 'bottom-up' development approach.

In additional to the definition of formal and informal institutions, Slikkerveer (2012) supports the view of Pejovich (1999:166) who defines informal institutions as: '*traditions, customs, moral values, religious beliefs and other norms of behaviour which have passed the test of time, being part of a community's heritage which is called culture.'* The informal institutions apply social norms of behaviour and conventions which may prohibit or permit individuals to undertake certain activities within their social settings.

In contrast, formal institutions include rules, laws, and constitutions legalised by the members of the society (*cf.* Slikkerveer 2012). As regards the social support system of the older person, Cantor & Brennan (1999) present a model of social support systems containing different types of support elements or sub-systems. The model is known as the 'social care model' by Cantor, representing the elderly at the centre of a circle, surrounded by the informal support relationships of spouse, children, and relative in the first circle. The informal support relationships in the second circle include other kin such as friends and neighbours. The next circle refers to the quasi-formal support, known as the mediating structure of religious and social organisations, and social and neighbourhood groups.

The outermost circle represents the public and voluntary service organisations including the formal support system. Obviously, the social care model includes both formal and informal components (*cf.* Cantor & Brennan 1999).

1.3.2 Traditional Elderly Care Institutions

Traditional elderly care, which occupies a critical position in this research, refers to the care of older adults, largely provided by family members at home in the communities. Family home care is the most appropriate term to denote care received by the elderly provided by the family at home. The role of the families in the care of the elderly is very important, starting from planning and implementation, to decision making and practice. In developing countries, such as Indonesia, values of kinship and family tradition are very important because people's involvement with their family determines what people do, think, and value. The value system refers to 'familism*'* described by Holmes & Holmes (1995:113) as: '*primarily a characteristic of societies wherein kinship is stressed over other forms of relationship and affiliation is with larger groups such as clans, lineages, kindreds, or extended-family household groups.*'

Indonesians, particularly the Javanese people, have a bilateral kinship system. Geertz (1961) states that the term 'bilateral kin' is used equally for the mother or the father. Similarly, inheritance of titles and property follows maternal as well as paternal lines (*cf.* Koentjaraningrat 1957). The underlying relationship in kinship is family relations, where the term family is used for household, nuclear family, and kindred depending on the circumstances. A household may be composed of a nuclear family and extended family. The nuclear family refers to a set of biological parents and their dependent offspring, *i.e.* parents and their children. Additionally, an extended family consists of two or more nuclear families related through parents, children or siblings. In the Javanese villages, the nuclear family, called *kulawarga* is the most important kinship-based unit (*cf.* Geertz 1961; Koentjaraningrat 1957).

Koentjaraningrat (1967) also states that in Java at the village level, the significance of kinship ties is very limited outside the nuclear family ('kindred'). Kindred consists of one to three generations of local relatives, usually direct descendants of a person's great-grandfather on his father's as well as his mother's side. Consequently, kindred involves recognition of all individuals to whom one is related through blood, marriage, or adoption (*cf.* Holmes & Holmes 1995). Moreover, Koentjaraningrat (1957) states that a term to name all the kinsmen outside the nuclear family is *sedulur*. *Sedulur* usually refers to the term siblings, which can also mean 'relatives' in general. Geertz (1961) states that the Javanese make some distinction between *sedulur tjedak* ('near kin') and *sedulur adoh* ('distant kin').

Most Javanese children have the obligation to take care of their parents with, showing respect towards them (*cf.* Koentjaraningrat 1957). Cultural values associated with filial piety have greatly influenced the care of parents and the relationship between parents and children in Asia, deeply rooted in Asian cultures (*cf.* Sung 2005). Choi (1995:93) states that: '*filial piety is the foundation of all human behaviour*' because it not only brings harmony into a family, but it is also practised in a society which is developing particular respect and care of the elderly, and eventually loyalty to the nation. Holmes & Holmes (1995) state that familism may even have religious sanctions wherein filial piety was demanded by Confucius's teachings in China.

The same situation is documented for Indonesia where strong filial obligations are based on norms of inter-generational relations between children and parents. Wirakartakusumah (1999:17) in Schroder-Butterfill (2003) states that: '*the Indonesian social norm prescribes that children respect their elders. Children who ignore and who do not care of their parents are subject to social sanctions. … The norm which demands children to respect their parents remains in effect and is adhered to by the Indonesian people. …Children in many communities are happy and proud to be able to care of their parents … (and) often compete for the opportunity to care of their parents.*' For the couples who do not have children, they may gain access to children through adoption, where Java is no exception (*cf.* Koentjaraningrat 1957; Geertz 1961).

Schroder-Butterfill (2004:114) states that: '*in rural East Java various forms of adoption are referred to as acquiring an anak angkat (literally, raised child). …Instead, Javanese adoption is*

traditionally strictly a matter between the two families involved.' In the majority of cases in Java, the *anak angkat* may be a child of a relative. Moreover, children of the wife's siblings are the most common source of *anak angkat*, although there is a possibility of children from among the husband's nephews and nieces (*cf.* Schroder-Butterfill 2004; Koentjaraningrat 1957). However, for the elderly who do not have either biological or adopted children, they can also receive support and care from outside their family or relatives such as from neighbours or friends.

The support and care provided by the family are rooted in the indigenous knowledge and institutions which include the *bakti* tradition in which they strongly believe and practice, and which represents the pan-Indonesian institution of *gotong royong* (*cf.* Slikkerveer 2019). In line with the above-mentioned working definition, the research defines traditional elderly care institutions represented by family home-care on the basis of indigenous knowledge, belief, and local people's practice at the community level.

The majority of the Tenggerese people practice the Hindu religion which influences how they live, and includes also their tradition of care of the elderly in general, and specifically for their parents. One of the Hindu principles of the Tenggerese people is the above-mentioned *Catur Guru Bakti*. There are four traditional principles to whom the people should pay respect: *Guru Swadyaya, Guru Rupaka, Guru Waktra,* and *Guru Wisesa*. The meaning of *Guru Swadhyaya* is God, and it fits the Tenggerese community's beliefs, namely *Sang Hyang Widhi*, while *Guru Rupaka* is a person playing the role of parents. Moreover, *Guru Waktra* is a person playing a role in teaching knowledge which is also known as teachers, and *Guru Wisesa* means the government who is responsible for making rules to improve people's welfare. There are no binding, legally-based rules, but more influenced by the indigenous norms, values and customs.

Living arrangements of older people and their children is also important to understand the way in which the care to the elderly is provided. Geertz (1961) states that usually 'a household' is the same as a group of people living in a house, but sometimes there are two households sharing the same living spaces with separate budgets. Parents seldom live together under one roof with two economically active married couples, but are living together with an adult child who has not yet married, or live together with their adult children who are married with or without their grandchildren. Koentjaraningrat (1967) states that the *somah* ('Javanese households') are not always characterised by a separate residence but a separate kitchen where each household cooks its own meal.

The term for a separate kitchen in one roof house is known as *bedo pawon* in Javanese. Related to the living and care arrangements, Keasberry (2002) found that the majority of the elderly lives with at least one child, while about half of the elderly have a child living in the same village. Keasberry (2002) also found that the number of children in the house or in the same village positively affects the perception of the parents.

Although the traditional familial elderly care in Indonesia provided by children living in the same household is conceptualised as 'good elderly care', the Government of Indonesia needs to provide a culturally appropriate type of comprehensive care of the elderly, which aims at integrating the local institutions of norms, values and practices into an advanced pluralistic elderly care system to meet the needs and expectations of the elderly to improve their health and well-being.

1.3.3 Transitional Elderly Care Organisations

The word 'transitional' in this research refers to a process of shifting from one condition to another. Transitional organisations are represented by various organisations characterised by in-between private and public organisations, or in-between traditional institutions and modern organisations. In the context of the 'emic' and 'etic' views of development, the transitional development approach can be regarded as a combination between 'emic' and 'etic' views of development. Similarly, the transitional development approach can be regarded as a combination of 'top-down' and 'bottom-up' approaches of development (*cf.* Saefullah 2019).

By using the 'bottom-up' approach, the transitional elderly care is defined as care of the elderly in-between traditional care, introduced from outside the community, *i.e.* between family home care and

modern care organisations. The position between family home care as a traditional care institution and the old age home as a modern care organisation is represented in community care. Community care includes transitional organisations, because the providers of care come from both local people and government. WHO (2004:16) defines that: '*community care is services and support to help people with care needs to live as independently as possible in their communities.*' Community care is also known as 'community-based care', indicating that it refers to community care which is introduced from outside, but practiced within the community. Both terms are sometimes used interchangeably.

Community-based elderly care is more common in East and South-East Asia than modern elderly care such as provided in old-age or nursing homes. It is primarily because most of the elderly prefer living with their own traditional institutions in their communities instead of staying in modern elderly care organisations. In Indonesia, the primary motive of community-based care is to fill the gap of care of the elderly which is provided by family home care. The role of community-based care is as a complement or substitution from the lack of care and support services offered in traditional care institutions. When the elderly do not have family or relatives who care of and support them, community-based care plays a role replacing the family's role to care and support them. Xu & Chow (2011) state that social services in communities are aimed to supplement traditional family care and to fill the gaps between needs and care of the elderly who are unable to be provided by the government and their family. Thus, it can be said that community-based care is more affordable for the government and families. The popularity of community-based services is driven by the desired goal of decreasing service cost provision and improving the quality of care.

HelpAge International (2015) reports that community-based care is seen as cost-effective and can reinforce social networks in the community. The role of the family in community care is quite large in determining care options that meet the elderly's needs. In contrast, for the elderly who do not have a family, community care can help them to maintain their psychological well being, substituting the existence of a family. It is because the elderly feel that they have support from the community and live in an environment that they know, making them feel more comfortable and easy to adapt to. On the contrary, being in a nursing home may make it possible for them to adapt to the new environment (*cf.* Fan 2007).

Xu & Chow (2011) state that community care of the elderly uses vertical and horizontal models in its implementation. Community care uses a vertical model because of the involvement of the local government and agencies providing the service. Government involvement can be material or non-material. Material involvement is related to funds for care and service provision for the elderly, such as medical resource payments and activities or events designed by the community for the elderly. For some additional health services, community members pay a relatively low cost, but sometimes it is free of charge.

On the other hand, non-material involvement includes providing health services, medicines, and medical equipment. Moreover, sometimes the government gives non-cash assistance for abandoned elderly such as basic food and clothes, which is managed by the community. Additionally, community care also uses a horizontal model implementing a care system involving resources from the community, both individually and in groups.

It includes funding, where voluntary contributions from individuals help the community to provide care and support services. The elderly can actively participate as volunteers in social activities held by the community. It is important to note that the management of transitional elderly care organisations come from local people's initiatives with the involvement of other organisations from outside of the community.

Hence, the provision of care of the elderly is fully implemented by the local community, which has recently received also support from the local government. Some examples of such community care programmes in Indonesia include the *Posyandu Lansia*. It focuses on elderly health care such as checking weight, blood pressure, blood sugar levels, and monitoring medical equipment. Besides, there is also the *Karang Werda*, consisting of several activities for supporting the elderly's social and spiritual activities, sports, arts, and training.

1.3.4 Modern Elderly Care Organisations

The third component of the plural elderly care sytem includes the modern elderly care organisations. The elderly care is provided by professionals in the *Panti Jompo* and the *Puskesmas Santun Lansia*. Care in old age homes is provided by both government and the private sector. Meanwhile, the *Pusat Kesehatan Masyarakat Santun Lansia* (*Puskesmas Santun Lansia*) is only provided by the government focusing on health care. Modern care organisations are based on modern knowledge of care of the elderly delivered by trained professionals. The implementation of care of the elderly in modern care organisations has binding and compelling rules for anyone involved. The rule requires the provision of care of the elderly to be fully managed by the modern organisation provider. Management of old age homes is divided into government and private management.

The *Panti Jompo* which are fully managed by the government are generally intended for the elderly who are under the abandoned category and do not have family or relatives who can take care of them. The government fully manages and funds the *Panti Jompo*. In contrast, the private old age homes provide care to the elderly who require the family or relatives of the elderly to pay the cost of those services. Even though the elderly have family and choose or are forced to live in old age homes, the care is fully managed by private old age homes. The family's role in care and support services is limited, and not as large as the family's role in traditional elderly care (family home care). Meanwhile, the *Puskesmas Santun Lansia* focuses on health centres by providing health services for the elderly such as health promotion, prevention, cure and rehabilitation. These services emphasise being proactive, ensuring access for health and being respectful to older people (*cf.* Kadar *et al.* 2013).

Care in this research refers to the services provided by both health and social care. Social care includes social support services for the elderly. In South-East Asia, especially in Indonesia, care of the elderly rely much on traditional elderly care institutions (family home care). On the other hand, establishing transitional elderly care organisations meet needs and care which the family and the government are unable to provide. However, organisational care such as an old age home is the last choice for care of the elderly. People in a society who are influenced by values of filial piety will be ashamed when they place the elderly in organisational care such as old age or nursing homes. However, the *Panti Jompo* will lose this stigma due to value changes over time in the modernisation era (*cf.* Ping 2013).

This research also attempts to identify the local people's considerations to utilise the 'Plural Elderly Care system' in society, whether it is traditional, transitional, or modern elderly care. Furthermore, this research uses independent factors, such as socio-demographic, psycho-social, perceived needs, socio-economic factors, institutional, environmental, and intervening factors, such as government regulation and private promotion. They are then used to analyse significant factors influencing behaviours of the local people towards utilisation of elderly care systems based on their local knowledge, beliefs, values, norms, and traditional principles in the community. Table 1.1 explains the plural elderly care system showing the characteristics of elderly care services provided in traditional institutions, or transitional and modern organisations.

Table 1.1 Characteristics of the Plural Elderly Care System

Characteristics	Plural Elderly Care System			
	Traditional Intitution	Transitional Organisation	Modern Organisation	
			Government	Private
Operation mode	Horizontal (Bottom-up)	Combination between vertical and horizontal (combination between top-down and bottom-up)	Top-down	Top-down

Table 1.1 (*continued*) Characteristics of the Plural Elderly Care System

Characteristics	Plural Elderly Care System			
	Traditional Intitution	Transitional Organisation	Modern Organisation	
			Government	Private
Care provider	Family	Volunteer from community such as cadres who are accompanied by medical personnel	Professional in Local Government	Professionals in Private Organisations
Place	Home	Local community place such as *Karang Werda* and *Posyandu Lansia* which focus on health for the elderly	*Panti Jompo* or Old Age Homes and *Puskesmas Santun Lansia* which focus on health for the elderly	Old age homes
Funds	Family	Community and supported by the government (not obligated)	Local government	Family
Rules	Not written, flexible	Written, loose regulation	Written regulation, forced	Written regulation, forced

Source: Fieldwork (2018)

1.3.5 The Ethnoscience View on Utilisation of the Plural Elderly Care System

'*Ethnoscience*' refers to a scientific user-oriented perspective based on the interactions between individuals and their environment, particularly on how humans perceive and adapt to their environment. A specific ethnoscience methodology has been selected for this research, known as the 'Leiden Ethnosystems' Approach.' Slikkerveer & Dechering (1995:435) state that: '*Ethnosystems encompassing local people's indigenous knowledge and practiced based on long-standing experience and wisdom in particular sociocultural setting over generations. Such systems possess many dimensions, including linguistics, education and socialization, health and healing, and kinship and social structures. Moreover, ethnosystems go beyond the general system of knowledge to include local, culture-specific concepts, belief and perceptions that form the praxis of daily livelihood and survival - often referred to as 'indigenous knowledge'- as well as local channels of communication and decision-making systems.*'

Warren, Slikkerveer, & Brokensha (1995) in Slikkerveer (2019:36) define the indigenous knowledge system as: '*a system of knowledge, beliefs and practices which has evolved in a particular area or region, often outside universities and laboratories and transferred over many generations, and as such forming the base for the local-level decision-making process and which has been recorded in several sectors of the society, such as in animal and human health, environment, natural resources management, agriculture, fisheries, forestry, bio-cultural diversity conservation, and local economies.*' The incorporation of indigenous knowledge into science is called 'ethnoscience.'

The concept of '*ethnosystems*' is central in the Leiden Ethnosystems And Development Programme (LEAD) introduced at Leiden University (*cf.* Slikkerveer 1990, 1995; Slikkerveer & Dechering 1995). The LEAD Programme provides activities for postgraduate research and sub-field training such as ethno-medicine, ethno-botany, ethno-pharmacy, ethno-communication, ethno-economics and ethno-mathematics (*cf.* Slikkerveer 2019). Moreover, Slikkerveer (2019:43) states that: '*the extended conceptualisation of indigenous knowledge includes not only the reference to local knowledge and practices, but also to perceptions, beliefs, cosmologies, values, wisdom, experience and last but not least institutions which have developed over many generations in a particular field of ethnographic study—or culture area—and which as such are unique to a specific culture.*' This research focuses on indigenous knowledge systems with the ethno-economic and ethno-management approach.

At the LEAD Programme, the 'Leiden Ethnosystems' Approach' has been implemented to design ethnoscience-based studies of Indigenous Knowledge Systems (IKS) within the dynamic context of the development process. Slikkerveer (1990, 1995, 2019a) introduced the 'Leiden Ethnosystems'

Approach' as a combined research methodology of three concepts, *i.e.* the 'Historical Dimension' (HD), the 'Participant's View' (PV), and the 'Field of Ethnological Studies' (FES). The 'Historical Dimension' refers to a historical analysis of the complex contemporary patterns, including religion, cultural, agriculture, natural resource preservation; the 'Participant's View' refers to people's perspective; and the 'Field of Ethnological Studies' refers to comparative analysis among different/comparable communities. In order to fully understand the local cultures related to care of the elderly, the study should be based on an 'emic' perspective, rather than an 'etic' perspective. It is primarily because the 'emic' perspective can show how other people tend to perceive, organise, and use their culture in relation to their environment based on knowledge, belief, and practice in the local context. Perceptions towards an individual regarding their daily life phenomena and knowledge systems becomes the vantage point for analysis.

In the Indonesian context, especially among the Tenggerese people in East Java, it is essential to know the form of care of the elderly, such as *bakti* as the most important local traditions which regulates the attitudes and behaviour of younger generations towards their parents and other older people. The 'emic' perspective refers to how adult children perceive their own situation particularly to provide care and support services based on their culture and experiences. Considering that the adult children's perspective is essential due to social changes such as urbanisation and modernisation, it can affect how adult children think of providing care of the elderly. The social changes tend to shift the adult child's behaviour pattern concerning elderly care, *i.e.* personal care, emotional care, physical contacts, and financial support. Moreover, the adult children's role in providing care of the elderly is replaced by other people in the organisations such as *Karang Werda* and *Posyandu Lansia*. Furthermore, effective solutions to the notion of care and support can only be understood and evaluated in the scope of the cultural contexts where the elderly live.

The Javanese are the largest ethnocultural group in Indonesia whose language and culture have influenced many other sub-cultures, such as Tenggerese culture. *Gotong royong* is used widely in Java and implemented in the communities, such as among the Tenggerese and Javanese people, as an indigenous institutionalized traditional principle of voluntary mutual aid and communal work in Indonesia. Slikkerveer *et al.* (2019:19) state that: *'in most of the Indonesian rural areas, the communities have been managed for many generations by indigenous institutions, such as gotong royong, metulung, kekeluargaan, and rukun, epitomising local knowledge, beliefs, values, norms and principles which form the foundation of the customary community of Indonesia or masyarakat adat.'* In this research, *bakti* and *sayan* which are practiced by friends and neighbours also refer to traditional institutions, such as the concept of *gotong royong*, which are guiding the behaviour in the community to provide care of the elderly. This research attempts to find the form of care based on the adult children's perspectives. In this context, the ethnoscience perspective is used to understand local people's preferences for utilising traditional elderly care institutions in comparison with transitional and modern elderly care organisations

1.4 Aim, Objectives and Structure of Study

1.4.1 The Importance of the Research on Elderly Care

Slikkerveer (2019a) distinguishes the concept of institutions and organisations. Institutions refer to norms and behaviours of some valued purpose, while organisations refer to the structure of recognised and accepted roles in the community. This study will consider the plural elderly care system, both on an institutional and organisational basis. *Bakti* as one of the local traditions, plays an important role in providing care of the elderly by the family at home. The focus of this study is related to the Javanese people, particularly the Tenggerese people who maintain their culture in the provision of care of the elderly. The young Tenggerese people refer to their parents as *Guru Rupaka*, taking care of them with respect to their old age. Such responsibility is part of their culture. It is common for parents and children in a village to live close to each other; most of them even live under the same roof. This situation gives children direct access to help their parents in case of sickness or death. Moreover, when

a financial matter occurs among their children, close relatives usually help them to cope with the situation. Based on such experience, this study uses the term *bakti*, which also includes the term *hormat* ('respect'), to refer to the tradition of filial responsibility and affection for parents and the elderly. The concept of *bakti* is very important for the relationship between adult children and parents regarding the care to the elderly. *Bakti* is practised by adults towards older and senior relatives or from adult children to the parents.

As Slikkerveer (2019) describes the institution of *gotong royong* as a pan-Indonesian traditional principle of mutual aid and communal work on a voluntary non-profit basis, it also includes the support and provision of care of the elderly, which is generally delivered by family, friends and neighbors for the elderly at home. The Tenggerese population also practice the traditional institution of *gotong royong*, called *sayan* as a reference to the local tradition of *genten kuat*, *buwuh*, *srawung*, *mbiyodo*, and *nyinoman*. The term *sayan* is derived from an old Javanese word: *hiya* meaning accord, and *sayan* comes from *sa-hiya-an*, meaning people are helping one another (*cf.* Pangarsa 1995). *Sayan* is also part of the local tradition of festive communal labour, which includes physical assistance to joint community activities. However, Keasberry (2002) reports that *gotong royong* is rarely used for care and support for the elderly people as long as some member of the household can fulfil the obligations to the elderly. As a result, elderly people benefit from *gotong royong* if they do not have family to take care of them. As long as the elderly still have family, *gotong royong* is rarely used to provide care to the elderly in the community. Hugo (1994) in Keasberry (2002) states that strong traditions of *gotong royong* ensure community cooperation to take care of the elderly without burdening the family. The traditions are likely to guarantee the care of the elderly under all circumstances, whether they still have a family or not.

In this context, traditional elderly care institututions research refer to family home care, based on the indigenous knowledge, belief, and practice of the local people. Their cosmological views are showing a strong influence on the utilisation of traditional elderly care institutions in the research area. This study attempts to describe and explain in what way the traditional institutions play an important role in the sustainable development of integrated care of the elderly, particularly to maintain the elderly's health and well-being at the community level. Social changes, such as modernisation and urbanisation, have an impact on the provision of care for the elderly. As a result, Indonesian parents will become less certain that their children will take care of them in their old age (*cf.* Mason 1992).

The transitional elderly care organisations refer to care and support services which are provided to the local people, but supported from outside by the local government. Activities in the transitional care organisations emphasise social care and health care, such as the *Karang Werda*, and *Posyandu Lansia*. The motivation behind these organisations is to fill the service gap between needs, the care that the family is unable to provide, and the lack of support from the government. Thus, community-based care from the transitional organisations is more affordable for both the government and the families since it is encouraged by the desired goal to decrease the costs of care and improve the quality of care and support. However, Keasberry (2002) found that some villages tend not to pay attention to older people. It can be seen that there is no *Posyandu Lansia* established yet. Moreover, not many elderly use the *Posyandu Lansia*. They tend to use the traditional care.

Lastly, modern elderly care organisations refer to *Puskesmas Santun Lansia* and *Panti Jompo* are the last choice for care of the elderly. The elderly who can no longer take care of themselves, do not have children, or their relatives do not want to support them, can live in the *Panti Jompo*. Rudkin (1994) in Keasberry (2002) found that in some cases, the elderly in urban areas who do not want to live with their children prefer to live in old-age homes. However, Rudkin (1994) in Keasberry (2002) concludes that many respondents strongly believe that they still have to provide care of the elderly or older members. It is not surprising that many families still provide care to the elderly to the present day. Moreover, they tend to strongly resist the idea of placing the elderly in an old age home. Meanwhile, Kadar *et al.* (2013) found that the implementation of the *Puskesmas Santun Lansia* is limited because of fiscal and human resources, particularly in rural areas. Similarly, Pratono & Maharani (2018) conclude that activities in the *Posyandu Lansia* have challenges such as a lack of volunteers, poor transportation system, lack of trust from target groups, lack of support from local and

religious leaders, and the poor skills of the volunteers. On the one hand, local people believe that children have to take care of and support their elderly. On the other, some conditions, such as the need of young children to work outside the village and the effect of social changes, urge the implementation of Integrated Community-Managed Development (ICMD). Care and support are dependent on family care to be integrated with community-based care of the elderly. The community's participation in providing care has to be increased. Moreover, the understanding of the behaviour patterns of care from the adult child's perspective is very important. The user's perspective is influencing the preferences for traditional elderly care institutions in comparison with transitional and modern elderly care organisations. *Bakti* and *sayan* are included in the applied-oriented knowledge which constitute the characteristics of the Tenggerese people regarding their care for the elderly at their homes. This research not only focuses on the local people's knowledge, belief and practice, but also on the cultural and socio-economic background of local people regarding the care of the elderly. In this way, this study hopes to provide an ethnoscience-based contribution to culturally-appropriate and community-based policy planning and implementation for the care of the elderly in the research area of East Java.

1.4.2 General Aim and Specific Objectives

This study seeks to document and study the role of the *bakti* and *sayan* local traditions as key principles of the indigenous institutions which are providing care and support for the elderly among the Tenggerese people. Both local traditions guide the care of the elderly on the basis of the filial principle of cooperation and mutual assistance in the communities. This study focuses on the indigenous knowledge, practices, beliefs and institutions underlying the *bakti* and *sayan* local traditions in relation with the patterns of utilisation of the traditional elderly care institutions and organisations of the plural elderly care system by the participants in the Tengger Region.

The central research question from the user's perspective is then: *'What is the role of the bakti and sayan local traditions in the utilisation of the indigenous elderly care institutions by the community members in the Tengger Region of East Java?*

Embarking on the implementation of the 'Leiden Ethnosystems' Approach', specifically developed by Slikkerveer (1990) to document, study, and analyse the Indigenous Knowledge Systems (IKS), the answer to this research question is sought through the execution of qualitative and quantitative community-based interviews and household surveys involving the research population in East Java. Thus, the general aim of this study seeks to provide an ethnoscience-based analysis of the utilisation of indigenous elderly care institutions based on the *bakti* and *sayan* local traditions in comparison with the utilisation of transitional and modern elderly care organisations, with a view to propose a practical model of integration of these institutions and organisations into a future comprehensive system of improved elderly care in East Java and elsewhere in Indonesia.

The conceptual model of the transcultural utilisation behaviour patterns of elderly care institutions and organisations will not only be taken into account in the scope of regional elderly security planning by the government, but also to identify alternative strategies to integrate the local and national institutions and organisations of the care of the elderly (*cf.* Slikkerveer 1990; 1995). The alternative strategies shed light on the improvement of elderly care, particularly in the research area, but also elsewhere in Indonesia. In order to realise this general aim, a number of specific objectives of the research have been formulated as follows:

Firstly, to present a theoretical overview for elderly care and support services which emphasise the management of the plural elderly care system; to describe determinant factors which affect the care and support system provided for the elderly, *e.g.* kinship, family system, living and care arrangements; to present the concept of a social support system for the elderly; to introduce integrated care of the elderly based on the Indigenous Knowledge Systems Integration Model (IKSIM) through Integrated Community-Managed Development (ICMD); and to introduce a model of integrated care focusing on service delivery for the elderly through case management.

Secondly, to present the appropriate ethnoscience research methodology on the study of the utilisation of plural elderly care institutions and organisations using the selected analytical model and execution of stepwise bivariate, mutual correlations, multivariate, and multiple regression analysis of elderly care utilisation behaviour by the local population; and to select research areas and target populations in the communities including data collection methods both in the scope of quantitative and qualitative research;

Thirdly, to describe the general profile and sociography of the research area, encompassing socio-demographic, socio-economic, and ethno-cultural development both in the research area and Indonesia—particularly in association with the effects on the ageing population; and to select the research area based on the division of cultural areas in East Java: Tenggerese and Javanese people;

Fourthly, to describe the profile of four villages related to the implementation of the plural elderly care institutions and organisations from the perspective of quantitative research; and to describe an 'emic' perspective of the local population on elderly care institutions and organisations from the qualitative research perspective, particularly on the role of the local traditions of *bakti* and *sayan*, observing how the local people provide elderly care and support at the community level.

Fifthly, to present the Tenggerese peoples' traditions and culture based on the Tenggerese cosmology in relation with the provision of care to the elderly; and to describe what factors affect old age security management in the Tenggerese community in East Java;

Sixthly, to present the results of the stepwise bivariate, mutual correlations, multivariate, and multiple regression analysis; to present and explain the differential relationship of significant variables in relation to the local people's utilisation behaviour of the plural elderly care system in the research areas; to explain the interaction between the block of independent variables and dependent variables following the conceptual model, in the utilisation of the plural elderly care system; and to describe the influence of the qualitative study on the behavioural patterns;

Seventhly, to formulate conclusions and recommendations based on the research findings on how to integrate and sustain the *bakti* and *sayan* local traditions as an indigenous institution for elderly care and old age security management; and to provide some suggestions on future policy for national old age security, and potential integration of elderly care institutions and organisations to provide sustainable care of the elderly in Indonesia.

1.4.3 Structure of the Study

Chapter I introduces the implications of demographic aging trends and describes the impact of the ageing population on sustainable development in Indonesia. This is then followed by the roles of the plural elderly care system consisting of traditional institutions, and transitional and modern organisations. These three types of are bridging the notion of how the local people utilise the system as the subject of development, using a 'bottom up' and 'emic' view of development approaches. Related to the traditional institutions, this chapter also describes the indigenous knowledge system, underlying the *bakti* and *sayan* local traditions in guiding care of the elderly in Tengger, including Javanese people. The *bakti* local tradition regulates the care and support to the elderly through a personal relationship which is practiced by children to parents or older people. Meanwhile, the *sayan* local tradition also involves a mutual cooperation or assistance which community members feel morally obliged to provide for elderly care and support in the local communities.

This chapter also explains the need of sustainable care for the elderly based on the cultural dimension of development. Integrated care of the elderly in the community needs to be developed for further improvement, emphasising the Indigenous Knowledge Systems Integration Model (IKSIM) through Integrated Community-Managed Development (ICMD). In this research, the innovative

ICMD approach, introduced by Slikkerveer (2019) is used to achieve the improvement of elderly care and sustainable community development in East Java. In addition, the case management approach is introduced to structure comprehensive service delivery for the elderly in the community. At the end of this Chapter, the general aim and specific objectives of this study will be described.

Chapter II presents the theoretical orientation of the study: to explain concepts and theories about care and support for the elderly. This chapter also describes kin relationships, family systems, and social support which affect the care and support services system provided for the elderly.
This chapter is followed by the concept of the plural elderly care system encompassing the provisions of care for the elderly: traditional institutions, and transitional, and modern organisations. The choice of the utilisation of elderly care system is also influenced by local people's beliefs, knowledge, and practices in the community or society. Many elderly care organisations need integration, based on the Indigenous Knowledge Systems Integration Model (IKSIM). In this context, Integrated Community-Managed Development (ICMD) has been developed in order to enhance the elderly's well-being. More specifically, the model of integrated care focuses on service delivery using the case management approach to maintain the elderly in the community (*cf.* Slikkerveer, Bourakis & Saefullah 2019).

Chapter III determines the appropriate research methodology consisting of chosen research strategies, selection of research areas, and data collection. The chapter underscores the 'Leiden Ethnosystems' Approach' consisting of the concepts of the Participant's View (PV), Field of Ethnological Study (FES), and Historical Dimension (HD). Thereafter, the operationalisation of relevant 'factors' through deducing 'concepts' utilising 'variables' and 'indicators' to 'categorise' is also explained, leading up to the design of the questionnaires through a complementary qualitative and quantitative survey. Furthermore, the chapter introduces the stepwise data analysis including bivariate, mutual correlations, multivariate, and multiple regression analysis.

Chapter IV describes the research setting in Indonesia as a country with various ethnocultural groups. The chapter starts with information about Indonesian geography, administration, socio-demographics, socio-economics, and ethnocultural information related to the ageing population. Furthermore, this chapter explains the sociographical description about the Tenggerese and Javanese people in East Java as represented by four villages. Moreover, the socio-demography of the respondents over the four villages is presented.

Chapter V describes the characteristics of the local population including knowledge, belief, opinions, financial support, and accessibility of the plural elderly care system in the research area. The traditional elderly care institutions, including the *bakti* and *sayan* local traditions among the Tenggerese people, is also described. This chapter also provides an overview on transitional and modern elderly care organisations operating in the research area. An explanation of the plural elderly care system is conducted based on the 'emic' perspective of the local population in the research areas.

Chapter VI explains the traditions and culture of providing elderly care and support based on the Tenggerese cosmology, particularly in Tenggerese communities, including rituals, celebrations, and spiritual beliefs. Moreover, this chapter describes the general livelihood patterns and heritage of the Tenggerese people related to old age security management.

Chapter VII presents the results of the stepwise statistical analysis of the quantitative data following the sequence of bivariate, mutual correlations, multivariate, and multiple regression analysis, as well as the final model of the utilisation of elderly care institutions and organisations. It also explains the patterns of utilisation behaviour of the plural elderly care system by the local people in the research areas. This chapter shows the reported patterns of elderly care utilisation behaviour illustrating the determinant factors of why the traditional institution is chosen in comparison to transitional and modern organisations.

Chapter VIII presents the conclusions and recommendations derived from the complementary qualitative and quantitative data analysis. The practical recommendations will contribute to old age security management, future policies for national old age security, and the possibilities for the integration of elderly care institutions and organisations to provide sustainable care of the elderly in Indonesia.

Notes:

[1.1] The developed countries include Europe, North America, Australia, New Zealand and Japan, while the developing countries include all other parts of the world (*cf.* UN 2017).

[1.2] Demographic ageing which can also be called population aging refers to change in the age composition of a population such that there is an increase in the proportion of older people.

[1.3] *Program Keluarga Berencana* or Family Planning Programme has a slogan '*Dua anak cukup, laki perempuan sama saja*' (two children is enough, whether boys or girls, it does not matter).

[1.4] Total Fertility Rate (TFR) is the average number of children born to a woman during her reproductive period *i.e.*15-49 years (*cf.* UNFPA 2014).

[1.5] Infant Mortality Rate (IMR) is defined as the number of infant deaths, that is, those occurring within the first year of birth per 1,000 live births. On the other hand, life expectancy at birth is the average number of years a new baby born can be expected to survive given the prevalent mortality conditions (*cf.* UNFPA 2014).

[1.6] Gross Domestic Product (GDP) is the standard measure of the value of final goods and services produced by a country during a period.

[1.7] Based on the 17th International Conference of Labour Statisticians (ICLS) in 2013, it defines informal employment as follows: 'employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severance of pay, paid annual or sick leave, etc.).'The Indonesian Central Bureau of Statistics (BPS) states that formal and informal works can be identified based on the main employment status. BPS categorises people who work based on informal work such as self-employment, employer with temporary labor, casual employee in agriculture, casual employee in non-agricultural sectors, and unpaid worker/working in the family business. Meanwhile, formal work involves being assisted by permanent laborers and employees (*cf.* BPS 2016).

[1.8] PKH is a programme to provide conditional social assistance to the families of determined beneficiaries. The elderly criteria (preferably starting from 60 years of age and those with disabilities, especially heavy disabilities) are included in the PKH target.
ASLUT is part of social rehabilitation to help neglected elderly people so that they can meet their basic needs for a decent life. Moreover, ASLUT is social assistance in the form of cash transfers for poor and vulnerable older people. Cash transfers of IDR 200,000 per month are found to be useful to meet their daily expenses, but the number of beneficiaries is too small (30,000 beneficiaries in 2017) compared to the number of older people.

[1.9] The Eastern world is defined as the whole Asia-Pacific, without Australia and New Zealand. On the contrary, the Western world, also known as the West, includes at least parts of Europe, Australasia, and the Americas (*cf.* Wikipedia).

[1.10] Asia has a number of kinship systems: patrilineal, matrilineal, and bilateral. Bilateral refers to kinship from both parents where people recognise kin on both the father's and the mother's sides, inheriting from either side, and a couple may live with relatives on either side or by themselves. On the other hand, matrilineal refers to kinship from the female line whereas patrilineal refers to kinship from the male line (*cf.* Gupta 2009).

[1.11] The value of children includes both the parents' satisfaction of receiving care from children and the costs of child rearing (*cf.* Bulatao 1975).

[1.12] The Confucian religion believes that there was no greater crime than failing to practice filial piety. As such, Chinese family structures traditionally cluster around relatives who assist one another economically. Elderly parents generally live with the eldest son (*cf.* Qu 2014).

[1.13] The potential support ratio is defined as the population aged 15-64 years divided by the population of those aged 65 years and over (*cf.* UNFPA 2014).

CHAPTER II THEORETICAL ORIENTATION

This chapter presents the concept of care of the elderly based on the plural elderly care system: traditional institutions, and transitional and modern organisations. Traditional institutions refer to the local traditions of *bakti* and *sayan* which are a key concept of the indigenous institutions. Additionally, transitional organisations such as *Karang Werda* and *Posyandu Lansia* refer to community-based care which involves the community's initiatives and the government's support. Moreover, modern organisations refer to the concept of organisational care of the elderly, such as *Panti Jompo* ('Old Age Home'), *Pusat Kesehatan Masyarakat Santun Lansia* (*Puskesmas Santun Lansia*). They are based on modern knowledge and managed by external parties, such as the government or the private sector.

The following sections will describe the concept of care of the elderly, particularly related to the utilisation of the elderly care system. The concept of care of the elderly will be explained in the larger context of conceptual and theoretical approaches from a wide variety of references and disciplines. This chapter also describes the kin relationships and the family system which affects the social care and support system provided for the elderly, as well as the living and care arrangements.

The research is based on a bottom-up oriented perspective of the 'Leiden Ethnosystems' Approach' to integrate Indigenous Knowledge System (IKS)-based decision-making processes in the care of the elderly. This research seeks to identify alternative strategies which apply knowledge systems and practices of local communities and their institutions. The integrated care based on the Indigenous Knowledge Systems Integration Model (IKSIM) is used to formulate recommendations based on the integrated community-managed development (ICMD) approach in the provision of care of the elderly to enhance their well-being. The ICMD approach aims at achieving sustainable development by integrating local and global systems of knowledge and technology in all sectors of the community through capacity building and local people's participation. The popular model of integrated care at the service delivery level is the case management approach. The approach attempts to integrate care systems to provide comprehensive services for the elderly in the community. Moreover, this study aims to analyse the use of elderly care institutions and organisations in a developing country, Indonesia. The research is designed for the Javanese, particularly those living in East Java, including the Tenggerese people. Analysis of the utilisation of elderly care institutions and organisations can also be applied to identify alternative strategies to promote the security of the elderly in their old age.

2.1 Theoretical Approaches to Elderly Care Research

This research focuses on the elderly's care and support services viewed from various approaches and perspectives, such as gerontological, sociological and anthropological perspectives. Traditionally, sociologists study people in their own society while anthropologists study people in other societies. Gerontologists study ageing and older adults. Keasberry (2002) conducts an interdisciplinary collaboration to study the elderly and partition removal between anthropology, sociology, and gerontology. The study also focusses on the ethnoscience perspective, a cross-disciplinary orientation of knowledge. At the Leiden Ethnosystems And Development Programme (LEAD) the 'Leiden Ethnosystems' Approach' has been redefined and operationalised as a combination of ethnographic fieldwork with an analysis of the interaction between individuals within their environment. Ethnoscience refers to a scientific perspective based on how humans perceive their environment and how they adapt to their environment as reflected in their own daily words and actions (*cf.* Saefullah 2019). Specifically, ethnoscience emphasises the perspective of how indigenous people, knowledge, and systems contribute to society.

In this context, ethnoscience uses an 'emic' perspective in science and development (*cf.* Slikkerveer 1990, 1995; Slikkerveer & Dechering 1995). An 'emic' view in this research also takes into account the economic activities to measure the fulfillment of care of the elderly. In sum, ethno-economics deals with economic activities implemented by local people and institutions, based on bottom-up approaches, and involves local peoples' participation in the use of local resources.

Umoh-Akpan (2000) states that ethnographics provide an in-depth understanding of the sociocultural contexts involving economic phenomena or processes known as ethno-economics. Ethno-economics provides the necessary descriptive and analytical baseline for understanding the local communities' values, ideas, attitudes, perceptions, and options. Moreover, ethno-economics has unique implications in the local ecosystems implemented by a social organisation (such as the religion and kinship) to make sustainable utilisation of local resources. Hence, this study collaborates various scientific disciplines, looking at various phenomena in society, focusing particularly on the elderly's care and support services based on the adult children's perceptions.

2.1.1 The Users' Perspective of Care

Using 'emic' and 'etic' perspectives, the research highlights care from inside and outside cultural situations. Warren, Slikkerveer, & Brokensha (1995) indicate the importance of cultural inclusion in development and the importance of the 'emic' perspective in development. In this context, the 'emic' perspective refers to adult children's perceptions towards care and support services provisions for the elderly. It also can be called an 'inside view.' On the contrary, the 'etic' perspective refers to the 'outside view' brought by the researcher to the analysis based on scientific perspectives. Holmes & Holmes (1995) state that the 'etic view' is an objective and controlled procedure for weighing and sifting facts and theoretical viewpoints. Culture is a particular example of how an 'emic' view differs from one community to another. Thus, an 'emic' perspective is critical in this research; it not only gives new meanings and different assumptions about reality, but also enables the creation of instruments which accurately measure variables, including the cultural aspect.

Moreover, endogenous development is also important in the development approach. It starts from peoples' worldviews and livelihood strategies to reflect sustainable development as a balance between material, social, and spiritual well-being. The spiritual aspect becomes an important dimension in the endogenous development approaches which make it different from other development approaches (*cf.* Millar *et al.* 2008). Boonzaaijer & Apusigah (2008) also state that endogenous development posits local cultures as a critical starting point for development. In practice, endogenous development is mainly based on indigenous initiatives, institutions, resources, strategies, knowledge, and values. In this context, the meaning of care and support services and the utilisation of elderly care institutions and organisations can only be understood and evaluated in terms of the cultural contexts where adult children utilise care of their elderly.

Keith (1992) conducts a set of 'queries' to obtain information about the social and cultural characteristics which most likely affect care-giving relationships between the elderly and their family members. The first query concerns the course of life as a cultural unit such as how it is perceived and old age defined, and how these perceptions affect views about who will provide and receive the care. The second inquiry relates to functionality requirements such as the requirements for an adult person to participate in society, how aging affects the ability to fulfil these requirements, and 'built in' support for social and domestic arrangements required for functionality in any communities. The third query concerns access to status and resources such as how ageing promotes or impedes access to status and resources, when and how resources are transmitted from across generations, and how status and resources affect the care-giving relationship. The fourth query relates to kinship and residence such as how family, kinship, and residence patterns interact with each other to determine which potential caretakers are likely to be living with or near elderly persons.

The last questions relate to caretaking roles such as who is an appropriate caregiver, other expected roles of these people, and how these other roles affect their availability as caretakers. This research considers some aspects of the sociocultural contexts presented by Keith (1992). Moreover, the research focuses on the perceptions of adult children towards providing care of the elderly based on their knowledge, belief, and opinions in their daily life practices.

2.1.2 An Advanced Theory of Elderly Care Development

Warren, Slikkerveer, & Brokensha (1995) introduce the importance of incorporating cultures into development which underscores the approach of sustainable development. In this context, Tronto (1993) attempts to develop and qualify the ethics of care as a moral and political theory. Moral refers to the value developed in the attitude towards and the activity of caring, while political refers to the dimension of caring which should be the point of departure for the organisation of a society (*cf.* Tronto 1993). Tronto's theory emphasises the relations among people themselves, and people and their environment. The definition of 'care' is given by Tronto & Fisher in Tronto (1993: 103): '*as a species activity that includes everything that we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible.'* Tronto insists that the caring activity is largely defined culturally, and will vary among different cultures, making his theory applicable in developing countries, particularly Indonesia (*cf.* Keasberry 2002).

Tronto (1993) distinguishes four phases in the caring process: caring about, taking care of, care-giving, and care-receiving. 'Caring about' involves the moral element of 'attentiveness,' recording the existence of a need and making an assessment that should be fulfilled. Moreover, 'caring about' will often involve the position of another person or group to recognise the need. 'Taking care of' requires the moral element of 'responsibility' involving some responsibilities for the identified need and determining how to respond to it. 'Taking care of' also means understanding that one should act to meet these unmet needs. 'Care-giving' requires the moral element of 'competence,' involving meeting the needs directly for care which requires physical work and comes in contact with the objects of care by care-givers. 'Care-receiving' requires the moral element of 'responsiveness' of the care-receiver. It refers to the object of care responding to the care received. It is important to understand the care-receiver perspectives as an element of the caring process to understand that the needs for care have been fulfilled. It can be said that caring is an ongoing activity process consisting of four analytically separate, but interconnected phases (*cf.* Tronto 1993). All humans have needs which other people help to fulfill, and the care degree that others provide depends on the culturally constructed norms. In this context, 'care' refers to the care given to the elderly.

Many elderly receiving care and support are sometimes not involved in decision-making related to the care services they need and want. It creates gaps in the care provision. Many care-givers fail to understand the basic needs of their elderly and the support structures and skills they need. However, the biggest gap related to care of the elderly is not only about care itself but a lack of social support, meaning social care of the elderly (*cf.* HelpAge International 2013). The social care provision is related to the 'stakeholders,' who may have different perspectives towards social care provision, such as perceptions of the users, providers, parents, government managers, and practitioners (*cf.* Waine *et al.* 2005). User interests relate to the nature, quality, and terms of access to provided services. Carers share this interest but also have concerns with the specific support offered to them. The government focuses not only on the implementation of values but also service outcomes, the costs of service provision, and their broader implications related to the services' operational level and budget for public spending allocation. Regulators look at service provision from the perspective of evaluating current standards and proposals framed to improve such standards. Managers and practitioners are involved as service providers and have their own approaches to implement values and improve standards (*cf.* Waine *et al.* 2005).

Moreover, care can be based on the care's place (locus) and provider. The care's place can be at home, in the community, or in an institution, while the care's providers can be family, voluntary, private, or state (*cf.* HelpAge International 2013). Residential and institutional care both refer to care provided by state or private organisations, such as nursing or old-age homes. Furthermore, a care's place in the community can be based on the provider: state or private, and family or voluntary. Care of the elderly is provided by state/private in some types: continuum, integrated, formal, and long-term care. Meanwhile, some care types are provided by a combination of state/private and family/voluntary, such as day care, community care, and community nursing.

According to the World Health Organisations (WHO) in HelpAge International (2013), integrated care is a concept that brings together inputs, delivery, management, and organisation of services related to diagnosis, treatment, care, rehabilitation, and health promotion. Integration aims to improve services related to access, quality, user satisfaction, and efficiency. At home, the elderly can get care services from state/private such as domestic and home care. Home help and home nursing are located between state/private and family/voluntary. Meanwhile, care of the elderly provided fully by family/voluntary at home is regarded as family care and filial care or filial piety. Figure 2.1 shows the dimensions of care to illustate the typology of care more easily.

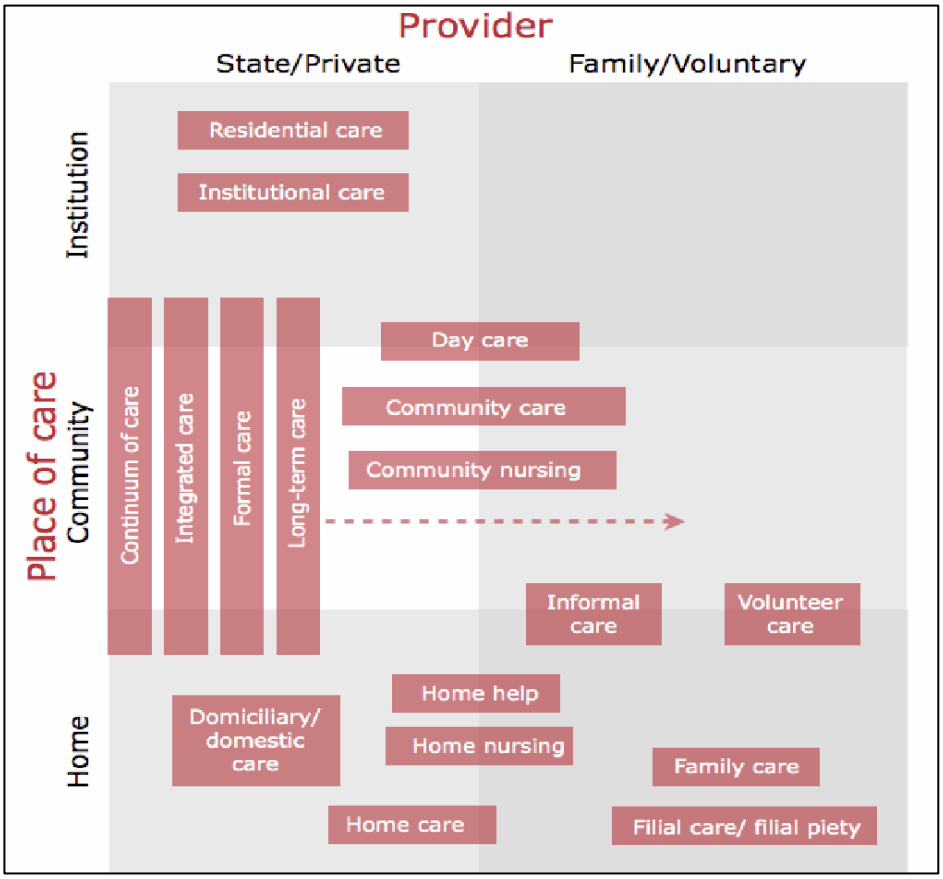


Figure 2.1 Schematic Representation of the Dimensions of Care
Source: HelpAge International (2013).

This research will attempt to give a clear understanding of terms and services about care of the elderly based on the representative dominant position of care locations and providers.

Firstly, this research takes into account the types of institutional state or private care services. Specifically, it refers to *Panti Jompo* ('Old Age Home') and *Puskesmas Santun Lansia*.

Secondly, as regards the place of care in a community, this research takes into account the type of community care which is combining service providers between state/private and family/voluntary care.

Thirdly, the terms of family care, filial care, or filial piety are often used interchangeably to denote care of the elderly at home. However, family care refers to the care provided by family or close relatives, usually a spouse or adult children, including personal, social, health, and financial support which usually occurs over a prolonged period of time (*cf.* HelpAge International 2013). This research regards family care and filial piety as a culturally-based moral obligation to the elderly, and by consequence seeks to introduce at the national level an integrated configuration of traditional, transitional and modern forms of culturally appropriate care of the elderly with a view to improve the health and well-being of the elderly in the communities in the research area and beyond.

2.2 Kinship

The kinship concepts describe kinship groups and the norms that govern marital forms, family structure and organisation, inheritance, authority, and residence. The kinship and residence patterns are tangible manifestations of more individual or collective cultural orientations (*cf.* Keith 1992). Olson *et al.* (2011) state that all cultures recognise kinship- the relatedness of certain individuals within a group - and have norms and expectations that govern kin behaviour. Kinship groups range from nuclear to extended families. The nuclear family, the smallest of the elementary kinship units, usually consists of two parents and their dependent children. The nuclear family is also known as a conjugal family system that emphasises marriage relationships. Meanwhile, the consanguineal family system emphasises blood ties more than marital ties. In the consanguineal system, married couples and their children are embedded in a larger kinship group of three or more generations related by blood. It also includes extended families. In a nutshell, an extended family consists of a nuclear family and those people related to its members by blood ties, such as aunts, uncles, cousins, grandparents, etc. (*cf.* Olson *et al.* 2011).

Cultural norms influence concepts of lineage or lines of descent: who holds authority in a family, and where newly married couples should reside. Lineage is important to determine membership in a particular kinship group, patterns of inheritance, and kinship obligations or responsibilities (*cf.* Olson *et al.* 2011). Das Gupta (2009) states that kinship systems shape the relative value of girls and boys largely through rules of inheritance. Moreover, Keith (1992) states that residence patterns are strongly related to kinship types which often determine sponsorship into households. In general, kinship systems can be divided into two types: lineal and bilateral kinship. Lineal kinship emphasises interactions among lineally related kin, perceived as common descent from an ancestor through the male line in patrilineal systems, and the female lines in matrilineal systems. Meanwhile, bilateral kinship traces the relationship of an individual through both parents (*cf.* Keith 1992). Bilateral kinship makes children tied equally to relatives of both mother and father. The differences in those types are also related to inheritance and residence patterns.

The patrilineal system focuses on inheritance through the male line and tends to occur in the patrilocal residence: a newly married couple live with or near the husband's patrilineal relatives or kin, usually his father's kinship group. In contrast, the matrilineal system focuses on inheritance through the female line and has a parallel relationship to matrilocal residence. Newly married couples normally live with or near the wife's kin, especially her mother's kinship group. Furthermore, bilateral systems recognise people inheriting from either the father's or mother's side. Moreover, bilateral kinship often occurs with neolocal residents which encourage newly married couples to have considerable choices in their household. Newly married couples can establish a separate, self-sufficient residence, living far from each partner's kinship group (*cf.* Keith 1992; Olson *et al.* 2011; Das Gupta 2009). Keith (1992) argues that the relationship between kinship, household formation, and care-taking are relevant to consider on what basis a person is recruited or sponsored into a household, and what relatives are likely to live together which may be potential care-givers and receivers.

2.3 Family System

Olson *et al.* (2011) describe three characteristics of family systems to understand and improve people's quality of life. The three dimensions of family systems that have been found are: (1) cohesion, (2) flexibility, and (3) communication. Family cohesion is the emotional closeness a person feels to other family members, which include commitment and spending time together. First, commitment to the family means trust, honesty, dependability, and faithfulness. Moreover, spending time together means commitment to sharing activities, feelings, ideas, and enjoying each other's company. Second, family flexibility is the ability to change and adapt when necessary, to resolve family matters and spiritual well-being, including the spiritual beliefs that guide family members through life's challenges. The ability to address family matters means using personal and family resources to help each other, accepting crises as challenges rather than denying them, and working together to settle family matters.

Furthermore, spiritual well-being includes happiness, optimism, hope, faith, and a set of shared ethical values that guide family members through life's challenges. Third, family communication is related to sharing of information, ideas, and feelings with each other showing positive communication, appreciation, and affection. Positive communication includes having open, straightforward discussions, being cooperative rather than competitive, and sharing feelings with each other. Moreover, appreciation and affection include kindness, mutual caring, respect for individuality, and a feeling of security. Olson *et al.* (2011) concludes that strong families are those that have good family cohesion, flexibility, and communication.

Olson *et al.* (2011) emphasise not only the family systems but also the sociocultural characteristics where families live. The sociocultural aspect is important because each ethno-cultural group has a culture which makes it easy to understand families. The cultural contexts can influence a wide variety of aspects, such as family values and behaviours, communication between parents and children, power and gender roles, work and the family, ethical and religious values, and the role of the extended family and people outside the immediate family in helping out in family matters (*cf.* Olson *et al.* 2011). Moreover, Olson *et al.* (2011) describe three sociocultural characteristics related to the family system: (1) the extended-family system encompasses relatives, kin, and other family members connected to the family system, (2) the social system includes the economic, educational, and other related resources, and (3) the belief system refers to a family's spiritual beliefs and values. Figure 2.2 shows how the family system characteristics and the sociocultural features can be synthesised.

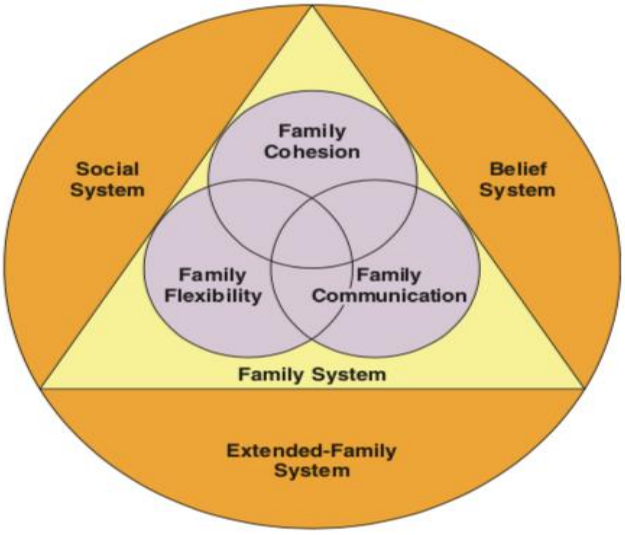


Figure 2.2 Socio-cultural Context and Family System Characteristics.
Source: Olson *et al*. (2011).

2.4 Social Support System

Social care is defined as assistance in three main areas: (1) activity of daily living (ADL), (2) instrumental activities of daily living (IADL), and (3) social support. ADL refers to basic self-care tasks, such as walking and moving around, bathing, dressing, toileting, and eating. Meanwhile, IADL refers to activities for an independent lifestyle, such as helping with the house cleaning, cooking, shopping, getting around, accompanying someone to go to a doctor, managing communi-cations, finances, and medication. Finally, social support means assistance to foster more significant social interactions and emotional well-being, provided when delivering ADL and IADL assistance. The social support includes activities which entertain and maintain relationships with each other, joining social communities and religious activities (*cf.* HelpAge International 2015). Social support which is included in the component of social care is important. HelpAge International (2015) reports that many elderly, particularly in East and South-East Asia, present even greater challenges associated with social interactions than with their practical daily activities, such as ADL or IADL. It is because the financial

support and health care offered by health professionals highlight more their physical health needs than their psychological needs. Providing social support to the elderly such as companionship, community interaction with each other becomes an essential part of meeting overall care needs and positively affects physical health for the elderly.

Related to social support, Cantor's model (1977) as cited in Cantor & Brennan (1999) has conceptualised the social support system of the elderly as a series of concentric circles, each containing a different type of support element or sub-system. In this model, the elderly are the centre and the sources of support based on the degree of social distance from the older person (*i.e.* nearest to farthest) and the organisation of the support element (*i.e.* informal to formal). The primary informal support comes from those who are closest and most involved in the elderly's daily life such as spouse, children, children-in-law, and grandchildren. The second circles are the informal support relationships from other kin such as friends and neighbours. The next circle is the quasi formal, known as mediating structures such as religious organisations, ethnic, cultural, or social and neighbourhood groups. These groups often serve a link between the individual and society. In the two outer circles are the public and voluntary service organisations, including the formal support system (*cf.* Cantor & Brennan 1999). Figure 2.3 presents the social support system, which is a part of the social care system for the elderly.

Furthermore, the concept of social support consists of three aspects: (1) structural aspects, (2) functional aspects, and (3) appraisal support (*cf.* Chen & Silverstein 2000). The structural aspects of social support constitute the social network and the availability of people in the network to help the individual; the functional aspects represent the amount of instrumental, emotional, and financial help; and the appraisal of social support represents the subjective evaluation of the degree of satisfaction with the support. Cutrona & Suhr (1992) define five general categories of social support, consisting of: (1) informational, (2) tangible, (3) emotional, (4) esteem, and (5) social network support. Cutrona & Suhr (1992) also divide these support types into two broad categories: action-facilitating and nurturant support. Action-facilitating support is intended to help the stressed individual resolve or address the matter causing the stress, including informational and tangible support.

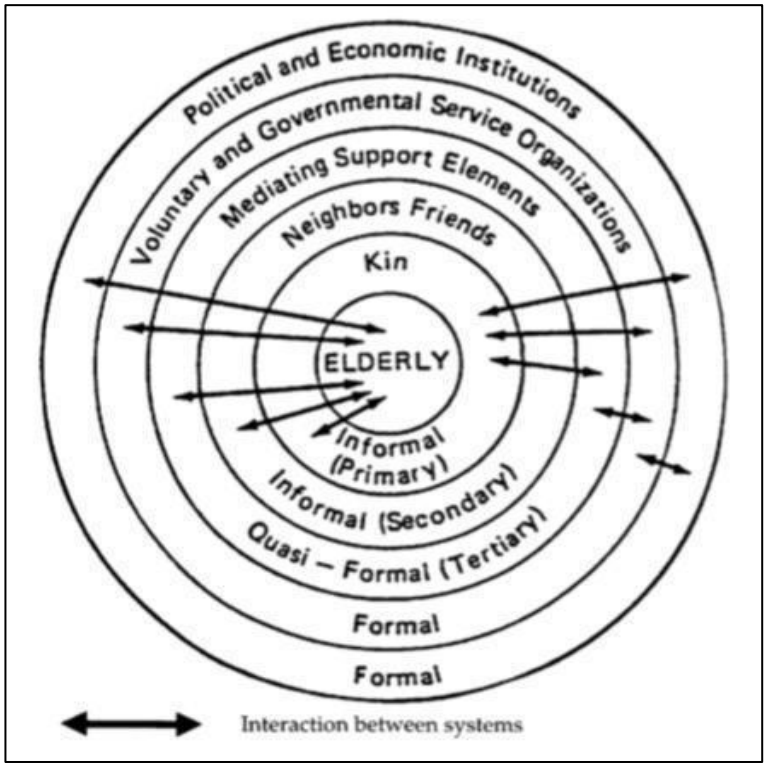


Figure 2.3 The Social Care System of the Elderly by Cantor's Model.
Source: Cantor & Brennan (1999).

Informational support refers to messages that include knowledge or facts, such as advice, factual input, and feedback in actions. Tangible assistance includes offers to provide needed goods (*e.g.* money, food) and services (transportation, housework) to recipients.

Meanwhile, nurturant support encompasses efforts to comfort without direct efforts to resolve the matter causing the stress. Nurturant support includes emotional, network, and esteem support. Emotional support includes expressions of caring, concern, empathy, and sympathy. Social network support emphasises the message that enhance a sense of belonging to a specific group with similar interests, situations, or concerns.

Finally, esteem support refers to expressions shown for people related to one's skills, abilities, and intrinsic values. Tang (2008) also describes three types of social support related to elderly caregivers, such as (1) informational support, (2) tangible assistance, and (3) emotional support. The informational support refers to others' guidance and advice, which help the family caregiver understand and manage stressful situations. Tangible assistance is the instrumental behaviours and goods which directly subsidise the primary caregiver's caregiving responsibilities. The emotional support that caregivers receive refers to others' behaviours that promote the primary caregiver's feelings of comfort, ease, and security.

2.5 Institutions and Organisations of Elderly Care

As mentioned in the Introduction, the concept of institutions encompasses different socio-cultural and individual formations in the community or society, which is created by people over generations in order to structure their collective rules, norms, beliefs, values, interactions, and behaviours (*cf.* Slikkerveer 2014). This research replicates Slikkerveer's concept (1990) of plural medical systems where he introduced the traditional, transitional, and modern medical system used by various ethnocultural groups in the Horn of Africa. In this context, the concept of the plural elderly care system relates to care for the elderly: traditional elderly care institutions, and transitional, and modern elderly care organisations. In order to explore and understand the role of the traditional elderly care institutions within the overall plural elderly care system, this study seeks to collect and document local knowledge, practices, and beliefs in the utilisation of elderly care institutions and organisations in the research area.

Incorporation of the cultural dimension in societal development became a foundation for an ethnoscience perspective in sustainable development studies (*cf.* Warren, Slikkerveer & Brokensha, 1995).

2.5.1 The Traditional Elderly Care Institutions

The word 'traditional' in this context refers to the elderly's home care where they can receive care and support services in their home. Backman & Hentinen (1999) and Železnik (2007) state that home care is much less expensive than organisational care, and the elderly living at home are considered to improve their life quality. In the context of care, the elderly can handle all of their daily activities by themselves, including their health or illnesses. It is called self-care when the care is provided by her/himself in response to her/his needs. In this case, both the care provider and receiver are the same person. Železnik (2007) states that self-care is associated closely with both the past and future life of an old person. Moreover, older people's self-care knowledge contribute to the understanding of many aspects of self-care and its associations with vulnerability in future life.

Backman's model in Backman & Hentinen (1999) focuses on precondition, activity, and the meaning or purpose of self-care in the home-dwelling elderly. Self-care preconditions mean the elderly's life experiences including their background, personality, health and ageing. Furthermore, self-care activities include taking care of the elderly's health, illnesses, and engaging in daily activities. Finally, the self-care purpose is composed of attitudes towards other people, ageing, and the future (*cf.* Backman & Hentinen 1999). Backman's model presents four different types of self-care: (1) responsible, (2) formally guided, (3) independent, and (4) abandoned self-care. Each type implies a

specific self-care behaviour style, life experiences, and orientations towards the future. In the model developed by Backman (Backman & Hentinen 1999), responsible self-care is defined as activities and responsibilities in daily activities about health and illnesses. The precondition for responsible self-care is to have a positive outlook for the future and a positive experience of ageing. For example, the elderly can understand why they receive treatments or medication, and they have the right to decide. People also believe that in the future if they need any help from others, they will receive it.

The second type is formally guided self-care which consists of regular but uncritical observance of medical instructions and routine performance of daily tasks. The elderly may do something as instructed but they do not know the reason for doing it. The elderly obey all instructions concerning their health care including taking medicine and food. However, they do not know why they have to do it. Formally guided self-care also means a tendency to accept life as it comes. The elderly hope to stay at home as long as possible, but they also understand that someday they would probably go to one of the institutions or organisations (*cf.* Backman & Hentinen 1999).

The third type is independent self-care based on the elderly´s desire to listen to their own internal voice. They have original ways to take care of their daily activities, health, and illnesses. The precondition of independent self-care aims to manage the elderly's life independently. The meaning of independent self-care is an attempt to maintain life's constancy. In this context, if the elderly notice that something is wrong with their health, they may not seek help, but rather find out what to do on their own. Life experience is the best teacher for them. The elderly may think that their home is a safe place, thus they want to stay at home now and forever. They resist ageing and deny the prospect of growing old. The elderly also compare themselves to others and think that they are much healthier than others (*cf.* Backman & Hentinen, 1999).

Abandoned care, on the other hand, is characterised by helplessness and a lack of responsibility. The elderly may not care about themselves. They are no longer able to manage their daily activities and feel helpless for different reasons. For example, some elderly may be unable to read anymore, lose their ability to hear, and do not remember things. These inabilities are associated with a desire to give up, leading to a situation where the elderly have a negative attitude towards ageing. Many factors affect the self-care of the elderly which are divided into external and internal factors. External factors consist of living conditions, different services, and social support, while internal factors consist of the elderly's health and sufficient functionality (*cf.* Backman & Hentinen 1999).

Strain (1991) finds that health beliefs may affect the use of the health care system including health services by the elderly person while the health locus of control appears to be unrelated to health service utilisation.

In traditional elderly care, the elderly may stay at home alone, with their spouse, or family and receive the family's care and support at home. Families play an important role in the process of care of the elderly, starting from planning, implementation, and decision making. Fan (2007) reports that the elderly prefer to receive care from the family to care institutions for five reasons: (1) family care embodies the character of love, intimacy, sincerity, warmth, and security, (2) the elderly feel more dignified, individualised, autonomous, free, and flexible, (3) the elderly can receive more personal care suitable to their particular personalities and religion practiced, (4) family care is particularly good for the elderly suffering from dementia because it is easier for them to recognise their family faces and to adapt to the familiar environment, and (5) family care at home is cheaper than organisational care, such as an old age home.

Most Javanese think that children must take care of their parents (*cf.* Koentjaraningrat 1957). It includes respect toward parents who become one of the categories of action of filial piety. However, for the elderly who do not have children, they can receive support and care from other family members or kin, such as friends and neighbours. Traditional elderly care involves the provision of care and social support provided by friends and neighbours, including informal care. Cantor (1979) states that although family structure has changed and is continuing to change, informal support networks still exist and are composed of kin -children, spouse, and relatives- friends, and neighbours. However, interaction between the elderly and their informal social support network varies across urban and rural areas, and ethno-cultural and socioeconomic strata (*cf.* Cantor 1979).

2.5.2 The Transitional Elderly Care Organisations

Transitional elderly care denotes the elderly's care provided by the local community and government. It can also be called community-based care, providing the elderly and their families with supplemental care and offering respite care and other needed support which adult children cannot provide. The desired goal of community-based services is to decrease service costs and improve care quality. However, Xu & Chow's (2011) research in China finds that a western assumption cannot be fully implemented in the eastern related to community service delivery due to social, political, and traditional differences. Western community-based service delivery is primarily organisation-centred where the elderly can receive the care service in the community. An organisation's services to the community are not only limited to fill a service gap provided by family or to substitute when no family takes care of the elderly but also to design and develop programs for the elderly independently.

The western community-based service delivery depends on professional providers, mainly non-governmental social service organisations. In contrast, Eastern community-based services tend to rely on the transformation of quasi-governmental community organisations. Moreover, the maturity of non-governmental social service organisations for the elderly is not the same between east and west. For example, in China, quasi-governmental organisations in urban neighbourhoods and rural villages are more developed than non-governmental social service organisations (*cf.* Xu & Chow 2011). Jette *et al.* (1995) state that informal community services include care provided by family members and/or friends for the elderly, whereas formal community services reflect care provided by private and public agencies or privately hired individuals.

China is one of the Asian countries that tends to take care of older people based on family care. China has designed community-based services for delivering care and support for the elderly focusing on shared responsibility among individual, family, local community, private sector, and government at the local, provincial, and national level. Xu & Chow (2011) state that the primary motivation of providing community-based care in China is to fill in the gaps between needs and support services which the family or the government are unable to provide. Community-based care can supplement traditional family care. Moreover, Siegler *et al.* (2015) also state that community-based care are designed to help older adults to remain safely at home within their community and avoid institutionalisation.

Xu & Chow (2011) differentiate the model of community-based services in China based on the following three characteristics: (1) using a mixed vertical-horizontal structure instead of the agency-centered social services model adopted in the West, (2) managed and/or organised by quasi-governmental community organisations instead of non-governmental social service organisations, and (3) provided primarily by private small business service providers and/or volunteers rather than professionals. Community-based care mixes both vertical and horizontal models (*cf.* Xu & Chow 2011). In the vertical model, service implementation involves the role between city government and the relevant agencies. Furthermore, services delivered in the vertical model are funded directly by municipal governments, and most services are free or with minimal fees. Xu *et al. (*2003) established a community health service centre model where nearly all services are funded by local public health departments, provided by professionals associated with local state-owned hospitals. In Indonesia, the implementation of community-based care of older people is through health care activities in the *Posyandu Lansia* and social care activities in as *Karang Werda* (*cf.* Kadar *et al.* 2013).

On the other hand, community-based care refers to the horizontal model whose number and quality of services depend on local funding, the residents' needs, the community's resources, and capacity to deliver services. It requires local community initiatives, a high level of community participation, and deep involvement of community organisations and volunteers (*cf.* Xu & Chow 2011). The transitional elderly care combine local community and government to give care of the elderly, which is called quasi-governmental community organisations (*cf.* Xu & Chow 2011). In some cases, the elderly in the community initiate to pay the services they received with relatively low cost, and sometimes also free of charge.

Social services in communities aim to supplement traditional family care and to fill in the gaps between needs and the care that the government and the family are unable to provide (*cf.* Xu & Chow 2011). Hence, community-based care can be the solution to the limited organisational care such as old-age home and help the family to fulfil the elderly's care and services.

2.5.3 The Modern Elderly Care Organisations

Modern elderly care means the elderly's care provided by the government or private organisations. It refers to organisational care, which is often delivered in hospitals for health care or in residential centres such as old-age homes for social care (*cf.* HelpAge International 2015). For social care, the elderly stay in a place other than their living environment, such as *Panti Jompo.* The provision of care and support for the elderly in *Panti Jompo* is classified into two types: old-age homes managed by the government, and the private sector.

Old-age homes managed by the government focus on care and support provision for the elderly who are neglected or do not have families. *Dinas Sosial* ('Social Affairs Office') has a role to manage, support, and control the implementation of care and support-giving in government old-age homes. The government covers the elderly's needs such as clothing, food, socialisation, religion, and recreation. Moreover, *Dinas Sosial* cooperates with *Dinas Kesehatan* ('Health Office') to give services for the elderly on medical aspects such as health checks, medication, medical resources, *e.g.* nursing and doctor (*cf.* Sumini *et al*. 2020). Old-age homes fully managed by the government are generally intended for the elderly who are under the abandoned category and do not have family or relatives who can take care of them. The government fully manages and funds old-age homes.

On the contrary, old age homes owned by private organisations are fully managed by the private sector. To access care and support in private old age homes, people must be willing to pay (*cf.* Sumini *et al.* 2020). In other words, the elderly need families, relatives, or people responsible for paying the service cost. Operational funding in private old-age homes is charged to the elderly's family. However, the operational management of service provision is fully managed by private old-age homes. Hence, the family's role in the elderly's care in private old-age homes is limited or not as much as the family's role in traditional elderly care (family care).

Zhan *et al.* (2006) found unfair competition between governmental and non-governmental elderly homes in China which can be seen in the home facility, quality, and client composition. Government-funded old-age homes have buildings and land, and require no additional investment or payment. Meanwhile, private old-age homes tend to have simpler and lower quality facilities, and need to receive payment for reinvestment. Furthermore, the facilities of government-owned old-age homes are much better than their private counterparts for the following reasons. First, government old-age homes can affiliate with hospitals. Second, government-funded old-age homes are far more likely to involve social activities including social interactions offered to residents, such as interaction with students, community residents, volunteers, and the media because they attract more attention from government officials. On the other hand, in non-governmental old-age homes, social activities depend on the arrangements made by the administrators, personal, and social networks that they have. Third, only rich families, upper class, or retired government employees will get such services from old-age homes, while poorer people have fewer options in choosing old-age homes (*cf.* Zhan *et al.* 2006).

The elderly can also receive health care in modern elderly care organisations through hospitals: care is delivered by trained professionals and organisations for the elderly, known as formal care (*cf.* HelpAge International 2013). Modern elderly care includes formal care because it involves a professional person who gives health care services for the elderly. In this context, the modern elderly care organisation related to health care is *Puskesmas Santun Lansia*. The implementation of care of the elderly in modern care organisations has binding and compelling rules for anyone involved because the care authority for the elderly is fully managed by the management of the modern care organisations.

2.6 Towards Integrated Care of the Elderly

2.6.1 Indonesia's Introduction of the Decentralisation Reform

The ageing population increases the elderly's need for care. Care focuses not only on health care but also social care. Increasing numbers of older people require the government to prepare a better health care system that accommodates elderly health care needs. Unmet health care needs for older people are generally found along with elderly people's health matters (*cf.* Kshetri & Smith 2011; Herr *et al.* 2014). The factors that allow elderly health care needs to be met will be classified into three points: (1) availability, (2) accessibility, and (3) acceptability. Availability refers to the waiting time to get the service, an unavailable service when it is required, or unavailable service in the area. Accessibility also includes cost of services and transportation concerns. Acceptability also includes attitudes towards and knowledge about health care, and the reasons for attitudes and responsibilities about health care (*cf.* Chen & Hou 2002).

The Government of Indonesia applied the decentralisation reform in 1999, which also impacted all citizens' health services. The decentralisation of the health system brings about changes in planning and service delivery management from the Ministry of Health to local governments. It has a role to impose a regulation to ensure resource availability, including personnel to supervise social insurance schemes. Moreover, the Ministry of Health also continues to operate some tertiary and specialist hospitals. Meanwhile, the health service at the local government is divided into provincial and district/municipality levels. The provincial governments own provincial hospitals, and organise health matters within the provincial level and across the district/ municipality. Moreover, the district/municipality governments own district/municipality hospitals and organise health services provided through primary health centres. However, the relationship between the Ministry of Health, provincial, and district/municipality health offices is not hierarchical because each level has its own mandates and areas of authority (*cf.* Mahendradhata *et al.* 2017). The elderly can get health care through primary and secondary health care centres including *Pusat Kesehatan Masyarakat (Puskesmas)* in the sub-district level and *Pos Pelayanan Terpadu (Posyandu)* in a village village area.

The Government of Indonesia has established health care centres for the elderly known as *Puskesmas Santun Lansia* and *Posyandu Lansia*. Secondary health care centres refer to hospitals at the district/municipality level. The implementation of health care centres at the sub-district level and in the villages is controlled by *Dinas Kesehatan* ('Health Office') at the district level.

The elderly also need to receive social care which includes social support and psychological well-being for the elderly. East Java proposes an empowerment organisation which supports the elderly by *Karang Werda*. The Governor of East Java issued a *Surat Keputusan* ('Decree') Number 65 of 1996 about guidelines for the formation of as *Karang Werda*. It was then followed by another Decree Number 188/309/SK/014/1999 about the formation of a supervisor team to empower the elderly from the province to the village or urban village levels in East Java.

In Indonesia, social security was initiated in 2004 through *Sistem Jaminan Sosial Nasional* (SJSN) ('National Social Security System') which covers all Indonesians including the elderly. On the one hand, social security schemes include pension, old-age savings, health insurance, working accident protection, and death benefits (*cf.* Bappenas & GTZ 2008; Widjaja & Simanjuntak 2010). However, BPS (2017) reports that elderly households who are under social security accounted for 18.83% in the cities and only 6.47% in the village. This amount covers a small percentage of elderly in Indonesia both in rural and urban areas. *Badan Penyelenggara Jaminan Sosial* (BPJS) ('Government Social Security Agency') carries out the distribution of social security for the elderly.

On the other hand, the Government of Indonesia also gives social assistance to the elderly who are categorised as poor and vulnerable through some programs, such as *Program Keluarga Harapan* (PKH) ('Hope Family Programme'), and *Asistensi Sosial Lanjut Usia Terlantar* (ASLUT) ('Assistance to Displaced Older People'). However, BPS (2017) reports that there were only 2.99% of elderly living in urban areas and 5.50% in rural areas who accepted PKH. Moreover, 30,000 elderly as ASLUT recipients are found all over Indonesia.

Moreover, *Badan Kependudukan dan Keluarga Berencana Nasional* (BKKBN) ('National Population and Family Planning Board') has initiated the *Bina Keluarga Lansia* (BKL) programme ('Elderly Family Development'). BKL was established to fulfil the elderly's needs through a family-based approach. It focuses on the family and community capacity building of family resilience, particularly the elderly's health, economic productivity and social interactions to create quality life for its members, including the elderly and their family members (*cf.* Perdamaian *et al.* 2000). The aim of BKL is to assess the family's knowledge, attitudes, and practices in implementing the elderly's well-being. Moreover, BKL comprises seven dimensions of elderly well-being: spiritual, physical, emotional, social community, environmental, vocational professional related to economic and financial aspects, and intellectual (*cf.* Astuti & Winarni 2018).

2.6.2 Integrated Elderly Care for Sustainable Development

The innovative strategy of *Integrated Community-Managed Development* (ICMD), introduced by Slikkerveer, Baourakis & Saefullah (2019) has introduced a solid contribution to current 'human development approaches' of the United Nations through the promotion of the integration of local and global systems of knowledge and technology with a focus on the instrumental role of indigenous institutions for increased community participation. Since such approach provides a community-based contribution to the realisation of the *2030 Agenda for Sustainable Development Goals* (SDG) of the United Nations (2015a), it has immediate relevance for sustainabe integrated elderly care development in Indonesia.

Indeed, following the previous *Millennium Development Goals* (MDG) of the United Nations (2000), the *2030 Agenda for Sustainable Development Goals* (SDG) of the United Nations (2015a), further elaborated the objectives including the focus on good health and wellbeing being essential to achieve sustainable development. Although recently, certain advancement has been made in the study of key factors associated with good health and quality of life, progress is globally yet uneven. The Sustainable Development Goal no. 3 shows the complexities of care, health and well-being, there is still a need of interdisciplinary evidenced-based research on the indicators operational in this goal (*cf.* Springer Nature 2022).

Collaborative evidence-based approaches to public policy and healthcare policy and practice are essential not only in addressing inequalities, but also in building trusted sustainable ways forward in which to ensure good health and wellbeing for all. Through the research we publish we hope to play our role in not only supporting researchers in both the publication and development of their work in this area, but also in enabling greater access to high-quality content to assist policy-makers, governments and humanitarian organisations, in making research-backed decisions to advance the international wellbeing agenda.

While a growing number of older people in the developed nations, such as the United States are posing a challenge to the providers of elderly care as health care demands high quality care in an economic environment of decreasing financial resources, the situation in Indonesia provides the opportunity to overcome similar challenges in a less-financial but rather socio-cultural approach in a nationwide reorientation towards the integration in a unique cultural context of the community-based traditional intitutions of *gotong royong*, *bakti*, *sayan* and similar traditions which have rendered the health and well-being of the elderly functional over many generations at the community level.

The appoach of the Indigenous Knowledge Sytems (IKS) of local people has shown to be very important to contribute to the above-mentioned *2030 Agenda for Sustainable Development Goals* (SDG) of the United Nations (2015). As mentioned above, the 'Leiden Ethnosystems' Approach' introduces the study of Indigenous Knowledge Systems (IKS) by linking the cognitive aspect of investigating the local systems of knowledge, practice, and belief to the behavioural components in the development process and changes in the community over generations.

The Leiden Ethnosystems And Development Programme (LEAD) has taken one further step to attain sustainable community development in several sectors of the society, by designing the IKS-based Integration Model (IKSIM). Slikkerveer, Baourakis, & Saefullah (2019:15) emphasise that IKSIM:

'*embarks on the integration and interaction of local and global systems of knowledge, practices and institutions as a stepping stone for the newly-developing concept of Integrated Community-Managed Development (ICMD).*'

Moreover, the IKSIM of ICMD encompasses the three interrelated worlds as the foundation: indigenous knowledge systems, institutions, and cosmology, which focus on the decision-making processes of the community members and developing the vertical 'bottom-up' approach towards sustainable community development (*cf.* Slikkerveer 2019a). The position of indigenous institutions is important to develop a strategy process to implement ICMD.

Indigenous institutions involve the perspectives of local people on their culture and life. In Indonesia, the indigenous institutions have existed for many generations with local values such as cooperation, mutual aid, and neighbourhood support at the community level, Slikkerveer *et al.* (2019:19) state: '*the approach of Integrated Community-Managed Development (ICMD) is dedicated to attaining sustainable development through the integration of local and global systems of knowledge and technology among all sectors of the community through capacity building and participation at the village level*.

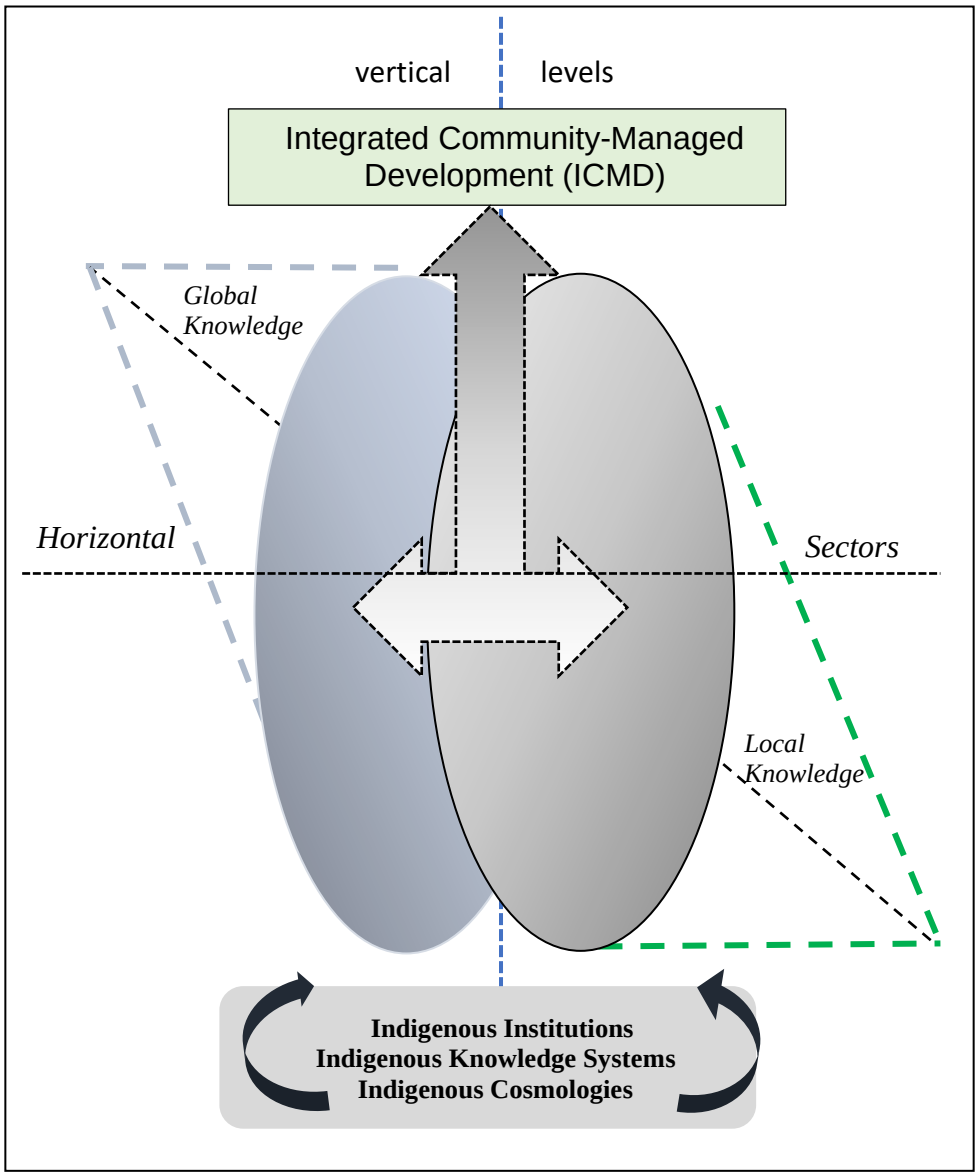


Figure 2.4 Representation of the *IKS-Based Integration Model* (IKSIM) of Integrated Community-Managed Development (ICMD).
Source: Slikkerveer (2019a).

Given the significance of the conceptualisation of this IKS-based integration approach of integrated elderly care development in Indonesia, Figure 2.4 shows the *IKS-Based Integration Model* (IKSIM) of Integrated Community-Managed Development (ICMD) (*cf.* Slikkerveer, Baourakis & Saefullah 2019).

In this context, the particular situation of the age-long practice of elderly care among the various ethno-cultural groups in indonesia, including the Tenggerese people in East Java, rooted in the indigenous institutions which have been practiced to maintain and prolonged the care and support of the elderly, provides a unique opportunity to propose an evidence-based 'bottom-up' strategy of integration of the traditional institutions with the tansitional and modern organisations care of the elderly in the Tengger Region of East Java.

2.6.3 The Case Management Approach for Integrated Elderly Care

Integration is a coherent set of methods and models on funding, administrative, organisational, service delivery, and clinical levels which is designed to create connectivity, alignment, and collaboration (*cf.* Kodner & Spreeuwenberg 2002). In this context, the case management system approach is also functional for the development of integrated elderly care in Indonesia. Goodwin (2016) states that integrated care is characterised by complexity involving five points: (1) the type of integration (*i.e.* organisational, professional, cultural, technological), (2) the level at which integration occurs (*i.e.* macro, meso and micro), (3) the process of integration (*i.e.* how integrated care delivery is organised and managed), (4) the breadth of integration (*i.e.* to a whole population group or specific client group), and (5) the degree or intensity of integration (*i.e.* the linkages between informal care and managed-care coordination with fully integrated teams or organisations).

Moreover, integrated care takes some forms, such as horizontal, vertical, sectoral, people-centred, and whole-system integrations (*cf.* Goodwin 2016). Horizontal integration means integrated care between health and social services, and other care providers based on the development of multi-disciplinary teams and/or care networks that support a specific client group. Vertical integration means integrated care across primary, community, hospital, and tertiary care services. Sectoral integration means integrated care within one sector which combines horizontal and vertical programmes. People-centred integration means integrated care between providers, patients, and other users of care to engage and empower people through health education, shared decision-making, supported self-management, and community engagement. Whole-system integration means integrated care that embraces public health to support both a population-based and person-centred approach to care (*cf.* Goodwin 2016).

Many developed countries, such as England, Canada, and Australia, attempt to integrate case management approaches into their elderly care systems to provide comprehensive services for community-based older people (*cf.* You *et al.* 2012). The Case Management Society of America (CMSA) (2010:8) defines case management as: *'a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual's and family's comprehensive health needs through communication and available resources to promote quality cost-effective outcomes.'* Case management focuses on two primary purposes: quality and costs of care (*cf.* Long 2002). Case management aims to improve the coordination of health and social care which needs interventions from case managers. Those who may be involved in case management are health professionals (*e.g.* nurses) and social workers (*cf.* Long 2002). If social workers are the case managers, they are more likely to use the social work perspective which encourages workers to incorporate the elderly's strengths, family (spouse, children, etc.), friends, and the community to make independent living possible (*cf.* Early & GlenMaye 2000).

Moreover, Wodarski & Williams-Hayes (2003) state that professional case managers and social workers should be familiar with the community's resources in order to make an effective link between the elderly clients' needs and existing resources. Health professionals have more constraints to pick up unmet social needs for the elderly than social workers who are well trained and prepared for it (*cf.* Keigher 2000). To sum up, case management is one approach to maintain the elderly in the community.

CHAPTER III METHODOLOGY AND ANALYTICAL MODEL

3.1 Selection of Research Methodology

3.1.1 Research Methods and Techniques

This chapter presents the research methodology and techniques applied in this study. This research uses the 'Leiden Ethnosystems' Approach', which has specifically been developed by Slikkerveer (1990), to study people's behaviour in the community. The 'Leiden Ethnosystems' Approach' is an ethnoscience methodological approach that has three basic elements: the 'Participant's View' (PV), the 'Field of Ethnological Study' (FES), and the 'Historical Dimension' (HD). The 'Leiden Ethnosystems' Approach' is a combination accommodating an in-depth study and description of the 'emic' view of the local people on their life and livelihood, based on their indigenous knowledge, belief, and practice as they have evolved over many generations in the specific cultural area (*cf.* Slikkerveer 1999). The approach is used to understand and explain local systems of knowledge, belief, and practice from an 'emic' perspective in the context of sustainable development.

This research combines qualitative and quantitative research methods. The qualitative study is based on both participative and non-participative observations, and interviews with key informants. It is used to accurately capture real behaviour and perceive participants' needs and feelings towards elderly care institutions and organisations, based on places, care providers, and availability of care and support services. Moreover, the qualitative method can produce detailed information about care behaviour, including support services for the elderly and how adult children ensure the elderly's well-being and security. A literature review of studies on the elderly is also carried out to offer insights for interpreting the data.

The fieldwork starts with a preliminary study of secondary data and interviews with some key informants, followed up by qualitative research. Furthermore, it is followed by a formal questionnaire using quantitative methods to conduct household surveys in the sample communities in the study areas. The design of the questionnaire is based on the analytical model adapted from Slikkerveer (1990). The background characteristics of the target sample survey are based on the appropriate sampling technique for collecting quantitative data. The target sample survey is the adult children household heads who have elderly and provide care of them. The respondents are documented as utilisers of elderly care institutions and organisations by structured and pre-coded questionnaires for the household surveys in the research area. The validation of the questionnaires is based on the establishment of face validity, followed by a pilot test of the survey on a subset of the target population, and concluded by a review of the responses in a spreadsheet to secure internal consistency of the questions for reliability and validity of the questionnaires.

A representative data set in SPSS is then designed and completed in line with the appropriate analytical model called the multivariate model of utilisation behaviour. The construction of the analytical model is selected and implemented to analyse the variables which appear to be involved in the establishment process of people's behaviour patterns towards the utilisation of any care provided by the institution and organisation, particularly in the use of the plural elderly care system. Slikkerveer (1990) has developed a model to measure significant changes of participants' well-being based on the Transcultural Health Care Utilisation Model introduced by Slikkerveer (1990; 1995), representing the plural medical systems in the Horn of Africa. Thereafter, this model has also been applied and adapted in various topics of ethnoscience-oriented research such as in Indonesia by Agung (2005), Leurs (2010), Djen Amar (2010), Ambaretnani (2012), Erwina (2019), Saefullah (2019), and Febriyanti (2021), in Tanzania by Chirangi (2013) and De Bekker (2020), and in Greece by Aiglsperger (2014). The construction of the analytical model and its components follows the objectives of the research. In this research, the analytical model can be used to identify people's preferences in utilising the plural elderly care system, *i.e.* the traditional elderly care institutions, and the transitional and modern elderly care organisations.

This research has been conducted in among the Tenggerese population of East Java, which includes the Tenggerese and Javanese population groups in the research area. The Tenggerese people have traditions and customs that are still preserved by local people. The Tenggerese people live in the Tenggerese highlands represented by two rural villages: Argosari and Ngadas. Argosari is located in the Senduro sub-district, Lumajang, while Ngadas is located in the Poncokusumo sub-district, Malang. The research is also conducted in two urban areas: *kelurahan* Ditotrunan (Ditotrunan urban village), Lumajang and *kelura han* Tlogomas (Tlogomas urban village), Lowokwaru, Malang. These two urban villages represent the Javanese ethno-cultural group. The aim of this research is to study the pattern of utilisation behaviour of elderly care from the adult children's perspective.

3.1.2 The 'Leiden Ethnosystems' Approach'

The 'Leiden Ethnosystems' Approach' introduces the study of Indigenous Knowledge Systems (IKS) by linking the cognitive aspect of investigating local systems of knowledge, practice, and belief to the behavioural components in the processes of development and change in the community. In practice, the 'Leiden Ethnosystems' Approach' follows three methodological principles: (1) the 'Participant's View' (PV), (2) the 'Field of Ethnological Study' (FES), and (3) the 'Historical Dimension' (HD).

Slikkerveer (1999: 173) defined the Participant's View (PV) as a broad concept that includes: '*the assessment of symbolic representations, world-views (cosmologies or cosmovisions), culture-bound philosophies of nature and the environment, perceptions, attitudes, opinions, etc. as part of the underlying structure of values, norms and belief systems, which characterize specific cultures.'* So, the PV principle provides a non-normative, local assessment of indigenous systems of knowledge, practices, and beliefs, thereby corresponding to an 'emic' research approach from the participants' standpoint. Moreover, PV refers to the local population's point of view on their own way of life. The PV has become a major guiding principle in policy planning and implementation at the local level, including the system of management, use and conservation of natural resources (*cf.* Ibui 2007). In the PV context, this research studies the local people's views among the Tenggerese people, including the Javanese, related to their perception of care of the elderly's care providers and their preferences for the utilisation of the elderly care institution and organisations.

This research is conducted from the 'emic' view which involves the perspectives of the cultures from the local people's perception rather than the 'etic' view which is taken from the researchers' outsiders perception. The 'Field of Ethnological Study' (FES) is related to the concept of 'culture area' and refers to a geographical region where cultural features can be compared between different ethno-cultural groups in that same region (*cf.* Slikkerveer 1999). Indonesia has a wide variety of sub-cultures characterised by language, religion, kinship, tradition, and other cultural aspects such as arts, music, dance, and cuisine. The Javanese people constitute the largest Indonesian ethno-cultural group which also has many sub-groups, such as Osing, Tenggerese, Samin, Bawean, Naga, Naganese, Banyumasan etc. (*cf.* BPS 2011). In addition, the Javanese people have similar perceptions and practices in their daily life, *i.e.* the root of the term *gotong royong.* According to Koentjaraningrat (1961) in Slikkerveer (2019b), *gotong royong* can be categorised into two types: (1) *spontaneous help* such as collective activities in agriculture, house building, celebrations, public works, event of disaster or death, and (2) *mutual assistance* based on the traditional principle of individual reciprocity.

As mentionen above, *gotong royong* can be defined as a set of institutionalised norms, values and activities by people carrying out a communal task together. As mentioned above, Slikkerveer (2019b) concisely encapsulates the concept of g*otong royong* as 'voluntary mutual aid and communal work', which provides a useful reference to this study, where the fieldwork area for this study is restricted to the Javanese areas occupied by the Tenggerese people in East Java, Indonesia. The Javanese population, including the Tenggerese population, have special cultural practices for care of the elderly: *bakti* and *sayan* as local traditions, elaborated in Chapters V to VII. The 'Historical Dimension' (HD) facilitates the analysis of the historical perspective of development processes. Moreover, the HD concept facilitates the assessment of the cognitive and behavioural components of the community studied. It includes the analysis of the complex contemporary patterns including culture, religion,

agriculture, living and care arrangements, support for the elderly, and livelihood strategies to secure old age. Those aspects will influence the current user behaviour towards the utilisation of the plural elderly care system in Java, particularly in the Tengger Region in East Java.

3.1.3 The Multivariate Utilisation Model of the Plural Elderly Care System

The study focuses on knowledge, belief, and practice among the Javanese people, and particularly among the Tenggerese people, related to care of the elderly towards the utilisation behaviour of elderly care institutions. Conceptualisation of the utilisation behaviour of the plural elderly care system in East Java in this research uses the central reference model by Slikkerveer (1990). The model is designed to describe health care utilisation in the plural medical system, as the basis of the multivariate model. Slikkerveer's model (1990) was also inspired by the early multivariate models, one of them being Andersen's (1968) behavioural model which proves that health services utilisation is determined by predisposing factors such as socio demographic, need factors, and enabling factors (*cf.* Andersen 1995; Andersen & Newman 1973). Bradley *et al.* (2002) later expands Andersen's model using long-term institutional care by adding psycho-social factors such as attitudes, knowledge, and social norms.

On the other hand, Slikkerveer's (1990) multivariate model provides a means to determine the relationship between the six blocks of factors as the possible determinants of variation in health-care utilisation, namely socio-demographic, socio-psychological, socio-cultural, economic, geographic, and organisational factors. Slikkerveer's (1990) multivariate model has thereafter been successfully adapted and applied in similar IKS-based studies in (A) Africa: in Kenya by Ibui (2007), in Tanzania by Chirangi (2013), and De Bekker (2020); (B) Indonesia: in Bali by Agung (2005), Leurs (2009), in Java by Djen Amar (2010), Ambaretnani (2012), Erwina (2019), Saefullah and Febriyanti (2019); and (C) in the Mediterranean Region: in Crete by Aiglsperger (2014). Slikkerveer's (1990) multivariate model facilitates the description and explanation of how an individual or social system changes over time. Moreover, Slikkerveer (1990) showes that factors at the individual level can be elevated to the systems level, in order to allow a comparative analysis between factors related to both individuals and systems.

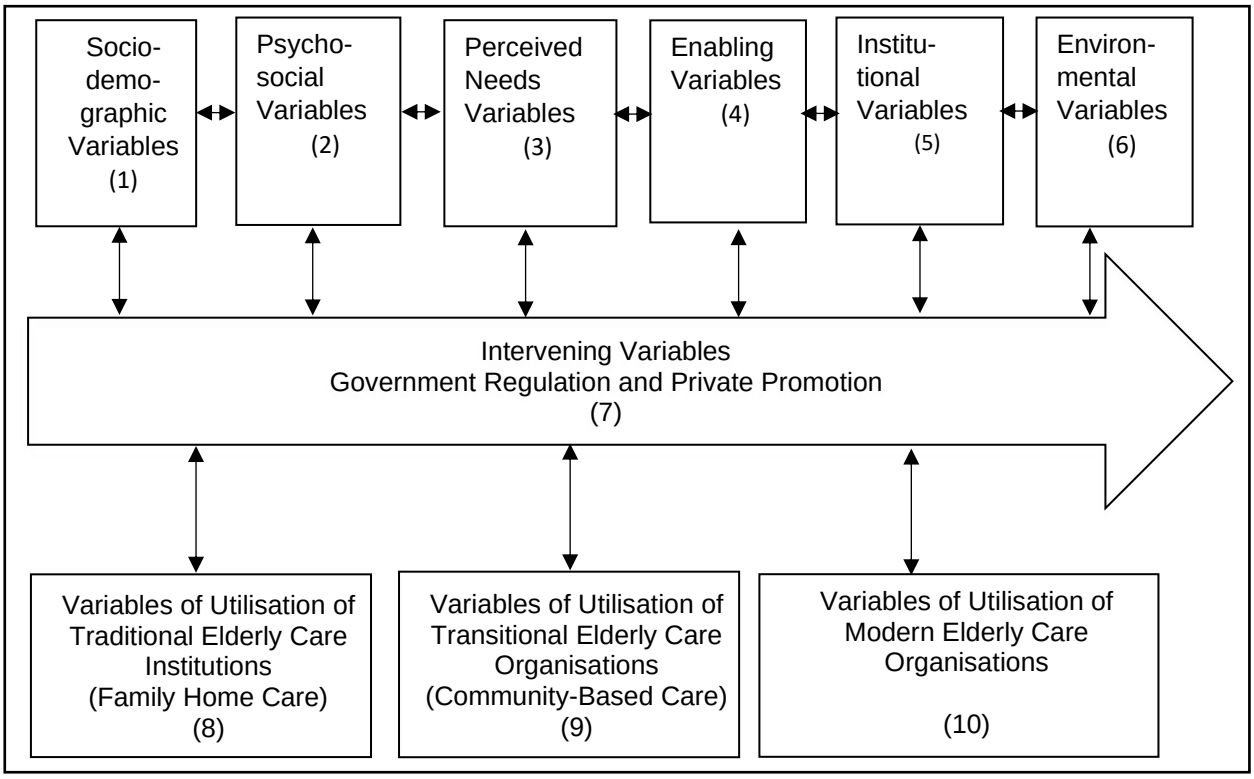


Figure 3.1 Conceptual Model Indicating the Blocks of Factors of the Utilisation Behaviour of Traditional Elderly Care Institutions, Transitional, and Modern Elderly Care Organisations.
Source: Adapted from Slikkerveer (1990).

This model consists of independent, intervening, and dependent factors, defined as variables in the model. The independent factors consist of the predisposing, enabling, needs, institutional, and environmental variables. More specifically, the predisposing factors incorporate the socio-demographic and psycho-social variables. The intervening factors include variables of the government or public and private programmes. In this research, the dependent variables are divided into three kinds of utilisation of institutions: traditional, transitional and modern elderly care organisations. Figure 3.1 shows the interaction between the independent, intervening, and dependent variables. Each reported independent and intervening variable included in the model is analysed as a potential determinant of the reported dependent variables of utilisation behaviour of elderly care institutions in the research area.

The research aims to discover the characteristics of the local people, and how their circumstances influence their preferences towards the utilisation of the traditional elderly care institutions, or the transitional or modern elderly care organisations. Their preference can be documented through the reported utilisation behaviour determined by several factors, such as the people's characteristics including their background and environment. Those factors can influence human behaviour and decision-making on the utilisation of elderly care institutions and organisations under particular circumstances.

The design of the household questionnaire is adapted from the conceptual model introduced by Slikkerveer (1990; 1999). Table 3.1 describes the general design structure of the household questionnaire in this research in East Java.

Table 3.1 General Design of the Structure of the Household Questionnaire

Section	Block	Variable Description
A. General Background		
Background Information	0	General Information
B. Independent Variables		
B.1 Predisposing Variables	1	Socio-Demographic Variables
	2	Psycho-Social Variables
B.2 Perceived Needs Variables	3	Perceived Needs Variables
B.3 Enabling Variables	4	Socio-economic Variables
B.4 Institutional Variables	5	Institutional Variables
B.5 Environmental Variables	6	Environmental Variables
C. Intervening Variables		
	7	Government regulations and Private promotions
D. Dependent Variables		
	8	Use of Traditional Elderly Care Institutions
	9	Use of Transitional Elderly Care Organisations
	10	Use of Modern Elderly Care Organisations
E. General Questions		
		Additional Qualitative Data
		Specific Problems and Solutions

Source: Adapted from Slikkerveer (1990).

3.1.4 Operationalisation of the Conceptual Model

In order to operationalise the model into an adequate measurement tool, the general theoretical concepts from the literature study called 'blocks of factors' are 'converted' into 'variables.' Using a deductive process, the 'blocks of factors' are at first specified as 'concepts' which are then 'translated' into measurable factors called 'variables.' After that, each variable is concretised by several indicators and answer categories pre-coded in the questionnaires. Bice *et al.* (1976:24) demonstrate that the process of measurement involves: '*specifying a concept, translating it into an operational definition which points to a variable that can be measured, and applying the operationally defined measurement technique to units of its indicators and related categories*.'

In this context, it is essential to determine measurement scales of selected variables [3.1]. As Slikkerveer (2019c:196) rightly argues that: '*it is important to make a differentiation between the various possible classes of measurement of the selected variables, especially since the type of scale is decisive for the later determination of the appropriate significance tests in the various analyses of collected data.*' Moreover, the characteristics of each different block of factors (concepts), variables, indicators and categories are described separately in relation to the various blocks identified in the model. Tables 3.2 to 3.11 present an overview of the operationalisation of the block of factors (concepts) into variables up to the level of the categories based on the indicators.

Independent Predisposing Factors

The predisposing factors operate at the individual level, and refer to a series of socio-cultural background characteristics of the respondents combining 'hard' socio-demographic and 'soft' psycho-social factors (*cf.* Slikkerveer 1990; Aiglsperger 2014). Coulton & Frost (1982) state that predisposing factors are individual characteristics that may affect the perceived need or service utilisation. Moreover, predisposing variables cover not only demographic characteristics but also beliefs and attitudes towards certain matters (*cf.* Calysin & Winter 2011). This research indicates two types of predisposing factors: socio-demographic and psycho-social factors. The block of socio-demographic factors represent variables such as gender, education, age, marital status, occupation, place of birth, etc. On the other hand, the block of psycho-social factors refers to respondents' knowledge, opinions, and beliefs. Table 3.2 demonstrates the concept operationalisation of the block of socio-demographic factors into variables, indicators, and categories.

Table 3.2 Block 1: Independent Predisposing Factors: Socio-Demographic Factors.

Concept	Variable	Indicator	Category
Socio-demographic factors at the individual level	Household	Relationship of household head to the elderly	Parents, parents in law, grandparents, other kins, non kin
	Sex	Sex classification	Male, female
	Age	Number of years alive	0-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85-89, 90-94, >95
	Education	Last school attended	No education, elementary school, junior high school, high school, university, other
	Place of birth	Location of the place of birth	In this place, elsewhere
	Ethnicity	Ethno-cultural affiliation	Javanese, Sundanese, Madurese, Chinese, Tenggerese
	Religion	Religion affiliation	None, Islam, Catholic, Protestant, Buddhism, Hinduism, Confucianism, other
	Marital status	Present marital status	Single, married, divorced, widow, widower, other

Source: Adapted from Slikkerveer (1990).

Table 3.2 *(continued)* Block 1: Independent Predisposing Factors: Socio-Demographic Factors.

Concept	Variable	Indicator	Category
	Occupation	Current occupation	Farmer, civil servant, private employee, teacher, maid, industrial labor, small traders/retailer, entrepreneur, military/policy, craftsman, retired, unemployed/unpaid, housewife, security, driver, guide, religious leader, student, other
	Employment in family business/ farm	Current employment in family business/ farm	No, yes

Source: Adapted from Slikkerveer (1990).

The psycho-social variables were operationalised in a set of phenomena measured individually by single questions. In the case of the knowledge questions, respondents were asked to demonstrate their knowledge by mentioning four examples of each phenomenon. For instance, they were asked to mention four examples of care and support services provided for the elderly in each elderly care institution or organisation. On the other hand, the belief questions were also operationalised in sets of phenomena asking respondents to indicate their perceived effectiveness or importance for care of the elderly. Their belief in each elderly care institution or organisation was measured by perceived well-being for the elderly. Table 3.3 represents the operationalisation of the concepts of the block of psycho-social factors into variables, indicators, and categories.

Table 3.3 Block 2: Independent Predisposing Factors: Psycho-Social Factors.

Concept	Variable	Indicator	Category
Psycho-social factors at the individual level	Knowledge of existing traditional elderly care institution	Level of knowledge of existing traditional elderly care institution	Do not know, none, very little knowledge, little knowledge, average, much knowledge, very much knowledge
	Knowledge of existing transitional elderly care organisation	Level of knowledge of existing transitional elderly care organisation	Do not know, none, very little knowledge, little knowledge, average, much knowledge, very much knowledge
	Knowledge of existing modern elderly care organisation	Level of knowledge of existing modern elderly care organisation	Do not know, none, very little knowledge, little knowledge, average, much knowledge, very much knowledge
	Belief in traditional elderly care that the institution is good for the elderly's well-being	Level of belief in traditional elderly care that the institution is good for the elderly's well-being	Do not know, none, very little belief, little belief, average, much belief, very much belief
	Belief in transitional elderly care that the organisation is good for the elderly's well-being	Level of belief in transitional elderly care that the organisation is good for the elderly's well-being	Do not know, none, very little belief, little belief, average, much belief, very much belief

Source: Adapted from Slikkerveer (1990).

Table 3.3 *(continued)* Block 2: Independent Predisposing Factors: Psycho-Social Factors.

Concept	Variable	Indicator	Category
	Belief in modern elderly care that the organisation is good for the elderly's well-being	Level of belief in modern elderly care that the organisation is good for the elderly's well-being	Do not know, none, very little belief, little belief, average, much belief, very much belief
	Opinion on care/support of services in the traditional elderly care institution	Level of opinion on care/support of services in the traditional elderly care institution	Do not know, no opinion, very negative opinion, negative opinion, neutral, positive opinion, very positive opinion
	Opinion on care/support of services in the transitional elderly care organisation	Level of opinion on care/support of services in the transitional elderly care organisation	Do not know, no opinion, very negative opinion, negative opinion, neutral, positive opinion, very positive opinion
	Opinion on care/support of services in the modern elderly care organisation	Level of opinion on care/support of services in the modern elderly care organisation	Do not know, no opinion, very negative opinion, negative opinion, neutral, positive opinion, very positive opinion

Source: Adapted from Slikkerveer (1990).

Independent Perceived Needs Variables

According to Coulton & Frost (1982), the perceived need refers to an individual's own judgment about the necessity or benefits of a particular service, and the need assessment is based on a clinical or screening evaluation on an individual's level of impairment in a specific area pertinent to each service. Need factors comprise both subjective perceptions and objective judgments. In this context, the perceived need refers to how the respondents perceive care of the elderly in the plural elderly care system. Calsyn & Winter (2001) state the two most common definitions of service needs used in the previous research for predicting the elderly's service needs, namely perceived and unmet service needs. They define perceived need of care as the need of care regardless of whether people currently receive any services or not, whereas unmet need of care represents only the care which people need, but they are not currently receiving. Moreover, Kizlik (2010) in Saefullah (2019) concludes that the assessment of perceived need comprises a systematic process for determining and addressing gaps between current conditions and desired conditions or 'wants,' or between the 'expected' and the 'perceived'.

Based on those definitions, this research focuses on the definition of perceived need in perceived need of care expressing the respondent's perceptions regardless of whether or not they currently use of care for the elderly. Table 3.4 presents the selection of factors of perceived need of care consisting of financial, socio-cultural, health, emotional, and primary needs.

Table 3.4 Block 3: Independent Perceived Need of Care Factors.

Concept	Variable	Indicator	Category
Perceived need of care factors at the individual level	Perceived need of care in using elderly care institution or organisation	Type of perceived needs of care in using elderly care institution or organisation	Do not know, no perceived need, financial need, socio-cultural need, health need, emotional need, primary need

Source: Adapted from Slikkerveer (1990).

Independent Enabling Variables

According to Coulton & Frost (1982), the enabling factors refer to circumstances or individual characteristics that either hinder or facilitate the use of an appropriate service. Moreover, Calsyn &

Winter (2011) argue that enabling variables include individual resources (*e.g.* income), and family and community resources (*e.g.* social support). In this context, the enabling factors refer to the respondents' socio-economic status which consist of subjective and objective perceptions. The subjective perceptions used the respondents' own opinions or self-assessment of socio-economic status. On the other hand, objective perceptions are measured ownership of material goods such as land and animal ownership, type of house, property values of vehicles and electronic items. Moreover, enabling variables operate on an individual level which refers to the actual condition of the household, *i.e.* the economic aspect. According to Coulton & Frost (1982), financial resources, especially access to payment for health and social services, are usually considered important. Table 3.5 shows the variables in the block of enabling factors: household head income, family income, and Socio-Economic Status (SES).

Table 3.5 Block 4: Independent Enabling Factors.

Concept	Variable	Indicator	Category
Enabling factors at the individual level	Monthly income of the household head	Average amount of the household head's monthly income (in Rupiah)	Do not know, none, 1-1.000.000, 1.001.000-2.000.000, 2.001.000-3.000.000, 3.001.000-4.000.000, >4.001.000
	Monthly income of the household members	Average amount of the household members' monthly income (in Rupiah)	Do not know, none, 1-1.000.000, 1.001.000-2.000.000, 2.001.000-3.000.000, 3.001.000-4.000.000, >4.001.000
	Socio-Economic Status (SES)	Level of SES	Do not know, very poor, poor, average, rich, very rich

Source: Adapted from Slikkerveer (1990).

Independent Institutional Variables

The institutional factors represent the available information about both financial and geographical accessibility of elderly care institutions or organisations which are perceived by the respondent. Financial accessibility refers to service costs of each elderly care institution or organisation. Additionally, geographical accessibility refers to the distance to each elderly care institution or organisation. Institutional factors also consider the financial support received by the respondents in each elderly care institution or organisation, based on the respondent's perceptions. Table 3.6 presents the operationalisation of the block of institutional factors of the types of elderly care institutions or organisations: traditional, transitional and modern.

Table 3.6 Block 5: Independent Institutional Factors.

Concept	Variable	Indicator	Category
Institutional factors at the system level	Accessibility cost of traditional elderly care institutions	Total amount of accessibility cost of traditional elderly care institutions	Do not know, no cost, 1-500.000, 501.000-1.000.000, 1.001.000-1.500.000, 1.501.000-2.000.000, >2.001.000
	Accessibility cost of transitional elderly care organisations	Total amount of accessibility cost of transitional elderly care organisations	Do not know, no cost, 1-500.000, 501.000-1.000.000, 1.001.000-1.500.000, 1.501.000-2.000.000, >2.001.000
	Accessibility cost of modern elderly care organisations	Total amount of accessibility cost of modern elderly care organisations	Do not know, no cost, 1-500.000, 501.000-1.000.000, 1.001.000-1.500.000, 1.501.000-2.000.000, >2.001.000

Table 3.6 *(continued)* Block 5: Independent Institutional Factors.

Concept	Variable	Indicator	Category
	Geographical accessibility of traditional elderly care institutions	Level of geographical accessibility of traditional elderly care institutions	Do not know, none, very difficult, difficult, average, easy, very easy
	Geographical accessibility of transitional elderly care organisations	Level of geographical accessibility of transitional elderly care organisations	Do not know, none, very difficult, difficult, average, easy, very easy
	Geographical accessibility of modern elderly care organisations	Level of geographical accessibility of modern elderly care organisations	Do not know, none, very difficult, difficult, average, easy, very easy
	Financial support from traditional elderly care institutions	Level of financial support received from traditional elderly care institutions	Do not know, none, very little, little, average, much, very much
	Financial support from transitional elderly care organisations	Level of financial support received from transitional elderly care organisations	Do not know, none, very little, little, average, much, very much
	Financial support from modern elderly care organisations	Level of financial support received from modern elderly care organisations	Do not know, none, very little, little, average, much, very much

Source: Adapted from Slikkerveer (1990).

Independent Environmental Variables

The environmental factors give information about the physical location of the household residence *i.e.* rural, semi-urban, or urban. Table 3.7 shows the variable of the environmental location of the residence of the respondents in the research area.

Table 3.7 Block 6: Independent Environmental Factors.

Concept	Variable	Indicator	Category
Environmental factors at the system level	Type of residence	Location of the household	Do not know, rural, semi-urban urban, other

Source: Adapted from Slikkerveer (1990).

Intervening Variables

The intervening factors refer to the characteristics of external interventions at the local community level (*cf.* Saefullah 2019). Aiglsperger (2014) also states that intervening factors operating at the system level change the standard relationship between independent and dependent blocks of factors from outside of the communities. In this context, there are two most powerful players determining the development of a community: (1) the power of the state represented by the government's intervention, and (2) the power of the market represented by the private sector's intervention (*cf.* Saefullah 2019). The intervening factors were operationalised in a set of questions asking for the respondents' perceptions of the impact of interventions from both public and private care towards the utilisation of elderly care institutions or organisations.

As indicated by Slikkerveer (2019c), the intervening variables consist of two main points: the impact of outside public interventions and private forces/interventions. Table 3.8 shows the operationalisation of the concept of the block of intervening factors into variables, indicators, and categories.

Table 3.8 Block 7: Intervening Factors for Government and Private Programmes.

Concept	Variable	Indicator	Category
Intervening factors at the system level	Impact of government regulation on traditional elderly care institutions	Perceived impact of government regulation on traditional elderly care institutions	Do not know, none, very little, little, average, much, very much
	Impact of government regulation on transitional elderly care organisations	Perceived impact of government regulation on transitional elderly care organisations	Do not know, none, very little, little, average, much, very much
	Impact of government regulation on modern elderly care organisations	Perceived impact of government regulation on modern elderly care organisations	Do not know, none, very little, little, average, much, very much
	Impact of private promotion on traditional elderly care institutions	Perceived impact of private promotion on traditional elderly care institutions	Do not know, none, very little, little, average, much, very much
	Impact of private promotion on transitional elderly care organisations	Perceived impact of private promotion on transitional elderly care organisations	Do not know, none, very little, little, average, much, very much
	Impact of private promotion on modern elderly care organisations	Perceived impact of private promotion on modern elderly care organisations	Do not know, none, very little, little, average, much, very much

Source: Adapted from Slikkerveer (1990).

The Dependent Variables

Tables 3.9, 3.10 and 3.11 represent the main elderly care institutions and organisations reported as utilised during a recall period of 12 months before the research was conducted.

The variable is chosen by the respondents based on their preferences for elderly care institutions and organisations during the last one-year period of time when the household surveys were conducted.

Table 3.9 Block 8 Dependent Variable: Reported Utilisation of Traditional Elderly Care Institutions.

Concept	Variable	Indicator	Category
Dependent factors of the main traditional institution used at individual level	The main traditional institution used as the elderly care institution	The main traditional institution used in the preceding year	Yes, no

Source: Adapted from Slikkerveer (1990).

Table 3.10 Block 9 Dependent Variable: Reported Utilisation of Transitional Elderly Care Organisations.

Concept	Variable	Indicator	Category
Dependent factors of the main transitional organisation used at individual level	The main transitional organisation used as the elderly care organisation	The main transitional organisation used in the preceding year	Yes, no

Source: Adapted from Slikkerveer (1990).

Table 3.11 Block 10 Dependent Variable: Reported Utilisation of Modern Elderly Care Organisations.

Concept	Variable	Indicator	Category
Dependent factors of the main modern organisation used at individual level	The main modern organisation used as the elderly care organisation	The main modern organisation used in the preceding year	Yes, no

Source: Adapted from Slikkerveer (1990).

3.2 Selection of the Research Area in East Java

3.2.1 Selection of the Tenggerese Sample Villages

The research focuses on the island of Java [3.2], especially on the Javanese population. The Javanese people are concentrated in Central and East Java (*cf.* Suryadinata 1988, www.britannica.com). Hefner (1990:5) concludes that: '*when we speak of Javanese culture, we think of inland Central Java, heir to the richly refined and hierarchical traditions of the native courts (kraton) that ruled much of the island from the seventeenth to nineteenth centuries.'* However, Javanese culture is not only concentrated in Central Java but also in East Java. This research focuses on the Javanese population of East Java, particularly in the Tengger Region which is also a part of the Javanese ethno-cultural group. The Tenggerese people have certain traditions which are not distinct from the Javanese people. The Tenggerese people have been selected for this research because they still maintain and practise their culture. As the other Javanese people in this region, they call themselves *wong Jawa* ('Javanese people'). Hefner (1985:6) states that: '*Only on certain occasions do they qualify that identification by also referring to themselves as Tengger people (wong Tengger).*' Thus, Tenggerese people are also Javanese. The Tenggerese have certain traditions which they still maintain, carry out, believe, and practise in their daily life. The research tries to document and explain in particular the role of the local traditions of *bakti* and *sayan* in the care of the elderly among the Tenggerese people.
Moreover, this research analyses the pattern of care and support services behaviour for the elderly from the adult child's perspectives. This analysis aims to know the preference of adult children towards the elderly care institutions and organisations.

The Tenggerese people live in the Tenggerese highlands located to the south of the port towns of Pasuruan and Probolinggo, to the east of Malang and west of Lumajang. The Tenggerese highlands are one of twelve mountain complexes, consisting of 120 mountains that form the east-west backbone of the island (*cf.* Hefner 1990). It shows that the Tenggerese highlands form a vast mountain wedge. The Tenggerese people live in the region of the Tenggerese Mountains which is divided into four administrative districts: Malang district in the south-west, Lumajang district in the south-east, Pasuruan district in the north-west, and Probolinggo districts in the north-east.

The research focuses in particular on the Tenggerese people living in two districts: Malang and Lumajang. Both districts are chosen because of the considerations after concluding the preliminary research. They have not been too much affected by outside factors [3.3]. The outside factors may come from the government's involvement and tourism's impact. It can be seen from the percentage of domestic and foreign visitors who visit Mount Bromo as the tourist destination surrounded by those districts. It can be assumed that the increasing number of visiting tourists can affect the local people's lifestyle. For example, the local people of the Tengger Region will tend to have more than one job: as a farmer and tourist guide, or renting out a vehicle to tourists. Moreover, it can also affect the neighbourhood and local people's behaviour. For example, local people supported by the local government have an initiative to provide hostel rooms or temporary housing for tourists. It can affect the local people's behaviour and mindset in the future. In addition, the Tenggerese highlands are surrounded by two *tlatah* ('cultural areas'): *Arek* and *Pendalungan* [3.4]. In this research, the Malang district represents the *Arek* cultural areas and Lumajang district represents the *Pendalungan* cultural areas.

Each district has sub-districts consisting of villages. In this research, the researcher chose a village which represents where Tenggerese people live, namely Ngadas village, Poncokusumo sub-district, Malang district, and Argosari village, Senduro sub-district, Lumajang district. Both villages implement the Tenggerese traditions in their daily life, livelihoods, religion, belief, social life, and environment. In this context, the researcher will document and explain the pattern of care of the elderly particularly focusing on the knowledge and practice of the local traditions of *bakti* and *sayan* within the Tenggerese community. A more detailed explanation of the Tenggerese people and traditions will be explained in Chapter VI.

The research was conducted not only among the Tenggerese people but also among the Javanese people, with the objective to describe the pattern of care of the elderly in East Java in general. The research includes two urban villages which represent the Javanese people, namely Tlogomas urban village, Lowokwaru sub-district, Malang district, and Ditotrunan urban village, Lumajang sub-district, Lumajang district. Both urban villages in those sub-districts were chosen because they have *Panti Jompo* owned by the government and supervised by *Dinas Sosial* ('the Ministry of Social Affairs'). In a nutshell, this research investigates Javanese ethno-cultural groups represented by two urban villages, and Tenggerese ethno-cultural groups represented by two villages as the Tenggerese are part of the Javanese ethno-cultural groups in East Java.

In this research, there are three types of elderly care institutions as components of the plural elderly care system consisting of traditional institutions, and transitional and modern elderly care organisations. The traditional elderly care institutions refer to family home care, while the transitional elderly care organisations refer to community-based care, and modern elderly care organisations refer to *Panti Jompo* and *Pusat Kesehatan Masyarakat Santun Lansia* (*Puskesmas Santun Lansia*). The present study also seeks to document and analyse the reported patterns of utilisation behaviour from the adult childrens's perspectives which dominates the influence on their preferences for the elderly care.

3.2.2 Target Population and Sample Surveys

The questionnaire instrument was firstly introduced by Slikkerveer (1990) and used in several types of research related to applied ethnoscience and development studies. To achieve the objectives of this research, the questionnaire required several adaptations to the present research in East Java and was finalised in May 2018. Once the questionnaire was ready to be distributed, the fieldwork has been conducted in the selected villages from June to August 2018.

After selecting the research area, the next step has been to choose respondents for the survey. The unit of analysis for this research is the adult person as the household head who has elderly people as parents. Another criterion is that these adults provide care for their elderly parents or older people. This study has tried to collect information on individual households rather than on communities at large. The questionnaire was distributed to the household head in each research area meeting the selection criteria. In this context, the household head is the adult child who is married or unmarried, and still has parents or older people to care for. The elderly refer to the criteria of the older person in Indonesia, who is 60 years old, or older. This definition is based on Law No. 13/1998 about elderly wellfare. The data collected for the household members are also related to the socio-demographic block of factors.

Most of the household heads are men. As the head of a household, the man as a husband has the role as a decision-maker in the household. In some cases where the husband in the household has passed away, the wife takes the responsibility as the decision-maker including fulfilling household needs. However, if the wife (widow) is not able to meet all of the household members' needs, the adult children - commonly men - can take over her position as the decision-maker. In another case when parents reside with an adult child, it is not always clear whether the parents or the adult child is the actual household head. The parent may be the household head even when the adult child is the primary breadwinner and manager of the household (*cf.* Rudkin 1992). The researcher needs to get more information about the survey's sample from the *Kepala desa* ('Heads of the villages') and *Ketua Rukun*

Tetangga/Rukun Warga ('Heads of the neighbourhoods's). To ensure the survey's sample meets the research criteria, the researcher asked the respondents directly to see their *Kartu Tanda Penduduk* (KTP) ('resident's identity card') and *Kartu Keluarga* (KK) ('family card') for the household. It is important to note that the household head in this research is an adult child or adult person who lives with/near and takes care of their parents or older people.

The research also requires some specific criteria to select the survey respondents. An adult person was considered a household head if s/he: (1) lives in the same house with elderly under *satu atap* ('one roof') or near their elderly's home, (2) eats from the same kitchen with elderly even if they live in another house (adult children and the elderly sleep in their own house), (3) eats from a different kitchen (*bedo pawon*) at the same house with the elderly, and (4) contributes to and is responsible financially or materially for the household needs. In this context, the researcher defines the type of care of the elderly provided by an adult child into three types: the first type is the adult child and their family living in his parents' home or bringing the parents to his home to take care of them; the second type refers to the adult child taking care of their aged parents by living nearby their parents' home; and the last type is the elderly who live separately from their children.

Methods of non-probability sampling are applied in the present research for some reasons. These techniques not require the complete 'sampling frame' in the population, and every unit of the population does not get an equal chance to participate in the survey (*cf.* Ferdinand 2014). More specifically, the type of non-probability sampling that was used is the purposive sampling method. It is chosen based on specific considerations to obtain samples which meet the criteria determined by the researcher. Purposive sampling relies on the subjective judgment of the researcher. Moreover, the main goal of purposive sampling is to focus on particular characteristics of a population of interest, in the hope that it can provide answers to the predetermined research questions.

3.3 Data Collection and Analysis

3.3.1 Qualitative Data Collection

The qualitative research methods were conducted to obtain data and in-depth information about both individuals and communities. The qualitative research tools have been designed to collect in-depth data on the patterns of individuals' behaviour, knowledge, and beliefs. Moreover, qualitative research is also a way to find out more about the communities' cosmovision in the research area. Qualitative research was carried out in the form of field observations, documentation, and formal and informal interviews with key informants and participants preceding the household surveys. In this context, the qualitative methods were used to accurately capture the actual behaviour, beliefs, and opinions of the adult person or child in providing care of the elderly.

The researcher lived temporarily with the research team in the villages where the qualitative fieldwork was carried out. It started with observations and attending relevant meetings and activities in each village. The team participated in social gatherings to understand the research settings and build up a rapport with the local people. It started with the introduction to explain the research and asked the cooperation and permission to interview and observe the participants in their daily life. After permission, appointments were made with the respondents, and the interviews started.

The interviews involved open-ended questions related to the following topics: (1) daily observations including one-day activities related to preparing everything for the elderly; (2) arrangements covering care of the elderly which focus on knowledge, belief, and practice of care; (3) utilisation behaviour referring to the context of care providers in old age with a focus on livelihood strategies to secure well-being in old age. The researcher made a list of questions for the respondents on the care of the elderly. After completion, the researcher and her team documented the answers of the participants. This qualitative method explored the participants' emic view. In addition, key informants were interviewed to get information about their general activities and specific programmess for care of the elderly. The key informants included the *Kepala Desa* or *Kades* ('Village Heads'), the *Ketua RT/RW* ('Neighbourhood Heads'), and the officials in the sub-district of the local government clinic, called

Puskesmas ('Primary Health Care Centre'), the officials in the village of the local government clinic, called *Puskesmas pembantu* or *Pustu* ('Auxiliary Health Centre'), the officials of the Health Department, called *Dinas Kesehatan* or *Dinkes*, and the officials of the Social Department, called *Dinas Sosial* or *Dinsos* at the *Kantor Kabupaten* ('District Office'). Moreover, the managers of *Panti Jompo Pemerintah* ('Government Old Age Homes') and the *Panti Jompo Swasta* ('Private Old-Age Homes') were also grouped as key informants.

Additionally, the researchers also interviewed other key informants such as *Kepala Adat* and *Kepala Dukun* as selected experts in the Tenggerese culture. They were interviewed mainly about traditional behaviour and culture on care of the elderly. The qualitative fieldwork tried to shed light on the patterns found in the survey to provide more in-depth information about it. In addition, qualitative data also have been collected from various documents which have been used as research material. These documents include any record of texts, digital sources, and images. The researchers also made photographs to record observation settings in research areas.

3.3.2 Quantitative Data Collection: Household Survey

Quantitative methods were used to accurately measure care practices, support providers, and old-age security from the perspective of an adult child or other person through a survey questionnaire. Based on this questionnaire, the researcher will know the respondents' preferences of utilising elderly care institutions and organisations. In the beginning, for the quantitative fieldwork, a questionnaire was drawn up in English. Thereafter, the researcher translated the questions in the questionnaire into Indonesian. During the questionnaire distribution, the researcher was helped by some interviewers. They were carefully recruited and tested on the basis of criteria, such as experience and more importantly Javanese speaking skills. Understanding Javanese is important because most of the people in the research areas, particularly in Tengger, speak Javanese daily [3.5]. Consequently, interviewers speak better Javanese than Indonesian with the Tenggerese respondents. Similarly, Wibisono (1956) in Smith-Hefner (1983) reports that interviewing the Tenggerese in Javanese can show better results than those conducted in Indonesian. According to Poedjosoedarmo (1968), speech levels in Javanese show two aspects: the degree of formality and respect between speakers and addressees [3.6]. Based on Javanese speech levels, traditionally, Tenggerese people use the same language level when speaking within the community. Most people usually speak a Tenggerese variant of '*ngoko.'* However, they also speak '*kromo*' in some formal occasions or when they speak to older people (*cf.* Hefner 1985). The study of Hefner (1990:3) about Tenggerese also concludes that: '..... '*kromo*' *was used to address outsiders, which is to say, to speak with people who did not understand the more direct and solidary ways of upland Java*.' In the beginning, the interviewers try to understand the Javanese speech level used by the respondents through a short conversation prior to interviewing based on the questionnaire. It is implemented in a way to ease communication and feel a sense of familiarity when interacting with each other.

In practice, some of the people who cannot read asked the interviewers to read the questions in the questionnaire one by one, but for those who can read, they also preferred that the questionnaire was read by the interviewer for them to easily understand the questionnaire. On the contrary, those in urban areas representing the Javanese filled out their questionnaires themselves. However, sometimes some respondents asked the interviewers to read the questionnaire and help them write the answers. In practice, interviewers could speak Indonesian and sometimes Javanese depending on the respondents' responses when filling out the questionnaire. Thereafter, the interviewers had to check each questionnaire and report the result and important findings during the field work. The research team discussed the results and target of the interviews every day. Last but not least, the research team also shared the problems encountered and any interesting stories during the fieldwork.

The survey used questionnaire and face-to-face interview methods. The questionnaire was prepared with some structured answer categories aimed to facilitate the respondents to fill in the questionnaire. The questionnaire consists of two parts: the first part is related to the survey of the household head as the respondent, consisting of questions about socio-demographic, psychosocial, perceived needs,

enabling, institutional, environmental, and intervening variables, and the utilisation of the elderly care institution; the second part is the data of the respondent's household members, particularly in the socio-demographic variables. The household members can fill in the questionnaire for the socio-demographic variables themselves. In fact, the interviewer found it difficult to directly meet and interview each household member because they have different activities. The household head can help to fill the questionnaire specifically on the socio-demographic variables for the household members when only the household head knows the information. Related to the socio-economic variables referring to the enabling variable, the questionnaire also requires the average amount of income to be filled in, not only for the household head but also for all the household members. Meanwhile, dependent variables indicate the main utilisation of elderly care and organisations reported by the household head as a respondent during the last one-year period when the research was conducted.

3.3.3 Quantitative Data Analysis

Data have been collected through both qualitative methods by observations and interviews, and quantitative methods through the household surveys. The quantitative data have been collected from the structured questionnaires following the conceptual model developed for this research. To execute the stepwise statistical data, the research analysis encompasses bivariate analysis, mutual correlations analysis, multivariate analysis, and multiple regression analysis.
The bivariate analysis is the first analysis stage where the independent and intervening variables are distributed over the dependent variables through cross-tabulation. The bivariate analyses examine whether one variable relates to another and more specifically indicate the shape, direction, or strength of the relationship (*cf.* Weinberg & Abramowitz 2002). It measures the relationship between two variables and does not allow for any indication of the causality (*cf.* Field 2009). The results of the bivariate analyses used in this research need to meet the following criteria (*cf.* Leurs 2010; Saefullah 2019):

- the observed counts and percentages of the cross-tabulation;

- the values of Pearson's Chi-square (χ^2) with the statistical critical measures; and

- the corresponding measures of association in Cramer's V with the statistical critical measures.

The cross-tabulation technique is used to establish whether the differences in the sample cross-tabulation represent the real differences in the population as a whole. Pearson's Chi-square test of independence determines whether there is a statistically significant relationship between two variables (*cf.* Miller *et al*. 2002). The confidence level for this study is set at 95%, meaning that if the significance level is less than 0.05 (< 0.05), it is significant. On the contrary, if the significance level is more than 0.05 (> 0.05), it means it is insignificant. Table 3.12 presents the range of significant values and its interpretation of significance. The researcher used the rules introduced by Agung (2005), Leurs (2010), Djen Amar (2010), Ambaretnani (2012), Chirangi (2013), Aiglsperger (2014), Erwina (2019), Saefullah (2019), and De Bekker (2020). The significance values of Pearson's chi-square test are arranged along the scale as illustrated in Table 3.12:

Table 3.12 Range of Significant Values and Interpretation of Significance.

Level of Significant Value (χ^2)	Interpretation of Value
$\chi^2 > 0.15$	non-significant
$0.15 > \chi^2 > 0.10$	indication of significance
$0.10 > \chi^2 > 0.05$	weakly significant
$0.05 > \chi^2 > 0.01$	strongly significant
$0.01 > \chi^2 > 0.001$	very strongly significant
$\chi^2 < 0.001$	most strongly significant

Pearson's Chi-square is considered suitable categorical data, which are by definition not continuous. Although Pearson's Chi-square does not rely on such assumptions as having continuously normal distributed data like most statistical tests, two important assumptions must always be fulfilled. *Firstly*, each respondent can score only in one cell of the cross-tabulation. *Secondly*, no expected frequencies should be below 1 and no more than 20% of expected frequencies should be below 5. On the basis of Pearson's chi-square test, the strength of each significant association among variables is further explored with Cramer's V.

Absolute values of Cramer's V range between 0 and 1, with 0 representing no association and 1 a perfect association (*cf.* Field 2009). The mutual correlations analysis is applied in this study encompassing an overview of all the significant variables resulting from the bivariate analysis.
Slikkerveer (2019c:207) introduces: '*a mutual relation analysis by clustering all those variables which are showing a differential degree of significance, ranging from 'indication of significance' to 'most strongly significant', into the pre-determined categories concerned, as represented as 'blocks' in the analytical model*.' In a recent article, Slikkerveer (2016) adapted his ethnomedical data analysis by replacing the 'mutual relations analysis' by the 'mutual correlation anaysis' in his analytical model of transcultural health care utilization, encapsulating the overview of significant correlations on the basis of the calculated Pearson's Chi-Square ($\chi 2$) within the range of significance between $0.15 > \chi^2 > 0.10$ and $\chi^2 < 0.001$ (*cf.* Table 3.12).

By consequence, the mutual correlations analysis shows the results from the bivariate analysis of all significant variables represented by each 'block' in the analytical model. In this context, it shows what factors significantly influence people's utilisation behaviour in choosing a traditional elderly care institution in comparison with the transitional and the modern organisations.

As an extension to the bivariate techniques of statistical data analysis, strengthened by the mutual correlations analysis, a multivariate analysis is applied to the present research. Multivariate analysis provides multiple independent and dependent variables (*cf.* Tabachnick & Fidell 1989). This study uses three dependent variables; therefore, the design of variables is multivariate. The multivariate analysis measures the relationships between the independent variables and the responses of the dependent variables, and the relationships between the multiple dependent variables. The multivariate analysis focuses on the interrelationships and interactions among all variables identified in the analytical model. By using multivariate analysis techniques, it is possible to determine which variables have the strongest impact on the interrelationship of the variables.

The classical multivariate analysis assumes that each variable has *a priori* quantification and can be treated as numerical data (*cf.* Geer 1993). However, although some variables can be considered (quasi) interval data, treating all data numerically would have been an oversimplification of the complexity of this dataset. The non-linear multivariate analysis, which does not have the same *a priori* assumption of the classical multivariate analysis, is the appropriate analysis to use. Following the example of Agung (2005), Ibui (2007), Leurs (2010), Djen Amar (2010), Ambaretnani (2012), Chirangi (2013), Aiglsperger (2014), Erwina (2019), Saefullah (2019), and De Bekker (2020), the OVERALS analysis is also implemented in this study. The OVERALS analysis is a non-linear generalised canonical correlation analysis (*cf.* Geer 1993), which allows the inclusion of variables with different measurement levels, including those with nominal and ordinal levels. Several scale types can be handled by the OVERALS technique. In this study, the set of independent and intervening variables form the first set while the dependent variables form the second set.

The general purpose of Multiple Regression Analysis is to delve more deeply into the relationship between several independent or predictor variables and a dependent or criterion variable. A Multiple Regression Analysis was used based on the individual OVERALS analyses between each block of variables and all other blocks of variables in the model. In a nutshell, while bivariate and multivariate analyses illustrate the relationship between different variables in the model, multiple regression analysis seeks to calculate the maximum correlation between blocks of variables (*cf.* Leurs 2010; Aiglsperger 2014; Saefullah 2019). Specific Multiple Regression Analysis was used here to calculate the relative importance of the block of variables and the block of dependent variables. It compares the various blocks of variables in the model to determine the relative strength of interaction. The multiple

regression analysis estimates the significance of the final model of utilisation behaviour which is expressed by a multiple correlation coefficient (r). In this analysis, the multiple correlation coefficients (ρd) of the individual OVERALS analyses will be used to measure the association.

The most commonly used multivariate measures of association can be expressed as functions of the 'eigenvalues' of the product matrix. The formula used to calculate the multiple correlation coefficient (ρd) using the 'eigenvalue' (Ed) is ρd = 2 x Ed-1 (*cf.* Van der Burg 1988).

The approach to the Multiple Regression Analysis follows the pre-defined block of factors presented in the multivariate model. This model was first introduced by Slikkerveer (1990) and later implemented in different studies of applied ethnoscience as mentioned above. Moreover, this model widens the cultural perspectives and permits the assessment of the cognitive and behavioural components of particular groups or communities as 'systems' in a rather holistic mode. Hence, it will generate a value relation towards policy making. The Multiple Regression Analysis of the blocks of factors gives an indication of which aspects should be developed for policies and at which point policies should be concentrated in order to heighten the probability of positively affecting the intended change in the behaviour of the community. Moreover, statistical data analysis aims at elaborating the final model of the utilisation of the elderly care institutions and organisations in the research area. The results obtained from quantitative data analysis are strengthened by the information gathered from the qualitative discussions, interviews and related explanations.

Notes:

[3.1] Measurement scales are used to categorise and/or quantify variables' values. In general, four scales of measurement are used in statistical analysis: nominal, ordinal, interval, and ratio scales (*cf.* Slikkerveer 2019c). *Nominal scales* refer to two or more named categories (classes) which are qualitatively different from each other, such as the variable 'marital status': single, married, divorced, and widowed.
Ordinal scales refer to two or more named categories (classes) which are qualitatively different from each other, but have an additional quality in a rank order or ladder, such as the variable 'socio-economic class': poor, average, and well-to-do. Interval scales refer to two or more named categories (classes) which are qualitatively different from each other, but have an additional quality where the intervals between the classes are equal, such as the variable 'temperature,' measured in degrees Celsius, where the difference between 20° and 25° is the same as between 32° and 37°C.
Ratio scales refer to two or more named categories (classes) which are qualitatively different from each other, but have an additional quality where zero indicates the absence of the attribute, rendering the ratio between numbers in the scale similar to that between the amounts of the attributes under measurement, such as the variable: 'income' measured in dollars, euros, pounds, etc.

[3.2] Administratively, Java is composed of four provinces: *Jawa Barat* ('West Java'), *Jawa Tengah* ('Central Java'), *Jawa Timur* ('East Java') and *Banten*; and two special regions, namely *daerah khusus lbukota* (Jakarta) and *Daerah Istimewa* (Yogyakarta) (*cf.* www.Britannica.com; www. wikipedia.org).

[3.3] Ngadisari village represents the Tenggerese people living in the Probolinggo district. Based on the preliminary research conducted by the researcher, Ngadisari is the centre of Tenggerese tourism area. Many tourists visit Mount Bromo. Many villagers have reaped economic benefits from tourism such as renting minibuses, jeeps, etc. Moreover, many villagers own horses which they rent to tourists who prefer to ride a horse than walk up the steep incline. On the other hand, other villagers built and rented some homestays to tourists and some villagers act as guides (*cf.* Smith-Hefner 1983). Tosari village in the Pasuruan district also has the same characteristics as the Probolinggo district.

[3.4] East Java is divided into ten *Tlatah* or cultural areas. There are four big cultures, *i.e.* Mataraman, Arek, Madura Island, Pendalungan, and six small cultures, *i.e.* Jawa Panaragan, Osing, Tengger, Madura Bawean, Madura Kangean, and Samin (*cf.* Ekaraga *et al*. 2018; Lukiyanto 2016). Malang and Surabaya are the centre of the Arek tlatah. Pendalungan includes the Madura and Jawa cultures. The Pendalungan tlatah includes Pasuruan, Probolinggo, Situbondo, Bondowoso, Lumajang, and Jember.

[3.5] The Javanese are not synonymous with the standard Javanese of Central Java. The Javanese includes both standard and regional (non-standard) dialect(s) of the Javanese. The Tenggerese dialect is one of several non-standard, regional varieties of Javanese (*cf.* Smith-Hefner 1983); thus the Tenggerese people speak Javanese in the dialect of the Tenggerese people.

[3.6] There are three vocabulary types in the Javanese speech level. First, *Ngoko* expresses non-polite and informal speech. The *Ngoko* vocabularies are used only to address someone with whom the speaker is very familiar. Second, *Madyo* expresses semi-polite and semi-formal speech. *Madyo* words are used to address a person towards whom one must express a formality of intermediate degree, such as a neighbor who is not a close friend or sometimes a relative of an older generation. Third, *Kromo* expresses politeness and formality. *Kromo* words are used to address someone towards whom the speaker must be distant and formal (*cf.* Poedjosoedarmo 1968).

CHAPTER IV RESEARCH SETTING: THE TENGGERESE AND JAVANESE PEOPLE IN EAST JAVA

The Chapter presents an overview of Indonesian geography as a country in South-East Asia, and the administration structure of the Indonesian government. Indonesia is the world's largest archipelago, which has more than 17,000 islands and hundreds of distinct native ethno-cultural and linguistic groups. Java is one of the Indonesian islands; it is the world's most populous island with more than half the country's population occupying it. The Javanese are one of the largest Indonesian ethno-cultural groups, predominantly located in Central and East Java. The Javanese ethno-cultural group has many sub-groups, such as the Osing, Tenggerese, Banyumasan and Samin people. This Chapter focuses on the research setting of the Javanese people in East Java, particularly the Tenggerese people as part of the Javanese ethno-cultural groups. Moreover, this chapter also introduces the sociography of East Java, especially the Tenggerese people, including the history, demography, socio-economics, people in the household, and community structure, which are influenced by the Javanese culture.

As mentioned above, the research has been conducted in four villages representing both the Tenggerese and Javanese populations. Two villages which represent the Tenggerese people are Ngadas village in the Poncokusumo sub-district, Malang district, and Argosari village in the Senduro sub-district, Lumajang district. Both are rural areas and represent the Tenggerese people who still believe and practise their customs to the present day. The remaining two villages representing the Javanese in East Java are Ditotrunan urban village, in Lumajang sub-district, Lumajang district, and Tlogomas urban village, in Lowokwaru sub-district, Malang district. In this research, *kabupaten* is a local name for a district, regency, and municipality consisting of several *kecamatan* ('sub-district'). Moreover, the sub-district consists of *desa* ('village') and *kelurahan* ('urban village'). This research uses the term *kabupaten*, district, regency, and municipality interchangeably with a similar meaning. The village term also is used interchangeably to refer to *desa* ('village') or *kelurahan* ('urban village').

The fieldwork was carried out from May to August 2018. The research started with a preliminary study and interviews with some key informants, which was followed by qualitative research including in-depth interviews with participant observation. The quantitative research on household interviews was implemented by using a questionnaire based on an adapted analytical model of Slikkerveer (1990). The analytical model of transcultural utilisation behaviour by Slikkerveer (1990) fundamentally integrates three main levels of 'blocks' of independent, intervening, and dependent factors.

4.1 Indonesia: A Newly-Developing Country

4.1.1 Geographical and Historical Background

Indonesia, geographically, is located between the Asian and Australian continents. Indonesia is an archipelagic country located in South-East Asia lying between the Indian and Pacific Oceans (*cf.* Habid & Rajendran 2008; Indonesian Embassy of Indonesia in Washington, D.C. 1951; BPS 2018b). Indonesia, as an archipelagic country, consists of thousands of islands which extend about 5.120 km from east to west and 1.760 km from north to south. Indonesia currently has 13,466 islands that have been registered to the United Nations (2012). However, based on the data from the Ministry of Home Affairs in BPS (2018), the total number of Indonesian islands is 16,056. Indonesia also has mainlands with about a total of 1,916,862.20 km^2 (*cf.* BPS 2018b). Indonesia has 34 provinces spread over five main islands and four archipelagoes. The five islands include Sumatera, Java, Kalimantan, Sulawesi, and Papua, while the four archipelagos include Riau, Bangka Belitung, Nusa Tenggara, and Maluku (*cf.* BPS 2018b). Indonesia is predominantly mountainous with approximately 400 volcanoes, of which 150 are still active (*cf.* Asiainfo 2010). Indonesia's volcanoes are part of the Pacific Ring of Fire which are located in the basin of the Pacific Ocean. It makes Indonesia susceptible to earthquakes and volcanic eruptions. Some volcanoes experienced notable eruptions with significant impacts such as the Krakatau eruptions in 1883 and Mount Tambora in 1815. Indonesia still has many active volcanoes

such as Kelud and Merapi in Java (*cf.* Wikipedia 2020). Some rivers in Indonesia such as Musi and Batanghari in Sumatera are among the longest rivers which are used for transportation, similarly to the Barito, Kapuas, and Mahakam rivers in Kalimantan, and Mamberamo river in Papua. Java also has famous rivers which are used for irrigation such as Bengawan Solo, Ciliwung, Citarum, and Brantas. Bengawan Solo is the longest river in Java (*cf.* Wikipedia 2019). Indonesia's climate is tropical consisting of two seasons: wet and dry, which change every six months.

Indonesia has several indigenous ethno-cultural and linguistic groups, where the Javanese people are forming the largest ethno-cultural group. Local people of various ethno-cultural groups mostly use local languages in their daily life. However, most Indonesians use *Bahasa Indonesia* as *a lingua franca* within the country, since it is the official national language in the Republic of Indonesia.

4.1.2 Administrative Government

Indonesia has 34 provinces, 98 cities, 416 districts, 7,217 sub-districts, and 83,344 villages (*cf.* BPS 2018b). The number of villages covers the *kelurahan* ('urban village') and *Unit Permukiman Transmigrasi* ('Transmigration Settlement Unit').

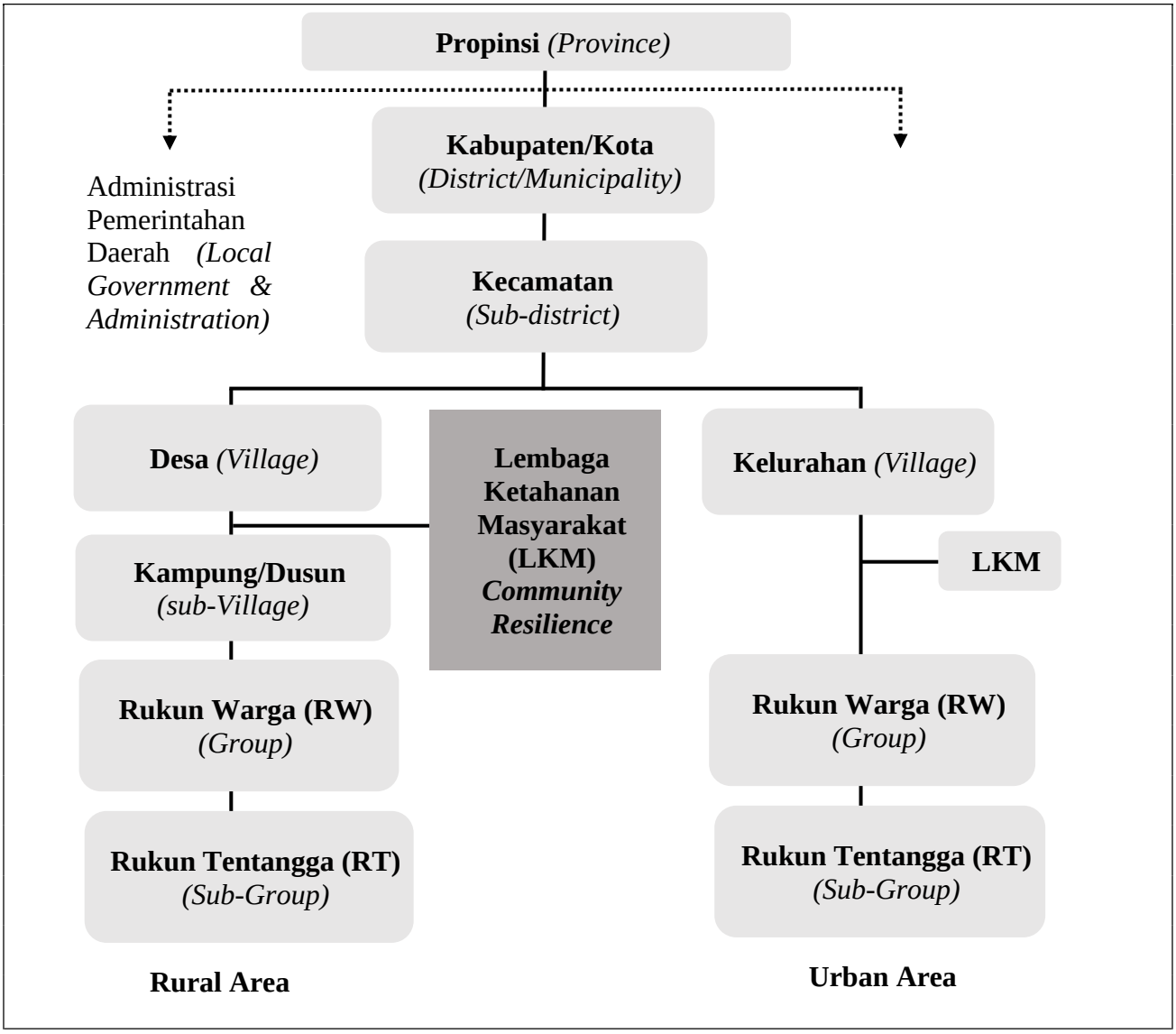


Figure 4.1 Government Administration Structure in Indonesia.
Source: Fang (2006), adapted from Indonesian Law No. 6/2014, No. 23/2014, and Saefullah (2019).
Note: LKMD = *Lembaga Ketahanan Masyarakat Desa* ('Institution of Community Security at Village Level').

The government structure of the Republic of Indonesia consists of a President, a Vice-president, the *Lembaga Tinggi Negara* (‘State Supreme Agency), the *Kementerian* (‘Ministry’), the *Lembaga Setingkat Menteri* (‘Ministerial Level Institution’), and the *Lembaga Pemerintahan Non Kementerian* (LPNK) (‘Non-ministerial Institution’). One of the ministries is the *Kementerian Dalam Negeri* (‘Ministry of Home Affairs’) which is responsible for the home affairs of the Government of Indonesia.

The district area is divided into sub-districts, which are again divided into *desa* or *kelurahan* (‘villages’). Each province and district or municipality has a regional government. The provincial area is led by a Governor as the representative of the central government in organising general government affairs. The district or municipality areas are led by a *Bupati* or *Walikota* (‘Regent or Mayor’), while the village administration level is led by a *Lurah* or *Kepala Desa* (‘Village Head’). The *kelurahan* (‘village’) is divided into *Rukun Warga* (RW) which are further divided into *Rukun Tetangga* (RT).

The *desa* (‘village ‘) in Java is divided into smaller units called *dusun* (‘hamlets or sub-villages’). RW is the administrative unit consisting of several RTs while RT is a sub-group of households in the groups (RW) of a *desa* or *kelurahan* (‘village’) or *dusun* (‘hamlets’). As the number of villages in Indonesia reach 83,000; the number of hamlets, RW (groups) and RT (sub-groups) therefore reach hundreds of thousands. As a result, the roles of the group and sub-group heads are also very important, especially in managing and controlling the community. The group and sub-group heads work voluntarily for their community. Figure 4.1 shows the administrative structure in Indonesia.

4.1.3 Socio-Demography

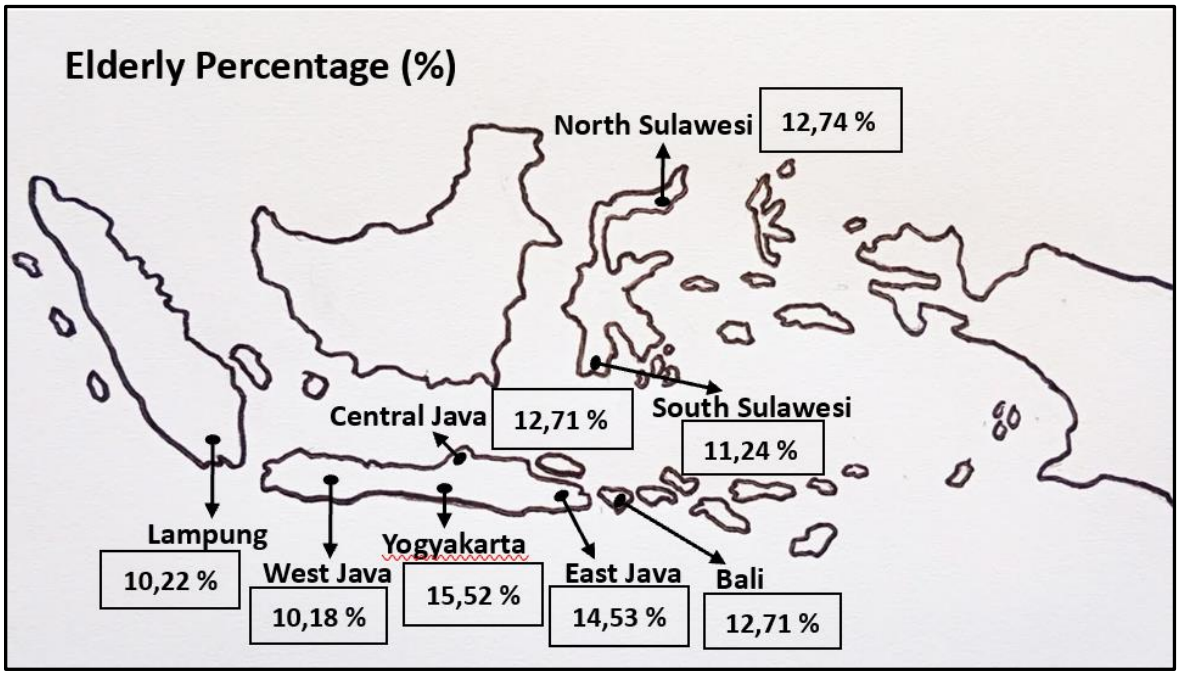
Indonesia is the largest country in South-East Asia and has a population of approximately 269 million inhabitants consisting of 133,416.9 females and 134,657.6 males in 2019 (*cf.* BPS 2020). Indonesia is also the fourth most populous country after China, India, and the United States (*cf.* United Nations 2019; Suryadinata *et al*. 2003). However, Indonesia has tried to control its population growth, which has been quite successful. President Suharto who led the new order government in the early 1970s initiated the *Program Keluarga Berencana* (‘Family Planning Programme’).

The programme was conducted to reduce the number of births in a typical Indonesian family (*cf.* Arifianto 2006). The programme succeeded in changing parents’ perceptions of having a smaller family size (*cf.* UNFPA 2014). The changing family size triggered by the fertility rate declined from 4.73 during 1975-1980 to 2.50 for the period 2010-2015 (*cf.* UNFPA 2014; UN 2015). The impact of successfully controlling the population, low birth and death rates is reflected in the projection of the occurring demographic dividend or demographic bonus from 2015 to 2030 [4.1].

Demographers often describe the changing age structure as a changing dependency ratios. The dependency ratio is commonly used to measure the burden of dependents that the working population has to support [4.2]. When the dependency ratio is low, more people can work in the total population indicating that they have to be more productive so they can contribute to economic growth. For the government, the demographic dividend can become an opportunity and a challenge at the same time. It can be an opportunity when the population has better access to employment or create job opportunities. By then, they become more productive and are able to contribute to economic growth. On the contrary, the demographic dividend can also be a challenge when most of the population are unemployed and are not ready to work due to their limited skills. It will be a burden for the government to push economic growth. The government also needs to make policies and other efforts which are able to push economic growth during demographic dividend times. The implementation of effective policies during the demographic dividend helps in facing unprecedented high old-age dependency ratios. So, the country will be ready to face the ageing population in the future and to ensure the elderly’s well-being such as better access of services for the elderly in all aspects *i.e.* health, transportation, social security, and assistance.

Indonesia has different population density in each region. Based on the main island, the majority of Indonesia’s population lives in Java island, about 57% in 2010, and is projected to decline to about 54.7% in 2035. It is presumably because of the effect of the transmigration programme and lower fertility rates than elsewhere in Indonesia (*cf.* Jones 2014). In fact, the population density in Indonesia

shows an uneven distribution over the whole island. Some areas are sparsely settled, particularly on the upper slopes of Java's volcanoes and in some southern coastal areas, while some others are very densely settled, particularly in the big cities and in the agricultural areas (*cf.* Jones 2014). The density of population ageing among provinces in Indonesia also shows uneven distribution. Some provinces tend to have a higher density of population ageing than others. *Badan Pusat Statistik* (BPS) ('Central Bureau of Statistics') in 2021 found that five provinces already have an ageing population, *i.e.* DI Yogyakarta (15.52%), East Java (14.53%), North Sulawesi (12.74%), Central Java and Bali (12.71%) (*cf.* BPS 2021). The geographic distribution of ageing population is shown in Map 4.1 showing that three out of the five provinces with ageing population are located in Java. This research focuses on East Java as one of the provinces with a high percentage of ageing population.



Map 4.1 The Geographic Distribution of Ageing Population in Indonesia.
Source: Indonesian Ageing Population (BPS 2021).

4.1.4 Socio-Economics

The role of the region in formulating the national GDP shows that Java has the highest contribution of 58.49%, followed by Sumatra 21.66%, Kalimantan 8.20%, Sulawesi 6.11%, Bali and Nusa Tenggara 3.11%, and Maluku and Papua 2.43% (*cf.* BPS 2018a) [4.3]. It shows that Java island still holds more than half of the national economy, which means that economic activities are still concentrated in Java. Regarding the state budget, in mid-2016, the Government of Indonesia implemented a tax amnesty programme expecting to increase state revenue from taxes. In 2018, taxes were the largest source of state revenue (85.40%), while other revenue sources are *Penerimaan Negara Bukan Pajak* (PNBP) ('Non-Tax Revenue') (14.54%) and grants with the smallest percentage (0.06%) (*cf.* BPS 2018a). The government significantly strives for revenue which aims to finance development programs for people's welfare. In fact, the Government of Indonesia still had a deficit in the state budget until 2018, meaning that the amount of state expenditure is still greater than the income received. The government is trying to use the state budget as efficiently as possible. One of the efforts is the reduction and diversion of the subsidy budget from the financing of subsidies in the energy sector (fuel and electricity) to the non-energy subsidy budget for the poor's welfare through social protection programs. Some social protection programs include direct assistance programs to the community, such as *Jaminan Kesehatan Nasional* (JKN) ('National Health Insurance'), *Kartu Indonesia Pintar* (KIP) ('Smart Indonesia Card'), *Kartu Indonesia Sehat* (KIS) ('Healthy Indonesia Card'), rice for underprivileged families, and Bidik Misi scholarships (*cf.* BPS 2018a).

The Government of Indonesia also provides a state budget in the form of *hibah dana desa* ('village fund grants') aimed at building public facilities in villages to make them more advanced. The provided budget has also increased from year to year since it was first raised in 2015, amounting to Rp. 20.8 trillion, increasing by Rp. 60.0 Trillion in 2018 (*cf.* BPS 2018a). The increasing village funds budget is expected to accelerate the realisation of people's welfare to support the achievement of national priorities such as reducing the unemployment rate and increasing public access to economic, educational, health, and social protection resources in accordance with the target. Social protection consists of social security and social assistance.

On the one hand, social security comprises the key social insurance, including health and pension insurance, unemployment benefits, work injury insurance, and disability grants. Insurance financing is mainly taken from participants' contributions (*cf.* Widjaja & Simanjuntak 2010; Bappenas & GTZ 2008). On the other hand, social assistance comprises non-contributory measures, such as care of the poor, elderly, and disabled. The financing of social assistance is mainly taken from taxes (*cf.* Widjaja & Simanjuntak 2010; Bappenas & GTZ 2008). The Government of Indonesia implemented Law No. 40 in 2004 for *Sistem Jaminan Sosial Nasional* (SJSN) ('National Social Security Systems'). SJSN is important because it expands coverage of social security programs covering all Indonesians, including those working in the informal sector, the unemployed, and the poor (*cf.* Bappenas & GTZ 2008). Moreover, the Government of Indonesia established the management of its national social security system for two types of *Badan Penyelenggara Jaminan Sosial* (BPJS) ('Government Social Security Agency'): BPJS *Kesehatan* (BPJS Health) for administering the SJSN health programme and *BPJS Ketenagakerjaan* (BPJS Employment) for administering the SJSN employment programs in 2011. They are established according to the enactment of Law No. 24/2011.

Every country takes very different decisions related to the allocated budget for the public sector, particularly to invest in social security taken from the GDP (Gross Domestic Product) (*cf.* ILO 2010). Between 2010 and 2014, the Government of Indonesia spent less than 2% on health and only 1% of the state budget on social protection (*cf.* Republik Indonesia 2016). However, the government increased health and social protection expenditures, particularly for the BPJS programs. Based on the 2018 state budget, the government allocated social protection for 12.8% of the central budget and 5% for health (*cf.* BPS 2018a). BPJS health implements *Jaminan Kesehatan Nasional* (JKN) ('National Health Insurance') programme which guarantees participants' access to health care based on basic health needs. Funding for implementing JKN comes from workers' contributions, employers, and the government. For example, insurance premiums for the poor are covered by the government, while formal workers' premiums are covered by both employers and employees, and informal workers are required to register for JKN and make monthly payments individually. Based on data from BPS (2017), the elderly who have health insurance are around 63.24%, while those who have health insurance through *Penerima Bantuan Iuran* (PBI) ('Premium Assistance Beneficiary') from the government are around 33.47%. Thus, half the elderly are still dependent on the government for paying their health insurance (*cf.* BPS 2017).

Furthermore, BPS has classified economic for the elderly measured based on their expenditure. The elderly who are in the bottom 40% of the expenditure group have health insurance amounting to 60.46%; nevertheless, only 36.02% of them use health insurance. Similarly, those who are in the middle 40% of the expenditure group have health insurance amounting to 60.62% and only 38.25% of them use health insurance. On the contrary, those who are in the top 20% of the expenditure group have health insurance amounting to 73.92%, and more than half (54.77%) of them use health insurance (*cf.* BPS 2017). So, the elderly who have high economic status tend to use their health insurance compared to those who have low and middle economic status. Moreover, the Government of Indonesia also implements social security programs through BPJS Employment, namely *Jaminan Kecelakaan Kerja* (JKK) ('Work Accident Security'), *Jaminan Kematian* (JKM) ('Death Security'), and *Jaminan Hari Tua* (JHT) ('Old Age Security') and the retirement pension. Only 12.63% of elderly households have social security (*cf.* BPS 2017), meaning that the elderly's active participation is still low. The government continues trying to increase the coverage and the elderly's active participation in the social security programme.

4.1.5 Ethno-cultural Profile

Much of Indonesian history focuses on Java as the centre of the powerful Hindhu-Buddhist empires, the Islamic sultanates, and the core of the colonial Dutch East Indies. Java was also the centre of the Indonesian struggle for independence during the 1930s and 1940s. For this reason, Java dominates Indonesia politically, economically and culturally. It is divided into (1) four administrative provinces: West Java, Central Java, East Java, and Banten, and (2) two special regions: Jakarta and Yogyakarta. Indonesia has many ethno-cultural groups located in the mountainous and island areas which have their respective different characters and traditions. The Javanese are the largest ethno-cultural group in Indonesia (40.22%), followed by the Sundanese (15.5%), Batak (3.6%), Sulawesi (3.2%), Madurese (3.0%), Betawi (2.9%) ethno-cultural groups, and ca. one third of other ethno-cultural groups (*cf.* BPS 2011) [4.6]. The majority of ethno-cultural groups in Indonesia are Javanese. Most Indonesians are Muslim, and the others are Christian including Catholics, Hindus, and Buddhists (*cf.* BPS 2011). *Kebatinan,* called animism *kejawen,* is also a Javanese religious tradition which can be seen from their history, culture, and traditions.

Das Gupta (1997) states that kinship systems and patterns of inheritance influence living arrangements and elderly care extremely. Kinship systems shape the relative value of girls and boys through their inheritance rules (*cf.* Das Gupta 2009). There are three types of kinship systems: matrilineal, patrilineal, and bilateral kinship systems. Matrilineality is kinship through the female line while patrilineality, also known as the male line, is a kinship system where an individual's family membership is derived from and is recorded through his or her father's lineage. Patrilineality and matrilineality involve the inheritance of property, rights, names, or titles through male or female kin. On the other hand, a bilateral relation is a kinship through both male and female lines. Some Indonesian ethno-cultural groups apply the patrilineal system such as Batak, Rejang, and Gayo, whereas the other ethno-cultural groups apply the matrilineal system such as the Minangkabau people in West Sumatra. The Javanese have bilateral kinship systems where a person is equally related to the families from both parents. Moreover, the bilateral kinship system is generally characterised by the values of showing *hormat* ('respect') and maintaining *rukun* ('harmony') towards the elderly relatives. The nuclear family, including parents, children, and spouse, is the most important kinship-based unit in the Javanese villages (*cf.* Geertz 1961; Koentjaraningrat 1957).

Understanding the local people's characteristics of ethnocultural groups, kinship systems, knowledge and living arrangements in the community is important to comprehensively understand the behaviour patterns related to elderly care in each ethno-cultural group. Moreover, it is also important to know the management of elderly care and services based on the adult child's perspective.

4.2 East Java Province

4.2.1 Geography and Demography of the Province of East Java

East Java is one of the provinces in Indonesia located in the east part of Java. East Java borders the Java Sea in the north, the Strait of Bali in the east, the Indian Ocean in the south, and Central Java province in the west. It has 431 islands, and the total area is 47,799.75 km^2 (*cf.* BPS 2018b). It has the widest area compared to other provinces in Java, *i.e.* West Java, Central Java, Banten, and two special regions: Jakarta and Yogyakarta. Surabaya is the capital of East Java Province. East Java has Mount Semeru, known as Mahameru summit, located between Lumajang and Malang districts. Mount Semeru is the highest mount in Java (3,676 m) and the third highest volcano in Indonesia. Moreover, Mount Semeru belongs to the Semeru-Tenggerese volcanic massif (*cf.* Thouret *et al*. 2007). Like Semeru, Mount Bromo is also an active volcano and part of the Tenggerese massif. Mount Bromo is popular for its crater which is located between Mount Semeru and Tenggerese massif in East Java. The Tenggerese massif has the peak of Mount Bromo 2,192 meters above sea level, and Mount Semeru 3,676 meters above sea level.

Illustration 4.1 Picture of Mount Bromo, Tenggerese Caldera, and Mount Semeru in East Java. *Source*: Alfred Molon.

The massif area is one of the most visited tourist attractions in East Java. Volcanoes in those areas are within the area of Bromo Tenggerese Semeru National Park. People who live in the Bromo Tenggerese Semeru National Park areas are called *wong Tengger* ('Tenggerese people'). Figure 4.2 shows a picture of Mount Bromo, Tenggerese Caldera, and Mount Semeru in East Java. East Java province also has two famous rivers, Brantas and Bengawan Solo. The Brantas river comes from East Java and ends in the city of Surabaya, while Bengawan Solo comes from Central Java and ends in the Gresik district, East Java (*cf.* Lelono 2010).

Based on administration divisions, East Java consists of 29 *kabupaten* ('district'), 9 municipalities, 666 sub-districts, 5,674 villages, and 2,827 urban villages (*cf.* BPS 2019). Based on the demography, it is the second most populous Indonesian province after West Java, with total population projections for 2018 at 39,5 million: 19,5 million male and 20 million female (*cf.* BPS 2019).

Besides the national language, *Bahasa Indonesia*, East Java people use Javanese as a daily language. Poedjosoedarmo (1968) describes three main speech levels in Javanese. First, *Kromo* is the most polite and formal, or respectful language (*alus*). Second, *Madyo* is the middle level which is semi-polite and semi-formal, and *Ngoko* is the base level which is non-polite and informal. In the western part of East Java, people speak *Kromo*, similar to the language spoken in Central Java, the Mataram dialect spoken around Surakarta and Yogyakarta. In the eastern part, such as Surabaya and Malang, people speak *Bahasa Jawa Timuran* (East Java language) which stresses less on the speech level and is a more egalitarian version of Javanese. However, some ethno-cultural sub-groups have a specific dialect, such as Surabayan (*Boso Suroboyoan*), and Malang (*Boso Walikan*). The Madurese also speak Madurese (*Bahasa Madura*). In the Tenggerese ethno-cultural group, Tenggerese people speak the Tenggerese language which sounds similar to the Javanese language. Its dialect is characterised by several variations of standard Javanese, such as different pronunciations of -a in open syllables and some restricted use of formal kromo Javanese (*cf.* Hefner 1985). The Osing ethno-cultural group also speak the Osing language in Banyuwangi. In terms of religion, the majority of people in East Java (96% of the total population) is Muslim. On a smaller scale, Buddhism and Hinduism are also found in the Javanese community in East Java. The Tenggerese people generally profess Hinduism as their religion, but they have also incorporated many Buddhist and Animist elements.

4.2.2 Socio-economic Profile and the Elderly Care System

Measures of socio-economic status are used as a proxy indicator of the need for health care or other services. Grundy & Holt (2001) state that there are three points in the relation between socio-economic status and health. The first is a materialist one, such as income where those with higher incomes have better access to health care. The second point emphasises behavioural or 'lifestyle' factors, such as appropriate uses of health care, which may differ depending on cognitive skills and information access. It is closely related to education. The third point emphasises psychosocial factors such as empowerment, social status, and social integration. Occupation can also be used as an indicator of the elderly's socioeconomic status.

Nearly half the elderly in Indonesia (47.92%) are still actively working: the percentage of older people working in rural areas is higher than those in urban areas (55.34% compared to 40.93%). This is because informal employment is more available in rural areas, such as the agricultural sector which does not require special skills. Most of the elderly who work in the agricultural sector (55.18%) only have education at elementary school level (82.05%) and earn income lower than other sectors such as industry, trade and services. 50.50% of the elderly earn less than 1,000,000 IDR per month. Meanwhile, 62.64% of the elderly live with their extended families either with their families in two generations or three generations (*cf.* BPS 2017) [4.7].

This research focuses on the three types of care of the elderly: traditional institutions, and transitional and modern organisations. Traditional institutions include family home care while transitional organisations are community-based care. In this context, community-based care includes the *Posyandu Lansia*, and the *Karang Werda*. East Java has 54,522 units of *Posyandu Lansia*, a rather large amount of integrated health services for the elderly compared to other provinces in Indonesia (*cf.* Kemenkes 2016). Modern elderly care organisations consist of the *Puskesmas Santun Lansia*, and *Panti Jompo*, which are owned by both the government and privately. The number of *Puskesmas Santun Lansia* in Indonesia is 824 units of which 131 are located in East Java, in second position after West Java with 158 units (*cf.* Kemenkes 2016). The *Panti Jompo* are the last option for elderly care in Indonesia targeting the elderly who are abandoned by their family, or do not have family or relatives.

4.2.3 Cultural Divisions in the Indigenous Communities in East Java

The East Java province is home not only to the Javanese but also to the Madurese, particularly in the eastern part, *i.e.* Madura Island (*cf.* Suryadinata *et al*. 2003). The Javanese are the majority ethno-cultural group in East Java. Meanwhile, the Javanese also have ethno-cultural sub-groups such as the Tenggerese people in Bromo, the Samin people and the Osing people in Banyuwangi where the percentage of their population is less than the Javanese population in East Java. Although the Javanese represent a single ethno-cultural group, by convention the Javanese are generally divided into three areas (*cf.* Whitten *et al.* 1996). The first area is known as the *Kejawen*, extending from Banyumas to Blitar, the heartland of the 'real' Javanese culture. The second area is known as *pesisir* located in the northern plain, from Cirebon to Surabaya and Pasuruan. The third Javanese area is Blambangan known as *Kawasan Tapal Kuda* ('Horseshoe Region'). The *Tapal Kuda* areas include Probolinggo, Banyuwangi, Bondowoso, Jember, Lumajang, Pasuruan, and Situbondo. These areas are also occupied by the Madurese.

The East Java area is divided into ten *tlatah* or cultural areas. There are four big cultures, *i.e.* Mataraman, Arek, Madura Island, and Pendalungan, and six small cultures, *i.e.* Jawa Panaragan, Osing, Tengger, Madura Bawean, Madura Kangean, and Samin (*cf.* Ekaraga *et al.* 2018; Lukiyanto 2016). First, Mataraman *tlatah* is located across the west part of East Java, *i.e.* Madiun, Ngawi, Pacitan, Ponorogo, Magetan, Kediri, Nganjuk, Tulungagung, Trenggalek, Tuban, Lamongan, and Bojonegoro. Those areas in the Mataraman *tlatah* are still strongly influenced by the Mataram empire whose customs are similar to Central Java, particularly Yogyakarta and Surakarta, as they tend to speak with respectful language (*alus*). Second, in the east part of Mataraman *tlatah* is Arek *tlatah* where Malang and Surabaya are the centre of it. Arek *tlatah* includes the areas around Malang and Surabaya, such as

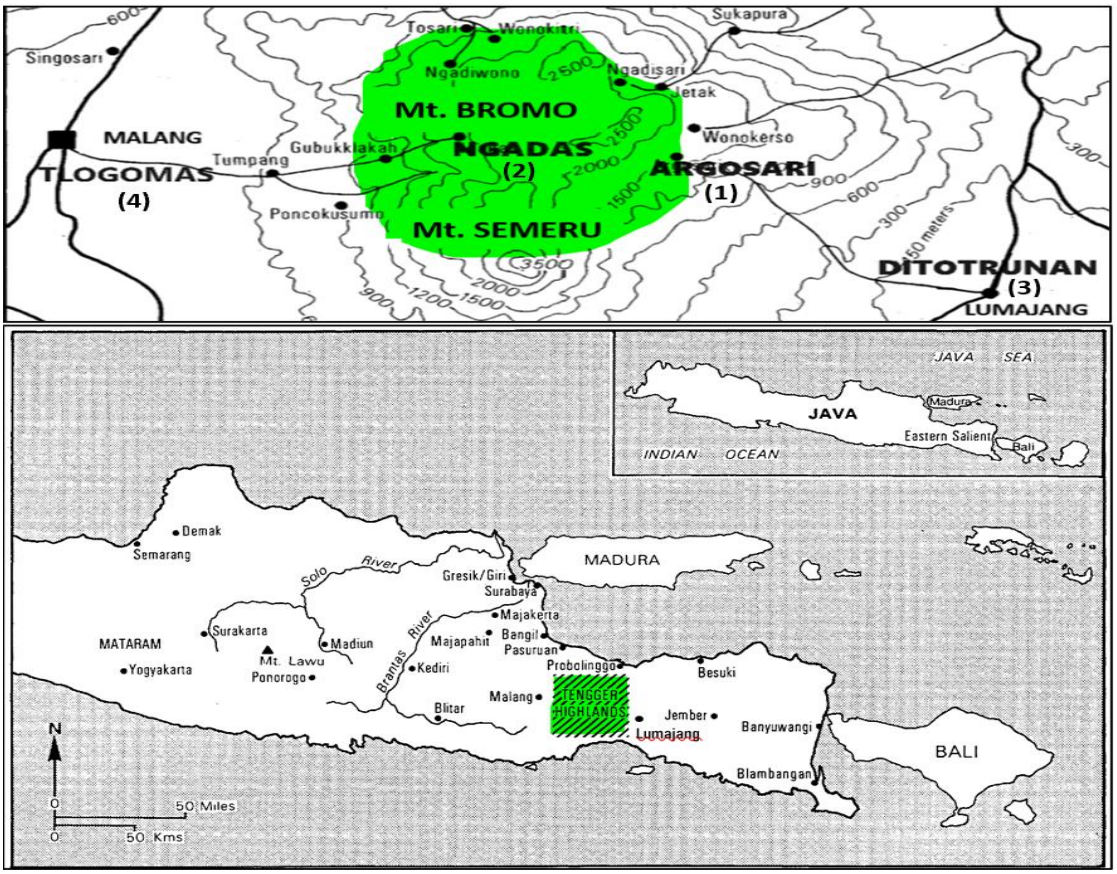
Batu, Sidoarjo, Mojokerto, Jombang, and Gresik. Third, Madura *tlatah* includes Madura Island, which is the largest island in East Java and separated from mainland Java by the Strait of Madura. The border of Madura is the Kangean Islands in the most eastern, Masalembu Islands in the northernmost, and Nusa Barung Island and Sempu Islands in the southern. The Madurese occupy the Bangkalan, Pamekasan, Sampang, and Sumenep regencies. One of the Madurese's characteristics is to be adventurous. Moreover, since the Madurese spread throughout the island, which makes them not have 'village solidarity', social relations are in Madura are centred on the individual (*cf.* Ekaraga *et al.* 2018). The land in Madura Island is not fertile, unlike in Java, leading to many Madurese migrating to East Java. The last *tlatah* is Pendalungan: a combination of the Madurese and Javanese cultures which includes Pasuruan, Probolinggo, Situbondo, Bondowoso, Lumajang, and Jember. Map 4.2 shows the division of cultural areas in East Java. Javanese cultures and customs in the western part of East Java were influenced much by the Mataraman *tlatah* whose cultures are similar to Central Java's. *Wayang Kulit* ('shadow puppets') and *Ketoprak* are quite popular in the western part of East Java, which tells the life of the palace.

Map 4.2 The Division of Cultural Areas in East Java.
Source: Malangcorner in https://www.goodnewsfromindonesia.id/2016/12/27

Meanwhile, some areas in Tuban, Lamongan, and Gresik were heavily influenced by Islamic culture. Five of the nine members of the *Walisongo* are buried in this area. *Ludruk* is one of the East Javanese art works in the form of traditional drama telling about the story of common people's daily life interspersed with jokes or humour and social criticism, and accompanied by the gamelan as the background. *Ludruk* groups can be found in the area of Surabaya, Mojokerto, and Jombang. Usually, *Remo* dance is used as the opening of *Ludruk* to welcome a guest. *Tari Topeng* ('Mask Dance') is also a famous dance from Malang. *Reog* Ponorogo becomes the icon of East Javanese art performance where the main dancer is a person wearing a lion-headed mask with a peacock feather decoration accompanied by *Kuda Lumping* ('Horse Braid') and several mask dancers as well as merry gamelan music. *Reog* is one of the Indonesian cultures that is still very strong with mystical elements, while Madura Island is also famous for its *Karapan Sapi* ('Bull Race') as one of the attractive icons of Madurese culture.'

The Javanese ethno-cultural group also has many ethno-cultural sub-groups such as Banyumasan in the western part of Central Java, Osing in Banyuwangi, and the Tengger. In East Java, Osing is a blend of Java, Madura, and Bali, while the Tenggerese people live in the Tenggerese highlands surrounded by Mount Bromo and Semeru. The Tenggerese highlands are located within four administrative *kabupaten* ('districts'): Pasuruan, Probolinggo, Lumajang, and Malang.

This research has been conducted to understand a specific behaviour of the Tenggerese and Javanese people in East Java. The Tenggerese and Javanese people in this research are represented by two *tlatah*: Malang as Arek *tlatah* and Lumajang as Pendalungan *tlatah*. Based on the two districts, the sub-district and villages were selected, representing the Javanese and Tenggerese people. *Firstly*, the research was conducted in Ngadas village in Poncokusumo sub-district representing the Tenggerese people, and Tlogomas village in the Lowokwaru sub-district representing the Javanese in Malang. *Secondly*, the research was also conducted in Argosari village in the Senduro sub-district representing the Tenggerese, and Ditotrunan village in the Lumajang sub-district representing the Javanese in Lumajang. Map 4.3 shows the Tenggerese and Javanese areas in East Java.



Map 4.3 Location of the Tenggerese and Javanese People in East Java: (1) Argosari and (2) Ngadas represent Tenggerese People; (3) Ditotrunan and (4) Tlogomas represent Javanese People. The green color refers to Tengger Highlands.
Source: Hefner (1985 & 1990) modified.

4.3 Selected Research in Two Districts of East Java

4.3.1 Lumajang and Malang: Home of the Tenggerese and Javanese Peoples

The geography, demography, and socioeconomic characteristics of the two districts in East Java: Malang and Lumajang representing the Tenggerese and Javanese people is East Java are described as follows.

The Lumajang district is 179,090.00 km^2 and has borders with the Jember district to the east part, Probolinggo district to the north part, Malang district to the west part, and the Indian Ocean to the

south part. Lumajang is a fertile land because it is flanked by three volcanoes: Mount Semeru (3,676 m), Mount Bromo (2,329 m), and Mount Lamongan (1,651 m). Lumajang is divided into 21 sub-districts, 198 villages, and 7 urban villages (*cf.* BPS 2019a). Its population in 2018 was about 1,039,794 people consisting of 507,781 males and 532,013 females.

The majority of people in Lumajang work as farmers (270,981 people), entrepreneurs (213,137 people), employees (43,681 people), laborers (32,562 people), traders (12,643 people), etc. (*cf.* BPS 2019a). In terms of religion, the majority of people in Lumajang are Muslim (1,105,487 people), followed by Christian (11,379 people), Hindu (6,031 people), Catholic (2,585 people), Budha (486 people), Konghuchu (19 people) and others (18 people). Lumajang has Mandhara Giri Semeru Agung which is the oldest temple in Indonesia. It is located in the Senduro sub-district, Lumajang district.

Hindus occupy the second position (4,316 people) after the Muslims (44,999 people) in the Senduro sub-district. Senduro is one of the sub-districts inhabited by the Tenggerese people in the Lumajang district. Senduro's area covers around 228.68 km^2 or 12.77% of the total area of Lumajang. Its population is about 52,313 inhabitants, of which 26,004 are males and 26,309 are females (*cf.* BPS 2019b). The Senduro sub-district has 12 villages; one of the villages, Argosari, is inhabited by the Tenggerese people. The majority of the Tenggerese people are Hindu while the majority of people in the Lumajang district are Javanese although some of them are Madurese.

The Malang district has borders with six other districts and the Indonesian Ocean. The north-east borders the Pasuruan and Probolinggo districts, the east with Lumajang district, the south with the Indonesian Ocean, the west with Blitar district, and the north-west with Kediri and Mojokerto districts. Malang municipality is located in the middle of Malang district. The Malang municipality area is 110.06 km^2 and divided into five sub-districts: Kedungkandang, Sukun, Klojen, Blimbing, and Lowokwaru. The population of Malang municipality is about 866,118 people (*cf.* BPS 2019c). The Javanese are the majority ethno-cultural group in the Malang district/municipality. On the other hand, the Malang district area is 2,977.05 km^2 and divided into 33 sub-districts, 12 urban villages, and 378 villages (*cf.* BPS 2019d). The population of Malang district is 2,591,795 people consisting of 1,302,771 males and 1,289,024 females (*cf.* BPS 2019d). Poncokusumo is one of the sub-districts inhabited by the Tenggerese people in the Malang district. Poncokusumo covers around 100.43 km^2 or 3.46% of the total area of Malang district. The population of Poncokusumo is 100,074 inhabitants, of which 50,242 are males and 49,832 are females (*cf.* BPS 2018c). Poncokusumo has 17 villages. One of the villages is inhabited by the Tenggerese people: Ngadas village. The majority of people in Ngadas village, representing the Tenggerese people, is Budhist (45%), Muslim (40%), and Hindu (15%) (*cf.* Profil Ngadas 2015).

4.4 Characteristics of Respondents in the Research Areas

4.4.1 Argosari Village in Senduro Sub-District

Argosari is one of the villages in the Senduro sub-district, Lumajang district, which represents the Tenggerese people. In 1907, the Lumajang district government formally changed the name of Argosari village; it was previously known as Sumbersari. Argosari initially consists of 5 hamlets: Argosari, Gedok, Bakalan, Pusung Duwur, and Ranupani (*cf.* Profil Argosari 2015). Based on the interview with Mr. Markatun as the former head of Argosari village from 1998 to 2008, he revealed that there were administrative matters concerning the distance between Ranupani hamlet and the village office in Argosari village.

People in Ranupani complain that their location is quite far from Argosari village so they find it difficult to process their administrative needs. Finally, the government of the Lumajang regency decided that the Ranupani hamlet was a village having its own government and was separated from Argosari village in 1999. Argosari and Ranupani villages are still in the sub-district of Senduro. Currently, Argosari village consists of 4 hamlets: Krajan Argosari, Gedog, Pusung Duwur, and Bakalan. Moreover, Argosari village has 7 RW and 24 RT. Krajan hamlet is the location of Argosari village office (*cf.* BPS 2019b; Profile Argosari 2015). Figure 4.2 and 4.3 show the entrance gate to

Argosari Village and the village office in Argosari Village. Geographically, Argosari village has borders with some other villages. In the north part, Argosari village borders Ledok Ombo village, Sumber sub-district, Probolinggo district. In the south part, it borders Ranupani village, Senduro sub-district. In the east part, it borders Kandang Tepus village, Senduro sub-district, and in the west part, it borders Ngadisari village, Sukapura sub-district, Probolinggo district. The distance of Argosari village to Senduro sub-district is 17 km, while the distance of Argosari village to Lumajang district is 35 km.

The Tenggerese population in Argosari is 4,228 includes 2,139 males and 2,089 females. Meanwhile the number of *Kartu Keluarga* (KK) ('family card') is 1,259 families (*cf.* BPS 2019b). The area of Argosari includes the upper slope mountain zones or highlands extending 2,200 m above sea level.

Illustration 4.2 Entrance Gate to Argosari Village
Source: Field Notes (2018) and Profile of Argosari (2015)

Illustration 4.3 Village Office of the Argosari Village.
Source: Field Notes (2018) and Profile of Argosari (2015)

Based on that geology, the type of agricultural land which is suitable for cultivation is *tegal* ('dry land'). Some vegetable products are produced in Argosari, *i.e.* potatoes, cabbages, carrots, and onions. The land covers about $\pm$ 56.05 km^2 or 5,603.68 hectares (*cf.* BPS 2019b). Moreover, the area of Argosari is bordered by the state protected forest, Mount Bromo and Mount Semeru, known as Bromo Tenggerese Semeru National Park. The location of Argosari's land area that borders the state forest land encourages the Ministry of Forestry to provide an opportunity for some people in Argosari to cultivate a few hectares of the forest land with a rental system and profit-sharing.

The inhabitants of Argosari village are Tenggerese people where the majority works as farmers (467 inhabitants), farm labourers (1,526 inhabitants), and others such as construction workers (50 inhabitants), transportation (55 inhabitants), trade (74 inhabitants), services and civil servants (10

inhabitants) (*cf.* BPS 2019b). Those who work as farm labourers generally do not own agricultural land or have only a small amount of land. They work as farm labourers by helping to cultivate agricultural land belonging to others to meet their needs. In addition, some Tenggerese people in Argosari also have livestock such as free-range chickens, beef cattle, goats, and pigs. However, the agriculture sector is still the main livelihood in the Tenggerese highlands. Argosari village has a tourist attraction known as the peak B-29 which has an altitude of 2,900 m above sea level. The B-29 tourist attraction is also called *Negeri di atas Awan* ('Country above the Clouds'). The existence of this tourist attraction also causes some Tenggerese people to provide motorcycle transportation services to get to the B-29 tourist site.

The majority religion in Argosari is Hindu, with the exception of the Gedok hamlet where many people embrace Islam (*cf.* Profile Argosari 2015; Field Notes 2018). It is indicated by the existence *Taman Pendidikan Al-qur'an* ('Islamic education') in the Gedog hamlet. Moreover, there are 3 *masjid* ('mosques'), 6 *musholla/langgar* ('prayer rooms'), 4 *pure* ('temples'), and 4 *sanggar* in Argosari village (*cf.* BPS 2019b). Even though the majority of people in Argosari are Hindu, they do not apply the caste system ('social strata') in their community's life. It is different from the general Hindu community in Bali (*cf.* Batoro 2017).

In addition, they also do not apply *pembakaran mayat* or *ngaben* ('cremation ritual') as performed in Bali (*cf.* Yuliati 2011). There are some schools in Argosari, *i.e.* two playgroups and two kindergartens, and three public elementary schools in each hamlet, *i.e.* Krajan Argosari, Gedok, and Bakalan. The highest school level is the junior high school in Krajan Argosari hamlet (*cf.* BPS 2019b; Profile Argosari 2015). For health facilities, there is one auxiliary health centre in Argosari, *i.e. Puskesmas Pembantu* (*Pustu*) *Desa Argosari* ('Argosari Village Auxiliary Puskesmas'), four *Posyandu* ('Integrated Health Post'), and one *Pos Kesehatan Desa* (*Poskesdes*) ('Village Health Post') (*cf.* BPS 2017a; Field Notes 2018). Moreover, there is also one *Puskesmas* ('Primary Health Care Centre') in Senduro sub-district (*cf.* BPS 2017a).

4.4.2 Ngadas Village in Poncokusumo Sub-District

Ngadas village is one of the villages in the Poncokusumo sub-district, Malang district which represents the Tenggerese people. The history behind the name of the village is based on the story of the local community about a man named *Mbah Sidik (Sedek)* from Surakarta, Central Java. His family and relatives supposedly did logging until it was developed into a village, namely Ngadas. The word '*Das*' is taken from the *Adas Pulo Waras* plant that is commonly found in Ngadas village. Until now, the tomb of *Mbah Sidik (Sedek)* is guarded by the Ngadas people because they believe that he was the founder of the village (*cf.* Profil Ngadas 2015). Figure 4.4 shows the tomb of *Mbah Sidik* (*Sedek*).

Illustration 4.4 The Tomb of *Mbah Sidik* (*Sedek*).
Source: Field Notes (2018).

Geographically, Ngadas village borders some other villages. In the north part, it borders Kandangsari village, Tutur sub-district, Pasuruan district. In the south part, it borders Ranupani village, Senduro sub-district. In the east part, it borders Ngadisari village in Sukapura sub-district in Probolinggo district. In the west part, it borders with Gubugklakah village, Poncokusumo sub-district, Malang district (*cf.* Profil Ngadas 2015). Ngadas village has an area of 4.14 km^2 which is also bordered by a protected forest, the Bromo Tenggerese Semeru National Park area. The distance from Ngadas village to Poncokusumo sub-district is 25 km, while the distance from Ngadas village to Malang district is 42 km. Ngadas village consists of 2 hamlets: Ngadas hamlet and Jarak Ijo hamlet. Ngadas hamlet is the location of Ngadas village office. Moreover, it consists of 2 RW and 12 RT (*cf.* BPS 2018c; Profil Ngadas 2015). Figure 4.5 shows the entrance gate to Ngadas village.

The area of the Ngadas village, similarly with Argosari, includes upper slope mountain zones or highlands extending more than 2200 meters above sea level. Ngadas village includes the Tenggerese highlands flanked by mountains, both non-volcanic and volcanic mountains such as Mount Bromo and Mount Semeru. The type of agricultural land which is suitable for cultivation is *tegal* ('dry land'). The same vegetables are cultivated as those planted in Argosari, *i.e.* potatoes, cabbages, carrots, and onions.

Illustration 4.5 Entrance Gate to Ngadas Village.
Source: Preliminary Field Notes (2016).

Furthermore, the number of the Tenggerese inhabitants of the Ngadas is 1,996 includes 1,031 males and 965 females while the number of family heads is 484 households (*cf.* BPS 2018c). Ngadas people predominantly work in agriculture (1,446 inhabitants), service and trade (103 inhabitants) (*cf.* Profil Ngadas 2015). They work in agriculture as owners of agricultural land or as tenants, but some people only work as agricultural labourers.

In general, those who have agricultural land are only a few; therefore, they can rent the land from the Ministry of Forestry through profit-sharing systems. For those who do not have land, they can work as farm labourers to help cultivate others' agricultural land to meet their needs. Initially, the Tenggerese people believed in animism and dynamism. In the 19th century, they recognise the '*Budo*' religion to refer to those who are not Muslim. The term '*Budo*' is used to show resistance towards Islam (*cf.* Yuliati 2011; Hadi 2009). The majority of the Tenggerese people in Ngadas are *Budha Jawa Sanyata* ('Javanese Buddhist Sanyata'), an original and hereditary belief of the ancestors of the Ngadas people that is different from Buddhist beliefs and rites in general (*cf.* Yuliati 2011; Hadi 2009). The difference between '*Budo*' (*Budha Jawa Sanyata*) and Buddhism made the government take an initiative to do an in-depth research through the Department of Religion on the religions of Ngadas people. In 1973, the government of the new order era determined that the belief of the Tenggerese people was *Mahayana Buddhism*. The decision of the *Departemen Agama* ('Department of Religion') was not yet

final, because three years later after further research was conducted, in 1976 the government set Hindu as the Tenggerese's religion (*cf.* Maksum 2015) [4.8]. However, many of the Tenggerese people still believe in the '*Budo*' although there are some who eventually embraced Hindu. Especially in Ngadas village, many also converted to Islam because of Islam influence in the modern era (*cf.* Hefner 1985; Hadi 2009). In fact, Ngadas people, whatever their religion—Buddha, Hindu, or Islam— still uphold and practice Tenggerese ceremonial traditions such as Karo, Kasada, Entas-entas, and Unan-unan (*cf.* Yuliati 2011; Hadi 2009). Togetherness among the Tenggerese people can be observed not only from their cultural practices but also the religious celebrations of each belief.

There is mutual tolerance between religious communities. Some Tenggerese people have the opinion that their religion is no more a 'cliche' as it sounds or just a 'dress' that it used only to fill in their *Identitas Diri* (ID) ('Personal Identity Information') (*cf.* Maksum 2015). Based on the data from BPS, the Tenggerese people in Ngadas village embrace various religions: Buddhism (973 inhabitants), Islam (605 inhabitants), and Hinduism (93 inhabitants) (*cf.* BPS 2018c). Moreover, there are 3 *masjid* ('mosques'), 4 *musholla/langgar* ('prayer rooms'), 1 *pure* ('temple'), and one *vihara* in Ngadas village (*cf.* BPS 2018c). There are some schools in the Ngadas village: 1 kindergarten in Ngadas hamlet, and 2 elementary schools in each hamlet *i.e.* Ngadas and Jarak Ijo. The highest school level is junior high school in Ngadas hamlet (*cf.* Profil Ngadas 2015; BPS 2018c). For health facilities in Ngadas village, there are two *Posyandu* ('Intgrated Health Post') and one *Poliklinik Desa* (*Polindes*) ('Village Clinic'). Moreover, there are also *Puskesmas Pembantu* (*Pustu*) and *Puskesmas* ('Primary Health Care Centre') in the Poncokusumo sub-district (*cf.* BPS 2018c; BPS 2019d).

4.4.3 Ditotrunan Village in Lumajang Sub-District

Ditotrunan is one of the villages in the Lumajang sub-district. In the north part, Ditotrunan borders with Rogotrunan village. In the south part, it borders with Grati village. In the west part, it borders with Citrodiwangsan village. In the east part, it borders with Jogotrunan village (*cf.* www.prodeskel binapemdeskemendagri.go.id). The area of Ditotrunan is 19.03 km2. It consists of 2 hamlets, 7 RW, and 33 RT (*cf.* BPS 2017a). The total population is 6,428 people consisting of 3,167 males and 3,261 females, with under 1,840 households (*cf.* BPS 2017a). The majority of people work in trade (356 people), services (395 people), as farm labourers (306 people), civil servants (108 people), transportation and communication (89 people), and farmers (65 people) (*cf.* BPS 2017a). Based on the data, it can be concluded that the Ditrotrunan's typology is industry or services (*cf.* www.prodeskel.binapemdes.kemendagri.go.id).

In Ditotrunan, the number of people who are Muslim is 6,117 people, 84 are Protestant, 63 are Catholics, one is Hindu, and three are Confucian (*cf.* BPS 2017a). They have two *masjid* ('mosques') and 62 *mushola* ('prayer rooms'). For educational facilities, the village has three playgroups, two public elementary schools, and one public junior high school. For health facilities, it has a *Posyandu Lansia* in each RW, namely *Posyandu* Nusantara, Kartini, Nusa Indah, Srikandi, Margi Rahayu, Sekarsari, Cendrawasih, and Pertiwi. The activities of a *Posyandu Lansia* are conducted in *Puskesmas* Rogotrunan and *Puskesmas Pembantu* (*Pustu*) Blukon (*cf.* BPS 2017a). Lumajang district has a programme called *Gerakan Membangun Masyarakat Sehat (Gerbangmas)* ('Movement to Build a Healthy Society') in the *Puskesmas* and *Posyandu* programmes. Moreover, Lumajang sub-district in Lumajang district with a majority of Javanese inhabitants has one old age home owned by the government through *Dinas Sosial* ('Social Affairs Office').

4.4.4 Tlogomas Village in Lowokwaru Sub-District

Tlogomas is one of the urban villages of the Lowokwaru sub-district in the Malang district. In 1982, Tlogomas village became the Tlogomas urban village (*cf.* Profil Tlogomas 2013). The terms 'urban village' and 'village' are interchangeable in this research but the two refers to the same administrative level (*cf.* Figure 4.1). Tlogomas village consists of 9 RW and 49 RT with a total population of about

19,450 people consisting of 9,692 males and 9,758 females (*cf.* BPS 2018d). Geographically, Tlogomas village borders with some other villages. In the north part, Tlogomas village borders with Tunggul Wulung village. In the south part, it borders with Merjosari village. In the east part, it borders with Dinoyo village. In the west part, it borders with Landungsari village (*cf.* Profil Tlogomas 2013).

Based on the typology, Tlogomas village includes industrial and service areas as large as 167.59 hectares (*cf.* www.prodeskel.binapemdes.kemendagri.go.id; Profil Tlogomas 2013). The industrial and service area in Tlogomas village is evident from the many buildings that have been erected, such as residential land, school buildings, offices, markets, shopping areas (malls), and shops. As a result, the area of paddy fields in Tlogomas village is decreasing.

The livelihoods of the population in Tlogomas village are civil servants (521 people), army personnel (47 people), private workers (95 people), service workers (257 people), entrepreneurs/traders (205 people), carpenters (158 people), farmers (128 people), labourers (97 people), and pensioners (108 people) (*cf.* Profil Tlogomas 2013). Based on this data, it can be seen that the number of residents working as farmers or farm laborers is not much compared to those who work as employees, entrepreneurs, or traders.

Tlogomas village has seven playgroups, six kindergartens, two elementary schools, two junior high schools, four senior high schools, and four universities. Moreover, Tlogomas village has ten mosques and twentyone prayer rooms (*cf.* Profil Tlogomas 2013). For health facilities, Tlogomas village has nine *Posyandu Lansia* in each RW, one *Puskesmas Pembantu* (*Pustu*), and *Puskesmas* Dinoyo in the Lowokwaru sub-district (*cf.* BPS 2019e; Profil Tlogomas 2013; Field Notes 2018). There is one hospital in Tlogomas village (*cf.* BPS 2019e). Lowokwaru sub-district has two *Panti Jompo* owned by the government through *Dinas Sosial* ('Social Affairs Office') and privately.

The study was conducted in the two villages representing the Tenggerese people and two villages representing the Javanese. This research focuses on the management of care of the elderly, and the utilisation of elderly care institutions and organisations in East Java. Table 4.1 contains a brief description of the village samples and the number of samples for the present research.

Table 4.1 Sample of the Four Villages in East Java

No.	Village Name	Sub-district District/ Name	Municipality of village	Social structure	Total N	%
1.	Argosari	Senduro	Lumajang	Rural and Tenggerese	86	27.6
2.	Ditotrunan	Lumajang	Lumajang	Semi Urban and Javanese	69	22.1
3.	Ngadas	Poncokusumo	Malang	Rural and Tenggerese	71	22.7
4.	Tlogomas	Lowokwaru	Malang	Urban and Javanese	86	27.6
	Total				312	100.0

Source: Fieldwork (2018).

4.5 Socio-Demographic Variables of Respondents

4.5.1 Age, Place of Birth, Ethno-cultural Affiliation, Religion, and Marital Status

On the basis of identifying the sample population of the selected research areas, Table 4.2 presents the age of the household members of the sample over the four villages.

BPS uses a three-group division related to the age of the population, *i.e.* the young (*usia muda*) are those aged less than 15 years, the productive (*usia produktif*) are those aged 15 to 64 years, and the elderly (*usia tua*) are those aged 65 and over (*cf.* BPS 2013).

Based on the division of age group, the ratio of the working-age population (67.90%) is bigger than the elderly (15.30%) and the young (16.80%). It is in line with the projection of the Indonesian demographic bonus where the percentage of working-age groups is higher than the percentage of non-working age groups, particularly from the years 2015 to 2030. Non-working age groups are those aged 65 years and over, and those under 15 years old.

Table 4.2 Distribution of Age of the Household Members of the Sample over the Four Villages (N=1411)

Age	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
0-4	27	7.3	7	2.5	26	7.4	17	4.1	77	5.5
5-9	11	3.0	11	4.0	23	6.5	25	6.1	70	5.0
10-14	19	5.1	19	6.8	22	6.2	30	7.3	90	6.4
15-19	22	6.0	21	7.6	29	8.2	27	6.6	99	7.0
20-24	57	15.4	17	6.1	20	5.7	40	9.7	134	9.5
25-29	43	11.7	14	5.0	8	7.9	23	5.6	108	7.7
30-34	29	7.9	18	6.5	31	8.8	20	4.9	98	6.9
35-39	12	3.3	21	7.6	35	9.9	20	4.9	88	6.2
40-44	13	3.5	23	8.3	14	4.0	34	8.3	84	6.0
45-49	11	3.0	19	6.8	22	6.2	32	7.8	84	6.0
50-54	14	3.8	19	6.8	9	2.5	22	5.4	64	4.5
55-59	1	0.3	6	2.2	8	2.3	18	4.4	33	2.3
60-64	62	16.8	31	11.2	46	13.0	27	6.6	166	11.8
65-69	18	4.9	17	6.1	12	3.4	19	4.6	66	4.7
70-74	9	2.4	12	4.3	13	3.7	22	5.4	56	4.0
75-79	7	1.9	10	3.6	3	0.8	14	3.4	34	2.4
80-84	8	2.2	8	2.9	8	2.3	14	3.4	38	2.7
85-89	1	0.3	3	1.1	1	0.3	6	1.5	11	0.8
90-94	1	0.3	0	0.0	2	0.6	1	0.2	4	0.3
>95	4	1.1	2	0.7	1	0.3	0	0.0	7	0.5
Total	369	100.0	278	100.0	353	100.0	411	100.0	1411	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Moreover, the elderly's classification can refer to the definition of the elderly based on Law No. 13/1998 about *Kesejahteraan Lanjut Usia* ('elderly welfare'). The elderly are those aged 60 years and over. Based on Table 4.2, the elderly, those aged 60-64 years old, contribute to the majority of household members in the four research villages (11.8%, n=166) followed by those aged 20-24 years (9.5%, n=134).

The total of the elderly from the four villages shows a large number in accordance with the facts, that East Java is one of the provinces with ageing population categories (*cf.* BPS 2017). Particularly in Argosari, the majority of ages are distributed between 60 to 64 years (16.8%, n=62), an age distribution similar to Ditotrunan (11.2%, n=31) and Ngadas (13%, n=46). In Tlogomas, the majority of ages are distributed between 20 to 24 years (9.7%, n=40).

Table 4.3 Distribution of Place of Birth of the Household Members of the Sample over the Four Villages (N=1411)

Place of birth	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
In this place	360	97.6	249	89.6	322	91.2	308	74.9	1239	87.8
Elsewhere	9	2.4	29	10.4	31	8.8	103	25.1	172	12.2
Total	369	100.0	278	100.0	353	100.0	411	100.0	1411	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Table 4.3 shows a large percentage of' 'births in this place' from a total of four villages (87.8%, n=1239), meaning that many of the household members are born and live in the same place. Table 4.3 also shows the birth percentage of 'in this place' from the household members in each village: Argosari (97.6%, n=360), Ditotrunan (89.6%, n=249), Ngadas (91.2%, n=322), and Tlogomas (74.9%, n=308). On the other hand, those reporting being born and living in different places contribute only a small percentage: Argosari (2.4%, n=9), Ditotrunan (10.4%, n=29), Ngadas (8.8%, n=31), and Tlogomas (25.1%, n=103). Specifically for household members in Ngadas and Argosari, they choose to grow up and live in their villages. They think it is their responsibility to live with their traditions by living in their village. Thus, only a few residents in Ngadas and Argosari villages decide to live outside of their place of birth.

Table 4.4 Distribution of Ethno-cultural Affiliation of the Household Members of the Sample over the Four Villages (N=1411)

Ethnicity	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
Tenggerese	367	99.5	0	0.0	326	92.4	0	0.0	693	49.1
Javanese	2	0.5	271	97.5	26	7.4	410	99.8	709	50.2
Sundanese	0	0.0	1	0.4	0	0.0	1	0.2	2	0.1
Madurese	0	0.0	6	2.2	1	0.3	0	0.0	7	0.5
Total	369	100.0	278	100.0	353	100.0	411	100.0	1411	100.0

Source: Computation of the Data set from the Fieldwork (2018).

While the household members report a general even distribution of ethno-cultural groups of Tenggerese (49.1% n=693) and Javanese (50.2%, n=709) in the research area, Argosari and Ngadas show an almost entire majority of Tenggerese repondents, respectively 99.5% (n=367) and 92.4 % (n=326), respondents from Ditotrunan report 97.5% (n=271) and Tlogomas for 99.8% (n=410) an ehno-cultural majority of Javanese respondents. These data are in line with the general view, that the inhabitants of Java consist of three main ethno-cultural groups: the Javanese in Central and East Java, the Sundanese in West Java, and the Madurese in the northern part of East Java (*cf.* Bowen 1986).

Table 4.5 Distribution of Religion of the Household Members of the Sample over the Four Villages (N=1411)

Religion	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
None	0	0.0	0	0.0	1	0.3	1	0.2	2	0.1
Islam	3	0.8	278	100.0	130	36.8	407	99.0	818	58.0
Catholic	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
Protestant	0	0.0	0	0.0	0	0.0	2	0.5	2	0.1
Buddhism	0	0.0	0	0.0	206	58.4	0	0.0	206	14.6
Hinduism	366	99.2	0	0.0	16	4.5	0	0.0	382	27.1
Total	369	100.0	278	100.0	353	100.0	411	100.0	1411	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Table 4.5 shows that the majority of the household members are muslim (58.0%, n=818), spread out in Ditotrunan (100%, n=278) and Tlogomas (99.0%, n=407) whereas the majority of the household members in Argosari are Hindu (99.2%, n=366). In Ngadas, Buddhism comes first (58.4%, n=206), followed by Islam (36.8%, n=130), and Hinduism with a small percentage of about (4.5%, n=16). Even though Ngadas and Argosari villages are Tenggerese, however, the proportion of each religion is different. In the Argosari village, the majority of the people are Hindu while in the Ngadas village they are Buddhists.

Based on the data in Table 4.6, the proportion of household members who are married are 49.8% (n=703) while those who are single are only 26.4% (n=372). Moreover, the number of widows is much bigger (13.4%, n=189) than widowers (5.0%, n=70).

Table 4.6 Distribution of Marital Status of the Household Members of the Sample over the Four Villages (N=1411)

Marital Status	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
Single	68	18.4	76	27.3	86	24.4	142	34.5	372	26.4
Married	216	58.5	123	44.2	194	55.0	170	41.4	703	49.8
Divorced	1	0.3	0	0.0	1	0.3	1	0.2	3	0.2
Widow	41	11.1	51	18.3	23	6.5	74	18.0	189	13.4
Widower	16	4.3	20	7.2	24	6.8	10	2.4	70	5.0
Other	27	7.3	8	2.9	25	7.1	14	3.4	74	5.2
Total	369	100.0	278	100.0	353	100.0	411	100.0	1411	100.0

Source: Computation of the Data set from the Fieldwork (2018).

These data link up with the BPS data of life expectancy stating that women have a longer life expectancy than men (*cf.* BPS 2013). Life expectancy tends to increase in Indonesia: women's life expectancy in 2018 is 73.2 years; *i.e.* longer than men's life expectancy (69.3 years) (*cf.* BPS 2013).

In this research, only a minor percentage of household members are divorced (0.2%, n=3). Additionally, 'other' refers to *Anak di Bawah Lima Tahun* (Balita) ('children under five years old').

4.5.2 Education, Occupation, and Employment in the Family Business/Farm

Based on Table 4.7, the last educational institute that the majority of household members attended was elementary school (43.3%, n=611).

Table 4.7 Distribution of Education of the Household Members of the Sample over the Four Villages (N=1411)

Education	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
No Education	61	16.5	12	4.3	25	7.1	29	7.1	127	9.0
Elementary School	209	56.6	72	25.9	202	57.2	128	31.1	611	43.3
Junior High School	54	14.6	50	18.0	77	21.8	67	16.3	248	17.6
High School	9	2.4	117	42.1	15	4.2	93	22.6	234	16.6
University	7	1.9	20	7.2	8	2.3	77	18.7	112	7.9
Other	29	7.9	7	2.5	26	7.4	17	4.1	79	5.6
Total	369	100.0	278	100.0	353	100.0	411	100.0	1411	100.0

Source: Computation of the Data set from the Fieldwork (2018).

The number of Tenggerese people who attended elementary school is bigger in Ngadas (57.2%, n=202) and Argosari (56.6%, n=209) compared to the other two villages: Ditotrunan (25.9%, n=72) and Tlogomas (31.1%, n=128). Moreover, the number of Tenggerese people who attended high school is smaller in Ngadas (4.2%, n=15) and Argosari (2.4%, n=9) compared to the other two villages, Ditotrunan (42.1%, n=117) and Tlogomas (22.6%, n=93). It may be because the highest school level in Ngadas and Argosari is up to junior high school.

When a student wants to continue to a higher school level, they have to go to a high school in *kecamatan* ('sub-districts'). They need more effort to get a higher school level (*cf.* Field Notes 2018).

Table 4.7 also shows a high percentage of high school levels reached in the two other research communities *i.e.* Ditotrunan (42.1%, n=117) and Tlogomas (22.6%, n=93). In Tlogomas, 18.7% (n=77) of household members went to university whereas the other research areas do not have a university. The household members who did not get any education is much higher in Argosari (16.5%, n=61) than in Ngadas (7.1%, n=25), Ditotrunan (4.3%, n=12), and Tlogomas (7.1%, n=29). Additionally, 'other' in Table 4.7 refers to those under seven years old who go to playgroup and kindergarten.

Table 4.8 Distribution of Occupation of the Household Members of the Sample over the Four Villages (N=1411)

Occupation	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
Farmer	276	74.8	2	0.7	222	62.9	3	0.7	503	35.6
Civil Servant	0	0.0	5	1.8	2	0.6	10	2.4	17	1.2
Private Employee	0	0.0	43	15.5	2	0.6	72	17.5	117	8.3
Teacher	5	1.4	6	2.2	3	0.8	1	0.2	15	1.1
Industrial/laborer	0	0.0	5	1.8	14	4.0	16	3.9	35	2.5
Small traders/retailer	1	0.3	17	6.1	3	0.8	8	1.9	29	2.1
Entrepreneur	1	0.3	20	7.2	2	0.6	36	8.8	59	4.2
Craftsman	1	0.3	1	0.4	0	0.0	0	0.0	2	0.1
Retired	0	0.0	9	3.2	1	0.3	7	1.7	17	1.2
Unemployed	44	11.9	82	29.5	46	13.0	109	26.5	281	19.9
House wife	5	1.4	30	10.8	7	2.0	50	12.2	92	6.5
Security	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
Driver	1	0.3	3	1.1	3	0.8	1	0.2	8	0.6
Guide	0	0.0	0	0.0	2	0.6	0	0.0	2	0.1
Student	34	9.2	55	19.8	45	12.7	94	22.9	228	16.2
Other	1	0.3	0	0.0	1	0.3	3	0.7	5	0.4
Total	369	100.0	278	100.0	353	100.0	411	100.0	1411	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Farming is the main occupation of the household members (35.6%, n=503), in accordance with the BPS data; agriculture is still the majority job in Indonesia for people aged 15 years and over (*cf.* BPS 2016). On the other hand, the number of unemployed household members comes in second position (19.9%, n=281). The number of unemployed household members in rural areas is lower than in the urban villages. Table 4.8 reports that those unemployed in Ditotrunan amount to 29.5% (n=82) and Tlogomas 26.5% (n=109), which is higher than in Argosari (11.9%, n=44) and Ngadas (13.0%, n=46), primarily because in the rural areas, people can still work as farmers which does not require special skills. On the contrary, in urban villages or urban areas, many jobs need special skills and require a certain level of education. This is in line with the computation results between Table 4.7 and 4.8 showing that many household members, particularly in rural areas such as Ngadas and Argosari, are farmers who have only elementary education. They can still work in their field as long as they are still able. In this context, the meaning of unemployment is that household members do not work or are not able to work for several reasons such as sickness, being too old, etc.

The third top occupation of household members is students (16.2%, n=228), followed by private employees (8.3%, n=117). In Ditotrunan, private employees amount to about 15.5% (n=43), and entrepreneurs 7.2% (n=20), while in Tlogomas, private employees amount to about 17.5 (n=72) and entrepreneurs 8.8% (n=36). In this research, 'housewife' refers to women who are responsible to take care of their household, including her husband, children, or elderly. Housewives do not work. Urban villages tend to have a bigger number of housewives compared to their village counterparts. The percentage of housewives in rural areas is low because most women are still working as farmers from morning to evening. The 'other' occupation in this research comprises traditional birth attendants (*dukun bayi*) in Argosari and Ngadas, and two lawyers and one journalist in Tlogomas.

Table 4.9 Distribution of Employment in Family Business/Farm of the Household Members of the Sample over the Four Villages (N=1411)

Employment	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
No	90	24.4	239	86.0	126	35.7	363	88.3	818	58.0
Yes	279	75.6	39	14.0	227	64.3	48	11.7	593	42.0
Total	369	100.0	278	100.0	353	100.0	411	100.0	1411	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Table 4.9 shows that the majority of household members are not working for the family business nor are they employees in a family farm (58.0%, n=818) in Ditotrunan (86.0%, n=239) and Tlogomas (88.3%, n=363). On the other hand, household members who are employees in the family business or farm are about (42%, n=593) in Argosari (75.6%, n=279) and Ngadas (64.3%, n=227). In this context, household members who work as entrepreneurs, small traders, or retailers are categorised as those running the family business. Additionally, household members in Ngadas and Argosari villages work in the family farm to cultivate their agricultural land inherited from generation to generation. Moreover, the Tenggerese people, especially in Ngadas and Argosari, try to maintain and cultivate land owned by their ancestors for generations in order to meet their needs.

Notes:

[4.1] The demographic bonus or demographic dividend is the age structure characterised by a high proportion of people in the working ages compared to the non-working ones. The Indonesian working-age groups are those aged 15 to 64 years, and the non-working age groups are the elderly (65 years and older) and children (age 0-14 years) (*cf.* Hayes & Setyonaluri 2015).

[4.2] The child dependency ratio is the ratio of the population aged 0-14 in relation to the population aged 15-64 while the old-age dependency ratio is the ratio of the population aged 65 years and over in relation to the population aged 15-64. These two dependency ratios are combined to form the total dependency ratio: the ratio of the sum of the population aged 0-14 and the population aged 65+ in relation to the population aged 15-64 (*cf.* Hayes & Setyonaluri 2015).

[4.3] Gross Domestic Product (GDP) is the standard measure of the revenue and expenses in the economy through the value of final goods and services produced by a country during a specific period (*cf.* Santoso 2017).

[4.4] PKH is a programme to provide conditional social assistance to the families of beneficiaries. The PKH uses three component criteria: health, education, and social welfare. The criteria of health components are pregnant women and children aged 0 to 6 years old whereas the criteria of education components are children who are at elementary, junior, or senior level, and children aged 6 to 21 years old who have not finished compulsory education yet. The elderly and heavily disabled are included in the social welfare component criteria (*cf.* Kemensos RI 2019).

[4.5] ASLUT is a part of social rehabilitation to help neglected elderly so they can fulfil their basic needs. Moreover, it is social assistance in the form of cash transfer for the poor and vulnerable older persons. Cash transfers of Rp 300,000 per month are found to be useful to meet their daily expenses (*cf.* TNP2K 2019).

[4.6] Batak includes Batak Angkola, Batak Karo, Batak Mandailing, Batak Pakpak Dairi, Batak Simalungun, Batak Tapanuli, Batak Toba, and dan Dairi. On the other hand, other Sulawesi ethno-cultural groups combine as many as 208 types of Sulawesi ethno-cultural groups excluding Makassar, Bugis, Minahasa, and Gorontalo.

[4.7] Families mean elderly living with children or daughters-in-law or with parents-in-law in one household. Three generations means that the elderly live with their children or daughters-in-law and grandchildren, or with their children or daughters-in-law and parents/parents-in-law in one household.

[4.8] Since 2010, the name of the department has been changed to the Ministry of Religion Affairs based on regulation Number 1 of 2020.

CHAPTER V COMMUNITY PERSPECTIVES ON THE PLURAL ELDERLY CARE SYSTEM

5.1 Community Perspectives on Institutions and Organisations

This Chapter seeks to provide a general, rather crucial perspectives of the communities on the three components of the plural elderly care system in the research area, differentiated over the four selected sample survey villages in the research area. Since these perspectives are largely based on the local peoples' psycho-social charateristics, the distribution of the selected variables over the four selected villages will be confined to the related pre-selected factors, encompassing the community knowledge, belief and opinion, which will be elaborated in relation with the individual respondents as users in the subsequent stepwise quantitative analyses of their utilisation behaviour in Chapter 7. Other pre-selected factors represented by the other independent and intervening variables in the model will be similarly analysed in Chapter 7.

The relevance of the institutional approach of development which focuses on indigenous institutions viewed as a resource for achieving development, is provided by the objective to execute an applied-oriented research to contribute to the development of the integration of the indigenous institutions into a new system of comprehensive elderly care in Indonesia. The Chapter presents the distribution of the institution-guided psycho-social factors of the respondents regarding the three sub-systems of the plural elderly care system over the sample survey villages. The institutional approach is supported by Watson (2003:288) who argues that: '*indigenous institutions are now viewed by development theorists and practitioners as having qualities that make them valuable resources for achieving development goals'*, while Uphoff (1992) divides the local institutions into three levels, namely 'localities' which are sets of communities that have kinship, marketing or other connections, 'communities' or villages or towns, and 'groups.'

In most Indonesian rural areas, communities have been guided for many generations by indigenous institutions which represent indigenous knowledge, beliefs, values, norms, and principles which form the foundation of the customary community of Indonesia, or *Masyarakat Adat* (*cf.* Slikkerveer, Baourakis & Saefullah 2019). In this context, people have relied over time not only on their own activities and their relatives to maintain their health and well-being, but also created community-based institutions to secure and increase their individual and family resources for their livelihood, survival, and their community as the whole.

As mentioned before, the terms 'institution' and 'organisation' are often used interchangeably and are sometimes overlapping concepts. Slikkerveer (2014) defines institutions which encompass different social and individual formations in the community or society created by people over generations to structure their collective rules, norms, beliefs, values, interactions, and behaviours. Uphoff (1986) also defines the institution as a complex of norms and behaviours that persist over time by serving some socially valued purposes.

In this context, Slikkerveer (2014) also notes, that organisations refer to structures of accepted roles and rules in the community, and may operate in a formal or informal way. It means that organisations deal with a structure of recognised and accepted roles in the community. Organisations may become institutions, which are institutionalised if they acquire people's values and special legitimacy for satisfying their needs over a longer period of time. For example, marriage is an institution which has longevity and legitimacy while a particular family is an organisation with roles. Another example is a judicial court as an institution while a new law firm is an organisation (*cf.* Slikkerveer 2014). North (1990) also makes a distinction between institutions and organisations. He concludes that institutions are: *'the rules of the game'* while organisations are similar to *'the players in the game'* consisting of groups of individuals bound together by some common purposes to achieve objectives (*cf.* North 1990). More specifically, Slikkerveer (2012) differentiates between formal and informal institutions. Formal institutions are characterised by the legitimacy of their rules, based on a written and codified constitution and official laws and regulations, enforced by the state.

Meanwhile informal institutions are characterised by conformity to their rules based on norms, traditions, customs, taboos and morals, and as such not on state laws and regulations. Moreover, North (1991) also distinguishes institutions into formal and informal. Formal institutions stipulate rules such as constitutions, laws, and property rights while informal institutions regulate sanctions, taboos, customs, traditions, and codes of conduct (*cf.* North 1991).

Informal institutions also refer to indigenous institutions, which are based on their unwritten or non-codified social rules, cultural traditions and norms of behaviour, enforced by the community (*cf.* Slikkerveer 2014). This definition also supports Pejovich's view (1999:166) who defines informal institutions as: '*traditions, customs, moral values, religious beliefs and all other norms of behaviour that have passed the test of time. …Thus, informal institutions are the part of a community's heritage that we call culture.'* Slikkerveer (2014) introduces two types of indigenous institutions, namely social and cultural institutions. Social institutions include indigenous healers, sages, medical systems, water management systems, indigenous farming systems, natural resource management systems, money borrowing systems, etc. Meanwhile cultural institutions include religion, age-grade groups, women's groups, circumcision, rituals, ceremonies, taboos, and sacred groves.

Thus, institutions are broadly conceptualised and encompass sets of enduring ideas, rules (formal and informal), practices (*de jure* and *de facto*), and organisations and decision-making groups (*cf.* Watson 2003). This Chapter describes not only institutions, but also organisations related to the care and support of services for the elderly. In this research, the three components of the plural elderly care system will be clearly described as related to the care and support of services for the elderly, including the characteristics of each institution or organisation from the local people's perspectives.

In this case, the meaning of the indigenous people's perspective is characterised by the 'emic' perspective which is important to understand the participants' individual knowledge, belief, and opinions. The 'emic' view of community members provides a deeper understanding of the target group culture and guides their decision-making processes. This research follows the work of Slikkerveer (1990), Agung (2005), Ibui (2007), Leurs (2010), Djen Amar (2010), Ambaretnani (2012), Chirangi (2013), Aiglsperger (2014), Saefullah (2019), De Bekker (2020) and Febriyanti (2021) who in their ethnoscience research distinguish between three categories of the plural system, *i.e.* the traditional, transitional and modern sub-systems. The distinction is defined as the components of the existing plural systems.

5.2 Community Perspectives on Traditional Elderly Care Institutions

Traditional institutions being the focal point of this study are generally regarded to have important roles in developing and low-income countries, including Indonesia. The traditional development approach can be viewed from some perspectives. The first perspective is based on 'endogenous' (from within) development. Boonzaaijer and Apusigah (2008:9), through the Comparing and Supporting Endogenous Development (COMPAS) Programme, define it: '*endogenous development is based on local people's own criteria of development and takes into account not only the material, but also the social and spiritual well-being of peoples*' [5.1].

For each community, needs and criteria for endogenous development may differ depending on the ecological, economic, and cultural situation, and the skills, values and insight of the local community and development agency (*cf.* COMPAS 2007). Endogenous development makes peoples' worldviews and livelihood strategies the starting point for development which reflects sustainable development as a balance between material, social, and spiritual well-being. The spiritual aspects become an important dimension in endogenous development approaches which make it different from other development approaches (*cf.* Miller *et al.* 2008).

The second perspective uses the 'bottom-up' approach to view the traditional development approach. Slikkerveer (2019) states that in the globalisation process, the interaction among local and global knowledge systems is important in various sectors of the local community which open the possibility of multidisciplinary integration and synergy of local and global knowledge and technology.

The ‘bottom-up’ approach starts with the Indigenous Knowledge Systems (IKS). Warren, Slikkerveer, and Brokensha (1995) in Slikkerveer (2019:36) define an indigenous knowledge system as: ‘*a system of knowledge, beliefs and practices which has evolved in a particular area or region, often outside universities and laboratories and transferred over many generations, and as such forming the base for the local-level decision-making process and which has been recorded in several sectors of the society, such as in animal and human health, environment, natural resources management, agriculture, fisheries, forestry, bio-cultural diversity conservation, and local economies’*.

Jensen (2007) concludes that the ‘bottom-up’ approach starts by inferring recommendation for a single activity, which then reach recommendations for society at large by putting together recommendations for all relevant activities. The ‘bottom-up’ approach uses local people’s beliefs and practices with full local participation, and the internal resources of the community (*cf.* Saefullah 2019).

Moreover, Slikkerveer (2019:43) also states that: ‘*the extended conceptualisation of indigenous knowledge includes not only the reference to local knowledge and practices, but also to perceptions, beliefs, cosmologies, values, wisdom, experience and last but not least institutions which have developed over many generations in a particular field of ethnographic study—or culture area—and which as such are unique to a specific culture.’* Thus, traditional institutions are initiated, built, and operated on the cultural principle of non-profit making from local people’s initiatives.

The next perspective, the traditional development approach, can be viewed from an ‘emic’ perspective. Holmes & Holmes (1995) state that the ‘emic-etic’ perspective stresses any cultural situation which can be viewed from both inside and outside. ‘Emic’ refers to the insiders’ window on the world. Keasberry (2002) states that the ‘emic’ perspective offers greater challenges and insights. She also said that the ‘emic’ perspective can lead not only to new meanings and different assumptions about reality, but also create instruments that are appropriately measured based on culturally significant variables. In this research, the ‘emic’ perspective is used to know how adult children perceive care and support service provisions for the elderly in their own situation. The meaning of care of the elderly and the effectiveness of solutions for elderly care matters can only be understood and evaluated in terms of the cultural context where adult children live and take care of their elderly.

This research tries to relate the above perspectives, namely ‘endogenous’, ‘bottom-up’, and ‘emic’, toward traditional or indigenous institutions. Slikkerveer (2019a:122) emphasises traditional or indigenous institutions as: *‘those local level institutions - informal and sometimes invisible to the outsider - which are rooted in the history of the community and based on strong local philosophical principles of cooperation, mutual aid, and collective action, where the interests, resources, and capacities of many community members are structurally joined together in order to achieve common goods and services for the entire community in a non-commercial way.’*

The use of traditional institutions, referring to ‘family home care’ in research areas, will be analysed based on some variables, such as the knowledge, belief, opinion of elderly care institutions and organisations. The majority of respondents of the four villages show much knowledge of traditional elderly care institutions.

Table 5.1 Distribution of Knowledge of Traditional Elderly Care Institutions of the Sample Household Heads over the Four Villages (N=312)

	Knowledge of Traditional Elderly Care Institutions									
	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
None	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Very Little Knowl.	1	25.0	0	0.0	1	25.0	2	50.0	4	100.0
Little Knowledge	1	2.9	1	2.9	18	52.9	14	41.2	34	100.0
Average	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0
Much Knowledge	43	21.4	58	28.9	42	20.9	58	28.9	201	100.0
Very Much Knowl.	41	56.9	10	13.9	9	12.5	12	16.7	72	100
Total	86	27.6	69	22.1	7	22.8	86	27.6	312	100.0

Source: Computation of the Data set from the Fieldwork (2018).

It is shown in Table 5.1 that respondents in Argosari (21.4%, n=43), Ditotrunan (28.9%, n=58), Ngadas (20.9%, n=42), and Tlogomas (28.9%, n=58) choose much knowledge of traditional elderly care institutions. In this research, the knowledge is measured by mentioning some examples (a minimum of four examples) of care and support services provided by respondents to their elderly's daily life.

Commonly, respondents know and get mainly hereditary knowledge about care of the elderly from knowledge transferred by parents, grandparents, and elderly in the same community. The knowledge of traditional elderly care is practiced in their everyday routines.

In this context, knowledge of traditional elderly care institutions refers to the filial piety concept. In all villages in selected research areas, most respondents answer with much knowledge of traditional elderly care institutions. Thus, the Javanese, including the Tenggerese people, confirm that practicing filial piety is one of the cultures in relation to the elderly's care and support. Many respondents mention filial piety action including filial affection such as respecting parents, fulfilling responsibility for and obligations to parents, providing physical and financial sacrifices for parents, forming a harmonious family with parents, practicing religious teachings in filial duty, and maintaining inheritance of property. In the Javanese culture including the Tenggerese culture, *bakti* is known as filial piety. *Bakti* refers to the local tradition of filial respect and care which greatly influences the relationship between parents and their children, including grandparents. Parents should love and care of their children and, in return, the children should respect and care of their parents. Both parents and children have been sharing the values of the local traditions of *bakti* for many generations, reflected in their daily behaviour. The results support the work of Koentjaraningrat (1957), that most Javanese children have the obligation to take care of their parents.

Table 5.2 Distribution of Belief in Traditional Elderly Care Institutions of the Sample Household Heads over the Four Villages (N=312)

	Belief in Traditional Elderly Care Institutions									
	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
None	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Very little belief	0	0.0	0	0.0	0	0.0	1	100.0	1	100.0
Little belief	0	0.0	4	50.0	0	0.0	4	50.0	8	100.0
Average	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Much belief	34	19.2	48	27.1	39	22.0	56	31.6	177	100.0
Very Much belief	52	41.0	17	13.5	32	25.4	25	19.8	126	100.0
Total	86	27.6	69	22.1	71	22.8	86	27.6	312	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Similarly, Wirakartakusumah (1997) in Schroder-Butterfill (2003) states that Indonesian social norm prescribes that children pay respect to their elderly, and when children ignore and do not care of their parents, they may receive social sanctions. Care and support for the elderly is not only provided by children but also friends or neighbours. The pattern of care and support for the elderly which come from friends or neighbours is based on mutual cooperation or assistance, known as *gotong royong* ('voluntary mutual aid and communal work'). The *sayan* term in the Tenggerese language is the local representation of *gotong royong* ('voluntary mutual aid and communal work'). The details of the local traditions of *bakti* and *sayan*, specifically related to elderly care are further explained in Chapter VI.

Table 5.2 shows that the majority of respondents much believe in the traditional elderly care institutions, namely the respondents in Argosari (19.2%, n=34), Ditotrunan (27.1%, n=48), Ngadas (22.0%, n=39), and Tlogomas (31.6%, n=56), because the traditional elderly care institutions have a good effect on the elderly's well-being. However, some respondents, particularly in Ditotrunan (50.0%, n=4) and Tlogomas (50.0%, n=4), have little belief towards traditional elderly care institutions. Both Ditotrunan and Tlogomas are urban villages where social change such as modernisation and urbanisation may influence the way of perceiving the elderly care institutions.

The majority of respondents in rural areas live with their elderly in the same house or nearby so that they can provide care and services for their elderly directly. Moreover, many respondents in rural areas work as farmers which tend to have more flexible time for providing care and support for the elderly at home. Those conditions make the elderly happy since they have full support and care from their

children in all aspects so that the elderly can maintain their well-being in the long term. On the contrary, the respondents who live in urban areas find it more difficult to provide care of the elderly directly because of two reasons.

First, they are living in a different area from their parents, sometimes following the job location, so that they are unable to stay close to their parents. Second, their job requires most of their time, which makes it difficult to provide care and services for the elderly. It potentially makes the elderly feel unhappy, lonely, and not feeling well in the long term. Commonly, the respondents have other options to make the elderly comfortable, such as putting parents into care and support organisations such as old-age homes, or encouraging parents to join in an elderly community activity. Some respondents believe that the elderly can get better care and support services from other care organisations, such as transitional or modern care organisations.

Table 5.3 Distribution of Opinion on Traditional Elderly Care Institutions of the Sample Household Heads over the Four Villages (N=312)

	Opinion on the Traditional Elderly Care Institutions									
	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
No opinion	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Very negative op.	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Negative opinion	0	0.0	0	0.0	5	62.5	3	37.5	8	100.0
Neutral	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0
Positive opinion	36	22.9	41	26.1	36	22.9	44	28.0	157	100.0
Very positive op.	50	34.2	28	19.2	29	19.9	39	26.7	146	100.0
Total	86	27.6	69	22.1	71	22.8	86	27.6	312	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Table 5.3 shows that many respondents report a 'positive opinion' on traditional elderly care institutions, namely respondents in Argosari (22.9%, n=36), Ditotrunan (26.1%, n=41), Ngadas (22.9%, n=36) and Tlogomas (28.0%, n=44). Likewise, many respondents had a 'very positive opinion' on traditional elderly care institutions.

The majority of respondents have a positive opinion about traditional elderly care institutions because they can provide care and support services directly for the elderly at home. Moreover, respondents can know and meet their parents' needs for care and support services. The respondents' opinions of traditional elderly care institutions relate to their beliefs. In fact, many respondents believe that traditional elderly care institutions have a good effect on the elderly, such as making the elderly happy, feeling full of support and care from their children.

5.2.1 *Bakti, Sayan* and the Users' Perspective of Elderly Care

The understanding of the *bakti* and *sayan* local traditions facilitates the assessment of the 'emic' perspectives of the respondents on the care and support of the elderly. These emic perspectives substantiate the innovative users'orientation in elderly care research, operationalised in this study in East Java. Kinship and familism play an important role in the household relationships in Indonesia. The Tenggerese and Javanese people practice both local traditions also in the relationship between young and older people. Specifically, *bakti* is one of the key local traditions in taking care of the elderly. In the Tenggerese and Javanese cultures, the participants adhere not only to the social norm of *hormat* ('respect'), but also to filial responsibility affection for their elderly. Based on the respondents' perception, *bakti* refers to the relationship between adult children and their parents even though *bakti* can also refer to the relationship between adults and older or senior relatives. The respondents provide care of their elderly based on their local knowledge, beliefs, norms and culture, conceptualised as *bakti*. In this way, *bakti* underlies personal behaviour to take care of the elderly practiced by adult children because they adult want to *balas budi* ('return the favour') to the elderly. The respondents return such favour because they are happy and proud when they are able to provide care and support for their parents. The adult children also see it as their duty to provide old-age support to their parents. When the adult children are not able to take care of their elderly, their community will judge them as *anak*

durhaka ('rebellious') and can even place social sanctions on them. Moreover, many adult children believe that *karma yang buruk* ('bad karma') could happen in their life. The Tenggerese people with the majority of respondents being Hindu and Buddhist describe *karma* as the force produced by a person's actions in one life which will influence what happens in their future lives. Respondents who ignore and do not take care of their elderly will be unlucky in their future lives.

Respondents characterised *sepuh* ('old age') as *tua* ('old'), *jompo* ('aged'), and *pikun* ('senile'). Those words are based on the 'emic' view from respondents. *Tua* means older age compared to other generations. *Jompo* means old, aged, decrepit, infirm, and sometimes not completely in the right mind. *Pikun* means very old, senile, and demented. In fact, the Tenggerese people do not have certain criteria for old age as long as the elderly are able to work. It is because most of the elderly are still actively working as farmers in *tegal* ('dry land') and able to meet their basic needs independently. The elderly Tenggerese people have strong motivations to work in order to meet their needs and keep their body healthy. Moreover, the elderly have a youthful spirit. Many elderly do not want to burden their children, particularly to fulfill their financial needs. However, the elderly still need emotional support, such as living nearby their children or in the same house with their adult children. Those conditions make the elderly feel happy and prolong their life expectancy. Researcher found one respondent in Argosari who lives with their father who is more than 100 years old. However, the respondent said that their father still wants to go to the dry land even though he cannot work because his legs are sick. He said that their father wants to see the green plants in their field because it can make him feel happy and fresh.

On the other hand, *sayan* is derived from an old Javanese word *hiya*, meaning 'accord'. *Sayan* comes from *sa-hiya-an* meaning people who are helping one another (*cf.* Pangarsa 1995). The *sayan* tradition provides care of the elderly in groups through mutual cooperation or assistance in local communities. The local community implements the *sayan* local tradition, such as visiting the elderly and bringing food or money to those who need it. The local people pay a visit to the elderly not only when the elderly are sick but also when they have special events, such as *slametan* or other events.
The Tenggerese people practice *sayan* as a local tradition of paying respect to each other, shown by attending an invitation to a particular celebration or event. They also bring food or money as a form of their participation (*cf.* Haryanto 2014).

An adult child will take care of their parents due to filial piety, their love for their parents, and because they inherit property from their parents (*cf.* Sung 1995). Sung (1995) also suggests that filial piety is not unidimensional but bidimensional factors. The first factor refers to behaviourally oriented filial piety which includes sacrifice, responsibility, and repayment. The second, which is called emotionally oriented filial piety, consists of family harmony, love or affection, and respect. Filial piety is practised in the context of the family, therefore making a harmonious family relation as an important element. The family members maintain very close and cohesive relations.

Moreover, close and cohesive kin ties also have important psychosocial functions, such as pooling familial resources, and providing emotional support for the elderly and other family members. The individual member is a function of the totality of the family, in which family harmony is emphasised over individual well-being (*cf.* Moon & Williams 1993). Olson *et al.* (2011) state that the characteristics of family systems refer to the strengths of families which consist of three dimensions: (1) family cohesion is the emotional sense of togetherness or closeness a person feels to other family members, (2) family flexibility is the ability to change and adapt with changing life circumstances, and (3) family communication is sharing information, ideas, and feelings with each other which helps to increase feelings of closeness, and straightforward discussion to work out family matters. Moreover, according to Olson *et al.* (2011), the sociocultural context in which families live is also useful in describing and understanding families from diverse ethno-cultural groups. There are three sociocultural characteristics: (1) the extended-family system which encompasses relatives, kin, and other family members connected to the family system, (2) the social system which includes the economic, educational, and other related resources, and (3) the family's spiritual beliefs and values.

The dedication of adult children is also an important factor. The adult child has a responsibility to his family, harmonises relations between generations, carries out the wishes of his parents, and visits

the rural home for an extended family gathering. Those are done by adult children to maintain the value of filial piety to their elderly. These practices are associated with family cohesiveness and dedication of self for family well-being indicating 'traditional cultural patterns' (*cf.* Sung 1994). Both dimensions of filial piety need to be considered in assessing to what extent adult children will care of their parents. This study also indicates that the tradition of filial piety persists and has valuable results in the provision of care of the elderly. The practice of traditional care of the elderly is closely related to the belief of adult children based on their religious, spiritual and cultural values.

5.3 Community Perspectives on Transitional Elderly Care Organisations

Basically, transition refers to an 'in-between' mode which involves any process of change from one condition to another. Transitional organisations can represent in-between private and public organisations, in-between non-profit institutions and commercial organisations, and in-between traditional institutions and modern organisations (*cf.* Saefullah 2019). Moreover, the transitional organisation can be described as the crossover between modern and traditional systems as exponents of both mingle materials and techniques (*cf.* De Bekker 2020). Transitional organisations can be viewed from some perspectives related to the development approach. Transitional organisations can represent perspectives of in-between 'endogenous' and 'exogenous' development, between the 'bottom-up' and 'top-down' approach, and a combination of in-between 'emic' and 'etic' views of development. Transitional organisations in development can be considered as the organisations operating on a combination between local people's initiatives and involvement of other organisations outside the community. Moreover, transitional organisations operationalise activities of local people through a combination between 'bottom-up' initiatives and 'top-down' supports (*cf.* Saefullah 2019). Transitional institution is established by the local people's initiative in the community which is also supported by local government. Central or local government has a role in controlling power in some particular sectors such as the economy and politics. At the same time, a transitional organisation accommodates local people's perspectives in the development process. It also means that the activities of transitional organisations can operate a combination of local initiatives and external support from other organisations outside the community, such as central or local government.

Table 5.4 Distribution of Knowledge of Transitional Elderly Care Organisations of the Sample Household Heads over the Four Villages (N=312)

	Knowledge of Transitional Elderly Care Organisations									
	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
None	31	86.1	2	5.6	1	2.8	2	5.6	36	100.0
Very Little Knowl.	27	32.5	27	32.5	16	19.3	13	15.7	83	100.0
Little Knowledge	13	11.0	35	29.7	29	24.6	41	34	118	100.0
Average	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0
Much Knowledge	12	20.7	4	6.9	18	31.0	24	41.4	58	100.0
Very Much Knowl.	3	18.8	0	0.0	7	43.8	6	37.5	16	100.0
Total	86	27.6	69	22.1	71	22.8	86	27.6	312	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Table 5.4 shows that the majority of respondents in four villages: Argosari (11.0%, n=13), Ditotrunan (29.7%, n=35), Ngadas (24.6%, n=29), and Tlogomas (34.7%, n=41) presents little knowledge of the transitional elderly care organisations. Moreover, 83 respondents also answered that they have very little knowledge of transitional elderly care organisations while only 58 respondents reported that they have much knowledge of transitional elderly care organisations. Many people in the community only have a little information about the existence of transitional elderly care organisations, and not many of them know about the care and support services provided by the organisations. In fact, many respondents do not get enough information about the care and support services provided by transitional care organisations because of lack of resources, *i.e.* human resources which distribute and share information to the community.

Moreover, in some areas, local village officials and staff do not actively share information about care and support services provided for the elderly. Many respondents know the existence of transitional elderly care organisations from media such as television or newspapers. Finally, many respondents do not use transitional care organisation services for their elderly (*cf*. Field Notes 2018). The *Posyandu Lansia* and *Karang Werda* are included in the transitional ederly care organisations. This research supports the results of Pratono & Maharani (2018) that the *Posyandu Lansia* had limited resources to operate and provide care to the elderly, including medical personnel and volunteers.

Table 5.5 Distribution of Belief in Transitional Elderly Care Organisations of the Sample Household Heads over the Four Villages (N=312)

	Belief in Transitional Elderly Care Organisations									
	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
None	31	86.1	2	5.6	1	2.8	2	5.6	36	100.0
Very little belief	24	39.3	23	37.7	8	13.1	6	9.8	61	100.0
Little belief	11	10.8	38	37.3	21	20.6	32	31.4	102	100.0
Average	0	0.0	1	50.0	0	0.0	1	50.0	2	100.0
Much belief	18	18.8	5	5.2	34	35.4	39	40.6	96	100.0
Very Much belief	2	13.3	0	0.0	7	46.7	6	40.0	15	100.0
Total	86	27.6	69	22.1	71	22.8	86	27.6	312	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Table 5.5 documents that the majority of respondents in Argosari (10.8%, n=11), Ditotrunan (37.3%, n=38), Ngadas (20.6%, n=21), and in Tlogomas (31.4%, n=32) have 'little belief' in transitional elderly care organisations, because many respondents report that the quality of care of the elderly in transitional elderly care organisations has a low standard. This is proven by the inability to provide regular activities due to lack of medical doctors and volunteers. However, some respondents also perceived 'much belief' in transitional elderly care organisations which is good for the elderly's well-being, particularly in Tlogomas (40.6%, n=39) as an urban area.

In Tlogomas, the elderly get more benefits from transitional elderly care organisations, such as *Posyandu Lansia*, since they provide not only health facilities but also creative and fun activities, such as sports and recreation activities for the elderly. *Posyandu Lansia* in urban areas provide more activities than those in rural areas due to the adequate available resources and ease of access to get the care of the elderly. In this context, many respondents in urban areas have the perception that transitional elderly care organisations are able to maintain well-being for the elderly.

The elderly can check their health, such as weight, blood sugar, and blood pressure in the *Posyandu Lansia* once a month. Moreover, the *Karang Werda* also has a programme related to the elderly, for religious activities, training, economic activities, *i.e. Koperasi Wanita* (women's cooperatives). The activities of *Karang Werda* enable the elderly to meet and talk to the other elderly in order to maintain social interaction with each other through joining its activities. Similarly, Ngadas village also has a *Posyandu Lansia* which provides health services for the elderly. However, the implementation of the health programme in the Ngadas *Posyandu Lansia* takes place every two months due to the limitation of medical personnel, such as doctors who can come regularly.

Inadequate transportation is also one of the obstacles of the provision of accessibility in rural areas. Another obstacle is limited resources from volunteers to help run *Posyandu Lansia* programmes. Volunteers are expected to ensure that *Posyandu Lansia* care is available every month. However, it is quite challenging to get *Posyandu Lansia* volunteers, particularly in rural areas.

This research supports the results of Pratono & Maharani (2018) that many services of the *Posyandu Lansia* have relatively low standards because of the lack of volunteers and the capability to provide regular care activities. Table 5.6 shows that 104 respondents in the four villages: Argosari (9.6%, n=10), Ditotrunan (40.4%, n=42), Ngadas (22.1%, n=23) and Tlogomas (27.9%, n=29), commonly reported negative opinions of services provided by transitional elderly care organisations. It is because most respondents have not reaped much benefit yet, even after their elderly joined the programme of the *Posyandu Lansia*.

For example, when some elderly are feeling unwell, and they want to check their condition in a *Posyandu Lansia*, they feel that they are not getting better even after taking some medicine. Most respondents will try to take their elderly to the hospital or *Puskesmas* ('Primary Health Care Centre') to get better services. Moreover, medical personnel are not always available at the *Posyandu Lansia*.

Table 5.6 Distribution of Opinion on Transitional Elderly Care Organisations of the Sample Household Heads over the Four Villages (N=312)

	Opinion on the Transitional Elderly Care Organisations									
	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
No opinion	30	85.7	2	5.7	1	2.9	2	5.7	35	100.0
Very negative op.	28	41.2	22	32.4	11	16.2	7	10.3	68	100.0
Negative opinion	10	9.6	42	40.4	23	22.1	29	27.9	104	100.0
Neutral	0	0.0	0	0.0	1	50.0	1	50.0	2	100.0
Positive opinion	16	18.4	3	3.4	30	34.5	38	43.7	87	100.0
Very positive op/	2	12.5	0	0.0	5	31.3	9	56.3	16	100.0
Total	86	27.6	69	22.1	71	22.8	86	27.6	312	100.0

Source: Computation of the Data set from the Fieldwork (2018).

It is often the case that when the elderly are feeling ill and need to get a medical check-up, medical personnel are not present, making both the respondents and the elderly disappointed (*cf.* Field Notes 2018). Moreover, respondents can also ask the elderly to join a programme of *Karang Werda* which focuses on the elderly's activities.

However, the implementation of *Karang Werda* is still not optimal yet, particularly in rural areas because not all elderly can get information and access the program. Limited resources, *i.e.* volunteers or cadre, are one of the obstacles in the provision of services for the elderly in rural areas. For example, most respondents in Argosari village had 'no opinion' because they do not get information about the programmes of the transitional organisations *Karang Werda* and *Posyandu Lansia*. Many elderly in Argosari never use the services of the transitional elderly care organisations.

On the contrary, 87 respondents reported that they have positive opinions of the transitional elderly care organisations. For example, the respondents in Ngadas feel glad about the care of the *Posyandu Lansia* for their elderly. The elderly can get health services and also the medicine they need. They do not need to pay for it. Meanwhile, the elderly in Tlogomas not only receive care in the *Posyandu Lansia*, but also participate in the *Karang Werda*. In Tlogomas, the programme of the *Karang Werda* is growing rapidly, also focusing on related activities for the elderly such as training, sport, recreation and *Koperasi Wanita* ('Women's Cooperatives') (*cf.* Field Notes 2018).

5.3.1 *Posyandu Lansia*

The *Posyandu Lansia* is part of the type of the community-based health services, also defined as a transitional elderly care organisation. The Ministry of Health Regulation Number 65/2013 states that *Upaya Kesehatan Berbasis Masyarakat* (UKBM) ('Community Based Health Efforts') is a medium for community empowerment, based on community needs and managed by the community under the guidance of the *Puskesmas* staff and other relevant organisations (*cf.* Kemenkes 2019). *Posyandu Lansia* is implementing the primary health care programme through community participation aimed at local people, particularly for the elderly. Care in the *Posyandu Lansia* include physical, mental, and emotional monitoring, such as examination of daily activities, mental and nutritional status, blood pressure, hemoglobin, glucose and protein in the urine, and physical activities such as gymnastics or sport (*cf.* Profil Kesehatan Indonesia 2007).

The *Posyandu Lansia* is an integrated service post providing health care to the elderly who are in certain areas such as the *kelurahan* ('villages) which are practised by the community. Moreover, the *Posyandu Lansia* is implementing the development of health services from the *Puskesmas* programme which involves the participation of the elderly, families, community leaders, and social organisations

in its implementation (*cf.* Sunaryo *et al.* 2015). The programme can be utilised to improve the elderly's health in the community. Basically, the *Posyandu Lansia* has two objectives:

1. increasing coverage of elderly health care in the community to the level of the *kelurahan* ('village'); and

2. increasing participation of the community and the private sector in providing health services (*cf.* Sunaryo *et al.* 2015).

Health services at the *Posyandu Lansia* include physical, mental and emotional health checks which are regularly recorded and monitored in the *Kartu Menuju Sehat* (KMS) ('Health Cards'). The provision of health care to the elderly consist of eight activities: (1) evaluating the capability of their basic daily activities such as eating/drinking, bathing, dressing, getting on and off their bed, defecating/urination, etc., (2) checking psychological well-being, (3) examining nutritional status through weight and height measurements, (4) measuring blood pressure and pulse calculation for one minute, (5) examining haemoglobin, (6) examining urine to check if diabetes mellitus or kidney disease are present,(7) referring the elderly to *Puskesmas* if there are complaints or abnormalities recorded from examinations of points 1 to 6 which cannot be handled by the *Posyandu Lansia* and (8) conducting health outreach activities for the elderly. Some *Posyandu Lansia* also have additional activities such as *Pemberian Makan Tambahan* (PMT) ('Supplementary Feeding') by paying attention to the elderly's health and nutrition. Moreover, there are also sport activities such as gymnastics for the elderly and casual walking to keep them fit (*cf.* Sunaryo *et al*. 2015).

5.3.2 *Karang Werda*

The *Karang Werda* is a transitional organisation focusing on the elderly at the village or urban village level throughout East Java [5.2]. It was introduced by a Gerontology Foundation called the Abiyoso Foundation located in East Java, particularly in Surabaya City, East Java province [5.3]. The presence of the Abiyoso Foundation is supported by several organisations concerned with the elderly, such as (1) the *Persatuan Wredatama Republik Indonesia* (PWRI) ('Union of the Republic of Indonesia for retired civil servants'), (2) *Legiun Veteran Republik Indonesia* (LVRI) ('Legion of the Republic of Indonesia for War Veterans'), and (3) *Persatuan Purnawirawan dan Warakawuri Angkatan Bersenjata Republik Indonesia* (PEPABRI) (Union of Retired and Warakawuri of the Republic of Indonesia Armed Forces for retired civil servants of the armed forces) (*cf.* Sunaryo *et al.* 2015). The establishment of the Abiyoso Gerontology Foundation on 13 February 1993 aims at accommodating all matters related to the elderly and providing necessary assistance in all fields so that the elderly's lives are worthy. The Abiyoso Gerontology Foundation's motto is to have a useful and quality elderly life, to stay healthy and productive in old age.

The name Abiyoso originated from a play of the *Wayang Purwa*, the Great King in the land of *Hastina Pura*, who chose to be a *Begawan* ('priest') after abdication. *Begawan Abiyoso* is said to have settled in a hermitage far from the centre of the kingdom in *Sapta Renggo*, the hill of *Wukir Ratawu*. He was a strong ascetic man and often gave advice and guidance to his main kings in *Hastina* and the *Pandawa* family. *Begawan Abiyoso* had a very long age and *muksa* ('died') after the completion of the *Barata Yuda* war, especially after the birth of *Parikesit*.

Begawan's identity as a wise parent, with good advice, independent, and helpful until the end of his life (*muksa*) made the name *Begawan Abiyoso* be used for the Gerontology foundation in East Java. The Abiyoso Foundation's vision is to help the government and community empower the elderly to achieve the elderly's social well-being. Furthermore, the main objective of this foundation is to assist the government in informing and developing the *Karang Werda* which is a platform for the elderly's empowerment in all villages or urban villages throughout East Java. East Java proposes an empowerment organisation to support the elderly through the establishment of the *Karang Werda* organisation.

It was initiated with the issuance of a decree from the Governor of East Java, No. 65 of 1996, concerning guidelines for the formation of the *Karang Werda*. The central government also supports the establishment of organisations aiming to empower the elderly by issuing Law No. 13 of 1998 concerning elderly welfare which includes the rights and obligations of the elderly. To facilitate the implementation of the *Karang Werda* organisation up to the village or urban village level, the Governor of East Java enacted *surat keputusan* ('decree') No. 188/309/SK/014/1999 on a team to empower the elderly in the province of East Java. It was then followed by the formation of a team to empower the elderly in the regency or city level based on regent or *walikota* decree in their respective regions in East Java.

The formation of the *Karang Werda* organisation was carried out at the village or urban village level through *surat keputusan camat* ('camat's decree'). The *Karang Werda* starts from collecting data on the elderly at the *Rukun Warga* level by the village or urban village; then the *karang werda* management is formed which consists of the elderly themselves. The village head and the head of the urban village act as a *penasehat* ('advisors') of the *Karang Werda* management while its establishment is stipulated under a camat's decree. Moreover, camat acts as a *pembina* ('trustee') of the *Karang Werda*.

It is most important that the ideas and the implementation of its activities come from the elderly's initiative both in the village and in their respective territories. The activities of the *Karang Werda* generally focus on five aspects: the religious or spiritual sector, health, welfare, empowerment, and sports including the arts and recreation. More specifically, East Java provincial regulation No. 5 of 2007 concerning the welfare of the elderly contains the activities carried out at the *Karang Werda*: (1) religious and mental spiritual services, (2) health services, (3) employment opportunity services, (4) education and training services, (5) services to get ease of access to use public facilities and infrastructure, (6) facilitating legal services and assistance, (7) sports, arts and recreation activities, (8) social protection for elderly people who have no potential, and (9) social assistance for potential elderly people [5.4].

Funding for the activities of the *Karang Werda* is obtained from the assistance of the local government at the city and district level. Besides, the *Karang Werda* also gets funds from the local communities' participation which are not binding and voluntary.

For certain activities such as the commemoration of the *Hari Lanjut Usia Nasional* (*Hari Lansia*) ('National Elderly Day') every May 29th, the *Karang Werda* can submit requests for financial assistance to private companies concerned with the elderly's activities (fundraising through sponsors). Elderly Day is commemorated internationally every 1st of October.

5.4 Community Perspectives on Modern Elderly Care Organisations

The concept of 'modern' is often related to the process of modernisation in development, which is influenced by intervention from developed countries for developing countries. Modern organisations can be viewed from several perspectives. The first is as an exogenous base for development. One of the characteristics of exogenous development is its contrast to patterns of endogenous development. Endogenous development is locally determined, whereas exogenous development is transplanted into particular locations and externally determined. Moreover, exogenous development tends to export the proceeds of development out of the local region. Accordingly, local people find it difficult to retain benefits within local communities. It should be noted that endogenous development respects local values while exogenous development tends to repress local values (*cf.* COMPAS 2007).

The second perspective is the 'top-down' approach which is the modern approach to development. The distinction between 'top-down' and 'bottom-up' can be seen to in what extent the community is involved during planning, implementing, monitoring and evaluating a programme or project: according to Cooksey & Kikula (2005), the differences between 'top-down' and 'bottom-up' can be seen from planning approaches which relate to participatory planning.

Thus, 'top-down' planning is related to both government and donor-funded programmes, where the government plans, and donors and the bureaucrats control the efficiency of the planning.

Additionally, modern organisations are those which are not established by local people. Usually, a modern organisation is introduced to the local people by an outsider of the local community. Moreover, modern organisations also offer assistance to support the needs of the local people, introduced and established either by the government or private entities (*cf.* Saefullah 2019). The next perspective of modern organisations is the 'etic' perspective. The 'etic' term comes from the word 'phonetic.' According to Holmes & Holmes (1995), the 'etic' approach is a scientific perspective that a researcher brings to the analysis.

In addition, they claim that the 'etic' approach refers to the cross-cultural frame of reference, and is an objective and controlled procedure for weighing and sifting through facts and theoretical viewpoints. This approach points out general human behaviour based on the outsiders' view (*cf.* Keasberry 2002).

Table 5.7 Distribution of Knowledge of Modern Elderly Care Organisations of the Sample Household Heads over the Four Villages (N=312)

	Knowledge of Modern Elderly Care Organisations									
	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
None	43	61.4	1	1.4	20	28.6	6	8.6	70	100.0
Very Little Knowl.	26	22.2	20	17.1	34	29.	37	31.6	117	100.0
Little Knowledge	14	15.1	32	34.4	13	14.0	34	36.6	93	100.0
Average	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0
Much Knowledge	3	10.7	15	53.6	3	10.7	7	25.0	28	100.0
Very Much Knowl.	0	0.0	0	0.0	1	33.3	2	66.7	3	100.0
Total	86	27.6	69	22.1	71	22.8	86	27.6	312	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Table 5.7 shows that the majority of respondents in the four villages: Argosari (22.2%, n=26), Ditotrunan (17.1%, n=20); Ngadas (29.1%, n=34), and Tlogomas (31.6%, n=37), reported very little knowledge of modern care organisations. Moreover, many respondents (93) also reported little knowledge and even no knowledge (70) of modern elderly care organisations. These numbers conclude that the majority of respondents cannot mention the types of care of the elderly in modern care organisations. Modern elderly care organisations refer to care and support of services for the elderly delivered by trained professionals, such as *Panti Jompo*, and *Puskesmas Santun Lansia*. In fact, many respondents in rural areas, *i.e.* Argosari and Ngadas, reported that they do not know about services in modern elderly care organisations, because most respondents in rural areas practice their hereditary knowledge about *bakti* and use it to provide care of the elderly.

The *bakti* tradition refers to the practice of respect, care and support for parents by adult children. Knowledge of *bakti* values have been shared for many generations and are reflected in their daily life. Moreover, when the elderly do not have family or close relatives, their neighbours or friends can help to provide care and support for the elderly. The concept is known as the *sayan* local tradition. Particularly in rural areas, adult children who ignore and do not provide care of their parents are socially sanctioned by their community. However, some respondents in urban areas, namely Tlogomas and Ditotrunan, reported much knowledge of modern elderly care organisations. It is relatively easy for respondents to get information about care and support services in modern elderly care organisations.

Moreover, a typical urban community tends to be individual compared to rural areas. Consequently, conditions are quite different when adult children in urban areas place their elderly in modern elderly care organisations. The urban community tends not to show any emotion about a family's decision to send the elderly to a modern care organisations.

Table 5.8 Distribution of Belief in Modern Elderly Care Organisations of the Sample Household Heads over the Four Villages (N=312)

	Belief in Modern Elderly Care Organisations									
	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
None	43	61.4	1	1.4	20	28.6	6	8.6	70	100.0
Very little belief	33	22.3	27	18.2	46	31.1	42	28.4	148	100.0
Little belief	10	13.9	27	37.5	5	6.9	30	41.7	72	100.0
Average	0	0.0	6	75.0	0	0.0	2	25.0	8	100.0
Much belief	0	0.0	8	57.1	0	0.0	6	42.9	14	100.0
Very Much belief	0	0.0	0	0.0	0	0.0	0	0.0	0	100.0
Total	86	27.6	69	22.1	71	22.8	86	27.6	312	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Table 5.8 shows that the majority of respondents in Argosari (22.3%, n=33), Ditotrunan (18.2%, n=27), Ngadas (31.1%, n=46), and Tlogomas (28.4%, n=42) reported very little belief in modern elderly care organisations. Firstly, modern elderly care organisations refer to *Panti Jompo*. Many respondents believe that their elderly prefer to stay close with their family than to stay in a modern elderly care organisation because they feel as if they are being taken away from their family and arranged for them to stay with other elderly in a new environment such as an old age home. Thus, the elderly need to adapt to the new environment. In fact, the elderly who stay in modern elderly care organisations are separated from their family including their children. Such conditions are not easy for the elderly to meet with or talk to their family or relatives, and conversely the same goes for the respondents.

Hence, based on the perception of respondents, putting the elderly into modern care organisations can potentially create uncomfortable situations and prevent emotional well-being for the elderly. Another reason not to place the elderly in modern care organisations is because many respondents, particularly in rural areas, still believe that they need to *balas budi* ('return the favour') to the parents or respect to the relatives by taking care of them. The respondents believe that if they do it, they will be lucky and happy. Most of the respondents strongly believe that they have to take care of their parents or elderly, and not to put them in modern care organisations (*cf.* Field Notes 2018).

However, those conditions are quite different if the elderly do not have a child, family, or relative who can take care of them. Respondents who cannot take care of the elderly for some reason, such as living at a large distance from their elderly, tend to place their elderly in modern elderly care organisations because respondents find it difficult to provide care of their elderly. On that account, an old age home is the place which can help maintain the elderly's well-being and provide proper care and services for the elderly (*cf.* Field Notes 2018). Table 5.8 shows that some respondents in urban areas tend to place the elderly into modern elderly care organisations because of the impact of social change, such as urbanisation and modernisation. Also, modern elderly care organisations also refer to health care services, namely *Puskesmas Santun Lansia*. Sometimes, some elderly in rural areas do not really believe in the health care provided by the *Puskesmas Santun Lansia*. They believe in traditional medicine and healing more than in modern medicine. As they receive care from the *Puskesmas Santun Lansia*, they often feel not better, and report very little belief in modern elderly care organisations.

Table 5.9 Distribution of Opinion on Modern Elderly Care Organisations of the Sample Household Heads over the Four Villages (N=312)

	Opinion on the Modern Elderly Care Organisations									
	Argosari		Ditotrunan		Ngadas		Tlogomas		Total	
	N	%	N	%	N	%	N	%	N	%
No opinion	44	62.0	1	1.4	20	28.2	6	8.5	71	100.0
Very negative op.	36	25.0	26	18.1	41	28.5	41	28.5	144	100.0
Negative opinion	6	8.1	28	37.8	8	10.8	32	43.2	74	100.0
Neutral	0	0.0	9	81.8	0	0.0	2	18.2	11	100.0
Positive opinion	0	0.0	5	50.0	2	20.0	3	30.0	10	100.0
Very positive op.	0	0.0	0	0.0	0	0.0	2	100.0	2	100.0
Total	86	27.6	69	22.1	71	22.8	86	27.6	312	100.0

Source: Computation of the Data set from the Fieldwork (2018).

Table 5.9 shows that the majority of respondents of four villages: Argosari (25.0%, n=36), Ditotrunan (18.1%, n=26), Ngadas (28.5%, n=41) and Tlogomas (28.5%, n=41), reported very negative opinions on modern elderly care organisations. The large number of respondents who had a very negative opinion on modern elderly care organisations is related to their beliefs and culture. The Tenggerese and Javanese people have cultural practices regarding care of and intergenerational relationships with their elderly. Traditionally, adult children are obliged to take care of their parents or relatives as a way to return the favour toward parents or elderly relatives who cared for and raised them. If they do not take care of these elderly people, the community will think that their adult children becomes an unfilial children and will sanction them socially.

5.4.1 *Panti Jompo*

Elderly care in the modern organisations of the *Panti Jompo* ('Old Age Homes') is provided both by the government and the private sector, and are based on modern knowledge of care and delivered by trained professionals. The implementation of care of the elderly in modern care organisations has binding and compelling rules for anyone involved. The rules require the provision of care of the elderly to be fully managed by the modern organisation provider. Management of old age homes is divided into two types: government and private management. Old age homes which are fully managed by the government are generally intended for the elderly who are in the abandoned category and do not have family nor relatives who can take care of them. The government fully manages and funds these old age homes. On the contrary, private old age homes provide care and support for the elderly who require family or relatives to pay the cost of the services. Even if the elderly have family but they choose or are forced to live in old age homes, the care is fully managed by private old age homes. The family's role in the care and support services is limited, and not so much by the family, as in traditional elderly care (family home care). The old age home is the last choice for care and support services.

People in society who are influenced by values of filial piety may be ashamed when they place their elderly in organisational care such as old age or nursing homes. However, old age homes will lose this stigma due to value changes over time in the modernisation era (*cf.* Ping 2013).

The old age homes are operated by the government and the private sector in cooperation with *Dinas Kesehatan* ('Health Office') for providing health care services. More specifically, old age homes are also supervised and controlled by the nearest *Puskesmas* which has a responsibility to regularly control old age homes in providing health services, particularly medical aspects such as health checks, medication, and medical resources (*e.g.* nursing and doctors). Visiting the old age home is conducted by *Puskesmas* staff minimally once a month or on the manager's request. *Puskesmas* staff activities include health education, sports or gym (physical exercise), health control for early detection of disease, laboratory checks, treatment, counselling, and referral to hospital health services (*cf.* Kemenkes 2017). Meanwhile, *Dinas Sosial* ('Social Affairs Office') has a role in managing, fulfilling, and controlling provisions of care of the elderly, particularly in government old age homes, such as fulfilment of primary needs to the elderly (*e.g.* food consumption, clothes, etc.). On the other hand, it is different from private old age homes where the management is fully under private care and the types of care services are discussed with the elderly's family.

Zhan *et al.* (2006) found unfair competition between governmental and private elderly homes in China in terms of facilities, quality, and resident composition. They conclude that private old-age homes need to receive payment for reinvestment. This condition is similar to the situation in Indonesia which causes the elderly staying in private old age homes having to pay more to use the services. On the other hand, those staying in government old age homes are fully supported by the state. Moreover, the government old age homes can affiliate with hospitals, to make it easier to get involved in social activities. On the contrary, in private old age homes, social activities depend on the arrangements made by the administrative, personal, and social networks that they have (*cf.* Zhan *et al.* 2006). In Indonesia, the number of old age homes owned by both the government and private sector are limited. Government old age homes only focus on care and support provision for the elderly who are neglected or do not have families.

In fact, many elderly who are neglected and do not have family are still not covered by the government old age homes services due to the limited capacity in government old age homes. One reason is the limited budget from the government to provide support services for the elderly

The government encourages the elderly to stay in their community as long as they can survive with family, relatives, friends, or neighbors who can support them in the community. Meanwhile, private old age homes provide health and social care of the elderly, and the family must be willing to pay the service costs, which means that only the rich elderly/families can afford to use the services of private old age homes.

5.4.2 *Puskesmas Santun Lansia*

The *Puskesmas Santun Lansia* ('Integrated Health Post for the Elderly') as a modern elderly care organisation is only established by the government, focusing on health care of the elderly. The Health Ministry Regulation No. 67/2015 on the provision of elderly health care at *Pusat Kesehatan Masyarakat (Puskesmas)* ('Primary Health Care Centre') states that the *Puskesmas Santun Lansia* focuses on health services for the elderly, such as health promotion, prevention, cure, and rehabilitation. The Government of Indonesia emphasises promotion and prevention more than cure and rehabilitation. Moreover, the *Puskesmas Santun Lansia* provides care with proactive, friendly staff, easy access including facilities and infrastructure, and financial support for those who need it. Promotion programs refer to coaching and counselling the elderly with direct and indirect targets. Direct targets for promoting programs involve the elderly who are 60 years or over while indirect targets include coaching and counselling for family, community, social organisations, and voluntary cadres. The promotion programme contains counselling on healthy living behaviour, nutrition for the elderly, efforts to improve physical fitness, maintenance of independence and productivity of the elderly. Prevention programs include activities to prevent disease as early as possible and its complications due to degenerative processes including early detection and monitoring the elderly's health by using *Kartu Menuju Sehat* (KMS) ('Health Card').

Furthermore, a curative programme means treatment for the elderly based on health matters. The rehabilitative effort includes an effort to restore the elderly's functional abilities and confidence as much as possible, *e.g.* medical and psychosocial efforts. Service provision for the elderly should be done proactively by visiting the elderly who need health services. Meanwhile, those directly coming to the *Puskesmas Santun Lansia* should receive care with a high priority, *e.g.* specific room facilities and supporting infrastructure for the elderly (chairs, corridors, stairs, and toilet specifically designed for the elderly). Sometimes, some elderly in rural areas do not believe in the health care services provided by the *Puskesmas Santun Lansia* because when the elderly receive care and medicine from the *Puskesmas Santun Lansia*, many of them are still not getting better. Many respondents in rural areas report very little belief in modern elderly care organisations. Respondents in urban areas are interested in sending the elderly to the *Puskesmas Santun Lansia* because the provision of care is relatively easily obtained, due to a one-stop service system, from registration, initial examination, and medical checkup, to medication administration in one building or room. It makes the elderly not need to queue long to get health services since the services are quick, easy, and affordable.

5.5 Socio-Cultural Factors of the Plural Elderly Care System

5.5.1 Significance of Tenggerese Kinship for Elderly Care

This research tries to describe the local people's perspectives on the care of the elderly. On one hand, the perspective of Tenggerese adult children to take care of and provide support services for their elderly will be described based on indigenous knowledge, belief, and practice of the local people. Moreover, their cosmology views also influence their daily life and attitudes related to the provision of care of their elderly. On the other hand, the perspective of the Javanese on care of their elderly is also considered in this research. In this context, the ethnoscience perspective is used to discover the

local people's preferences in utilising the three elderly care institutions and organisations: traditional institutions, and transitional and modern organisations. As mentioned before, institutions refer to norms, beliefs, interactions, and behaviours of some valued non-profit purpose, while organisations refer to the structure of recognised and accepted profit-making roles in the community. This research considers both the institutional and organisational bases focusing on the provision of care of the elderly. The type of household among the Tenggerese people, including Ngadas and Argosari villages, is composed of an extended family, consisting of two or more nuclear families linked together through parents, children, or siblings, and through blood, marriage, or adoption.

The Tenggerese use the term '*sedulur'* which refers to kindred consisting of one to three generations of local relatives, usually direct descendants of a person's great grandfather on a father's or mother's side. In Ditotrunan and Tlogomas, the majority of older parents live together with their adult child in a house. On the one hand, at least one of the children has to stay in their parents' house to provide care and support services. In many cases, the daughter has more responsibility to stay with their parents and provide care of them. On the other hand, the older parents may move to one of their children to receive care and support services at home because their children must work in different places from their parents' house. This condition sometimes makes the elderly feel alienated because they have to stay in a new community. Meanwhile, the situation is different in Ngadas and Argosari where nearly all Tenggerese people have a tradition to stay and work in the Tengger Region because they believe that they will be happy and prosperous when they live there. Moreover, their life will be blessed when they hold on relatively firmly to their traditional customs for generations. Commonly, the older Tenggerese parents live with an adult child who has not married yet, or with their adult child who has married regardless of whether they have children. The parents have the responsibility to take care of and educate their children until they become adults. The definition of adult children based on the local people's perspective is indicated by marital status; therefore, the children will stay with their parents as long as the children have not married yet.

The practices of providing care of the elderly are influenced by strong filial obligations which echo relationships between children and parents, known as *bakti* tradition, one of the indigenous institutions, which plays an important role to provide care of the elderly. The Tenggerese people place parents as *guru rupaka*, making them pay respect, guard, and take care of them in their old age. *Bakti* is also related to the well-known term *hormat* ('respect'), expressing filial responsibility, and affection for parents and the elderly. Moreover, *bakti* is practised from the adults towards older and senior relatives or from adult children to the parents. Parents should love and care of their children and, in return, the children should respect and care of their parents. Both parents and children have been sharing the *bakti* local traditions for many generations as reflected in their daily rituals and norms. Local people also return a favour because they would be happy and proud when they are able to provide care and support for their parents. Adult children feel the duty to provide old-age support for their parents. When adult children are not able to take care of the elderly, their community will judge them as *anak durhaka* ('rebellious') and apply even social sanctions on them. Moreover, many adult children believe that *karma yang buruk* ('bad karma') could happen to their life. The Tenggerese people who are both Hindu and Buddhist, describe *'karma*' as a force produced by a person's actions in one life, which will influence what will happen in their future lives. Respondents who ignore and do not take care of their elderly are expected to be unlucky in their future lives.

It is important to note that older Tenggerese parents can freely choose with whom they will be staying in their old age. The elderly do not have to stay with their children if they do not want to. They can stay with their kindred or relatives instead. It is most important that whoever the parents live with, either their children, kindred or relatives, can make them comfortable and happy in their old age. The local people use the term '*sak srekke*' to show what the elderly want and like. Thus, it is not morally wrong when older parents prefer to live with younger or older siblings. The Tenggerese people will not show prejudice, blame and shame, or sanction children socially when parents are not living with them. The society in the local community assesses that such conditions are normal and usual among the Tenggerese people. Selection of living arrangements from older people will affect who plays a dominant role to provide care of the elderly. It is the one reason why the elderly Tenggerese people

have longevity because they feel happy and comfortable that they receive care and support services from their family. The Tenggerese people have a norm called *'telon,'* that says that three household heads cannot live in one house. So, a house can only be inhabited maximally by two household heads. They believe that living with three household heads or more will make one of them *kalah* ('lose out') in terms of wealth or longevity.

Interestingly, the researcher found that many houses in the Tengger Region have two *pawon* ('kitchens') in one house. It is due to two household heads in one house. The researcher observes two living and care arrangements between the elderly and their children. First, the elderly live with their spouse in a house and meet their needs independently. In many cases, the children live near the elderly: it can be next to or behind the elderly's house or within the same village. The children will visit the elderly in the afternoon or evening to bring some food or cigarettes, or just to have a conversation with the elderly. The children try to know the condition of their parents by visiting them regularly and taking turns among the children. Second, the elderly live with their child and they have two kitchens (*pawon*) for each household head in one house, because the elderly Tenggerese do not want to burden their children as long as they can meet their needs independently.

However, sometimes the children still take care of their parents in other ways, such as helping to clean the house, washing clothes, accompanying their parents to go somewhere, etc. On the contrary, when the elderly cannot meet their needs independently, their children will help to fulfill all their needs including cooking and serving food in one kitchen in a house. Meanwhile, the other children will help to fulfill the elderly's needs in clothes, cigarettes, or basic foods (*e.g.* rice, sugar, coffee, and tea). It is important that the children have the same responsibility to take care of their parents and carry out the tasks according to their respective roles. They try to make their parents feel comfortable and happy living in a supported environment. In some cases, researcher found that many elderly still insisted on going to the field even though they find it difficult to work due to decreasing physical capabilities. Their children accompany them there. In an extreme case, researcher found one respondent in Argosari who lives with their father aged more than 100 years old. The respondent said that their father still wants to go to the field even though he cannot work because his legs are sick. He said that their father wants to see the green plants because it can make him feel happy and fresh. Moreover, the elderly in the Tengger Region have the spirit to live independently and fulfil their needs as long as they can work in the field and not burden their children. The elderly in the Tengger Region also still have the responsibility to raise and help with their children's needs until they are married and live independently.

5.5.2 The Role of Javanese Family Values in Elderly Care

In the research area, the values of kinship and family structure are similarly very important among the Javanese to influence the ways of local people providing care of the elderly. Familism values emphasise kinship relationships and affiliation with larger groups such as clans, lineages, kindreds, or extended family. The underlying relationship in kinship is family relations consisting of nuclear and extended family which depend on particular circumstances. The majority of households among the Javanese including those in Ditotrunan and Tlogomas villages is composed of a nuclear family: a set of biological parents and their dependent offspring consisting of parents and children, called '*kulawarga'*. Javanese people in Ditotrunan and Tlogomas represent the Javanese where the children have an obligation to take care of their parents.

Commonly, parents stay with their child in the same house. However, the elderly sometimes have conflicts with their adult children, such as limited time for the adult children to provide care and support services to the elderly, and the division of limited resources during the process. Sometimes the elderly might stay with other relatives (not with their child) or stay alone with their spouse. This situation is normal when the elderly are in good condition in all aspects. However, when the elderly have some health or financial matters, they might need to receive care and support services from outside the nuclear family.

Consequently, the people in their community will judge their families, particularly their children, for not respecting their parents. Children are considered then ignorant and do not care of their parents; therefore they may be socially sanctioned from their community.

The Javanese, as the Tenggerese people, have a bilateral kinship system which refers to a relationship from both parents making the children equally connected to relatives from both the mother's and father's line. So, children have an equal opportunity to provide care of their parents from both the mother's and the father's side

Not only the Tenggerese, but the Javanese people also confirm that practicing filial piety is one of the cultural traditions in relation to the care of the elderly. Many respondents mention filial piety actions including filial affection such as respecting parents, fulfilling responsibilities for and obligations to parents, providing physical and financial needs for parents, forming a harmonious family with parents, practicing religious teachings in filial duty, and maintaining inheritance of property. For most Indonesian families, children are still very much valued and parents look to them for help. Parents emphasise that having children is an attempt to ensure care in their old age. They have a proverb that '*banyak anak, banyak rezeki* ('many children bring prosperity'). The 'value of children' is important to ensure care in their old age which consists of three values: emotional, social-normative, and old-age security factors. Many parents have been investing in their children by sending them to school, providing money for their marriage, providing housing, and even looking after their grandchildren. All is done in the hope that their children will return the favour by looking after them in their old age. Parents will receive more care and support, and thus feel more secure.

In the Tenggerese tradition, couples who do not have children can adopt a child from their relatives, known as '*anak angkat.*' Couples will acquire and raise the adopted child as their biological child. It is common in the Tengger Region that the process of adoption is based on the agreement between relatives. Generally, when couples choose to adopt, they have to get legal permission. In fact, the researcher found some couples in the Tengger Region adopting children only with an unwritten agreement between the two families. The process of adoption must be known and agreed on, with no compulsion between them. The age of adopted children is varied from a newborn baby, toddlers, and teenagers. All the Tenggerese people believe that the process of adopting children will positively impact both parties, particularly to help those who have not had children yet. However, children adopted by relatives still respect and take care of both their biological parents and the new parents. When the researcher conducted fieldwork in Tengger, most Tenggerese people said that they have a close relationship with each other. Moreover, these couples are not ashamed to say that they have adopted a child. Hence, the elderly in the Tengger Region perceive themselves as secure and comfortable as long as they have children who can take care of them in their old age.

Furthermore, care of the elderly is not only provided by children, but also by friends or neighbours. As mentioned above, this type of care is based on the traditional principle of *gotong royong* ('voluntary mutual aid and communal work'), and the term '*gotong royong*' in the Tenggerese language is known as *sayan*. The local community implements the *sayan* local tradition by visiting the elderly and by bringing food or money to those who need it. The local people pay a visit to the elderly not only when they are sick but also on special occasions such as *slametan* ('social ceremonial dinner') or similar events. Hence, the local people's preference for care of the elderly provided by family, friends, or neighbours through utilising traditional elderly care institutions is still larger than transitional and modern organisations. The management of care of the elderly is fully controlled by family, friends, or neighbours in the community.

The elderly can also receive both health and social care as well as support services in modern elderly care organisations. Modern care organisations are based on modern knowledge of care of the elderly delivered by trained professionals, such as hospitals and old age homes. In this context, *Puskesmas Santun Lansia* are provided by the government focusing only on health care. Meanwhile, care in old age homes is provided by both the government and the private sector. Care in this research refers to services provided by both health and social care. In fact, health and social care facilities in modern organisations tend to be better-managed in urban areas than rural areas. The researcher found that some adult children and their elderly in rural areas do not really believe in the health care services provided

by the *Puskesmas Santun Lansia* because they believe in traditional medicine or healing more than modern kinds of care. Some adult children said that when they brought their elderly to the *Puskesmas Santun Lansia* to receive treatment or medicine, many of them still felt that they were not getting better. More specifically, based on interviews with some medical personnel in Tengger, many people have health matters such as hypertension and diabetes because they live in the highlands which are colder than the lowlands, and they always consume coffee or tea with much sugar and only drink a little bit of water. Every guest is always given sweet coffee or tea. They also smoke. However, not all the elderly and their adult children go directly to the *Puskesmas* when they do not feel well. They prefer going to the *'dukun*' first to get '*suwuk*' for them to recover. *'Suwuk*' is a prayer of the *Dukun* for sick people by casting a spell called '*mantra*' or '*japa.*' The *Puskesmas* in the Tengger Region can be considered incomplete for the elderly in terms of medical equipment, personnel and medicines. Doctors are not always stand-by in the *puskesmas.* In fact, often the *bidan* ('midwives') will check the patient's condition and prescribe their medicine. This is based on the Health Ministry Regulation No. 67/2015 on the provision of elderly health services in primary health care, where doctors and nurses are eligible to check and prescribe medicine to the elderly.

However, lack of medical personnel in the Tengger Region make *Bidan* have double tasks: to check on women, her toddlers, and the elderly. Interestingly, the Tenggerese people who receive care and support services from medical personnel in the *puskesmas* insist on paying for it, including medicine, although they do not need to pay because they have *Kartu Indonesia Sehat* (KIS) ('Healthy Indonesia Card') for the poor. In one case, an elderly person fell in his field and needed medicine to relieve the pain in his leg. He decided to postpone a visit to the *puskesmas* because he did not have enough money, instead of using his KIS card. That is why many Tenggerese people seldom use the *Kartu Indonesia Sehat* (KIS). The Tenggerese people believe that free care and support services will not help them get better, and they are willing to pay to get well soon.

5.5.3 Influence of Urbanisation on Elderly Care

The rural conditions in the communities are rather different from the urban areas. People are more open-minded to modern knowledge and decide to visit *Puskesmas* when they encounter health matters. They believe in modern knowledge for health care and support. *Puskesmas* facilities and medical personnel in urban areas are considered more complete. More specifically, doctors and nurses are always ready to examine, and treat the elderly. Many people in urban areas are more aware of the importance of using KIS and BPJS for their health matters. In urban areas, people who are categorised as poor choose to use KIS because they do not need to pay for care and support services from *Puskesmas,* and they feel fortunate because they get assistance from the government. Some people use BPJS for which they have to pay monthly as insurance contributions.

Other care of the elderly are old age homes. In Indonesia, old age homes are used as the last resort to provide care of the elderly. Old age home management is divided into two types: government and private management. Old age homes which are fully managed by the government are generally intended for the elderly who are in the abandoned category and do not have family nor relatives who can take care of them. The government fully manages and funds these old age homes. Ironically, the government facilities of old age homes are limited because of limited state budgets. On the contrary, private old age homes provide care of the elderly which require the family or relatives to pay for service costs. Even though the elderly have family, they choose or are forced to live in old age homes whose cost is fully managed by private old age homes. The family's role in care and support services is limited, and not as much as the family's role in traditional elderly care (family home care).

In fact, local Tenggerese people are influenced by filial piety values and they will feel ashamed when they place the elderly in institutional care such as in old age homes. Moreover, the community will think that the children have abandoned their elderly and are socially sanctioned. It may be because the Tenggerese people were born and live in the same place. They think it is their responsibility to live up to their traditions of care of the elderly by living in their villages. The majority of people in rural areas have a close relationship among each other and many of them are close kin in the same village.

Meanwhile, people born and living in different places tend not to feel depressed by the surrounding community when they decide to put their elderly in the old age homes. Usually, they live far away from their relatives or siblings and their status is as an immigrant in the urban area.

However, in general, adult children believe that their older parents prefer to stay close to their family rather than stay in an old age home. The elderly who stay in old age homes are separated from their family including their children. It may not be easy for the elderly to meet or talk to their family or relatives, and vice versa. Hence, based on the perceptions of the respondents, putting the elderly into old age homes can potentially create uncomfortable situations and prevent emotional well-being among the elderly. Another reason not to place the elderly in old age homes is that many respondents still believe that they need to *balas budi* ('return the favour') to parents or respect relatives by taking care of them. The respondents believe that if they do it, they will be lucky and happy. For that reason, most respondents strongly believe that they have to take care of their parents or elderly, and not to put them in old age homes (*cf.* Field Notes 2018). The *Puskesmas Santun Lansia* and the *Panti Jompo* ('Old Age Homes') are included in the modern elderly care organisations whose initiatives and management come from the other organisations outside of the community. It can be said that the role of government or the private sector is dominant in its implementation.

Notes:

[5.1] The Comparing and Supporting Endogenous Development (COMPAS) Programme is an international network implementing programmes to develop, test, and improve endogenous development methodologies.

[5.2] *Karang Werda* comes from two words: *Karang* which means 'island in the sea' occurring from coral and interpreted as a place or container, and *Werda* which means elderly.

[5.3] Gerontology is derived from the word Geron, which is Old, and Logos or Logi, which means science. Gerontology is the science of all topics related to increasing age related to health, economic, social, and cultural aspects.

[5.4] Potential elderly are elderly who are still able to do work and or activities that can produce goods or services while no potential elderly are elderly who are powerless to make a living so that their lives depend on the help of others.

CHAPTER VI CULTURE, COSMOLOGY AND LIFESTYLE OF THE TENGGERESE PEOPLE

6.1 History of the Tenggerese People

In old Javanese, the word 'Tengger' means 'highlands' and the phrase *wong Tengger* (Tenggerese) means 'people of the highlands' in the early period. However, in modern Javanese, the term is used only as a noun to refer to the region and people of the Tenggerese Highlands. The Tenggerese people represent one of the sub-ethno-cultural groups in the Javanese ethno-cultural group. The origin of the Tenggerese people can be found in folklore and the history of the Tenggerese traditional community, which is generally unique compared to the Javanese in general. The majority of the Tenggerese people are Hindus and Buddhists who also uphold their traditional values and customs as reflected in their behaviour, daily life, and traditional ceremonies.

Historically speaking, based on etymology, 'Tengger' means in Javanese 'standing tall', or 'being quiet without moving'. *Tengger* is an abbreviation of the Javanese words *Tenggering budi luhur* ('virtuous *Tenggering*'). Additionally, *Tengger* is a sign or characteristic which gives special meaning to something. It can also mean the characteristic of virtuous life (*cf.* Yuliati 2011). As previously mentioned, in the old Javanese language, the term *Tengger* means 'highlands'. However, *Tengger* in modern Javanese language, especially in Indonesian, is a proper noun to refer to the region of the Tengger Highlands in East Java (*cf.* Hefner 1985). Also, the Tenggerese people believe that *Tengger* refers to the only surviving remains of the Hindhu-Buddhist Majapahit Empire (*cf.* Britannica encyclopedia Tengger).

The Tenggerese are descendants of the refugees of the Majapahit Kingdom. In the 16th century, the Majapahit Kingdom began to weaken because of the attacks from the Islamic Empire led by Raden Patah. Saving themselves from invasion, some Majapahit people fled to Bali. Others chose to occupy a mountainous region in East Java, isolating themselves from outside influences. These people are called the Tenggerese people.

The Tenggerese people also believe that there is a legend of the Tenggerese people concerning Mount Bromo. The earliest known references to the region of Mount Bromo date back to the first quarter of the tenth century. A stone charter, dated 851 *Saka* granted the village of Linggasuntan autonomy in taxation as a holy place for the worship of a Deity at a place named *Walandit*. Charters from neighbouring communities dating back to this period of time also suggest the presence of cult activities related to Mount Bromo. One such charter identifies a Deity named *Sang Hyang Swayambuwa*, the Indian God *Brahma* (*cf.* Hefner 1985). The association of *Brahma* with Mount Bromo is also evident from the mountain's name itself, *Bromo* or *Brama* as a Javanese variant of the name *Brahma*. In Hinduism, *Brahma* is frequently identified as the God of fire. While the *Nagarakertagama* being the old Javanese eulogy of the fourteenth century to Hayam Wuruk, a Javanese King of the Majapahit, the poet *Prapanca* identifies *Walandit* as the site of both the Sivaite and Buddhist religious communities. Dating back to 1327 *Saka*, the charter speaks again of a district called *Walandit*, identifying it as *hila-hila* ('sacred') and referring to its residents as the *hulun hyang* ('spirit servants') of the holy Mt. Bromo (*cf.* Hefner 1985).

The word *teng* is derived from the word *anteng*, which means 'a quiet condition' which is *damai* ('not easily disturbed'), while *ger* originates from the word *seger*, which means 'healthy and prosperous' (*cf.* Yuliati 2011). Based on the story believed by the Tenggerese community, it comes from a marriage between *Jaka Seger* and *Rara Anteng*. Even though their marriage reaches eight years, they do not have children. After they were ascetic for six years at the summit of Mount Bromo, their request was finally granted under one condition: their youngest child had to be sacrificed to the crater of Mount Bromo later.

To the present date, the Tenggerese community believes the story and they perform the *Kasada* ceremony, which means making sacrifices by throwing offerings into the crater of Mount Bromo, such as agricultural and livestock products.

6.2 Cosmology of the Tenggerese People

The concept of 'cosmologies' refers to sets of indigenous knowledge, beliefs, interpretations, and cultural practices related to explanations about the role and the meaning of humans, life, and the world within the universe or cosmos in the past, present, and future (*cf.* Slikkerveer 2019a). The Tenggerese people believe in *catur guru bakti*, which means practising devotion and obedience to the beloved four *guru* to gain wisdom, spiritual discipline, and enlightenment. Moreover, Sutarto (2008) states that the Tenggerese people show respect and filial piety to four *guru* known as *bekti marang guru papat.* There are four traditional principles for which the people should pay respect to: *Guru Swadhyaya*, God, which fits the Tenggerese community's belief about a god named *Sang Hyang Widhi; Guru Rupaka*, a person playing a role as parents; *Guru Waktra*, a person playing a role in teaching knowledge (teachers); and *Guru Wisesa*, the government who is responsible for making rules to improve the people's welfare.

In this context, the concept of cosmologies refers to the indigenous knowledge, beliefs, and cultural practices related to the care and support provision for the elderly. It also includes the relationship between children and parents. The Tenggerese people's *Catur Guru Bakti* cosmology represent parents as *Guru Rupaka*. So, children should pay respect to, guard, and take care of their parents in their old age because their parents raised them until they can live independently. The parents will do anything to make their children happy and independent such as sending them to school, providing money for their marriage and housing, and even looking after their grandchildren. For that reason, children need to return the favour to their parents by looking after them in their old age. This responsibility is based on *bakti* which has been a part of their local tradition, to take care of the elderly. It is also known as filial piety, which not only brings harmony into a family, but can also be developed towards respect and services for the elderly in society, and eventually loyalty to a nation (*cf.* Choi 1995). Filial piety is not only practised between parents and children, but also towards the elderly or older relatives. The Tenggerese people believe that when children are not taking care of their parents, *karma yang buruk* ('bad *karma*') may happen in their life. The Tenggerese people, whose majority of respondents are Hindu and Buddhist, describe '*karma*' as the force produced by a person's actions in one life which may influence what happens in their future lives. Respondents who ignore and do not take care of their elderly will be unlucky in their future lives. Moreover, the Tenggerese community will judge children who are not able to take care of their elderly as *anak durhaka* ('rebellious') and even give them social sanctions. The Tenggerese people believe that the children who take care of their parents or older relatives will be happy, lucky, prosperity, and proud to be able to care of their parents in their life (*cf.* Field Notes 2018).

The Tenggerese people have the tendency to follow customs and the traditional beliefs inherited from their ancestors in the Majapahit Kingdom. Tenggerese people recognise the '*Budo*' religion to refer to those who are not Muslim. The term '*Budo*' is used to show resistance toward Islam (*cf.* Yuliati 2011; Hadi 2009). The majority of the Tenggerese people in Ngadas village are *Budha Jawa Sanyata* ('Javanese Buddhist Sanyata'), an original and hereditary belief of the ancestors of the Ngadas people that is different from Buddhism in general (*cf.* Yuliati 2011; Hadi 2009). Meanwhile, the majority of the Tenggerese people in Argosari village are Hindu. However, Hinduism as believed by the Tenggerese people in Argosari village is different from Hinduism in general. Purnomo (2011) states that between the Tenggerese and the Hindu priests, they have different views regarding their religions and customs. Moreover, Purnomo (2011) found that the Tenggerese people may face a dilemma, whether they should follow the existing religious groups (*e.g.* Islam, Christianity, Catholicism, Hinduism, and Buddhism) or their traditional belief. It is because during the Suharto regime the government tried to homogenise the spiritual orientation of the local people by categorising them into five religious groups.

The researcher found that the majority of the Tenggerese community follows Hinduism, Buddhism, and Islam. Most Tenggerese people are Hindu, influenced by the teachings of Hindu Dharma Bali. The Hindu cosmology is closer to their beliefs than other religious creeds (*cf.* Purnomo 2011). In fact, the traditional priests in the Tengger Region claim that Tenggerese creeds are not identical to the Hindu religion (*cf.* Purnomo 2011). It is different from the general Hindu community in Bali (*cf.* Batoro 2017)

where the Tenggerese people do not apply the caste system (*kasta*) or social strata as those in Bali. The Balinese have the stratification system denoting status by birth from highest to lowest: *Brahmana, Satria, Wesya* and *Sudra* (*cf.* Leurs 2010). Meanwhile, the Tenggerese people consider the same social strata. In addition, the Tenggerese people also do not apply *pembakaran mayat* or *Ngaben* ('cremation ritual') as in Bali (*cf.* Yuliati 2011). A person who has passed away in the Tengger Region is buried in the ground with the head facing south where Mount Bromo lies and the body facing Mount Semeru. However, the Tenggerese people make dolls using leaves and flowers to symbolize a human symbol and then burn it in the *Entas-entas* ceremony (*cf.* Field Notes 2018).

In fact, the Ngadas people, whatever their religion – Buddha, Hindu, or Islam – still uphold and practice Tenggerese ceremonial traditions such as *Karo, Kasada, Entas-entas,* and *Unan-unan* (*cf.* Yuliati 2011; Hadi 2009). Togetherness among the Tenggerese people can be seen not only from their cultural practices, but also the religious celebrations of each religion. There is mutual tolerance between religious communities. Some Tenggerese people think that their religion is no more as 'cliche' as it sounds or just as a 'dress' only to fill in their ID card or personal identity information (*cf.* Maksum 2015).

The Tenggerese community is known for their belief in *Panca Sradha*, involving beliefs in (1) *Sang Hyang Widhi*, God as a creator of Mother Nature, (2) *Atman* or *Petra*, commonly known as ancestors' spirit and their own spirit, (3) *Karmapala* or *walat*, or karma, a cause and effect punishment, (4) *Punarbawa,* reincarnation, meaning that humans are bound to law and live multiple times according to the previous *dharma* of life, and (5) *Moksa* or *sirno*, meaning that humans will no longer be tied to *punarbawa* but they will live in eternal peace when they reach *moksa* (*cf.* Atmojo 2014; Suyitno 2001).

The Tenggerese people have a relationship concept which is affected by Hindu tenets known as *Tri Hita Karana* (*cf.* Yuliati 2011). '*Tri*' means three, '*hita*' means well-being or prosperity, and '*karana*' means causes or reasons. *Tri hita karana* means the three causes of well-being, or three reasons for prosperity: harmony with God, among people, and with nature. Harmony with God is implemented in numerous rituals held by the Tenggerese community while harmony among fellow human beings is through mutual cooperation or *gotong royong* which is practised in the Tenggerese people's daily activities. Meanwhile, harmony with their environment is shown through the Tenggerese people's conservative and balanced efforts to the environment. Hence, the implementation of the above three traditional principles can create sustainability for all live aspects in the Tenggerese community.

6.3 The Tenggerese Culture

The Tenggerese community strongly clings to the traditions and noble values of their culture. The devotion to local traditions is clearly reflected in traditional ceremonies and the *selamatan* ('ceremonial meal') which are passed on by their ancestors over generations. *Adat* ceremonies in the Tenggerese community are categorised into three: the *adat* ceremony representing social life, the life cycle of a person, and the agricultural cycle, house building, and natural phenomena (*cf.* Suyitno 2001; Yuliati 2011) [6.1].

6.3.1 The *Adat* Ceremony to Represent Social Life and the Human Life Cycle

The *adat* ceremony to represent social life involves several activities, including (1) *Pujan Karo,* (2) *Pujan Kapat,* (3) *Pujan Kapitu,* (4) *Pujan Kawolu,* (5) *Pujan Kasongo,* (6) *Pujan Kasada,* and (7) *Unan-unan* (*cf.* Suyitno 2001).

Illustration 6.1 *Sanggar Agung* in Argosari Village in the Tengger Region of East Java.
Source: Wiliandri (2018).

Another *Adat* ceremony is *Walagara*, a marriage contract led by a shaman. The term *walagara* comes from *wala* or *lare* meaning a child, and *gara* or *rabi* meaning marriage. The shaman helps decide the day the *walagara* should be held according to the *saptawara* and *pancawara* of the bride and groom, referring to the Tenggerese year calculation [6.7]. Finally, funerals comprise two stages: the moment when somebody passes away and *entas-entas*. *Nglawuh* (offering help) is the first task to perform to do when someone passes away, which involves physical or financial assistance, and other necessities such as rice, *mori* ('shroud'), sugar, etc.

The practice is followed by an *entas-entas* ceremony, also known as '*nyewu.*' It is the last ceremony held, to pray for the dead on his/her way to nirvana. The deceased in the Tengger Region is laid down with the head facing the south—to Mount Bromo—while the body faces Mount Semeru. The dead body is wrapped with shroud before it is buried.

Unlike in Bali, cremation does not apply in this ceremony although the dead may be Buddhist or Hindu. In Bali, however, cremation often takes place during *Ngaben* (traditional funeral ceremony in Bali). During *entas-entas*, the locals prepare *bespa* consisting of the burned leaves which are further placed in *Danyang* [6.8]. The ash of the burned leaves symbolises the cremated body. *Danyang* is a place for the spirits of the ancestors, village keeper, hamlet, central village, or a place where ritual ceremony and *petra* (*bespa*) take place.

Illustration 6.2 *Punden* in Ngadas Village in the Tengger Region of East Java.
Source: Wiliandri (2018).

6.3.2 The *Adat* Ceremony for the Agriculture, Building, and Nature

Another important ceremony represents the agricultural cycle, house building, and other natural phenomena. This ceremony consists of *leliwet* or *wiwitan*, a ceremony held particularly for those who begin *tandur tuwuh* – planting crops such as potatoes, cabbages, carrots, tomatoes – and harvesting. The *leliwet* or *wiwitan* ceremony is to keep bad luck away during cultivation and harvest, led by a shaman in the house of the person concerned. The parts of the house the shaman casts a spell on are the kitchen, door, and yards. When people experience loss or failure in their farming, the farmer usually holds a ceremony called *Tolak Sengkala*, to keep loss away and to apologise to *Sang Hyang Widhi* and to the *mbaureksa* (unseen ghost that guards the village). It is done in the hope that it will not hamper the harvest due to humans' negligence or unintentional mistakes.

A *Selamatan* is held, led by a shaman for those building a house and living in the house. This traditional ceremony is to protect the occupants. It usually involves *melekan*, a moment where family members and close neighbours stay overnight in the new house. Related to natural phenomena such as earthquakes, natural disasters, and eclipses, the Tenggerese people believe *karma* is imposed on human beings in the form of illness or misery.

In order to evade any potential bad luck in life, the Tenggerese people also hold *Barikan*, a traditional ceremony to express gratitude to *Sang Hyang Widhi* expecting clemency, to avoid illness and misery. It is also to keep bad luck away (*tolak sengkala*) or any potential harm in humans' lives in the future. The Tenggerese people still believe in all traditional ceremonies to date, and they highly respect traditions passed through generations as their ancestors' legacy.

6.4 The Tenggerese Lifestyle

6.4.1 The Tenggerese Kinship System

The line of descent in the Tenggerese community is based on a bilateral traditional principle, drawn from both father and mother. There are three groups of kinship that apply in the Tenggerese community (*cf.* Atmojo 2014): *sa'omah* ('main family as the smallest kinship group'), *sa'dulur,* and *wong tengger* ('Tenggerese People').

Tenggerese people living under the *sa'omah* ('same roof') are categorised as the main family consisting of husband, wife and children. Sometimes the main family also has grandparents and foster children. This type of family is led by the head of the family who is responsible for the survival of the family members. The researcher found that the Tenggerese people have a norm, *'telon'*, where three household heads cannot live in one house. So, a house can only be inhabited maximally by two household heads. They believe that living with two other household heads or more will make one of them *kalah* ('lose') in terms of wealth or longevity. It is also shown by the number of *pawon* ('kitchens') in one house. The researcher found that many houses in the Tengger Region have two kitchens in one house. Commonly, the Tenggerese name this *beda pawon*. The Tenggerese people believe that it is important to separate needs, particularly basic needs, among household heads in a house. Thus, each household cooks its own meal in order for both the household head and their household members to feel comfortable. Moreover, the Tenggerese people have a habit of using the *pawon* ('kitchen') as a place to talk with or visit each other. Interestingly, they receive guests from outside the community in the kitchen at the back part of their house and always serve drinks (*e.g.* sweet tea or coffee), foods, or snacks. They have a tradition to provide guests or anyone outside the household with good service, showing that the Tenggerese people respect guests and are happy to meet guests. When the researcher visited each household in Tengger, they always served drinks, foods, or snacks. The tradition is practiced by the Tenggerese people not only for guests or anyone outside the household but also for the relatives who visit them. The Tenggerese people usually visit houses in the afternoon until the evening because they have to go to the field in the early morning until the afternoon.

Commonly, parents who live independently in a house are visited by their children in the afternoon. Children regularly visit them to see and talk about their condition, and bring some food or cigarettes. Children usually take turns to visit. They usually have a chat in the kitchen that has a fireplace in the middle because of the cold weather in the highlands. Meanwhile, the elderly who live together with their children in one house have a separate kitchen so that they can cook their own meal. It is because the elderly in the Tengger Region do not want to burden their children as long as they can meet their needs independently. However, children sometimes still take care of their parents in other ways, such as helping to clean the house, washing clothes, accompanying parents to some places, etc. Moreover, the other children will help to fulfill the elderly's needs such as clothes, cigarettes, and basic needs (*e.g.* rice, sugar, coffee, and tea).

Interestingly, the elderly can choose with whom they will be staying in their old age. The local people use the term '*sak srekke*' to show what the elderly want and like. The couples who do not have children can adopt a child from their relatives, known as '*anak angkat*.' In fact, couples in the Tengger Region adopt children under an unwritten agreement between the two families. Most importantly, the process of adoption must be known, agreed, without compulsion between the two families. The researcher found that couples in the Tengger Region are not ashamed to say that they adopted a child. They even said that they acquire and raise the adopted children as their biological children. Meanwhile, children adopted by relatives still respect and take care of both their biological and new parents, because most Tenggerese people say they have a close relationship with each other. Moreover, they live in harmony and peace, and with mutual assistance from each other. Besides, the Tenggerese people prefer to stay in their village until they die. They believe that they still could hold on relatively firmly to their traditional customs for generations by staying in their village. Hence, the Tenggerese people perceive themselves as secure and comfortable as long as they live near their families and relatives in Tengger.

The kinship system of *sa'dulur* not only has father, mother, older and younger brothers/sisters, grandfather, grandmother, but also recognises other relatives such as cousins from both father and mother, second generation cousins from father and mother, relatives from father and mother, and so forth. Usually all relatives gather in a particular activity. The biggest kinship group is *wong* Tengger. This group also holds religious activities, traditional ceremonies, and other activities held in unity as a group. The care of the elderly in the Tengger Region is not only given personally by their families but also by groups through mutual cooperation or assistance. Care and support provision for the elderly is personally based on the *bakti* tradition, in which the Tenggerese people believe.

Meanwhile, the *sayan* local tradition refers to mutual aid, in which context the community members in the Tengger Region feel morally obliged to provide support and care of the elderly in their communities. The local people practice the *sayan* local tradition, such as visiting the elderly and bringing food or money to those who need it. The local people pay a visit to the elderly not only when they are sick but also when they have special events such as a *slametan* or other events. The local community is also visiting and talking to each other in the afternoon.

In Tengger, older parents can freely choose with whom they will be staying in their old age. It is important that whoever the parents live with – their children, kindred, or relatives – can make them comfortable and happy in their old age. The people who provide care and support for the elderly during their old age will get inheritance from them.

In Tengger, the inheritance share system depends on whom their elderly live with. The elderly can choose with whom they live with so that they can get sufficient care and support services. It can make the elderly feel comfortable and happy in their old age. The local people use the term '*sak srekke*' to show what the elderly want and like. For example, the adult married child who provides care of the elderly will get more inheritance from their parents than other siblings because they will take care of their parents until they die. All families will receive the decision with relief and do not show jealousy. The person among the family or relatives who is willing to provide care and support for the elderly until they die is called '*sendenan tuwo*'. So, the elderly believe that the person can take care of them and provide support services in their old age (*cf.* Field Notes 2018).

6.4.2 Socio-Demographic Status of the Tenggerese People

The majority of people living in the Tengger Region are farmers and farm labourers. Labourers are farmers who have narrow lands or may not even have any land. Some Tenggerese people own their farming land, but some other areas are owned by the government under supervision of Bromo Tenggerese Semeru National Park (BTSNP), Ministry of Forestry. The Tenggerese people who have a small pieces of land will lease the government's land to cultivate it.

Later there will be an agreement between Tenggerese farmers and the local forest service. The Tenggerese highlands are flanked by volcanoes, such as Mount Bromo and Mount Semeru, and the Tenggerese massif in East Java. The type of agricultural land suitable for cultivation is *tegal* ('dry land') where the Tenggerese people plant vegetables such as potatoes, cabbages, carrots, and onions.

The Tenggerese highlands, dominated by the Bromo crater located in the middle of the Tenggerese Mountains and Mount Semeru, are also a popular tourist attraction for both domestic and foreign tourists. The number of tourists visiting Mount Bromo enables some Tenggerese people to work as tour guides. In addition, there are also those who provide transportation services such as jeeps and horse riding for tourists who want to take a closer look at the Mount Bromo area. Some lodgings are also provided in the area around Mount Bromo.

Just as the Javanese people, the Tenggerese people call themselves *wong Jawa* ('Javanese people'). Only on certain occasions do they identify themselves as *Wong Tengger*. The Tenggerese people are descendants of non-Islamic Javanese who fled to the mountains above Majapahit, the last major Hindu-Buddhist kingdom in Java when that court fell to Islamic forces from neighboring principalities in the beginning of the sixteenth century. They fled to preserve a religion called *agama Buda* ('Buda religion'). More recently, many Tenggerese people have identified this religious tradition as *agama Hindu* (Hindu religion) (*cf.* Hefner 1985).

The Tenggerese people traditionally cultivate hereditary farmland. The parents always give their children knowledge about best cultivation practices in their farmland. Children commonly follow their parents to the farmland after school, accompanying their parents and practicing cultivation of the land. Parents hope that their children continue to maintain and cultivate their land. Moreover, Tenggerese customs prohibit selling the land to non-Tenggerese people. The norm is to keep the Tenggerese land which is believed to be ancestral land. They will maintain and cultivate their land in the Tengger Region as a form of respect to their ancestors. The Tenggerese people believe that Tenggerese land and its environment can meet their needs and help them live peacefully and prosperously. It encourages most Tenggerese people to prefer to stay and work in their village rather than move to live and work outside the Tengger Region. Hence, they want to preserve the Tenggerese traditions of their ancestors by living and working there.

The majority of Tenggerese people are farmers who depend on working on farmland which has mainly been inherited. The Tenggerese people who have farmland will share inheritance equally among their heirs. Therefore, parents will divide their inheritance equally among sons and daughters. Parents will share out and give their children the full right to cultivate the farmland after their children get married. Interestingly, parents will maintain some farmland to be cultivated by themselves to meet their needs independently. Thereafter, the land will be given to one of their children when the parents can no longer work and manage the farmland. The children who receive additional inheritance from the parents are called *sendenan tuwo*.

In Tengger, the additional inheritance from the parents given to children who care of them until they die is known as '*Tanah Gantung'* or '*Gantungan*' (*cf.* Field Notes 2018). *Gantungan* is not only farmland but also a house or another asset that their parents have. Parents choose one of the children to take care of and provide support for them in their old age and give them this additional inheritance as an appreciation of their support. It does not mean that parents do not love the other children as much; rather, they sometimes have reasons to do this, such as a feeling of comfort, and the child is more understanding of what the parents want and like. It can be called '*sak srekke*' which means that children follow what the parents want and like. On the other hand, the other children can still provide care of their parents in other ways and they do not feel jealous about this. Children accept their parents' decision with relief. It is important that their parents are happy in their old age.

6.4.3 Socio-Economic Status of the Tenggerese People

As previously explained, the majority of the Tenggerese people are farmers who work on dry land (*tegalan*). Ownership of agricultural land in the Tengger Region comes from various sources, such as inheritance and buying-selling between Tenggerese, but parents' inheritance dominates. The people community through its village apparatus has a regulation not to sell Tenggerese-owned land to people outside the Tenggerese village because land is inherited from ancestors who must be cared for and looked after well by the Tenggerese people themselves. The majority of Tenggerese people depends on farmland for their livelihood.

Specifically, for working on farmlands, the Tenggerese people have a tradition known as *Sambatan*, to help each other in the farmland or other works through mutual cooperation. Most of the labor needed to cultivate the fields is obtained from family members. If it is not enough, one can ask for help from relatives or neighbors. For the Tenggerese, processing the fields using workers from the Tenggerese community (both relatives and neighbors) is known as *Wong Gunung*, meaning to be a farmer on one's own land. But for the current conditions, because labor from *Wong Gunung* is still lacking, there are some farmers who decide to employ *Wong Ngare* (workers who come from the lowlands or outside the community).

According to Hefner (1999), there are several types of cooperative labour organisations in the region of the Tenggerese Mountains which have been used in the past. Some of them are continuously working to date, while others are abandoned for several reasons.

a. *Kroyokan keluarga* is an informal family gathering of very close kin with a relatively small group to perform a task intimately associated with the household's domestic needs. *Kroyokan* involves parents and their children or grandchildren, or siblings and their spouses and children. It is only used among very close kin and implies informality and undemanding tasks.

b. *Rewang* or helping out is used for vigorous tasks, such as weddings, preparing a field for planting, renovating a house, or preparing for a ritual festival. The traditional principle of *rewang* is cooperative assistance which does not need immediate returns or to be immediately repaid. People who do *rewang* are those upon whom one can depend without having to worry about immediate repayment of the favor. *Rewang* helpers are usually neighbors and relatives, but not the immediate family involved in 'family gathering' work.

c. *Gentenan* (turn-taking labor) is the most rigorously applied reciprocal cooperative form of labour. The rule of *gentenan* is strict reciprocity and hard work. Turn-taking labor is used for weddings or hoeing fields before planting. People hope or reciprocity as soon as after they lend labour in *gentenan*. To ensure such a balance, a household is expected to repay (*nyaur*) the *gentenan* favor as soon as possible. The Tenggerese people have an oft-cited aphorism:
'*Sing ditedo tok saged gentosan, tapi sanes kangge pados donyo*', meaning that unpaid reciprocal labor is conducted only when the crop is cultivated for daily consumption rather than for agricultural products for sale. Commonly, kin who join *gentenan* are kin in the same generation. Wijaya (2009) relates the term *Gintingan* to *Gentenan*, which means 'reciprocity'.

d. The final form of cooperative labour is *Sayan* in the upper slope area and *Soyo* in the midslope area ('festive cooperative labour'). *Sayan* is generally supposed to be a large, enjoyable activity, with abundant and special foods, and a relaxed working schedule. The food and festive air of *sayan* free its sponsors from the responsibility for repaying laborers. Commonly, the host will serve the food and invite more workers than required to show their dignity among each other related to their agricultural profit. According to Mauss (2002), a traditional institution is a form of reciprocal exchange, implemented by local people in a community as a positive return for what they have already received.

6.4.4 Administrative Structure of the Tenggerese Communities

In their book *Inventarisasi Komunitas Adat Tengger*, Warouw *et al.* (2012) suggest that social organisations in the Tenggerese community consist of two groups: a senior member who holds a respectful position and the shaman. The senior member can be a village head functioning on *adat* traditional principles. Both the senior member and village head have similar roles, which show no difference and overlapping functions. Roughly speaking, a person can represent both roles with the same function, where the person also executes additional governmental tasks. The election of the village head is directly done by votes from the locals.

On the other hand, the shaman is known as *pandhita*, who plays a role in leading *adat* ceremonies, guiding the youth to understand Hinduism, maintaining sacred objects, holding traditional consultations (offerings and marriage), and protecting the community. The *pandhita* has an unofficial position which may be transferred to another position when the *pandhita* can no longer do their tasks or decides to step down. This shaman is elected from villagers' discussions, based on a test, and is appointed by the local village government. The *pandhita* has to be fully aware of *adat* traditional principles and master spells cast in almost every traditional ceremony. The spells are passed down through generations in oral form, but these days, spells also often seem to come in written form.

Notes:

[6.1] Culture lies at the core of what in Indonesia is called *adat* (*cf.* Hauser-Schaublin 2013). The *adat* ceremony is basically a cultural ceremony.

[6.2] Based on the Tenggerese calendar, *sasi* (month) consists of 12 months in a year: *kasa, karo, katiga, kapat, kalima, kanem, kapitu, kawolu, kasanga, kasadasa, dhesta*, and *sadha.*

[6.3] *Padmasari* is a shrine in the shape of a small temple where offerings/*tamping* are usually placed. It is built in the front yard of each house of the Tenggerese community. *Tumang* is a stove in the shape of a fireplace used to cook rice and other food, and can function as a fireplace. *Danyang* is the place for the spirit who guards the central village, and this is also a station where *petra* is usually incinerated. *Danyang* is usually located under shady trees. *Petra* is a small doll made of particular flowers and leaves and it wears an outfit to represent a dead person.

[6.4] *Ngasah japa mantra* is improving particular prayer spells by Tenggerese shaman. *Mutih* is a form of fasting where the person doing it avoids eating foods containing salt and sugar, and no sexual intercourse is allowed during fasting. *Pati geni* is when switching on lamps and lighting up cigarettes is not allowed. The *Dukun* or shaman is the leader of the *adat* or religious ceremonies especially in Hinduism.

[6.5] *Ngeroan* represents housewives in the Tengger Region carrying offerings to the house of the village head where the shaman will cast a spell on the offerings.

[6.6] *Kentongan* is a wooden hollow cylinder with a hole along the cylinder to produce sound when beaten.

[6.7] *Saptawara* consists of the seven names for the days of the week: radite (Sunday), somo (Monday), anggara (Tuesday) budha (Wednesday), wraspati (Thursday), sukra (Friday), and tumpek (Saturday). Additionally, *pancawara* represents five names of day in Javanese and Bali culture (*pasaran*) such as *legi, paing, pon, wage*, and *kliwon*.

[6.8] *Bespa* is a small doll made of flowers and leaves symbolising a dead body.

CHAPTER VII UTILISATION PATTERNS OF THE PLURAL ELDERLY CARE SYSTEM

7.1 Behavioural Patterns of the Utilisation of the Elderly Care System

Based on the quantitative data analysis in the household surveys of 312 respondents from the four sample villages, Table 7.1 shows the distribution of the selected variables of the respondents over the variables of reported utilisation of the plural elderly care system in the four sample villages (N=312).

Table 7.1 Distribution of the Selected Sample Village Variables of the Respondents over the Variables of Reported Utilisation of the Plural Elderly Care System in the Four Sample Villages (N=312)

Sample Village	Utilisation of the Elderly Care Institutions and Organisations							
Name	Traditional		Transitional		Modern		Total	
	N	%	N	%	N	%	N	%
Argosari	72	83.7	14	16.3	0	0.0	86	100.0
Ditotrunan	56	81.2	2	2.9	11	15.9	69	100.0
Ngadas	51	71.8	20	28.2	0	0.0	71	100.0
Tlogomas	42	48.8	24	27.9	20	23.3	86	100.0
Total	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square = .000 / Cramer's V = .307

Table 7.1 indicates the most strongly significant correlation between the selected sample village variable over the differential utilisation of the plural elderly care system of respondents in the four sample villages ($\chi 2$ = .000), and extremely strong association with Cramer's V= .307.

The overall distribution in Table 7.1 of the Sample Village variables (N=312) over the reported utilisation rate of the plural elderly care system shows a very high utilisation rate of almost three-quarter (70.8%, n=221) of the the traditional elderly care institution, followed by a utlisation rate of almost one-fifth (19.2%, n=60) of the transitional elderly care organisation, and a utlisation rate of nearly one-tenth (9.9%, n=31) of the modern elderly care organisation.

Table 7.1 also shows that more than four-fifth (83.7%, n=72) of the respondents from Argosari prefer the traditional elderly care institutions while no one prefers the modern organisations. In Ngadas village which also represents the Tenggerese, almost three-quarter (71.8%, n=51) of the respondents prefer the traditional elderly care institutions and no one prefers the modern organisations. So, the Tenggerese people still believe and practice their tradition-related care of the elderly, *i.e.* the *bakti* and *sayan* local traditions.

In Tlogomas village, almost half of the respondents (48.8%, n=42) utilise traditional elderly care institutions, while more than one-third (27.9%, n=24) utilise transitional elderly care organisations, and one-quarter (23.3%, n=20) the modern organisations.

In Ditotrunan, more than four-fifth of the respondents (81.2%, n=56) utilise the traditional elderly care institutions, while more than one-tenth (15.9%, n=11) utilise the modern elderly care organisations, and only a few (2.9%, n=2) utilise the transitional organisations.

In general, the respondents reported to utilise the traditional elderly care institutions as their first preference, followed by the transitional elderly care organisations. Only, about 10% of respondents prefer to utilise the modern elderly care organisations. The majority of respondents still prefer to care of and support the elderly by themselves and with their family. In addition, one-fifth (19.2%, n=60) of the respondents prefer to utilise the transitional elderly care organisations, combining care and support from the family and the community. The community has a role in helping each family to support the elderly in the community.

The role of a community is not only in the health aspects, such as routine health checks in the *Posyandu Lansia*, but also as a form of social support for the elderly, such as activities in the *Karang Werda*, *i.e.* gymnastics exercises, religious activities, etc.

Based on the results indicated in Table 7.1, the Figure 7.1 presents a schematic representation of the reported utilisation patterns of the sample of respondents of household heads (100.0%, N=312), distributed over the three components of the plural elderly care system, sub-devided over the traditional elderly care institutions, transitional and modern elderly care organisations in the Tengger Region of East Java. The calculated distribution is also reflected in the subsequent bivariate, mutual correlations, multivariate, and multiple regression data analyses.

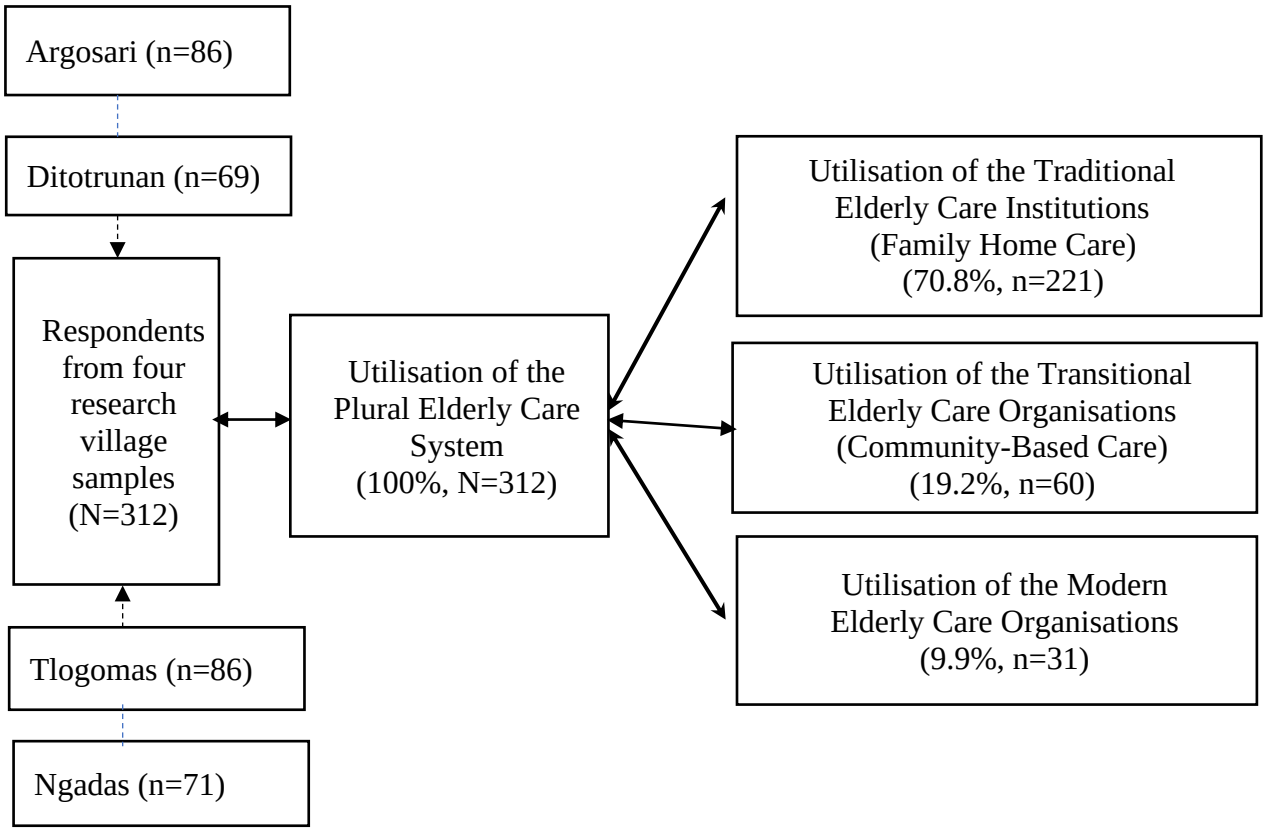


Figure 7.1 Schematic Representation of the distribution of 312 (100.0%) Household Respondents in the four villages over Their Reported Utilisation Patterns of the Plural Elderly Care System, subdivided into the three Elderly Care Institutions and Organisations in East Java.
Source: Adapted from the Computation of the Data set from the Fieldwork (2018).

The explanation of the fact, that only one-tenth (9.9%, n=31) of the respondents prefer to utilise the modern elderly care organisations in comparison with traditional and transitional organisations, the responsibility to care and support the elderly in modern elderly care organisations is that the care is provided by outsiders, such as nurses, doctors, or medical personnel, and paid for by the government or privately.

Although the outside providers of care possess certain skills and expertise in care of the elderly, the professional personnel seem to lack an understanding of the local culture in terms of indigenous customs, norms, values and knowledge systems. While the elderly generally prefer to stay with their families in the community, they also can live with other elderly in the same place such as *Panti Jompo* or get medical treatment in the *Puskesmas Santun Lansia*.

7.2 Bivariate Analysis of Selected Variables

The bivariate analysis is the starting point for the quantitative analysis of the data sets of the utilisation contacts reported by the household heads in the sample. As Slikkerveer (1990: 237) provides the calculation of the number of contacts between clients or patients and a particular health institution or organisation by recording the number of vitis or contacts to determine the level of utilisation, the case of the utilisation by the elderly of the plural elderly care system is expressed in scores, called utilisation rates. In this research, the utilisation scores refer to the reported utilisation by household heads of the elderly care institutions or organisations in the four selected villages, recorded for the period of time in the preceding year of the research. The technique of 'cross-tabulation' is selected as a method to execute the bivariate analysis to the present data. The method of cross-tabulation arranges the distribution of two categorical variables through frequencies, which hereafter illustrate the total number of elements in each combination of categories (*cf.* Slikkerveer 1990; Field 2009; Aiglsperger 2014).

The cross-tabulation refers to a frequency table, where the number of categorical variables is reflected in the table's rows and columns. In this way, the cross-tabulation method is used to establish the distribution of the independent and intervening variables of the respondents over their reported utilisation of the plural elderly care system and analyse the significance of the correlation of each independent variable with the dependent variables. Given the rather dominant, but so far neglected position of the traditional elderly care institutions, the bivariate analysis will focus on the utilisation of the traditional elderly care institutions in comparison to the transitional and modern elderly care organisation in the research area.

7.2.1 Bivariate Analysis of the Socio-Demographic Variables

Socio-demographic variables indicate the characteristics of the respondents in the society or community concerned, based on user-based indicators such as the relationhip with the elderly, age, sex, education, marital status, occupation, religion, and place of birth. The word 'society' in this context refers to a group of respondents of a selected society, classified by their sociological and demographic characteristics. The social sciences use socio-demographic variables to describe the profile of a particular group or sample, in order to explain people's behaviour in particular circumstances (*cf.* Manstead 2018). In line with the above-mentioned distribution of 312 (100.0%) household respondents in the four villages over their reported utilisation patterns of the plural elderly care system, Tables 7.2a – 7.2h show the overall distribution of the various socio-demographic variables of respondents over their reported utilisation rates of the plural elderly care system with a generally very high utilisation rate of the traditional elderly care institutions (*cf.* Figure 7.1).

Table 7.2a Distribution of the Socio-Demographic Variable 'Relation of Household Head with Elderly' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Relation of Household Head with Elderly	N	%	N	%	N	%	N	%
Parents	139	77.2	33	18.3	8	4.4	180	100.0
Parents-in-law	69	75.0	19	20.7	4	4.3	92	100.0
Grandparents	10	50.0	6	30.0	4	20.0	20	100.0
Other kin	3	17.6	2	11.8	12	70.6	17	100.0
Non kin	0	0.0	0	0.0	3	100.0	3	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .423

As regards the socio-demographic variable 'relation of household head with elderly', Table 7.2a shows the most strongly significant correlation between the household head's relationship with the elderly and their differential utilisation of the plural elderly care system ($\chi 2$ = .000). In line with these results, the association is extremely strong with Cramer's V= .423.

Table 7.2a also shows that more than two-third (77.2%, n=139) of respondents living with their parents report the highest utilisation of traditional elderly care institutions, followed by nearly one-fifth (17.6%, n=3) of respondents living with other kin (*e.g.* uncle or aunt) also reporting their utilisation of traditional elderly care institutions.

In comparison, almost one-third (30.0%, n=6) of respondents living with their grandparents report the highest utilisation of transitional elderly care organisations, while more than two-third (70.6%, n=12) of respondents living with other kin report the highest utilisation of the modern elderly care organisations.

Table 7.2b Distribution of the Socio-Demographic Variable 'Age' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Age	N	%	N	%	N	%	N	%
0-4 years	0	0.0	0	0.0	0	0.0	0	0.0
5-9 years	0	0.0	0	0.0	0	0.0	0	0.0
10-14 years	1	100.0	0	0.0	0	0.0	1	100.0
15-19 years	8	100.0	0	0.0	0	0.0	8	100.0
20-24 years	22	75.9	5	17.2	2	6.9	29	100.0
25-29 years	32	69.6	12	26.1	2	4.3	46	100.0
30-34 years	28	68.3	12	29.3	1	2.4	41	100.0
35-39 years	38	88.4	4	9.3	1	2.3	43	100.0
40-44 years	28	66.7	12	28.6	2	4.8	42	100.0
45-49 years	31	68.	7	15.6	7	15.6	45	100.0
50-54 years	27	71.1	5	13.2	6	15.8	38	100.0
55-59 years	5	45.5	2	18.2	4	36.4	11	100.0
60-64 years	1	16.7	1	16.7	4	66.7	6	100.0
65-69 years	0	0.0	0	0.0	0	0.0	0	0.0
70-74 years	0	0.0	0	0.0	1	100.0	1	100.0
75-79 years	0	0.0	0	0.0	0	0.0	0	0.0
80-84 years	0	0.0	0	0.0	1	100.0	1	100.0
85-89 years	0	0.0	0	0.0	0	0.0	0	0.0
90-94 years	0	0.0	0	0.0	0	0.0	0	0.0
>95 years	0	0.0	0	0.0	0	0.0	0	0.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = 0.000 / Cramer's V = .343

As regards the socio-demographic variable 'age', Table 7.2b shows the most strongly significant correlation between the age category of the respondents and their differential utilisation of the plural elderly care system ($\chi 2$ = .000), and a strong association with the Cramer's V= .343.

Table 7.2b also shows that almost nine-tenth (88.4%, n=38) of the respondents in the 35-39 age group, followed by almost three-quarter (75.9%, n=22) of respondents in the 20-24 age group reporting the second highest utilisation of traditional elderly care institutions. In comparison, two-third (29.3%, n=12) of the respondents in the 30-34 age group is reporting the highest utilisation of the transitional elderly care organisations, while two-third (66.7%, n=4) of the respondents in the 60-64 age group is reporting the highest utilisation of the modern elderly care organisations.

Table 7.2c Distribution of the Socio-Demographic Variable 'Education' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Education	N	%	N	%	N	%	N	%
No education	8	100.0	0	0.0	0	0.0	8	100.0
Elementary school	89	72.4	31	25.2	3	2.4	123	100.0
Junior high school	53	82.8	9	14.1	2	3.1	64	100.0
High school	53	60.9	17	19.5	17	19.5	87	100.0
University	18	60.0	3	10.0	9	30.0	30	100.0
Other	0	0.0	0	0.0	0	0.0	0.0	100.0
Utilisation rate	22	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .256

As regards the socio-demographic variable 'education', Table 7.2c shows the most strongly significant correlation between the education category of the respondents and their differential utilisation of the plural elderly care system ($\chi 2$ = .000), and a moderate association with the Cramer's V= .256.

Table 7.2c also shows that all (100.0%, n=8) the respondents with no education is reporting the highest utilisation of traditional elderly care institutions, followed by almost two-third (72.4%, n=89) of respondents with elementary school education reporting the second highest utilisation of traditional elderly care institutions.

In contrast, one-fourth (25.2%, n=31) of the respondents with elementary school education is reporting the highest utilisation of the transitional elderly care organisations, while less than one-third (30.0%, N=9) of the respondents with university education is reporting the highest utilisation of the modern elderly care organisations.

Table 7.2d Distribution of the Socio-Demographic Variable 'Place of Birth' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Place of Birth	N	%	N	%	N	%	N	%
In this place	188	74.3	51	20.2	14	5.5	253	100.0
Elsewhere	33	55.9	9	15.3	17	28.8	59	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .305

As regards the socio-demographic variable 'place of birth', Table 7.2d shows the most strongly significant correlation between the place of birth of the respondents and their differential utilisation of the plural elderly care system ($\chi 2$ = .000), and a similarly strong association with the Cramer's V= .305. Table 7.2d also shows that two-third (74.3%, n=188) of the respondents whose place of birth is in their village is reporting the highest utilisation of traditional elderly care institutions.

In contrast, one-fifth (20.2%, n=51) of the respondents whose place of birth is in their village is reporting the highest utilisation of the transitional elderly care organisations, while nearly one-third (28.8%, n=17) of the respondents born alsewhere is reporting the highest utilisation of the modern elderly care organisations.

Table 7.2e Distribution of the Socio-Demographic Variable 'Ethnicity' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Ethnicity	N	%	N	%	N	%	N	%
Javanese	104	64.6	27	16.8	30	18.6	161	100.0
Sundanese	0	0.0	0	0.0	0	0.0	0	0.0
Madurese	3	75.0	0	0.0	1	25.0	4	100.0
Chinese	0	0.0	0	0.0	0	0.0	0	0.0
Tenggerese	114	77.6	33	22.4	0	0.0	147	100.0
Utisation rate	221	70.8	60	19.2	3	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = 0.000 / Cramer's V = .225

As regards the socio-demographic variable 'ethnicity' Table 7.2e shows the most strongly significant correlation between the ethnicity of the respondents and their differential utilisation of the plural elderly care system ($\chi 2$ = .000), and a moderate association with the Cramer's V = .225.

Table 7.2e also shows that more than two-third (77.6%, n=114) of the respondents with the Tenggerese ethnicity is reporting the highest utilisation of traditional elderly care institutions, followed by about two-third (64.6%, n=104) of respondents with the Javanese ethnicity is reporting the second highest utilisation of traditional elderly care institutions.

Similarly, more than one-fifth (22.4%, n=33) of the respondents with the Tenggerese ethnicity is reporting the highest utilisation of the transitional elderly care organisations, while nearly one-fourth (25.0%, n=1) of the respondents with the Madurese ethnicity is reporting the highest utilisation of the modern elderly care organisations.

Table 7.2f Distribution of the Socio-Demographic Variable 'Marital Status' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Marital Status	N	%	N	%	N	%	N	%
Single	29	76.3	6	15.8	3	7.9	38	100.0
Married	178	72.7	48	19.6	19	7.8	245	100.0
Divorced	2	100.0	0	0.0	0	0.0	2	100.0
Widow	9	50.0	4	22.2	5	27.8	18	100.0
Widower	3	33.3	2	22.2	4	44.4	9	100.0
Other	0	0.0	0	0.0	0	0.0	0	0.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .004 / Cramer's V = .189

As regards the socio-demographic variable 'marital status', Table 7.2f shows a very strongly significant correlation between the marital status of the respondents and their differential utilisation of the plural elderly care system ($\chi 2$ = .004), and a moderate association with the Cramer's V= .225.

Table 7.2f also shows that more than two-third (76.3%, n=29) of the respondents with a single marital status is reporting the highest utilisation of traditional elderly care institutions, followed by more than two-third (72.7%, n=178) of the respondents with a married marital status similarly reporting the second highest utilisation of the traditional elderly care institutions.

In contrast, more than one-fifth (22.2%, n=4) of the respondents with a marital status of widow, as well as more than one-fifth (22.2%, n=2) of the respondents with a marital status of widower is reporting the highest utilisation of the transitional elderly care organisations.

In addition, nearly half (44.4%, n=4) of the respondents with a marital status of widower, as well as nearly one-third (27.8%, n=5) of the respondents with a marital status of widow is reporting the highest utilisation of the modern elderly care organisations.

Table 7.2g Distribution of the Socio-Demographic Variable 'Employment in Family Business/Farm' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Employment in Family Business/Farm	N	%	N	%	N	%	N	%
No	76	65.0	18	15.4	23	19.7	117	100.0
Yes	145	74.4	42	21.5	8	4.1	195	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .254

As regards the socio-demographic variable 'employment in family business/farm', Table 7.2g shows the most strongly significant correlation between the employment in family business/farm of the respondents and their differential utilisation of the plural elderly care system ($\chi 2$ = .000), with a moderate association with the Cramer's V= .254.

Table 7.2g also shows that more than two-third (74.4%, n=145) of the respondents with employment in family business/farm is reporting the highest utilisation of traditional elderly care institutions. In addition, one-fifth (21.5%, n= 42) of the respondents with employment in family business/farm is reporting the highest utilisation of transitional elderly care organisations. In contrast, nearly one-fifth (19.7%, n=23) of the respondents with no employment in family business/farm is reporting the highest utilisation of modern elderly care organisations.

Table 7.2h Distribution of the Socio-Demographic Variable 'Occupation' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Occupation	N	%	N	%	N	%	N	%
Farmer	115	77.7	33	22.3	0	0.0	148	100.0
Civil servant	9	69.2	1	7.7	3	23.1	13	100.0
Private employee	46	65.7	12	17.1	12	17.1	70	100.0
Teacher	4	100.0	0	0.0	0	0.0	4	100.0
Maid	0	0.0	0	0.0	0	0.0	0	0.0
Industrial labourer	11	73.3	2	13.3	2	13.3	15	100.0
Small traders/retailer	9	60.0	2	13.3	4	26.7	15	100.0
Entrepreneur	18	56.3	7	21.9	7	21.9	32	100.0
Military/policy	0	0.0	0	0.0	0	0.0	0	0.0
Craftsman	1	100.0	0	0.0	0	0.0	1	100.0
Retired	0	0.0	1	33.3	2	66.7	3	100.0
Housewife	1	100.0	0	0.0	0	0.0	1	100.0
Security	0	0.0	1	100.0	0	0.0	1	100.0
Driver	7	100.0	0	0.0	0	0.0	7	100.0
Guide	0	0.0	0	0.0	0	0.0	0	0.0
Religious leader	0	0.0	0	0.0	0	0.0	0	0.0
Other	0	0.0	1	50.0	1	50.0	2	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .315

As regards the socio-demographic variable 'occupation', Table 7.2h shows the most strongly significant correlation between of the respondents occupation and their differential utilisation of the plural elderly care system ($\chi 2$ = .000), and a strong association with Cramer's V value of .315.

Table 7.2h also shows that more than three-fourth (77.7%, n=115) of the respondents with the occupation of farmer is reporting their highest utilisation of traditional elderly care institutions, followed by nearly three-fourth (73.3%, n=11) of the respondents with the occupation of industrial labourer similarly reporting their highest utilisation of traditional elderly care institutions. In addition, more than one-fifth (22.3%, n=33) of the respondents with the occupation of farmer is reporting the highest utilisation of transitional elderly care organisations.

In contrast, more than one-fourth (26.7%. n=4) of the respondents with the occupation of small traders or retailer is reporting the highest utilisation of the modern elderly care organisations.

The explanation of the most strongly significant correlations between respondents with selected socio-demographic variables and their reported highest utilisation of the traditional elderly care institutions is that the majority of respondents in this context continue to practice the generations-long local traditions of *bakti* and *sayan* of their ethno-cultural subgroups in the researh area.

The fact that the variable of the selected socio-demographic variables of the respondents shows the most strongly significant correlation with their utilisation of the traditional elderly care institution implies that this variable is very important for the proposed development of integrated elderly care in the Tengger Region of East Java.

7.2.2 Bivariate Analysis of the Psycho-Social Variables

In line with the above-mentioned correlations of the socio-demographic variables, Tables 7.3a – 7.3i show that the overall distribution of the various psycho-social variables of respondents (N=312) over their reported utilisation rates of the plural elderly care system, are generally indicating very high utilisation rate of the traditional elderly care institutions.

Table 7.3a Distribution of the Psycho-Social Variable 'Knowledge of Traditional Elderly Care Institutions' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Knowledge of Traditional Elderly Care Institutions	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	0	0.0	0	0.0	0	0.0	0	0.0
Very little knowledge	4	100.0	0	0.0	0	0.0	4	100.0
Little knowledge	20	58.8	12	35.3	2	5.9	34	100.0
Average	1	100.0	0	0.0	0	0.0	1	100.0
Much knowledge	140	69.7	36	17.9	25	12.4	201	100.0
Very much knowledge	56	77.8	12	16.7	4	5.6	72	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .175 / Cramer's V = .136

As regards the psycho-social variable 'knowledge of traditional elderly care institutions', Table 7.3a shows a non-significant correlation between the 'knowledge of traditional elderly care institutions' of the respondents and their differential utilisation of the plural elderly care system ($\chi 2$ = .175), while the score of Cramer's V value of .136 indicates a very weak association between this variable and the utilisation variables of the Plural Elderly Care System.

Although Table 7.3a also shows that more than three-fourth (77.8%, n= 56) of the respondents with very much knowledge of traditional elderly care institutions is reporting their highest utilisation of traditional elderly care institutions, followed by nearly three-fourth (69.7%, n=140) of the respondents with much knowledge of traditional elderly care institutions similarly reporting their highest utilisation of traditional elderly care institutions, there is no significant correlation between these psycho-social variables and the utilisation variables found.

As regards the psycho-social variable 'knowledge of transitional elderly care organisations', Table 7.3b shows the most strongly significant correlation (χ^2 = .000) and an extremely strong association with the Cramer's V value of .418.

Table 7.3b Distribution of the Psycho-Social Variable 'Knowledge of Transitional Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Knowledge of Transitional Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	35	97.2	0	0.0	1	2.8	36	100.0
Very little knowledge	70	84.3	7	8.4	6	7.2	83	100.0
Little knowledge	93	78.8	10	8.5	15	12.7	118	100.0
Average	0	0.0	1	100.0	0	0.0	1	100.0
Much knowledge	20	34.5	30	51.7	8	13.8	58	100.0
Very much knowledge	3	18.8	12	75.0	1	6.3	16	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .418

Table 7.3b also shows that nearly all (97.2%, n=35) of the respondents with no knowledge of transitional elderly care organisations are reporting their highest utilisation of traditional elderly care institutions, followed by nearly three-fourth (84.3%, n=70) of the respondents with very little knowledge of transitional elderly care organisations similarly reporting their highest utilisation of traditional elderly care institutions. In addition, three-fourth (75.0%, n=12) of the respondents with very much knowledge of transitional elderly care organisations is reporting the highest utilisation of transitional elderly care organisations. In contrast, more than one-tenth (13.8%, n=8) of the respondents with much knowledge of transitional elderly care organisations is reporting the highest utilisation of the modern elderly care organisations.

Table 7.3c Distribution of the Psycho-Social Variable 'Knowledge of Modern Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Knowledge of Modern Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	63	90.0	7	10.0	0	0.0	70	100.0
Very little knowledge	84	71.8	32	27.4	1	0.9	117	100.0
Little knowledge	62	66.7	21	22.6	10	10.8	93	100.0
Average	0	0.0	0	0.0	1	100.0	1	100.0
Much knowledge	11	39.3	0	0.0	17	60.7	28	100.0
Very much knowledge	1	33.3	0	0.0	2	66.7	3	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .457

As regards the psycho-social variable 'knowledge of modern elderly care organisations', Table 7.3c shows the most strongly significant correlation (χ^2 = .000) and an extremely strong association with Cramer's V value of .457.

Table 7.3c also shows that nearly all (90.0%, n=63) of the respondents with no knowledge of modern elderly care organisations are reporting their highest utilisation of traditional elderly care institutions, followed by nearly three-fourth (71.8%, n=84) of the respondents with very little knowledge of modern elderly care organisations similarly reporting their highest utilisation of traditional elderly care institutions. In addition, more than one-fourth (27.4%, n=32) of the respondents with very little knowledge of modern elderly care organisations is reporting their highest utilisation of transitional elderly care organisations. In contrast, nearly two-third (60.7%, n=17) of the respondents with much knowledge of modern elderly care organisations is reporting the highest utilisation of the modern elderly care organisations.

Table 7.3d Distribution of the Psycho-Social Variable 'Belief in Traditional Elderly Care Institutions' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Belief in Traditional Elderly Care Institutions	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	0	0.0	0	0.0	0	0.0	0	0.0
Very little belief	1	100.0	0	0.0	0	0.0	1	100.0
Little belief	7	87.5	0	0.0	1	12.5	8	100.0
Average	0	0.0	0	0.0	0	0.0	0	100.0
Much belief	116	65.5	35	19.8	26	14.7	177	100.0
Very much belief	97	77.0	25	19.8	4	3.2	126	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .035 / Cramer's V = .150

As regards the psycho-social variable 'belief in traditional elderly care institutions', Table 7.3d shows a strongly significant correlation (χ^2 = .035) and a weak association with the Cramer's V value of .150. Table 7.3d also shows that nearly all (87.5%, n=7) of the respondents with little belief in the traditional elderly care institutions are reporting their highest utilisation of traditional elderly care institutions, followed by more than two-fourth (77.0%, n=97) of the respondents with very much believe in traditional elderly care institutions similarly reporting their highest utilisation of traditional elderly care institutions. In addition, nearly one-fifth (19.8%, n=35) of the respondents with much believe in traditional elderly care institutions is reporting the highest utilisation of the transitional elderly care organisations

Table 7.3e Distribution of the Psycho-Social Variable 'Belief in Transitional Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Belief in Transitional Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	35	97.2	0	0.0	1	2.8	36	100.0
Very little belief	59	96.7	0	0.0	2	3.3	61	100.0
Little belief	87	85.3	0	0.0	15	14.7	102	100.0
Average	2	100.0	0	0.0	0	0.0	2	100.0
Much belief	35	36.5	49	51.0	12	12.5	96	100.0
Very much belief	3	20.0	11	73.3	1	6.7	15	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .497

As regards the psycho-social variable 'belief in transitional elderly care organisations', Table 7.3e shows the most strongly significant correlation (χ^2 = .000) and an extremely strong association with the Cramer's V value .497.

Table 7.3e also shows that nearly all (97.2%, n=35) of the respondents with no belief in the transitional elderly care organisations are reporting their highest utilisation of traditional elderly care institutions, followed by more than nine-tenth (96.7%, n=59) of the respondents with very little believe in transitional elderly care organisations similarly reporting their highest utilisation of traditional elderly care institutions.

In contrast, more than two-third (73.3%, n=11) of the respondents with very much believe in transitional elderly care organisations is reporting the highest utilisation of the transitional elderly care organisations.

In addition, nearly one-fifth (14.7%, n=15) of the respondents with little believe in transitional elderly care organisations is reporting the highest utilisation of the modern elderly care organisations.

Table 7.3f Distribution of the Psycho-Social Variable 'Belief in Modern Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Belief in Modern Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	63	90.0	7	10.0	0	0.0	70	100.0
Very little belief	106	71.6	39	26.4	3	2.0	148	100.0
Little belief	50	69.4	13	18.1	9	12.5	72	100.0
Average	1	12.5	0	0.0	7	87.5	8	100.0
Much belief	1	7.1	1	7.1	12	85.7	14	100.0
Very much belief	0	0.0	0	0.0	0	0.0	0	0.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .524

As regards the psycho-social variable 'belief in modern elderly care organisations', Table 7.3f shows the most strongly significant correlation (χ^2 = .000) and an extremely strong association with the Cramer's V value .524.

Table 7.3f also shows that nine-tenth (90.0%, n=63) of the respondents with no belief in the modern elderly care organisations are reporting their highest utilisation of traditional elderly care institutions, followed by more than nine-tenth (71.6%, n=106) of the respondents with very little believe in modern elderly care organisations similarly reporting their highest utilisation of traditional elderly care institutions.

In contrast, nearly one-fourth (26.4%, n=39) of the respondents with very little believe in modern elderly care organisations is reporting the highest utilisation of the transitional elderly care organisations.

In addition, more than four-fifth (87.5%, n=7) of the respondents with average belief in modern elderly care organisations is reporting the highest utilisation of the modern elderly care organisations.

Table 7.3g Distribution of the Psycho-Social Variable 'Opinion on the Traditional Elderly Care Institutions' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Opinion on the Traditional Elderly Care institutions	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
No opinion	0	0.0	0	0.0	0	0.0	0	0.0
Very negative opinion	0	0.0	0	0.0	0	0.0	0	0.0
Negative opinion	8	100.0	0	0.0	0	0.0	8	100.0
Neutral	1	100.0	0	0.0	0	0.0	1	100.0
Positive opinion	112	71.3	25	15.9	20	12.7	157	100.0
Very positive opinion	100	68.5	35	24.0	11	7.5	146	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .203 / Cramer's V = .117

As regards the psycho-social variable 'opinion on the traditional elderly care institutions', Table 7.3g shows a non-significant correlation (χ^2 = .203) and a very weak association with the Cramer's V value .117.

Table 7.3g also shows that all (100.0%, n=8) of the respondents with a negative opinion on the traditional elderly care institutions are still reporting their highest utilisation of traditional elderly care institutions, while nearly three-fourth (68.5%, n=100) of the respondents with a very positive opinion on traditional elderly care institutions are reporting their highest utilisation of traditional elderly care institutions. In addition, nearly one-fourth (24.0%, n=35) of the respondents with a very positive opinion on traditional elderly care institutions is reporting the highest utilisation of the transitional elderly care organisations. In contrast, more than nine-tenth (12.7%, n=20) of the respondents with a positive opinion on traditional elderly care institutions is reporting the highest utilisation of the modern elderly care organisations.

Table 7.3h Distribution of the Psycho-Social Variable' Opinion on the Transitional Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Opinion on the Transitional Elderly Care organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
No opinion	34	97.1	0	0.0	1	2.9	35	100.0
Very negative opinion	65	95.6	0	0.0	3	4.4	68	100.0
Negative opinion	89	85.6	1	1.0	14	13.5	104	100.0
Neutral	2	100.0	0	0.0	0	0.0	2	100.0
Positive opinion	29	33.3	47	54.0	11	12.6	87	100.0
Very positive opinion	2	12.5	12	75.0	2	12.5	16	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .511

As regards the psycho-social variable 'opinion on the transitional elderly care organisations', Table 7.3h shows the most strongly significant correlation (χ^2 = .000) and an extremely strong association with the Cramer's V= .511. Table 7.3h also shows that almost all (97.1%, n=34) of the respondents with no opinion on the transitional elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, similarly followed by almost all (95.6%, n=65) of the respondents with very negative opinion on the transitional elderly care organisations, also reporting their highest utilisation of traditional elderly care institutions. In contrast, nearly three-fourth (75.0%, n=12) of the respondents with very positive opinion on transitional elderly care organisations is reporting the highest utilisation of the transitional elderly care organisations. In addition, more than one-tenth (12.6%, n=11) of the respondents with a positive opinion on transitional elderly care organisations is reporting the highest utilisation of the modern elderly care organisations.

Table 7.3i Distribution of the Psycho-Social Variable 'Opinion on the Modern Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Opinion on the Modern Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
No opinion	64	90.1	7	9.9	0	0.0	71	100.0
Very negative opinion	104	72.2	38	26.4	2	1.4	144	100.0
Negative opinion	50	67.6	13	17.6	11	14.9	74	100.0
Neutral	0	0.0	0	0.0	11	100.0	11	100.0
Positive opinion	3	30.0	2	20.0	5	50.0	10	100.0
Very positive opinion	0	0.0	0	0.0	2	100.0	2	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .517

As regards the psycho-social variable ‘opinion on the modern elderly care organisations’, Table 7.3i shows the most strongly significant correlation (χ^2 = .000) and an extremely strong association with the Cramer’s V= .517.

Table 7.3i also shows that almost all (90.1%, n=64) of the respondents with no opinion on the modern elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, similarly followed by almost three-fourth (72.2%, n=104) of the respondents with a very negative opinion on the modern elderly care organisations, also reporting their highest utilisation of traditional elderly care institutions.

In addition, more than one-fourth (26.4%, n=38) of the respondents with a very negative opinion on modern elderly care organisations is reporting the highest utilisation of the transitional elderly care organisations. In contrast, more than one-tenth (100.0%, n=11) of the respondents with a neutral on modern elderly care organisations is reporting the highest utilisation of the modern elderly care organisations.

The explanation of the most strongly significant correlations between respondents with selected psyho-social variables on the plural elderly care system, reporting their highest utilisation of traditional elderly care institutions is further supporting the result, that the majority of respondents continue to utilise the traditional elderly care institutions in their villages, where the transitional and modern elderly care organisations have not yet been fully accepted.

The fact that the psyho-social variables the respondents shows a most strongly significant correlation with their utilisation of the traditional elderly care institution emphasises again that this variable is very important for the proposed development of integrated elderly care in the Tengger Region of East Java

7.2.3 Bivariate Analysis of Perceived Needs Variables

The distribution of the independent perceived needs variable of respondents over the dependent variables of the utilisation of the plural elderly care system indicates in general a most strongly significant correlation, as presented in the following Table 7.4.

Table 7.4 Distribution of the Perceived Need Variable ‘Perceived Needs of Using the Plural Elderly Care System’ over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Perceived Needs of Using the Plural Elderly Care System	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
No perceived needs	0	0.0	0	0.0	0	0.0	0	0.0
Financial need	3	42.9	1	14.3	3	42.9	7	100.0
Socio-cultural need	39	76.5	11	21.6	1	2.0	51	100.0
Health need	14	60.9	3	13.0	6	26.1	23	100.0
Emotional need	156	75.4	36	17.4	15	7.2	207	100.0
Primary need	9	37.5	9	37.5	6	25.0	24	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson’s Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer’s V = .236

As regards the perceived need variable ‘perceived needs for using the plural elderly care system’, Table 7.4 shows the most strongly significant correlation (χ^2 = .000) and an extremely strong association with the Cramer’s V= .517. Table 7.4 also shows that more than three-fourth (76.5%, n=39) of the respondents with perceived socio-cultural needs of elderly care are reporting their highest utilisation of the traditional elderly care institutions, followed by three-fourth (75.4%, n=156) of the respondents with an emotional need of elderly care is also reporting their highest utilisation of traditional elderly care institutions.

In addition, more than one-third (37.5%, n=9) of the respondents with perceived primary need of elderly care is reporting the highest utilisation of the transitional elderly care organisations. In contrast, more than two-fifth (42.9%, n=3) of the respondents with perceived financial need of elderly care is reporting the highest utilisation of the modern elderly care organisations.

The explanation of the most strongly significant correlations between respondents with perceived socio-cultural needs of elderly care reporting their highest utilisation of traditional elderly care institutions in comparison with the most strongly significant correlations between respondents with perceived financial needs of elderly care reporting their highest utilisation of modern elderly care organisations is that perceived socio-cultural needs of elderly care are accommodated within the traditional elderly care institutions, while perceived financial needs of elderly care are met within the modern elderly care organisations.

The fact that the variable 'perceived needs for using the plural elderly care system' of the respondents shows a most strongly significant correlation with their utilisation of the traditional elderly care institution *versus* the modern elderly care organisation emphasises the importance of this variable for the proposed development of integrated elderly care in the Tengger Region of East Java.

7.2.4 Bivariate Analysis of Enabling Variables

The distribution of the selected independent enabling variables of respondents over the dependent variables of the utilisation of the plural elderly care system indicates in general a most strongly significant correlation, as presented in the following Tables 7.5a – 7.5c.

Table 7.5a Distribution of the Enabling Variable 'Monthly Income of the Household Head' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Monthly Income of the Household Head	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	0	0.0	0	0.0	0	0.0	0	0.0
Rp. 1-1.000.000	37	68.5	11	20.4	6	11.1	54	100.0
Rp. 1.001.000-2.000.000	102	81.0	18	14.3	6	4.8	126	100.0
Rp. 2.001.000-3.000.000	47	61.8	18	23.7	11	14.5	76	100.0
Rp. 3.001.000-4.000.000	17	58.6	5	17.2	7	24.1	29	100.0
Rp. > Rp. 4.001.000	18	66.7	8	29.6	1	3.7	27	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .013 / Cramer's V = .176

As regards the enabling variable 'monthly income of household head', Table 7.5a shows a strongly significant correlation (χ^2 = .013) and a weak association with the Cramer's V= .176.

Table 7.5a also shows that more than four-fifth (81.0%, n=102) of the respondents with a monthly income of the Household Head of Rp. 1.001.000-2.000.000 are reporting their highest utilisation of the traditional elderly care institutions, followed by more than two-third (68.5%, n=37) of the respondents with a monthly income of the Household Head of Rp. 1-1.000.000 is also reporting their highest utilisation of traditional elderly care institutions.

In addition, nearly one-third (29.6%, n=8) of the respondents with a monthly income of the household head of > Rp. 4.001.000 is reporting the highest utilisation of the transitional elderly care organisations.

In contrast, more than two-fifth (24.1%, n=7) of the respondents with a monthly income of the household head of Rp. 3.001.000-4.000.000 is reporting the highest utilisation of the modern elderly care organisations.

Table 7.5b Distribution of the Enabling Variable 'Monthly Income of the Household Members' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Monthly Income of the Household Members	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	7	33.3	5	23.8	9	42.9	21	100.0
Rp. 1-1.000.000	44	80.0	8	14.5	3	5.5	55	100.0
Rp. 1.001.000-2.000.000	80	71.4	23	20.5	9	8.0	112	100.0
Rp. 2.001.000-3.000.000	42	68.9	15	24.6	4	4.6	61	100.0
Rp. 3.001.000-4.000.000	20	76.9	3	11.5	3	11.5	26	100.0
Rp. >4.001.000	28	75.7	6	16.2	3	8.1	37	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .231

As regards the enabling variable 'monthly income of the household members', Table 7.5b shows the most strongly significant correlation (χ^2 = .000) and a moderate association with the Cramer's V= .231.

Table 7.5b also shows that four-fifth (80.0%, n=44) of the respondents with a monthly income of the household members of Rp. 1-1.000.000 are reporting their highest utilisation of the traditional elderly care institutions, followed by more than three-fourth (76.9%, n=20) of the respondents with a monthly income of the household members of Rp. 3.001.000-4.000.000 similarly reporting their highest utilisation of traditional elderly care institutions. In addition, nearly one-fourth (24.6%, n=15) of the respondents with a monthly income of the household members of Rp.2.001.000-3.000.000 is reporting the highest utilisation of the transitional elderly care organisation.

In contrast, more than two-fifth (42.9%, n=9) of the respondents with no monthly income of the household members is reporting the highest utilisation of the modern elderly care organisations.

Table 7.5c Distribution of the Enabling Variable 'Socio-Economic Status (SES)' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System (N=312							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Socio-Economic Status (SES)	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
Very poor	6	66.7	1	11.1	2	22.2	9	100.0
Poor	48	81.4	8	13.6	3	5.1	59	100.0
Average	29	54.7	11	20.8	13	24.5	53	100.0
Rich	79	71.2	25	22.5	7	6.3	111	100.0
Very rich	59	73.8	15	18.8	6	7.5	80	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .007 / Cramer's V = .184

As regards the variable 'sosio-economic status', Table 7.5c shows a very strongly significant correlation (χ^2 = .007) and weak association with Cramer's V= .184.

Table 7.5c also shows that more than four-fifth (81.4%, n=48) of the respondents with a poor socio-economic status are reporting their highest utilisation of the traditional elderly care institutions. In comparison, more than one-fifth (22.5%, n=25) of the respondents with a rich socio-economic status is reporting the highest utilisation of the transitional elderly care organisations.

In contrast, nearly one-fourth-fifth (24.5%, n=13) of the respondents with an average socio-economic status is reporting the highest utilisation of the modern elderly care organisations.

The explanation of the very strongly significant correlations between respondents with selected enabling variables reporting their highest utilisation of traditional elderly care institutions, is that the enabling variables is influencing the utilisation behaviour of the majority of respondents, largely because of the cost of care concerned. The fact that the enabling variable of the respondents shows a

very strongly significant correlation with their utilisation of the traditional elderly care institution *versus* the modern elderly care organisation, emphasises the importance of this enabling variable for the proposed development of integrated elderly care in the Tengger Region.

7.2.5 Bivariate Analysis of Institutional Variables

The distribution of the independent institutional variables of respondents over the dependent variables of the utilisation of the plural elderly care system indicates in general a most strongly significant correlation, as presented in the following Tables 7.6a – 7.6e. As regards the institutional variable 'financial support availability from traditional elderly care institutions', Table 7.6a shows a most strongly significant correlation ($\chi^2 = .000$) and moderate association with Cramer's V= .227.

Table 7.6a Distribution of the Institutional Variable 'Financial support availability from Traditional Elderly Care Institutions' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Financial support availability from Traditional Elderly Care Institutions	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	48	64.0	24	32.0	3	4.0	75	100.0
Very little	9	64.3	5	35.7	0	0.0	14	100.0
Little	36	61.0	14	23.7	9	15.3	59	100.0
Average	1	50.0	0	0.0	1	50.0	2	100.0
Much	84	73.7	15	13.2	15	13.2	114	100.0
Very much	43	89.6	2	4.2	3	6.3	48	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .227

Table 7.6a also shows that nearly nine-tenth (89.6%, n=43) of the respondents with very much financial support availability from traditional elderly care institutions are reporting their highest utilisation of the traditional elderly care institutions, followed by nearly three-fourth (73.7%, n=84) of respondents with much financial support availability from traditional elderly care institutions are reporting their highest utilisation of the traditional elderly care institutions.

In contrast, more than one-third (35.7%, n=5) of the respondents with very little financial support availability from traditional elderly care institutions is reporting the highest utilisation of the transitional elderly care organisations. Similarly, nearly one-fifth (15.3%, n=9) of the respondents with little financial support availability from traditional elderly care institutions is reporting their highest utilisation of the modern elderly care organisations.

Table 7.6b Distribution of the Institutional Variable 'Geographical Accessibility of Transitional Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Geographical Accessibility of Transitional Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	82	86.3	6	6.3	7	7.4	95	100.0
Very difficult	22	81.5	3	11.1	2	7.4	27	100.0
Difficult	69	72.6	13	13.7	13	13.7	95	100.0
Average	1	33.3	2	66.7	0	0.0	3	100.0
Easy	41	52.6	29	37.2	8	10.3	78	100.0
Very easy	6	42.9	7	50.0	1	7.1	14	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .272

As regards the institutional variable 'geographical accessibility of transitional elderly care organisations', Table 7.6b shows a most strongly significant correlation (χ^2 = .000) and moderate association with Cramer's V= .272.

Table 7.6b also shows that nearly nine-tenth (86.3%, n=82) of the respondents with none geographical accessibility of transitional elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, followed by more than four-fifth (81.5%, n=22) of respondents with very difficult geographical accessibility of transitional elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions.

In contrast, more than two-third (66.7%, n=2) of the respondents with average geographical accessibility of transitional elderly care organisations is reporting their highest utilisation of the transitional elderly care organisations. Similarly, nearly one-fifth (13.7%, n=13) of the respondents with difficult geographical accessibility of transitional elderly care organisations is reporting their highest utilisation of the modern elderly care organisations.

Table 7.6c Distribution of the Institutional Variable 'Accessibility Cost to Modern Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations		Total	
Accessibility Cost to Modern Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
No cost	210	76.6	53	19.3	11	4.0	274	100.0
Rp. 1-500.000	2	100.0	0	0.0	0	0.0	2	100.0
Rp. 501.000-1.000.000	2	66.7	1	33.3	0	0.0	3	100.0
Rp. 1.001.000-1.500.000	0	0.0	1	7.7	12	92.3	13	100.0
Rp. 1.501.000-2.000.000	1	14.3	2	28.6	4	57.1	7	100.0
Rp. > Rp. 2.001.000	6	46.2	3	23.1	4	30.8	13	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .469

As regards the institutional variable 'accessibility cost to modern elderly care organisations', Table 7.6c shows a most strongly significant correlation (χ^2 = .000) and moderate association with Cramer's V= .469.

Table 7.6c also shows that more than two-third (76.6%, n=210) of the respondents with no accessibility cost to modern elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, followed by more than two-third (66.7%, n=2) of respondents with accessibility cost of Rp. 501.000-1.000.000 to modern elderly care organisations are similarly reporting their highest utilisation of the traditional elderly care institutions.

In addition, nearly one-fifth (28.6%, n=2) of the respondents with accessibility cost of Rp. 1.501.000-2.000.000 to modern elderly care organisations is reporting their highest utilisation of the transitional elderly care organisations. In contrast, nearly all (92.3%, n=12) of the respondents with accessibility cost of Rp. Rp. 1.001.000-1.500.000 to modern elderly care organisations is reporting their highest utilisation of the modern elderly care organisations.

As regards the institutional variable 'financial support availability from modern elderly care organisations', Table 7.6d shows a very strongly significant correlation (χ^2 = .006) and a weak association with Cramer's V= .185. Table 7.6d also shows that more than two-third (72.3%, n=206) of the respondents with no financial support from modern elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, followed by more than two-third (70.6%, n=12) of respondents with very little financial support from modern elderly care organisations, similarly reporting their highest utilisation of the traditional elderly care institutions.

Table 7.6d Distribution of the Institutional Variable 'Financial Support availability from Modern Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System							
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisastions		Total	
Financial Support availability from Modern Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	206	72.3	56	19.6	23	8.1	285	100.0
Very little	12	70.6	1	5.9	4	23.5	17	100.0
Little	1	20.0	2	40.0	2	40.0	5	100.0
Average	0	0.0	0	0.0	0	0.0	0	0.0
Much	1	25.0	1	25.0	2	50.0	4	100.0
Very much	1	100.0	0	0.0	0	0.0	1	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .006 / Cramer's V = .185

In addition, two-fifth (40.0%, n=2) of the respondents with little financial support from modern elderly care organisations is reporting their highest utilisation of the transitional elderly care organisations. Similarly, a half (50.0%, n=2) of the respondents with much financial support from modern elderly care organisations is reporting their highest utilisation of the modern elderly care organisations.

Table 7.6e Distribution of the Institutional Variable 'Geographical Accessibility of Modern Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System						Total	
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations			
Geographical Accessibility of Modern Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	175	73.2	53	22.2	11	4.6	239	100.0
Very difficult	35	67.3	5	9.6	12	23.1	52	100.0
Difficult	10	58.8	2	11.8	5	29.4	17	100.0
Average	0	0.0	0	0.0	0	0.0	0	0.0
Easy	1	33.3	0	0.0	2	66.7	3	100.0
Very easy	0.0	0	0	0.0	1	100.0	1	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .275

As regards the institutional variable 'geographical accessibility of modern elderly care organisations', Table 7.6e shows a most strongly significant correlation (χ^2 = .000) and moderate association with Cramer's V= .275.

Table 7.6e also shows that nearly two-third (73.2%, n=175) of the respondents with none geographical accessibility of modern elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, followed by more than two-third (67.3%, n=35) of respondents with very difficult geographical accessibility of modern elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions.

Similarly, nearly one-fourth (22.2%, n=53) of the respondents with none geographical accessibility of modern elderly care organisations is reporting their highest utilisation of the transitional elderly care organisations. In contrast, nearly two-third (66.7%, n=2) of the respondents with easy geographical accessibility of modern elderly care organisations is reporting their highest utilisation of the modern elderly care organisations.

The explanation of the most strongly significant correlations between respondents with selected institutional variables reporting their highest utilisation of traditional elderly care institutions, is that

they have no geographical difficulty to utilise the traditional elderly care institutions is in their local communities.
The fact, that respondents with different institutional variables are showing a most strongly significant correlation with their utilisation of the traditional elderly care institution, supports the importance of this institutional variable for the proposed development of integrated elderly care in the Tengger Region.

7.2.6 Bivariate Analysis of Environmental Variables

The distribution of the independent Environmental variables of respondents over the dependent variables of the utilisation of the plural elderly care system indicates in general a most strongly significant correlation, as presented in the following Table 7.7.

Table 7.7 Distribution of the Environmental Variable 'Type of Residence' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System						Total	
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations			
Type of Residence	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
Rural	123	78.3	34	21.7	0	0.0	157	100.0
Semi urban	56	81.2	22.9	11	11	69.0	100.0	100.0
Urban	42	48.8	24	27.9	20	23.3	86	100.0
Other	0	0.0	0	0.0	0	0.0	0	0.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .279

As regards the environmental variable 'type of residence', Table 7.7 shows a most strongly significant correlation (χ^2 = .000) and moderate association with Cramer's V= .279.

Table 7.7 also shows that more than four-fifth (81.2%, n=56) of the respondents whose residence is in a semi-urban area are reporting their highest utilisation of the traditional elderly care institutions, followed by nearly four-fifth (78.3%, n=123) of respondents whose residence is in a rural area are reporting their highest utilisation of the traditional elderly care institutions.

In addition, nearly one-fourth (27.9%, n=24) of the respondents whose residence is in an urban area are reporting their highest utilisation of the transitional elderly care organisations.

In comparison, nearly one-fifth (69.0%, n=11) of the respondents whose residence is in a semi-urban area is reporting their highest utilisation of the modern elderly care organisations.

The explanation of the most strongly significant correlations between respondents whose residence is in a rural or semi-urban area reporting their highest utilisation of traditional elderly care institutions, is that they prefer to utilise the traditional elderly care institutions is in their local communities.

The fact, that the environmental variable 'type of residence' of respondents whose residence is in different areas is showing a most strongly significant correlation with their utilisation of the traditional elderly care institution, supports the importance of this environmental variable for the proposed development of integrated elderly care in the Tengger Region.

7.2.7 Bivariate Analysis of Intervening Variables

The distribution of the independent Intervening variables of respondents over the dependent variables of the utilisation of the plural elderly care system indicates in general a most strongly significant correlation, as presented in the following Tables 7.8a – 7.8f.

As regards the intervening variables 'impact of government regulation on the traditional elderly care institutions', Table 7.8a shows a most strongly significant correlation (χ^2 = .000) and a moderate association with Cramer's V= .241.

Table 7.8a Distribution of the Intervening Variable 'Impact of Government Regulation on Traditional Elderly Care Institutions' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System						Total	
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations			
Impact of Government Regulation on the Traditional Elderly Care Institutions	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	36	75.0	11	22.9	1	2.1	48	100.0
Very little	84	82.4	18	17.6	0	0.0	102	100.0
Little	38	70.4	8	14.8	8	14.8	54	100.0
Average	10	71.4	1	7.1	3	21.4	14	100.0
Much	47	58. 0	17	21.0	17	21.0	81	100.0
Very much	6	46.2	5	38.5	2	15.4	13	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .241

Table 7.8a shows that more than four-fifth (82.4%, n=84) of the respondents who experienced very little impact of government regulation on the traditional elderly care institutions are reporting their highest utilisation of the traditional elderly care institutions.

In contrast, nearly two-fifth (38.5%, n=5) of the respondents who experienced very much impact of government regulation on the traditional elderly care institutions are reporting their highest utilisation of the transitional elderly care organisations.

In comparison, nearly one-fifth (21.4%, n=3) of the respondents who experienced average impact of government regulation on the traditional elderly care institutions are reporting their highest utilisation of the modern elderly care organisations.

Table 7.8b Distribution of the Intervening Variables 'Impact of Government Regulation on Transitional Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System						Total	
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations			
Impact of Government Regulation on the Transitional Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	109	87.2	8	6.4	8	6.4	125	100.0
Very little	40	65.6	21	34.4	0	0.0	61	100.0
Little	13	56.5	9	39.1	1	4.3	23	100.0
Average	5	62.5	0	0.0	3	37.5	8	100.0
Much	48	58.5	17	20.7	17	20.7	82	100.0
Very much	6	46.2	5	38.5	2	15.4	13	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .310

As regards the intervening variables 'impact of government regulation on the transitional elderly care organisations', Table 7.8b shows a most strongly significant correlation (χ^2 = .000) and a strong association with Cramer's V= .310. Table 7.8b also shows that more than four-fifth (87.2%, n=109) of the respondents who experienced no impact of government regulation on the transitional elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, followed by three-fourth (65.6%, n=40) of respondents who experienced very little impact of government regulation on the transitional elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions.

In contrast, nearly two-fifth (39.1%, n=9) of the respondents who experienced little impact of government regulation on the transitional elderly care organisations are reporting their highest utilisation of the transitional elderly care organisations.

In comparison, nearly two-fifth (37,5%, n=3) of the respondents respondents who experienced average impact of government regulation on the transitional elderly care organisations are reporting their highest utilisation of the modern elderly care organisations.

Table 7.8c Distribution of the Intervening Variables 'Impact of Government Regulation on Modern Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System						Total	
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations			
Impact of Government Regulation on the Modern Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	165	74.0	41	18.4	17	7.6	223	100.0
Very little	20	80.0	5	20.0	0	0.0	25	100.0
Little	11	61.1	7	38.9	0	0.0	18	100.0
Average	7	58.3	0	0.0	5	41.7	12	100.0
Much	13	59.1	2	9.1	7	31.8	22	100.0
Very much	5	41.7	5	41.7	2	16.7	12	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .260

As regards the intervening variables 'impact of government regulation on the modern elderly care organisations', Table 7.8c shows a most strongly significant correlation (χ^2 = .000) and a moderate association with Cramer's V= .260. Table 7.8c also shows that four-fifth (80.0%, n=20) of the respondents who experienced very little impact of government regulation on the modern elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, followed by nearly three-fourth (74.0%, n=165) of respondents who experienced very no impact of government regulation on the modern elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions. In contrast, more than two-fifth (41.7%, n=5) of the respondents who experienced very much impact of government regulation on the modern elderly care organisations are reporting their highest utilisation of the transitional elderly care organisations.

In comparison, more than two-fifth (41.7%, n=5) of the respondents respondents who experienced average impact of government regulation on the modern elderly care organisations are reporting their highest utilisation of the modern elderly care organisations.

Table 7.8d Distribution of the Intervening Variable 'Impact of Private Promotion on Traditional Elderly Care Institutions' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System						Total	
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations			
Impact of Private Promotion on Traditional Elderly Care Institutions	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	175	73.2	41	17.2	23	9.6	239	100.0
Very little	9	75.0	3	25.0	0	0.0	12	100.0
Little	24	77.4	7	22.6	0	0.0	31	100.0
Average	1	50.0	1	50.0	0	0.0	2	100.0
Much	12	52.2	5	21.7	6	26.1	23	100.0
Very much	0	0.0	3	60.0	2	40.0	5	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .003 / Cramer's V = .206

As regards the intervening variable 'impact of Private Promotion on Traditional Elderly Care Institutions', Table 7.8d shows a very strongly significant correlation (χ^2 = .003) and a moderate association with Cramer's V= .206. Table 7.8d also shows that more than three-fourth (77.4%, n=24) of the respondents who experienced little impact of private promotion on traditional elderly care

institutions are reporting their highest utilisation of the traditional elderly care institutions, followed by three-fourth (75.0%, n=9) of respondents who experienced very little impact of private promotion on traditional elderly care institutions, are reporting their highest utilisation of the traditional elderly care institutions. In contrast, more than three-fifth (60.0%, n=3) of the respondents who experienced very much impact of private promotion on traditional elderly care institutions, are reporting their highest utilisation of the transitional elderly care organisations. In comparison, more than two-fifth (40.0%, n=2) of the respondents who experienced very much impact of private promotion on traditional elderly care institutions report their highest utilisation of modern elderly care organisations.

Table 7.8e Distribution of the Intervening Variable 'Impact of Private Promotion on Transitional Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System						Total	
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations			
Impact of Private Promotion on Transitional Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	187	70.3	56	21.1	23	8.6	266	100.0
Very little	3	75.0	1	25.0	0	0.0	4	100.0
Little	18	90.0	1	5.0	1	5.0	20	100.0
Average	3	50.0	1	16.7	2	33.3	6	100.0
Much	10	76.9	0	0.0	3	23.1	13	100.0
Very much	0	0.0	1	33.3	2	66.7	3	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .004 / Cramer's V = .203

As regards the intervening variable 'impact of Private Promotion on Transitional Elderly Care Organisations', Table 7.8e shows a very strongly significant correlation (χ^2 = .004) and a moderate association with Cramer's V= .203. Table 7.8e also shows that more than nine-tenth (90.0%, n=18) of the respondents who experienced little impact of private promotion on transitional elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, followed by three-fourth (76.9%, n=10) of respondents, who experienced much impact of private promotion on transitional elderly care organisations, and are reporting their highest utilisation of the traditional elderly care institutions. In contrast, more than one-fifth (21.1%, n=56) of the respondents who experienced no impact of private promotion on transitional elderly care organisations, are reporting their highest utilisation of the transitional elderly care organisations.

In comparison, more than two-third (66.7%, n=2) of the respondents who experienced very much impact of private promotion on transitional elderly care institutions, are reporting their highest utilisation of the modern elderly care organisations.

Table 7.8f Distribution of the Intervening Variable 'Impact of Private Promotion on Modern Elderly Care Organisations' over the Dependent Variables of the Utilisation of the Plural Elderly Care System (N=312)

Variable	Utilisation of the Plural Elderly Care System						Total	
	Traditional Elderly Care Institutions		Transitional Elderly Care Organisations		Modern Elderly Care Organisations			
Impact of Private Promotion on Modern Elderly Care Organisations	N	%	N	%	N	%	N	%
Do not know	0	0.0	0	0.0	0	0.0	0	0.0
None	189	72.1	56	21.4	17	6.5	262	100.0
Very little	3	100.0	0	0.0	0	0.0	3	100.0
Little	12	75.0	0	0.0	4	25.0	16	100.0
Average	2	22.2	1	11.1	6	66.7	9	100.0
Much	15	75.0	2	10.0	3	15.0	20	100.0
Very much	0	0.0	1	50.0	1	50.0	2	100.0
Utilisation rate	221	70.8	60	19.2	31	9.9	312	100.0

Pearson's Chi-Square (Asympt. Sig., 2-sided) = .000 / Cramer's V = .287

As regards the intervening variable 'impact of Private Promotion on Modern Elderly Care Organisations', Table 7.8f indicates a most strongly significant corrlation (χ^2 = .000), and a moderately strong association with Cramer's V= .287. Table 7.8f also shows that all (100.0%, n=3) of the respondents who experienced very little impact of private promotion on modern elderly care organisations are reporting their highest utilisation of the traditional elderly care institutions, followed by three-fourth (75.0%, n=12) of respondents, who experienced little impact of private promotion on modern elderly care organisations, and are reporting their highest utilisation of the traditional elderly care institutions. In contrast, more than one-fifth (21.4%, n=56) of the respondents who experienced no impact of private promotion on modern elderly care organisations, are reporting their highest utilisation of the transitional elderly care organisations.

In comparison, more than two-third (66.7%, n=6) of the respondents who experienced average impact of private promotion on modern elderly care organisations, are reporting their highest utilisation of the modern elderly care organisations.

7.2.8 Results of the Significant Variables of the Bivariate Analysis

The results of the bivariate analysis of the relationship between the selected categories of independent, intervening and dependent variables in the analytical model encompass the following significant correlations:

1. As regards the socio-demographic variables, there are nine significant variables which have mutual correlations with the intervening variables influencing the utilisation of traditional elderly care institutions in contrast to transitional and modern ones. These are: relationship with the elderly (.000), age (.000), education (.000), place of birth (.000), ethno-cultural affiliation (.000), religious affiliation (.000), marital status (.004), occupation (.000), and employment in family business/farm (.000).

2. As regards the psycho-social variables, there are seven significant variables which have mutual correlations with the intervening variables influencing the utilisation of traditional elderly care institutions in contrast to transitional and modern ones. These are: knowledge of transitional elderly care (.000), knowledge of modern elderly care (.000), belief in traditional elderly care (.035), belief in transitional elderly care (.000), belief in modern elderly care (.000), opinion on transitional elderly care (.000), and opinion on modern elderly care (.000).

3. As regards the perceived needs variables, there is only one significant variable which has mutual correlations with the intervening variables influencing the utilisation of traditional elderly care institutions in contrast to transitional and modern ones. This is the perceived needs for using elderly care institutions or organisations (.000).

4. As regards the enabling variables, there are three significant variables which have mutual correlations with the intervening variables influencing the utilisation of traditional elderly care institutions in contrast to transitional and modern ones. These are: monthly income of household head (.013), monthly income of household members (.000), and socio-economic status (.007).

5. As regards the institutional variables, there are five significant variables which have mutual correlations with the intervening variables influencing the utilisation of traditional elderly care institutions in contrast to transitional and modern ones. These are: accessibility costs of modern elderly care (.000), financial support availability from traditional elderly care institutions (.000), financial support availability from modern elderly care organisations (.006), geographical accessibility of transitional elderly care organisations (.000), and geographical accessibility of modern elderly care organisations (.000).

6. As regards the environmental variables, there is only one significant variable which has mutual correlations with the intervening variables influencing the utilisation of traditional elderly care institutions in contrast to transitional and modern ones. This is type of residents, which means the environmental locations of the household (.000).

7. As regards the intervening variables in this model indicate the mutual correlations between the independent variables and the intervening variables influencing the utilisation of traditional elderly care institutions, in contrast to transitional and modern ones. These are: the impact of government regulation on the traditional, transitional, and modern elderly care organisations (each counts .000), and the impact of private promotion on traditional, transitional, and modern elderly care organisations (each counts <.05).

By consequence, the overall explanation of the various significant correlations between respondents with selected independent and intervening variables and their reported preference for the utilisation of the traditional elderly care institutions, is that the respondents tend to favour to utilise the traditional elderly care institutions because of the cultural context of the proximity of family members and availability within the local communities.

The fact, that the significant correlations between the independent and intervening variables of the respondents and their reported preference for the utilisation of the traditional elderly care institutions is supporting the importance of the integration of the socio-cultural determinants for the proposed development of integrated elderly care in the Tengger Region of East Java.

7.3 Mutual Correlations Analysis of Significant Variables

As mentioned above, Slikkerveer (2016) adapted his ethno-methodological data analysis model by his elaboration of the 'mutual correlation anaysis' as the second phase in the stepwise analysis of utilisation behaviour of participants in the transcultural research setting of pluralistic systems. In this way, the bivariate analysis of the independent, intervening and dependent variables is presented in the mutual correlations analysis, providing a schematic model of the configuration of significant correlations in the model. The model of the mutual correlations analysis is based on the respondents' reported behavioural patterns of their utilising the plural elderly care system in the four village samples as shown in Figure 7.2.

In the statistical evaluations of the significance of the correlations among the variables to determine the utilisation behaviour of the elderly care systems by the respondents in the four village samples, the following correlations have been identified:

There are 32 significant variables in Block 1 to Block 7. This study concludes that there are 9 significant independent variables under Block 1 of the 'Socio-demographic Variables,' 7 significant independent variables under Block 2 of the 'Psycho-social Variables,' 1 significant independent variable under Block 3 of the 'Perceived Needs Variables,' 3 significant independent variables under Block 4 of the 'Enabling Variables,' 5 significant independent variables under Block 5 of the 'Institutional Variables,' 1 significant independent variable under Block 6 of the 'Environmental Variables,' and 6 significant variables under Block 7 of the 'Intervening Variables'.

Table 7.9 shows a list of the strength of the correlations among selected significant independent, intervening and utilisation variables of the model of transcultural elderly care utilisation in the research area.

Table 7.9 List of the Selected Significant Variables and Variable Labels based on Blocks of Determinant Variables, indicating their Significance and Interpretation of their Value with the Dependent Variables

Variable Name	Variable Label	Significance Value	Interpretation of Value
INDEPENDENT VARIABLES:			
Block 1: Socio-Demographic Variables			
Relationship with the elderly	*Relhh*	.000	Most Strongly
Age	*Age*	.000	Most Strongly
Education	*Edu*	.000	Most Strongly
Place of birth	*Placb*	.000	Most Strongly
Ethno-cultural affiliation	*Ethn*	.000	Most Strongly
Religious affiliation	*Rel*	.000	Most Strongly
Marital Status	*Marstat*	.004	Very Strongly
Occupation	*Occup*	.000	Most Strongly
Employment in Family Business/farm	*Fambuss*	.000	Most Strongly
Block 2: Psycho-Social Variables			
Knowledge of transitional elderly care	*knowtsec*	.000	Most Strongly
Knowledge of modern elderly care	*knowmec*	.000	Most Strongly
Belief in traditional elderly care	*beltdec*	.035	Strongly
Belief in transitional elderly care	*beltsec*	.000	Most Strongly
Belief in modern elderly care	*belmec*	.000	Most Strongly
Opinion on transitional elderly care	*optsec*	.000	Most Strongly
Opinion on modern elderly care	*opmec*	.000	Most Strongly
Block 3: Perceived Needs Variable			
Perceived needs for using elderly care	*percec*	.000	Most Strongly
Block 4: Enabling Variables			
Monthly income of the household head	*inchh*	.013	Strongly
Monthly income of the household members	*inchm*	.000	Most Strongly
Socio-Economic Status (SES)	*obsosec*	.007	Very Strongly
Block 5: Institutional Variables			
Accessibility Cost of modern elderly care	*costmec*	.000	Most Strongly
Geographical Accessibility of transitional elderly care	*accstsec*	.000	Most Strongly
Geographical Accessibility of modern elderly care	*accsmec*	.000	Most Strongly
Financial support availability from traditional elderly care	*fintdec*	.000	Most Strongly
Financial support availability from modern elderly care	*finmec*	.006	Very Strongly
Block 6: Environmental Variables			
Type of residence	*res*	.000	Most Strongly
INTERVENING VARIABLES**:**			
Block 7: Government or Public Programme Variables			
Impact of government regulation on trad. eldcare	*gregtdec*	.000	Most Strongly
Impact of government regulation on transt. eldcare	*gregtsec*	.000	Most Strongly
Impact of government regulation on mod. eldcare	*gregmec*	.000	Most Strongly
Impact of private promotion on trad. eldcare	*pprmtdec*	.003	Very Strongly
Impact of private promotion on transt. eldcare	*pprmtsec*	.004	Very Strongly
Impact of private promotion on mod. eldcare	*pprmmec*	.000	Most Strongly
DEPENDENT VARIABLES:			
Block 8: Utilisation of Traditional Elderly Care Institutions	*tdec*		
Block 9: Utilisation of Transitional Elderly Care Organisations	*tsec*		
Block 10: Utilisation of Modern Elderly Care Organisations	*mec*		

Source: Computation of the Data set from the Fieldwork (2018).

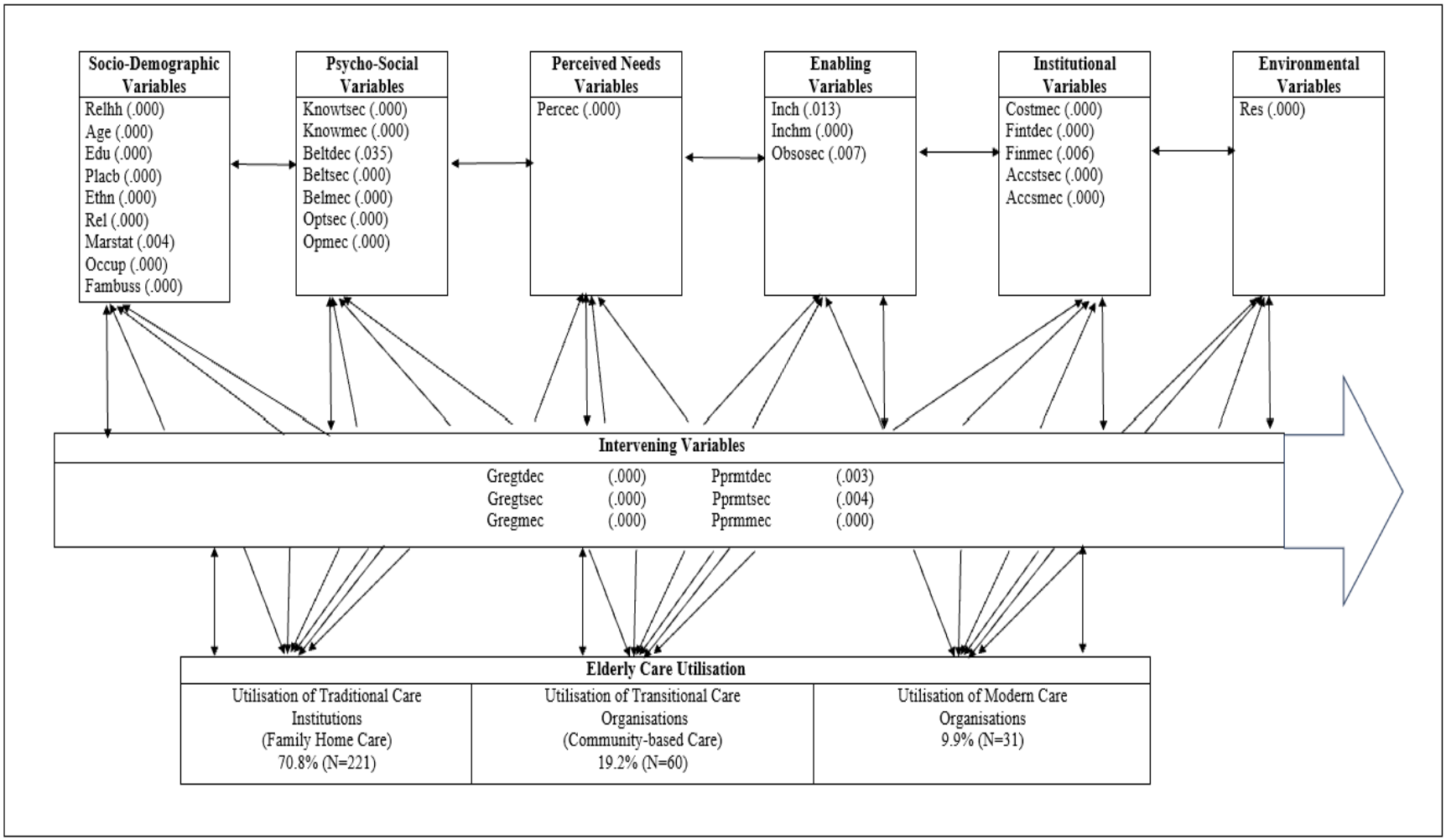


Figure 7.2 Model of the Mutual Correlations Analysis of the Blocks of Variables
Source: Adapted from Slikkerveer (2016).

7.4 Multivariate Analysis of Significant Variables

7.4.1 Multivariate Analysis of the Variables by OVERALS

This study also included a multivariate analysis after the bivariate analysis. The multivariate analysis is implemented with the Non-Linear Generalized Canonical Correlation Analysis, which is known as OVERALS. The OVERALS procedure is a part of the SPSS, allowing variables to have different measurement levels: nominal, ordinal, or interval, within the same analysis. The approach enables combining phenomena which cannot be measured under the same level, for some variables as in categories which reflect a rank or classification, with intrinsic or semantic differences; this is typical for ethnoscience research (*cf.* De Bekker 2020). Similar studies also report the utilisation of OVERALS, *e.g.* Slikkerveer (1990), Agung (2005), Leurs (2010), Djen Amar (2010), Ambaretnani (2012), Chirangi (2013); Aiglsperger (2014); Saefullah (2019), De Bekker (2020) and Febriyanti (2021) in the study of various topics on ethnoscience and sustainable development.

In this multivariate analysis, the study applies the multiple regression and the canonical correlation analyses, while at the same time OVERALS is also applied to indicate the relationship among sets of independent variables. Seven blocks of independent variables, including one intervening variable, are used to analyse their influence on three dependent variables of the utilisation behaviour on elderly care systems. In addition to assessing the correlation among sets of variables, OVERALS evaluates the correlations between the canonical variates and the original variables, known as 'canonical' or 'component' loadings. The component loadings indicate to which extent each variable contributes to the variance within the canonical variate. The component loadings can estimate the significance of each variable in the overall model. In general, the higher the component loading of the single variable, the more significant the variable's contribution to the overall model of utilisation of elderly care institutions. In this respect, positive and negative values of ± .3 reveal a medium effect, while positive and negative values of ± .5 indicate a large effect in the variable. The strong and medium independent and intervening variables are highlighted in descending order for each dimension.

Table 7.10 shows the distribution of the component loadings with two dimensions in the OVERALS analysis of 32 variables of the 312 respondents. Based on Table 7.10, there are five leading independent variables in Dimensions 1 and 2, as also shown in Table 7.11, which explain the strongest correlation to people's behaviour in the utilisation of the plural elderly care system. Based on Table 7.10, as in the analysis, the variable 'belief in modern elderly care organisations' ('Belmec') of the psycho-social variables in Dimension 1 has the strongest correlation to people's behaviour in the utilisation of elderly care institution (correlation score of .759). On the other hand, the variable 'opinion on transitional elderly care organisations' ('Optsec') in the psycho-social variables in Dimension 2 has the strongest correlation to people's behaviour in the utilisation of elderly care institutions (correlation score of .824). Following sequentially from strong to low correlation are the variables 'belief in transitional elderly care organisations' ('Beltsec'), 'knowledge of transitional elderly care organisations' ('Knowtsec'), 'geographical accessibility of transitional elderly care organisations' ('Accstsec'), and 'financial support availability from traditional elderly care institutions' ('Fintdec').

In addition to Table 7.11, Figure 7.3 presents a graphic representation of the OVERALS solution, where Dimension 1 is presented horizontally and Dimension 2 is presented vertically. The component loadings serve as vector coordinates, which constitute each variable, and are projections of each variable's correlations with all other variables in the canonical space.

The distance between the vector points and the origin of the scatter plot illustrates the significance of each variable within the overall model. In order to highlight the effects of the dependent variables in the model, the distance between the vector points of the three dependent variables and the origin have been marked in the graph with a straight line (*cf.* Aiglsperger 2014).

Table 7.10 Distribution of the Component Loadings of the 32 Variables of the Utilisation of Traditional Elderly Care Institutions, Transitional and Modern Elderly Care Organisations by Respondents in Four Villages of East Java (N=312)

Set (Block)	Variable	Dimension 1	Dimension 2
1	relhh[a,b]	.551	.083
	age[b,c]	.421	.014
	edu[b,c]	.280	-.075
	placb[a,b]	.321	.006
	ethn[a,b]	-.338	.020
	rel[a,b]	-.192	-.050
	marstat[a,b]	.129	.037
	occup[a,b]	.138	.150
	fambuss[a,b]	-.264	.034
2	knowtsec[b,c]	.006	.648
	knowmec[b,c]	.634	-.060
	beltdec[b,c]	-.190	-.006
	beltsec[b,c]	.035	.789
	belmec[b,c]	.759	.037
	optsec[b,c]	.060	.824
	opmec[b,c]	.385	106
3	percec[a,b]	-.255	-.028
4	inchh[b,c]	.099	.100
	inchm[b,c]	-.271	-.085
	obsosec[b,c]	-.113	.007
5	costmec[b,c]	.611	.117
	fintdec[b,c]	.049	-.263
	finmec[b,c]	.190	.096
	accstsec[b,c]	.024	.349
	accsmec[b,c]	.310	-.019
6	res[a,b]	.367	.030
7	gregtdec[b,c]	.169	.140
	gregtsec[b,c]	.094	.243
	gregmec[b,c]	.144	.129
	pprmtdec[b,c]	.142	.191
	pprmtsec[b,c]	.194	.087
	pprmmec[b,c]	.299	-.076
8	TDEC[a,b]	-.487	-.828
	TSEC[a,b]	-.183	.937
	MEC[a,b]	.981	.023

a. Optimal Scaling Level: Single Nominal
b. Projections of the Single Quantified Variables in the Object Space
c. Optimal Scaling Level: Ordinal

Source: Computations based on Fieldwork Survey (2018).

Table 7.11 Distribution of the Strongest Correlated Variables to People's Behaviour in the Utilisation of Traditional, Transitional and Modern Elderly Care over Respondents in the Four Villages of East Java (N= 312)

Dimension 1	Dimension 2
Belmec	Optsec
Knowmec	Beltsec
Costmec	Knowtsec
Relhh	Accstsec
Age	Fintdec

Source: Computation from the Fieldwork Survey (2018).

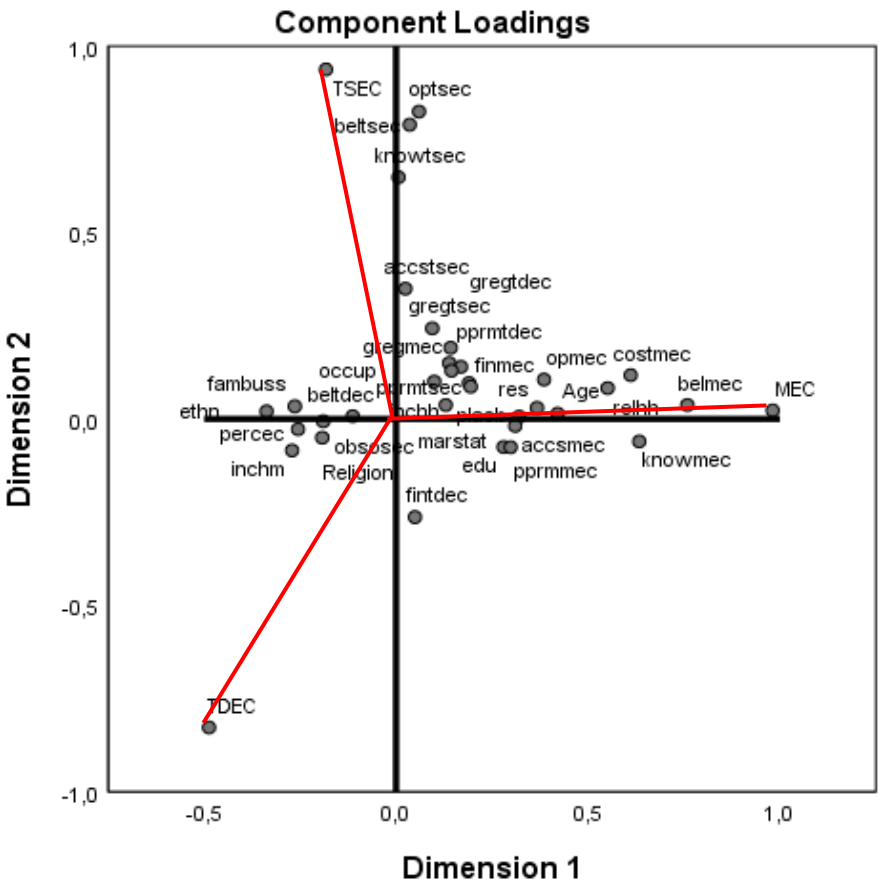


Figure 7.3 Plot of Component Loading Analysis (OVERALS) in the Utilisation of Elderly Care Institutions and Organisations in East Java.
Source: Computations based on Fieldwork Survey (2018).

The three dependent variables are plotted with three straight lines from the centre of the graph to distinguish them from the independent and the intervening variables. The line also explains the closest influences of each of the independent and intervening variables to the related dependent variables. For instance, the variable 'income of household member' (inchm) lies between the dependent variables of 'utilisation of traditional elderly care institutions' (TDEC) and 'utilisation of transitional elderly care organisations' (TSEC).

This means that the income of the household members living in a village household influence people's behaviour in their preference to utilise traditional elderly care institutions in comparison with transitional elderly care organisations.

Another example, the 'education' variable (edu), lies between the variables 'utilisation of traditional elderly care institutions' (TDEC) and 'utilisation of modern elderly care organisations' (MEC); this sows that the 'education' of the household head influences people's behaviour in their preference to utilise modern elderly care organisations in comparison with traditional elderly care institutions. The education variable is also demonstrated in both bivariate and qualitative analyses. For example, those who attend higher education, *i.e.* university, prefer modern elderly care organisations to traditional ones. On the contrary, those who only attend elementary school prefer traditional elderly care institutions to modern ones.

7.4.2 Multiple Regression Analysis of Blocks of Variables

After conducting the bivariate analyses which examine the correlations between one variable and another, the mutual correlations analysis examining interaction among variables follows. The next step is multiple regression analysis which compares the various blocks of variables in the model to determine the relative strong interactions. It focuses not on the individual variables but on the relationships between the dominant variables within the various blocks of the model. The multivariate analysis can be extended to develop an explanatory analytical model of utilisation behaviour towards the plural elderly care system: traditional elderly care institutions, and transitional or modern elderly care organisations.

OVERALS provides an Eigenvalue for each dimension (Ed) of the calculation, and forms the basis of subsequent calculations in the multiple correlation coefficients (r) for each dimension. The formula is used to calculate the multiple correlation coefficients for two blocks of variables is 2xEd-1, meaning twice the *Eigenvalue* (d=dimension) minus one (*cf.* Van der Burg et al 1988; Agung 2005; Ibui 2007; Leurs 2010; Djen Amar 2010; Ambaretnani 2012; Chirangi 2013; Aiglsperger 2014; Erwina 2019; Saefullah 2019; De Bekker 2020). Moreover, multiple regression analysis estimates the significance of the overall model by comparing the observed values to the predicted ones for each dimension, represented by a multiple correlation coefficient (r).

Table 7.12 describes a list of all multiple correlation coefficients for all the combinations of the blocks of variables for each dimension. A regression analysis is conducted with the assistance of statistical software, IBM version 23, resulting in the Dimension-Reduction Optimal Scaling statistical technique which uses the Eigenvalue as the multivariate measure of interactions among all the variables. In Table 7.12, the first column to the left highlights the number of the respective blocks of variables, the second indicates the dimension of the solution, and the third calculates the multiple correlation coefficients reconstructed for each correlation using the Eigenvalues. Cohen (1988) and Field (2009) point out the value of the multiple correlation coefficient (r) for each dimension, where the value r = .10 reveals a weak correlation effect, r = .30 reveals a moderate correlation effect, and r = .50 reveals a strong correlation effect.

Any correlation coefficients between those values will be interpreted in between the categories. For instance, if the correlation coefficient is .40, it can be said that the correlation effect is moderate to strong, whereas the correlation coefficient of .0.25 can be said to be a weak to moderate correlation effect. Furthermore, Calkins (2005) categorized the coefficient correlations as very highly correlated for r 0.9 to 1.0, highly correlated for r 0.7 to 0.9, moderately correlated for r 0.5 to 0.7, weakly correlated for r 0.3 to 0.5, and slightly correlated for r less than 0.3 to 0 (*cf.* Calkins 2005).

As shown in Table 7.12, the correlation effect between Block 8 (utilisation of traditional elderly care institutions) and Block 9 (utilisation of transitional elderly care organisations) can be categorised as having a strong correlation effect since the correlation coefficient is .760. On the other hand, the correlation effect between Block 8 and Block 10 (utilisation of modern elderly care organisations) is considered a strong correlation effect since the correlation coefficient is .518. Moreover, the correlation effect between Block 9 and Block 10 is considered weak as the correlation coefficient is .162. The results reflect the tendency of local people in the studied villages to utilise traditional elderly care institutions as their first choice, followed by the transitional and modern ones (*cf.* Field 2009; Aiglsperger 2014; Saefullah 2019).

The relationship between Block 1 (socio-demographic variables) and Block 6 (environmental variables) produces the highest sum of the Eigenvalue and the strongest correlation coefficients on the first dimension, with a correlation coefficient of .968. Then, the relationship between Block 2 (psycho-social variables) and Block 7 (intervening variables) follows with a correlation coefficient of .938.

Table 7.12 List of the Multiple Correlation Coefficients calculated by means of Multiple Regression Analysis of the Ten Blocks of Variables of Two Dimensions (N=312)

Block <--> Block	Dimension (r= 2 x Ed -1)	Calculation Coefficient (r)	Multiple Correlation
1 <--> 2	1	r= (2x0.860)-1 =1.720-1=	0.720
	2	r= (2x0.783)-1 =1.566-1=	0.566
1 <--> 3	1	r= (2x0.770)-1 =1.540-1=	0.540
1 <--> 4	1	r= (2x0.774)-1 =1.548-1=	0.548
	2	r= (2x0.700)-1 =1.400-1=	0.400
1 <--> 5	1	r= (2x0.852)-1=1.704-1=	0.704
	2	r= (2x0.765)-1=1.530-1=	0.530
1 <--> 6	1	r= (2x0.984)-1=1.968-1=	0.968
1 <--> 7	1	r= (2x0.915)-1=1.830-1=	0.830
	2	r= (2x0.828)-1=1.656-1=	0.656
1 <--> 8	1	r= (2x0.762)-1=1.524-1=	0.524
1 <--> 9	1	r= (2x0.665)-1=1.330-1=	0.330
1 <--> 10	1	r= (2x0.879)-1=1.758-1=	0.758
2 <--> 3	1	r= (2x0.681)-1=1.362-1=	0.362
2 <--> 4	1	r= (2x0.700)-1=1.400-1=	0.400
	2	r= (2x0.657)-1=1.314-1=	0.314`
2 <--> 5	1	r= (2x0.931)-1=1.862-1=	0.862
	2	r= (2x0.874)-1=1.748-1=	0.748
2 <--> 6	1	r= (2x0.827)-1=1.654-1=	0.654
2 <--> 7	1	r= (2x0.969)-1=1.938-1=	0.938
	2	r= (2x0.821)-1=1.642-1=	0.642
2 <--> 8	1	r= (2x0.889)-1=1.778-1=	0.778
2 <--> 9	1	r= (2x0.878)-1=1.756-1=	0.756
2 <--> 10	1	r= (2x0.892)-1=1.784-1=	0.784
3 <--> 4	1	r= (2x0.600)-1=1.200-1=	0.200
3 <--> 5	1	r= (2x0.667)-1=1.334-1=	0.334
3 <--> 6	1	r= (2x0.701)-1=1.402-1=	0.402
3 <--> 7	1	r= (2x0.728)-1=1.456-1=	0.456
3 <--> 8	1	r= (2x0.625)-1=1.250-1=	0.250
3 <--> 9	1	r= (2x0.572)-1=1.144-1=	0.144
3 <--> 10	1	r= (2x0.646)-1=1.292-1=	0.292
4 <--> 5	1	r= (2x0.690)-1=1.380-1=	0.380
	2	r= (2x0.635)-1=1.270-1=	0.270
4 <--> 6	1	r= (2x0.748)-1=1.496-1=	0.496
4 <--> 7	1	r= (2x0.714)-1=1.428-1=	0.428
	2	r= (2x0.663)-1=1.326-1=	0.326
4 <--> 8	1	r= (2x0.650)-1=1.300-1=	0.300
4 <--> 9	1	r= (2x0.597)-1=1.194-1=	0.194
4 <--> 10	1	r= (2x0.674)-1=1.348-1=	0.348
5 <--> 6	1	r= (2x0.834)-1=1.668-1=	0.668
5 <--> 7	1	r= (2x0.848)-1=1.696-1=	0.696
	2	r= (2x0.800)-1=1.600-1=	0.600
5 <--> 8	1	r= (2x0.750)-1=1.500-1=	0.500
5 <--> 9	1	r= (2x0.718)-1=1.436-1=	0.436
5 <--> 10	1	r= (2x0.825)-1=1.650-1=	0.650
6 <--> 7	1	r= (2x0.921)-1=1.842-1=	0.842
6 <--> 8	1	r= (2x0.639)-1=1.278-1=	0.278
6 <--> 9	1	r= (2x0.615)-1=1.230-1=	0.230
6 <--> 10	1	r= (2x0.671)-1=1.342-1=	0.342
7 <--> 8	1	r= (2x0.693)-1=1.386-1=	0.386
7 <--> 9	1	r= (2x0.680)-1=1.360-1=	0.360
7 <--> 10	1	r= (2x0.705)-1=1.410-1=	0.410
8 <--> 9	1	r= (2x0.880)-1=1.760-1=	0.760
8 <--> 10	1	r= (2x0.759)-1=1.518-1=	0.518
9 <--> 10	1	r= (2x0.581)-1=1.162-1=	0.162

Source: Computations based on Fieldwork Survey (2018).

The third relationship is calculated between Block 2 and Block 5 (‘institutional variables’) with a correlation coefficient of .862. The fourth is the relationship between Block 6 and Block 7 with a correlation coefficient of .842. The fifth is the relationship between Block 1 and Block 7 with a correlation coefficient of .830 (*cf.* Table 7.12).

The relationship between Block 3 (perceived needs variables) and Block 9 (‘utilisation of transitional elderly care organisations’) has the lowest sum for the Eigenvalue and the weakest correlations coefficient on the first dimension, of .144. The second is the relationship between Block 9 and Block 10 (‘utilisation of modern elderly care organisations’) with a correlation coefficient of .162. The third is the relationship between Block 4 (‘enabling variables’) and Block 9 with a correlation coefficient of .194. The fourth is the relationship between Block 3 and Block 4 with a correlation coefficient of .200. The fifth is the relationship between Block 6 ‘(environmental variables’) and Block 9 with a correlation coefficient of .230 (*cf.* Table 7.12).

7.5 Results of the Analysis and Interpretation of the Findings

7.5.1 Preferences in the Utilisation of the Elderly Care System

Based on Figure 7.4, the majority of people in the studied village prefer to utilise traditional elderly care institutions, compared to the transitional and the modern ones. It can be seen that out of the 312 respondents, 70.8% (N=221) utilised traditional elderly care institutions whereas 19.2% (N=60) utilised transitional elderly care organisations, and only 9.9% (N=31) prefer modern elderly care organisations.

From the multivariate analysis, Figure 7.4 also shows the multivariate correlations of local people’s preferences to utilise elderly care institutions, which is influenced by the six blocks of independent variables and one block of intervening variables. The numbers on the arrows are the correlation coefficients representing each of the correlations. It shows how each block of variables correlates to another block of variables, including the dependent variables. The higher the correlations coefficient, the higher the strength of its correlation among the block of variables as categorised by Cohen (1988) and Field (2009). Moreover, Figure 7.4 presents the final analytical model of the plural elderly care system.

7.5.2 Determinants of the Utilisation of the Plural Elderly Care System

The general aim of this research is to discover the utilisation behaviour of the local people in the studied village towards plural elderly care system as presented in Figure 7.4. From the socio-demographic variables, the relationship of the household heads with the elderly, age, education, place of birth, ethno-cultural affiliation, religion, marital status, occupation, and employment in family business/farm influences people’s behaviour in utilising the plural elderly care system. By using Field’s criteria (2009), these socio-demographic variables have a strong correlation to the utilisation of traditional elderly care institutions (r= .524), and the modern ones (r= .758). Additionally, the socio-demographic variables have a moderate correlation to the utilisation of transitional elderly care organisations, with a correlation coefficient of .330.

The psycho-social variables also influence local people’s behaviour in utilising elderly care systems. The psycho-social variables include knowledge about transitional and modern elderly care organisations, belief in traditional, transitional, and modern elderly care organisations, and opinions about the transitional and modern elderly care organisations. Additionally, the psycho-social variables have a strong correlation to the utilisation of the plural elderly care system: r= .778 for the traditional, r= .756 for the transitional, and r= .784 for the modern elderly care organisations.

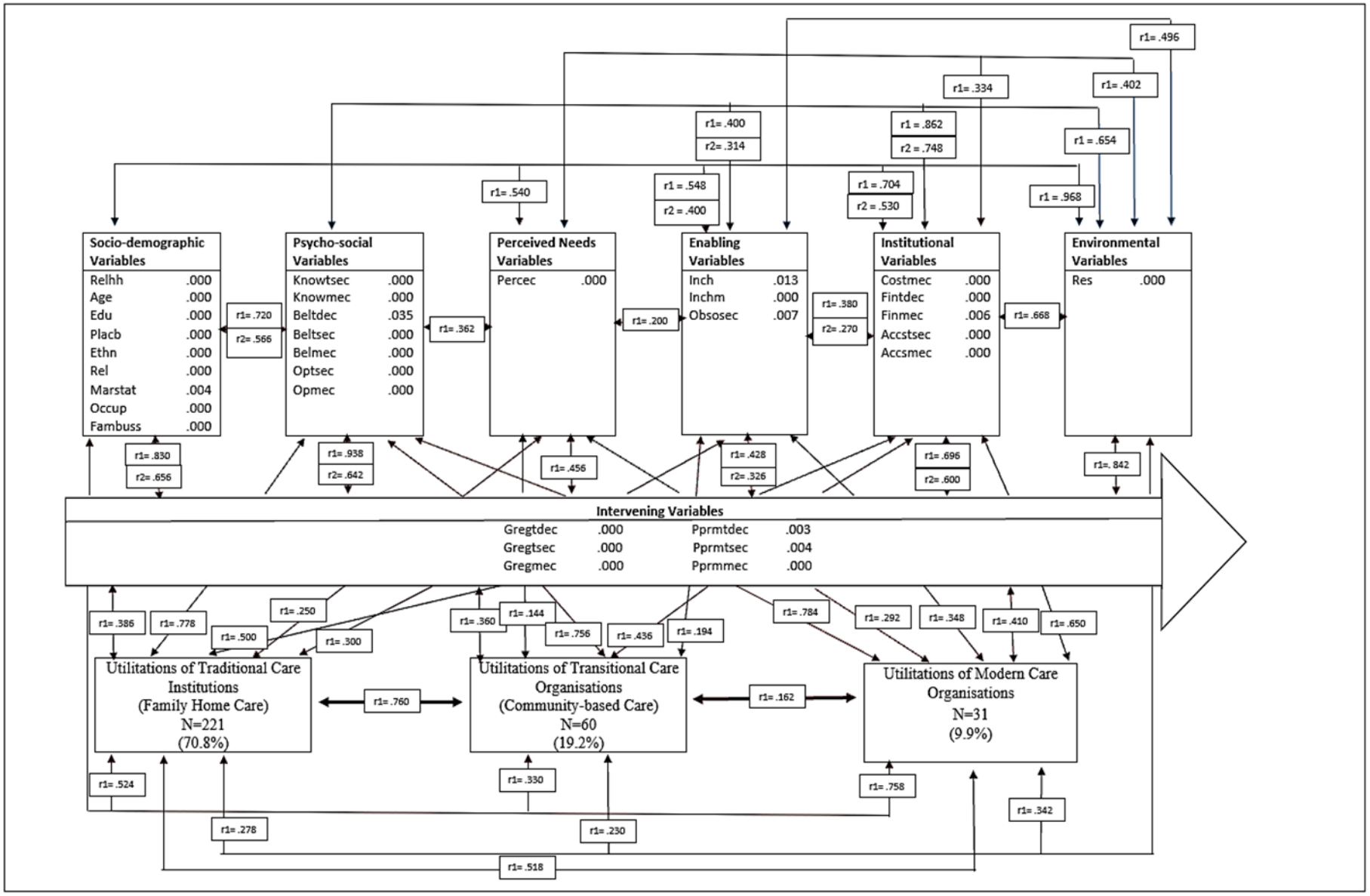


Figure 7.4 The Final Model of the Plural Elderly Care System.
Source: Computation based on Fieldwork Survey (2018)

The correlations between the perceived needs variables and the utilisation behaviour of the plural elderly care system reveal that perceived needs influence people's behaviour in utilising elderly care systems. The perceived needs variables have a moderate correlation effect, with r= .250 for traditional and r= .292 for modern elderly care organisations. However, the perceived needs variables have a weak correlation effect with a correlation coefficient of .144 for transitional elderly care organisations. Moreover, the determinant factor in the enabling variables, monthly income of the household head and members, and socio economic status influences people's behaviour in the utilisation of elderly care systems. The enabling variables have a moderate correlation effect to the traditional (r= .300) and modern (r= .348) organisations. However, the enabling variables have a weak correlation effect to transitional elderly care organisations (r= .194).

Furthermore, institutional variables influence local people's behaviour in utilising elderly care systems. The institutional variables include accessibility cost of modern elderly care organisations, geographical accessibility of transitional and modern elderly care organisations, as well as financial support from traditional and modern elderly care organisations. The institutional variables have a strong correlation to the utilisation of the plural elderly care system: r= .500 for the traditional, r= .436 for the transitional, and r= .650 for the modern elderly care organisations.

The determinant factor of the environmental variables, *i.e.* the type of residence variable, influences people's behaviour in the utilisation of the plural elderly care system. The environmental variables have a moderate correlation to the utilisation of the plural elderly care system: r= .278 for the traditional, r= .230 for the transitional, and r= .342 for the modern elderly care organisations.

The intervening variables also influence people's behaviour in the utilisation of the plural elderly care system. The variables consist of government regulation on traditional, transitional, and modern elderly care organisations, and private promotion of traditional, transitional, and modern elderly care organisations. The intervening variables have a moderate correlation to the utilisation of the plural elderly care system: r= .386 for the traditional, r= .360 for the transitional, and r= .410 for the modern elderly care organisations.

7.5.3 Qualitative Data of Behaviour Patterns of the Elderly Care System

The qualitative data of this study was collected to offer additional explanations for behavioural patterns of elderly care institutions from the sample population. Meanwhile, the quantitative data is also collected to present the statistical analysis results which enable the identification of the determinants of people's behaviour for the utilisation of elderly care institutions.

The research combines both qualitative and quantitative results where the quantitative ones serve to weigh whether the statistics are in line with the qualitative findings or vice versa. In general, the quantitative analysis presents household heads' preference in utilising elderly care systems. Additionally, the analysis results illustrate respondents' preferences from four villages in choosing traditional elderly care institutions as the first preference (70.8%) and transitional as their second preference (19.2%). Lastly, just 10% of respondents preferred to utilise modern elderly care organisations.

Moreover, the mutual correlations analysis of the blocks of variables shows that both socio-demographic and psycho-social variables have many significance values of the independent variables to the dependent variables. It means that the two blocks of variables influence people's behavioural patterns in the utilisation of elderly care institutions in four village samples more than for other blocks of variables, such as perceived needs, enabling, institutional, environmental, and intervening variables. This is shown in the model of the mutual correlations analysis of the blocks of variables in Figure 7.2. More specifically, in terms of the socio-demographic variables, there are nine significant variables: *relationship of household head with the elderly, age, education, place of birth, ethno-cultural affiliation, religion affiliation, marital status, occupation* and *employment in family business/farm*.

Meanwhile, in terms of the psycho-social variables, there are seven significant variables: *knowledge of transitional elderly care, knowledge of modern elderly care, belief in traditional elderly care, belief in transitional elderly care, belief in modern elderly care, opinion on transitional elderly care,* and *opinion on modern elderly care.*

The mutual correlations analysis shows the results from the bivariate analysis of all significant variables represented by each block in the analytical model. On the other hand, the multiple regression analysis compares the various blocks of variables in the model to determine relative strong interactions. It focuses not on the individual variables but on the relationships between the dominant variables within the various blocks of the model. Furthermore, Calkins (2005) categorised the correlation coefficient rates as follows: (a) 0.9 to 1.0 as very highly correlated, (b) 0.7 to 0.9 as highly correlated, (c) 0.5 to 0.7 as moderately correlated, and (d) less than 0.3 as slightly correlated. Based on the categorisation, the results of multiple regression analysis of the block of variables shows that the block of socio-demographic variables and the block of psycho-social variables have high correlation coefficiency results with some blocks of independent variables. Moreover, the block of psycho-social variables shows high correlation with all blocks of dependent variables. Those blocks of variables are highly correlated with the coefficient correlation rates between 0.7 and 0.9, and very highly correlated with the rates between 0.9 and 1.0 (*cf.* Table 7.12; Figure 7.4).

The relationship between block 1 (socio-demographic variables) and block 6 (environmental variables) shows the strongest correlation coefficients (.968). The relationship between the household head with the elderly and the environmental variables show the strongest correlation. It indicates that household heads living with parents and parents-in-law report the utilisation of care and support services from traditional elderly care institutions. This quantitative result supports the qualitative findings where the majority live in rural areas.

In Tengger, adult children live with their parents and/or parents-in-law in one house or sometimes in separate houses in the same villages report the utilisation of traditional elderly care institutions. They have many relatives who also live in the same village. Likewise, respondents who live in semi-urban areas choose traditional elderly care institutions. On the contrary, respondents living with other kin (*e.g.* uncle and aunt) and non kin report the utilisation of modern elderly care organisations because some elderly who are categorised as having a non-kin relationship with the respondents do not have any family members who can take care of them. The researcher found that respondents in urban areas tend to report the utilisation of modern elderly care organisations. This is commonly because respondents are too busy with their work already and do not have relatives living near the elderly. So they cannot provide care of the elderly and choose modern elderly care organisations for care provision instead. Moreover, respondents in urban areas tend to choose transitional elderly care organisations when they still have kinship relations with the elderly, such as uncle and aunt.

The infrastructure and facilities of the higher education level in urban areas is more complete than rural areas. Meanwhile, the majority of respondents in rural areas only attend elementary or junior high school. The researcher found that the highest school level in Ngadas and Argosari villages is junior high school. The Tenggerese people need more effort to get to a higher school level. In this context, the education level is correlated with the occupation of the household heads. In this research, the majority of household heads work as farmers and live in rural areas. Their education level is only up to elementary school, primarily because those in rural areas can work as farmers which does not require special skills. They report the utilisation of traditional elderly care institutions more often than transitional and modern elderly care organisations.

This finding matches previous research stating that most Indonesians whose primary income source is agriculture live with their children. Moreover, most family members help to cultivate their parents' agricultural land and therefore inherit the land. When parents are unable to manage their own property, they may allow an adult child to run their farm or business in exchange for supporting them (*cf.* Rudkin 1994a). Meanwhile, household heads in urban areas with a higher education level tend to get jobs requiring special skills according to their education level.

It was found that they tend to report the utilisation of private modern elderly care organisations when they cannot provide home care of the elderly. However, those participants who are able to afford care and support for the elderly themselves can combine both traditional and transitional elderly care institutions and organisations.

The place of birth proved to be statistically significant towards the selection of elderly care institutions. Household heads who were born and live in the same place tend to choose traditional and transitional elderly care organisations. They tend to follow the traditional culture, *i.e.* Javanese culture, emphasising the children's role to take care of and respect their parents, known as filial piety (*cf.* Koentjaraningrat 1957). It is also common in rural areas where the parents are born and live with their children in the same village. The researcher found that the Tenggerese people prefer to stay and work in their village rather than move to live and work outside Tengger. The Tenggerese people believe that they will preserve their ancestors' traditions by living and working in the village including providing care and support for their elderly. Similar to the Javanese culture, the Tenggerese people practice the *bakti* local traditios where care and support for the elderly are personally provided and the *sayan* local tradition which is based on mutual aid in the local community. Hence, the Tenggerese people perceive themselves as secure and comfortable as long as they live near their families and relatives in Tengger. Moreover, the Tenggerese people also believe in bad *karma* when the adult children are not able, or ignore to take care of their elderly. They will be unlucky in their future lives and their community will judge them as *anak durhaka* ('rebellious') and even place social sanctions on them. They can also ask for help from other family members to take care of their parents, known as familism (*cf.* Holmes & Holmes 1995; Keasberry 2002). Meanwhile, household heads who migrate from their hometown tend to choose modern elderly care organisations if they cannot provide care and support for their elderly. This is also related to the fact that they have no family members living in the same place. The researcher found this happening in the urban areas.

The relationship between block 1 (socio-demographic variables) and block 7 (intervening variables) shows strong correlation coefficients (.830), similarly to the relationship between block 6 (environmental variables) and block 7 (enabling variables) (.842). The researcher found that many Tenggerese people seldom report the utilisation of *Kartu Indonesia Sehat* (KIS) ('Health Indonesia Card') even though they have it. The Tenggerese people believe that free care and support services may not help them, and they insist on paying to receive care and support services. It is also revealed that the Tenggerese people report the utilisation of traditional elderly care institutions more often than transitional and modern ones. Meanwhile, it is common for the Javanese to be more aware of the importance of using KIS and BPJS to receive health care services. People who are categorised as poor choose to report the utilisation of KIS and do not need to pay for health care and support services. They feel fortunate because they can get benefits from government policies. Moreover, household heads in urban areas are more open-minded and have easier access to get information, and understand government regulations and private promotion better. Some people report the utilisation of BPJS which requires them to pay monthly as insurance contributions and report the utilisation of transitional and modern elderly care organisations. On the contrary, household heads in rural areas have obstacles accessing information and understanding government regulations and private promotion, such as lack of resources in sharing related information to the community, and geographical accessibility of people in the rural areas to receive government and private programs. For that reason, household heads in rural areas report the utilisation of traditional elderly care institutions more often than transitional and modern ones.

The relationship between block 2 (psycho-social variables) and block 7 (intervening variables) in the utilisation of elderly care institutions shows very strong correlation (938). Similarly, the relationship between block 2 (psycho-social variables) and block 5 (institutional variables) shows strong correlation coefficients (.862). It means that the knowledge, belief, and opinion variables of the household heads in each elderly care institution have an impact on the government's regulation and private promotion in the research areas. Moreover, the knowledge, belief, and opinion variables of the household heads about each elderly care institution have a strong relationship with the available information regarding financial and geographical accessibility perceived of each elderly care

institution. Financial accessibility refers to cost and financial support received by respondents in each elderly care institution, whereas geographical accessibility refers to the geographical accessibility of elderly care services. Those variables influence people's behaviour in the research villages and motivate their preferences in the utilisation of the 'Plural Elderly Care System.'

In the context of the Tenggerese people, the researcher found that some adult children and their elderly do not really believe in the health care services provided by the government because they believe in traditional medicine or healing more than transitional and modern health care. Some adult children have the opinion that when they brought their elderly to receive treatment or medicine, many of them were not getting better. Moreover, the Tenggerese people prefer going to *'dukun*' first to get '*suwuk*' to recover. *'Suwuk*' is a prayer of the *dukun* for sick people by casting a spell called '*mantra*' or '*japa.*' Hence, the elderly who live near transitional elderly care organisations do not report the utilisation of such services to check their health. Many respondents do not get enough information about care and support services provided by transitional care institutions because of the lack of human resources to distribute and share information to the community.

Moreover, in some areas, the village officials and staff do not actively share information about care and support services provided for the elderly. As such, many respondents know the existence of transitional elderly care organisations from the media such as television or newspapers. Furthermore, the researcher found that health and social care facilities in transitional and modern elderly care organisations tend to be better-managed in urban areas than rural areas. The researcher also found a lack of medical equipment, personnel, and medicine stock in providing care and support services in transitional and modern elderly care organisations in rural areas. In fact, transitional elderly care organisations in urban areas provide more activities than those in rural areas since they have adequate resources and ease of access to get care and support services. They not only focus on health services for the elderly but also hold creative and fun activities, such as sport for the elderly and recreation activities; thus, the elderly get more benefits from transitional care services in urban areas. Hence, many respondents in urban areas have the perception that transitional elderly care organisations are able to maintain the elderly's well-being.

CHAPTER VIII CONCLUSION

8.1 Conclusions

The research focuses on the Javanese ethno-cultural group in Indonesia, in particular the Tenggerese ethno-cultural group, with a view to understand the practice of the *bakti* and *sayan* local traditions which emphasise mutual aid in the local communities. Furthermore, the study seeks to document and study the role of *bakti* and *sayan* as local traditions to provide care of the elderly.

The research was conducted in four villages representing both the Tenggerese and Javanese people in the East Java Province of Indonesia. The two villages, Ngadas in Poncokusumo sub-district, Malang district, and Argosari in Senduro sub-district, Lumajang district represent the Tenggerese people. Both are rural areas and represent the Tenggerese people who still believe in and practise their customs to the present day. The other two villages representing the Javanese in East Java are Ditotrunan in Lumajang district, and Tlogomas in Malang district.

Furthermore, this chapter discusses the utilisation behavior of the Plural Elderly Care system among the Tenggerese people, a part of the Javanese ethno-cultural groups in East Java. The Tenggerese people live in the Tenggerese Highlands surrounded by Mount Bromo, Mount Semeru and the Tenggerese massif. They hold on to, believe in and practise their customs to the present day. This research conducted a qualitative and quantitative study which focuses on the knowledge, belief, and practice of local people, particularly the Tenggerese people, in terms of care and support services provided for the elderly towards the utilisation behaviour of elderly care institutions which consist of traditional, transitional, and modern elderly care organisations. The local people's perspective is characterised by the 'emic' view which is vital to understand the participants' knowledge, belief, and practice, and to know how the local people perceive, organise, and report the utilisation of their culture focusing on care and support behaviour for the elderly. The 'emic' view provides a deeper understanding of the target group culture and affects their decision-making processes.

Moreover, this study attempts to understand the pattern of care and support behaviour from the adult child's perspective. This will likely affect their preference for available care and support for the elderly in the traditional, transitional and modern elderly care organisations. The *bakti* and *sayan* local traditions are based on the applied-oriented knowledge, characteristic of the Tenggerese people in relation to the care of the elderly. This research focuses not only on the local people's knowledge, but also on the background of the local people in terms of their socio-economic status and culture in relation with their care of the elderly. This research also enables the provision of a contribution to culturally-appropriate and local community-based policy planning and implementation for improved care of the elderly in the research area of East Java.

This study includes the description and explanation of the significant factors influencing the local people's behavioural patterns from the four village samples in the utilisation of the traditional institutions using *bakti* and *sayan* local traditions in the family home care, in comparison with the existing transitional and modern elderly care organisations. Moreover, identifying the possible contribution to improving care and support provision for the elderly emphasises integrated care based on the Indigenous Knowledge Systems Integration Model (IKSIM) through Integrated Community-Managed Development (ICMD).

This research will attempt to give a clear understanding of care services for the elderly based on the representative dominant position of care places and providers. First, this research takes into account the institutional care services provided by the state or private. Specifically, it refers to *Panti Jompo* and *Puskesmas Santun Lansia*. Second, for the place of care in a community, this research considers community care combining service providers between state/private and family/voluntary services. Third, family care and filial piety are often used interchangeably related to the care of the elderly at home.

However, family care refers to the care provided by family or close relatives, usually a spouse or adult children including personal, social, health, and financial support, which usually occurs over a prolonged period (*cf.* HelpAge International 2013). This research regards family care and filial piety

as related to the specific moral obligation to the elderly. Since this research considers some aspects of the sociocultural contexts presented by Keith (1992), it focuses on adult children's perceptions toward providing care of the elderly based on their knowledge, beliefs, and opinions in their daily life practices.

As mentioned above, the objective of this research is to find an answer to the central research question from the user's perspective is then: *'What is the role of the bakti and sayan local traditions in the utilisation of the indigenous elderly care institutions by the community members in the Tengger Region of East Java?'*

By consequence, this study focuses on the local knowledge, practices, beliefs, and institutions in relation with patterns of utilising the plural elderly care system, in which the local traditions of *bakti* and *sayan* are playing a key role. Additionally, the research also attempts to understand the behaviour pattern of care of the elderly from the adult child's, *i.e.* the user's perspective. The care of the elderly in traditional care institutions is implemented more flexibly than in transitional and modern care organisations. There are no binding rules and the behaviour is influenced by local traditions and informal norms. Both the elderly and the younger possess the authority to carry out daily care. Furthermore, in its implementation, the care and support process covers all aspects ranging from social, health, cultural, and financial support.

The implications of the research findings are described to provide care of the elderly based on the integrated care model that focuses on service delivery through case management. Notably, the process of integrated care highlights the integration of traditional, transitional and modern elderly care organisations that focus on the important role of community in managing the care of the elderly. This study aims to document and analyse the utilisation of the plural elderly care system by the local people in research areas. In particular, the study also analyses the knowledge and practice of *bakti* and *sayan* local traditions from the 'emic' perspective among the Tenggerese people to understand the provision of care for the elderly. In addition to its general aim, this study seeks to achieve the following specific objectives:

Firstly, Chapter II presents a theoretical overview of the elderly care and support services, emphasising the management of the plural elderly care system. This research has highlighted the concept of the Plural Institutional System analysed by Slikkerveer (1990), introducing the concept of the plural medical system using traditional, transitional, and modern medical systems by various ethno-cultural groups in the Horn of Africa. In this context, the plural elderly care system relates to care for the elderly using traditional institutions, and transitional and modern elderly care organisations. The concept of institutions encompasses different social and individual formations in the community or society, created by people over generations to structure their collective rules, norms, beliefs, values, interactions, and behaviours (*cf.* Slikkerveer 2014). However, this research considers both the institutional and organisational basis focusing on care and providing services for the elderly. In this context, institutions refer to norms and behaviours of some valued purpose, while organisations refer to the structure of recognised and accepted roles in the community. This study focuses on care of the elderly, emphasising health and social care services based on the place and provider of the elderly care institutions. Traditional elderly care is the care of the elderly provided by family at home. The elderly can also get assistance or support at home not only from their family but also close relatives, usually a spouse or adult children. The role of families in providing care of the elderly at home is very important, starting from planning, implementation, and decision-making; this type of service is called family home care. Backman & Hentinen (1999) and Železnik (2007) state that home care is much less expensive than institutional care, and the elderly living at home are considered to improve their life quality. In the context of care, the elderly can handle all of their daily activities by themselves, including health or illnesses. In the model developed by Backman (Backman & Hentinen 1999), responsible self-care is defined as activity and responsibility in daily activities about health and illness. The precondition for responsible self-care is to have a positive outlook for the future and a positive ageing experience.

Meanwhile, transitional elderly care is defined as care of the elderly in-between traditional care institutions *i.e.* family home care and modern care organisations. In traditional elderly care, the elderly may stay at home alone, with their spouse, or family. The elderly receive the family's care and support at home where families play an important role in the process of care of the elderly, starting from planning, implementation, and decision-making. Fan (2007) reports that the elderly prefer receiving care from family rather than care institutions for five reasons: (1) family care embodies the character of love, intimacy, sincerity, warmth, and security, (2) the elderly feel more dignified, individualised, autonomous, free, and flexible, (3) the elderly can receive more personal care suitable to their particular personalities and religious practices, (4) family care is particularly good for the elderly suffering from dementia because it is easier for them to recognise family faces and adapt to the familiar environment, and (5) family care at home is cheaper than institutional care, such as old age homes.

In Indonesia, particularly among the Javanese, kinship and family structure values are essential to influence the ways of local people providing care of the elderly. Familism emphasises kinship relationships and affiliation with larger groups such as clans, lineages, kindreds, or extended families. The underlying relationship in kinship is family relations consisting of nuclear and extended family, which depend on particular circumstances. The majority of Javanese households are composed of a nuclear family while the Tenggerese household is composed of an extended family consisting of two or more nuclear families linked together through parents, children, or siblings, and through blood, marriage, or adoption. The Tenggerese people use the term '*sedulur'* which refers to kindred consisting of one to three generations of local relatives, usually direct descendants of a person's great grandfather on the father's or mother's side. The Javanese, including the Tenggerese people, have a bilateral kinship system which refers to relationships from both parents, making children tied equally to relatives of both the mother's and father's line. It means that children have an equal opportunity to provide care of their parents from both the mother's and father's side. Living arrangements for older people will affect who plays a dominant role in providing care of the elderly.

Community-based care lies between traditional and modern elderly care organisations. The management of transitional elderly care organisations comes from local people's initiatives with other institutions' involvement from outside the community. Cantor's model (1977) as cited in Cantor & Brennan (1999) has conceptualised the social support system of the elderly as a series of concentric circles; each contains a different type of support element sub-system. In this model the elderly are at the centre with support sources based on the degree of social distance from the older person (*i.e.* nearest to the farthest) and the support element's organisation (*i.e.* informal to formal). The primary informal support is from those closest and most involved in the elderly's daily life, such as a spouse, children, children-in-law, and grandchildren. The second circles are informal support relationships from other kin such as friends and neighbours. The next circle are quasi-formal, known as mediating structures such as religious organisations, ethnic, cultural, social and neighbourhood groups, which often serve a link between the individual and society. The two outer circles are the public and voluntary service organisations, including formal support systems (*cf.* Cantor & Brennan 1999).

Three groups of kinship apply in the Tenggerese community: *sa'omah* (main family as the smallest kinship group), *sa'dulur,* and *wong Tengger*. The elderly will receive care and support services predominantly from the family living in one house (*sa'omah*); the elderly who live independently in a house would be visited by their children in the afternoon. Children take it in turns to regularly visit them to see and talk about their condition and bring them some needs such as food or another needs.

Meanwhile, the elderly who live together with their children in one house have a separate kitchen so that they can cook their own meals. The elderly in the Tengger Region do not want to burden their children as long as they can meet their needs independently. However, sometimes children still take care of their parents in other ways, such as cleaning the house, washing clothes, or accompanying them to go somewhere. Moreover, the other children will help fulfil the elderly's needs such as food, clothes, cigarettes, or basic needs (*e.g.* rice, sugar, coffee, tea), etc. The *sa'dulur* kinship system recognises other relatives such as cousins from both father and mother, cousins of the second generation from father and mother or relatives from father and mother. They will provide care of the elderly when the elderly's family needs it.

Sometimes, *sa'dulur* initiate visits to the elderly just to meet and talk. Care and support provision for the elderly is based on the local tradition of *bakti* in which the Tenggerese people believe in. Lastly, the Tenggerese people are morally obliged to provide support and care of the elderly in their communities. The local community implements the *sayan* local tradition, such as visiting the elderly and bringing food or money to those who need it. The local people pay a visit to the elderly not only when they are sick but also when they have special events such as *slametan* or other events. The local community is also visiting and chatting with each other in the afternoons.

Finally, modern care organisations are based on modern care of the elderly delivered by trained professionals. The implementation of care of the elderly in modern care institutions has binding and compelling rules for all involved. The rule requires care of the elderly to be fully managed by the modern organisations provider. Commonly, management of modern elderly care organisations is divided into two kinds: government and private management. The government manages old-age homes to provide care and support for the elderly, who are neglected or do not have families. Care of the elderly in Indonesia consist of four schemes. One example is health services provided in the *Puskesmas Santun Lansia*, the *Posyandu Lansia*, and the hospitals. As mentioned above, social care services for the elderly are provided by the the *Karang Werda* and the *Panti Jompo*.

Moreover, the elderly also receive social assistance from different governmental institutions, *e.g.* financial assistance from the Ministry of Social Affairs (ASLUT and PKH) and financial or non-material assistance from BKKBN (BKL). Several central government ministries and agencies control all those schemes. For example, health care services are controlled by the Ministry of Health, while the Ministry of Social Affairs controls social care services and some social assistance such as ASLUT and PKH. Moreover, social security for the elderly is controlled by *Badan Penyelenggara Jaminan Sosial* (BPJS) (Government Social Security Agency), while BKKBN controls the BKL programme. Care and support service provision for the elderly involves many ministries and agencies, central to the province, district, sub-district, urban village, or village. Each ministry and agency has a programme for the elderly. Unfortunately, particularly in rural areas, programme implementation for the elderly suffers from unequal distribution of available resources. There are no clear directions from central government to the various layers of health service providers in supporting the elderly's needs in Indonesia. Inadequate staff and a lack of direction from the government can reduce government programs' effectiveness. The elderly's activities such as social and health care, and the contribution of other sectors such as transport, public facilities, and telecommunications should be integrated to ensure optimal coordination and efficiency.

Care and support service schemes for the elderly, *i.e.* health and social care, social security and assistance, are provided by many ministries and agencies. The schemes need to be based on what the elderly need and want in the community. This study introduces integrated care at the service delivery level through case management. It provides comprehensive services for community-based older people, which focuses on two primary purposes: quality and cost of care.

Case management aims to improve health and social care coordination, which needs interventions from case managers. Case managers who are social workers are more likely to encourage cooperation among the elderly's own strengths, family, friends, and the community to make independent living possible, rather than health professionals.

Secondly, Chapter III presents the appropriate ethnoscience research methodology to utilise plural elderly care institutions using the selected analytical model. It is introduced by Slikkerveer (1990) and used in several types of research related to applied ethnoscience and development studies. The 'Leiden Ethnosystems' Approach' is chosen to better understand and explain the indigenous perceptions, practices, beliefs, values, and philosophies associated with the concept and practice of care and support service provision for the elderly. The 'Leiden Ethnosystems' Approach' follows three methodological principles: the 'Participant's View' (PV), the 'Field of Ethnological Study' (FES), and the 'Historical Dimension' (HD). In the PV context, this research studies the local people's views in the Tengger, including the Javanese, related to their perception of care of the elderly for care providers and utilisation of preferences for elderly care institutions. This research is conducted from the 'emic' view

that involves the way local people perceive themselves rather than the 'etic' view taken from the way the researcher perceives people. The FES is related to the concept of 'culture area' and refers to a geographical region where cultural features can be compared between different ethno-cultural groups in that same region. The Javanese, including the Tenggerese people, have cultural practices regarding care and support behaviour for the elderly, using *bakti* and *sayan* as the underlying local traditions. The HD concept facilitates the assessment of the cognitive and behavioural components of the community studied. It includes analysing the intricate contemporary patterns including culture, religion, agriculture, living and care arrangements, support for the elderly, and livelihood strategies to secure old age. Those aspects will influence the current user behaviour towards utilising elderly care institutions in Java, particularly in Tengger, East Java.

Moreover, data have been collected through both qualitative methods by observation and interviews, and quantitatively through household surveys. The quantitative data have been collected from the structured questionnaires following the conceptual model developed for this research. The appropriate conceptual model is then constructed on the basis of the Transcultural Utilisation Model, developed by Slikkerveer (1990) allowing the assessment of the cognitive and behavioural components of particular groups or communities as 'systems' in a rather process-oriented mode. The research uses a multidimensional approach which focuses on indigenous knowledge systems with ethno-economic and ethno-management approaches based on the significant evidence that an individual's behaviour is affected by a number of factors *i.e.* socio-demographic, psycho-social, perceived needs, enabling institutional, environmental and intervening variables. The collected data was analysed through stepwise bivariate, mutual correlations, multivariate, and multiple regression analysis.

This research focuses on the Javanese ethno-cultural group in East Java, particularly in the Tengger Region, a part of the Javanese ethno-cultural group. The Tenggerese people have certain traditions they still maintain, carry out, believe in, and practise in their daily life, including the practice of the *bakti* and *sayan* local traditions in the care of the elderly. This research was conducted in four villages representing the Tenggerese and Javanese ethno-cultural groups in East Java. The unit of analysis of this research is the adult person as the household head with parents or elderly. Another criterion is that these adults provide care of their parents or elderly. The household head is the adult child, married or unmarried, which still has parents or older people to care of. In this context, the researcher defines care of the elderly provided by an adult child into three types. The first type is the adult child and their family living in the parents' home or bringing the parents to his/her home to take care of them. The second type refers to the adult child taking care of their aged parents by living near their parents' home. The last type is the elderly who live separately from their children.

Thirdly, the general profile or sociography of the research area refers to Indonesia, and the Tenggerese and Javanese people in East Java, as discussed in Chapter IV. Java is one of the Indonesian islands which is the world's most populous island; more than half its population occupies the island. The Javanese are the predominant Indonesian majority ethno-cultural group, predominantly located in Central and East Java. This research focuses on East Java as one of the provinces with a high percentage of ageing population.

The Island of Java still holds more than half of the national economy, which means that economic activities are still concentrated in Java. Nearly half of Indonesia's elderly are still actively working with the percentage of working elderly higher in rural areas than that of urban areas; informal employment is much more available in rural areas, such as the agricultural sector which does not require special skills. Most elderly who work in the agricultural sector only have education up to elementary school level and earn income lower than other sectors such as industry, trade, and services. Many elderly live with their extended families, either with two or three generations. The Javanese ethno-cultural group also has many ethno-cultural sub-groups, such as the Tenggerese people in East Java which live in the Tenggerese Highlands surrounded by an active volcano such as Mount Bromo, Mount Semeru, and part of the Tenggerese massif. This research was conducted to understand the specific behaviour of the Tenggerese and Javanese people in East Java, related to care of the elderly. In this research, the Tenggerese and Javanese people are represented by two *tlatah* or cultural areas:

Malang as Arek *tlatah* and Lumajang as Pendalungan *tlatah*. Understanding the local people's characteristics of ethnocultural groups, kinship systems, knowledge and living arrangements in the community is important to comprehensively understand the behaviour patterns related to care of the elderly in each ethno-cultural group.

Fourthly, the description of the four villages is presented in Chapter V, which focuses on care and support service provision for the elderly in traditional, transitional, and modern elderly care organisations. This study focuses on care of the elderly, emphasising health and social care services. In this context, the health and social care services are shown based on the place and provider of the elderly care institutions. In terms of place, it can be at home, in the community, or an institution while service provision can be family, voluntary, private, or state.

The majority of respondents in the four villages of Argosari (19.2%, n=34), Ditotrunan (27.1%, n=48), Ngadas (22.0%, n=39), and Tlogomas (31.6%, n=56) much believe in traditional elderly care institutions. However, some respondents, particularly in Ditotrunan (50.0%, n=4) and Tlogomas (50.0%, n=4), have little belief in traditional elderly care institutions. Both Ditotrunan and Tlogomas are urban villages where social change such as modernisation and urbanisation may influence perceptions of care institutions. The majority of respondents in four villages report that they receive much financial support from traditional elderly care institutions, namely respondents in Argosari (28.1%, n=32), Ditotrunan (34.2%, n=39), Ngadas (14.0%, n=16), and Tlogomas (23.7%, n=27). This happens because many elderly live with their children or family, and rely on their household members for financial support (*cf.* Field Notes 2018). This research supports the data from BPS (2017) that the family members have a large role in financing the elderly. BPS (2017) reported that 77.82% of elderly households obtained funding from household members who work.

On the whole, the majority of respondents in the four villages of Argosari (25.8%, n=50), Ditotrunan (24.2%, n=47), Ngadas (23.2%, n=45), and Tlogomas (26.8%, n=52) report that it is easy to access the services of traditional care institutions. In this context, geographical accessibility concerns the respondents' perception of access to get care of the elderly. Many respondents find it easy to access care of the elderly because many elderly live with them. The elderly who are not living in the same house with their adult children also find it easy to access assistance from their friends or neighbours in the same community (*cf.* Field Notes 2018).

Compared to traditional eldery care, the majority of respondents in the four villages of Argosari (11.0%, n=13), Ditotrunan (29.7%, n=35), Ngadas (24.6%, n=29), and Tlogomas (34.7%, n=41) present little knowledge on transitional elderly care organisations. Many people in the community only have a little information about transitional elderly care organisations, and not many of them know about care and support services provided by these organisations.

In this context, transitional elderly care organisations refer to community-based care, such *Posyandu Lansia* and the *Karang Werda*. The majority of respondents in the four villages of Argosari (33.7%, n=83), Ditotrunan (16.7%, n=41), Ngadas (22.0%, n=54), and Tlogomas (27.6%, n=68) report that they do not receive financial support from transitional elderly care organisations. Apart from such support, the respondents reported no access to reach services in transitional care organisations. Similarly, 95 respondents also reported difficult geographical access to these services. The geographical accessibility of transitional elderly care organisations refers to the respondents' perception of access to care of the elderly. It is also related to the availability and sustainability of services in transitional elderly care organisations.

Modern elderly care organisations refer to care of the elderly delivered by trained professionals, such as *Panti Jompo*, and *Puskesmas Santun Lansia*. In fact, many respondents in rural areas, *i.e.* Argosari and Ngadas, report that they do not know about these modern services. Most respondents in rural areas have hereditary knowledge about the *bakti* local tradition to provide care for the elderly. The majority of the respondents in Argosari (22.3%, n=33), Ditotrunan (18.2%, n=27), Ngadas (31.1%, n=46), and Tlogomas (28.4%, n=42) report very little belief in modern elderly care organisations. Modern elderly care organisations primarily refer to *Panti Jompo*. Many respondents believe that their elderly prefer to stay close with their family than to stay in a modern elderly care organisations because if the elderly

stay in modern care organisations, they feel as if they are being taken away from their family and arrange to stay with other elderly in a new environment such as an old age home. It is not surprising then, that the majority of respondents of the four villages in Argosari (25.0%, n=36), Ditotrunan (18.1%, n=26), Ngadas (28.5%, n=41) and Tlogomas (28.5%, n=41) report a very negative opinion on modern elderly care organisations.

Furthermore, the qualitative research is also based on the 'emic' view, or local people's perspectives on each elderly care institution in the four villages. Some adult children and their elderly do not really believe in the government's health care services because they believe in traditional medicine or healing more than transitional and modern organisations. Some adult children in the Tenggerese people have the opinion that when they brought their elderly to such government's health care to receive treatment or medicine, many of them were not getting better. Moreover, the Tenggerese people prefer going to the *'dukun*' first to get '*suwuk*' to recover. *Suwuk* is a prayer of the *dukun* for sick people by casting a spell called *mantra* or *japa*.

Hence, the elderly who live near transitional elderly care organisations do not want to use these services to check their health. Many respondents do not get enough information about care and support services provided by transitional elderly care organisations because of the lack of human resources to distribute and share information to the community. Moreover, in some areas, the village officials and staff do not actively share information about care and support services provided for the elderly. Many respondents know transitional elderly care organisations from media such as television or newspaper. The health and social care facilities in transitional and modern organisations tend to be better-managed in urban areas than in rural areas.

In the rural areas, the medical equipment, medicine stock and personnel are lacking care and support service provision in transitional elderly care organisations. Moreover, the transitional elderly care organisations in urban areas provide more activities than those in rural areas since they have adequate resources and ease of access to get care and support services, such as health services, sport, religious, training, and economic activities for the elderly.

In Indonesia, old age homes are used as the last resort to provide care of the elderly. Old age homes that the government fully manages are generally intended for the elderly in the abandoned category who do not have family or relatives who can care of them. The government fully manages and funds these old age homes. Ironically, government old age homes are limited because of the limited budget from the government. On the contrary, private old age homes provide care of the elderly, which require the family or relatives to pay service costs. Even though the elderly have family, they choose or are forced to live in old age homes whose cost is fully managed by private old age homes.

So, the family's role in this kind of care and support service is limited, compared to the family's role in traditional elderly care (family home care). In fact, the Tenggerese people are influenced by filial piety values, and they will feel ashamed if they place the elderly in old age homes. Moreover, the community will think that their children have abandoned them and they will be sanctioned. The Tenggerese people have the responsibility to live up to their traditions for care of the elderly by living in their villages. The majority of people in rural areas have a close relationship among each other, and many of them are close kin in the same village.

Fifthly, since this research in the field of ethno-economics, ethno-medicine and ethno-management, is based on the socio-cultural analysis of elderly care management, Chapter VI describes the Tenggerese culture, history, and belief system, including their cosmology and way of life. The Tenggerese community strongly clings to their traditions and the noble values of their culture. The devotion to local traditions is reflected from traditional ceremonies and *selamatan* that their ancestors pass over generations. The *Adat* ceremonies in the Tenggerese community are described in Chapter VI, which is categorised into three kinds: the *adat* ceremony representing social life, the life cycle of a person, and the agricultural cycle, house building, and natural phenomena. In this context, the cosmology concept refers to indigenous knowledge, beliefs, and cultural practices related to care and support provision for the elderly. The Tenggerese people believe in *Catur Guru Bakti* which means practising devotion and obedience to gain wisdom, spiritual discipline, and enlightenment.

The Tenggerese people show respect and filial piety to four *guru* known as *bekti marang guru papat*. There are four traditional principles whom people should pay respect to: *Guru Swadhyaya*, *Guru Rupaka*, *Guru Waktra*, and *Guru Wisesa*. The meaning of *Guru Swadhyaya* is God, and it fits the Tenggerese community's beliefs of the god named *Sang Hyang Widhi*, while *Guru Rupaka* is a person playing a role as parents.

Moreover, *Guru Waktra* is a person playing a teaching role, and *Guru Wisesa* means the government who is responsible for making rules to improve the people's welfare. This research focuses on the parents as *Guru Rupaka*. It means that the children should pay respect to, guard, and take care of their parents in their old age because their parents raise them until they can live independently. The parents will do anything to make their children happy and independent such as sending them to school, providing money for their marriage and housing, and even looking after their grandchildren. For that reason, children need to *balas budi* ('return the favour') to their parents by looking after them in their old age. This responsibility is based on *bakti* which has been a part of their culture to take care of the elderly. However, filial piety is not only practised between parents and children, but also towards the elderly or older relatives. The Tenggerese people believe that when children are not taking care of their parents, *karma yang buruk* ('bad *karma*') may happen in their life.

The Tenggerese people, where the majority of respondents are Hindu and Buddhist, describe '*karma*' as the force produced by a person's actions in their life, which may influence what happens in their future lives. It means that respondents who ignore and do not take care of their elderly will be unlucky in their future lives. Moreover, the Tenggerese community will judge children who cannot take care of their elderly as *anak durhaka* ('rebellious') and even socially sanction them. The Tenggerese people believe that children who take care of their parents or older relatives will be happy, lucky, prosperous, and proud to have taken care of their parents in their life.

The Tenggerese communities practice kinship as care and support providers for the elderly. The elderly can live and stay with their children in one house (*sa'omah*) or live in a separate house from their children. The kinship system of *sa'dulur* recognises other relatives such as cousins from both father and mother, cousins of the second generation from father and mother, or relatives from father and mother. The biggest kinship group is *wong* Tengger. Care and support provision for the elderly in Tenggerese people are given personally by their families and groups through mutual cooperation or assistance. The care and support provided for the elderly are personally based on the *bakti* local tradition which the Tenggerese people believe in. Meanwhile, *sayan* refers to a local tradition of mutual aid where community members in the Tengger Region are morally obliged to provide care and support to the elderly in their communities.

Interestingly, couples who do not have children can adopt a child from their relatives. The term is known as '*anak angkat*.' In fact, couples in the Tengger Region adopt children under an unwritten agreement between the two families. The adoption process must be known, agreed to, and without compulsion between two families. Couples in Tenggerese are not ashamed to say that they adopted a child and they will and raise adopted children as their biological children. Meanwhile, children adopted by relatives still respect and take care of both their biological and new parents.

It is the reason that most Tenggerese people have a close relationship with each other. 'Having children' is important for the Tenggerese people to perceive themselves as secure and comfortable in their old age. Moreover, the majority of Tenggerese people are farmers who depend on working on farmland which is owned by heirs from inheritance. The Tenggerese people who have farmland will share inheritance equally among their heirs; parents will divide their inheritance equally among sons and daughters. The children help cultivate their parents' agricultural land and therefore inherit the land. When parents cannot manage their own property, they may allow an adult child to run their farm or business in exchange for providing support for them. The children who receive an additional inheritance from the parents are called *sendenan tuwo*. In Tengger, the additional inheritance from the parents to the children who take care of them until they die is known as '*Tanah Gantung* or *Gantungan*'.

Sixthly, the results of the stepwise bivariate, mutual correlations, multivariate and multiple regression analysis of the quantitative data from the household surveys are presented in Chapter VII. The analysis shows and explains the relationship between the independent and intervening variables and their role in determining the utilisation behaviour of the traditional elderly care institutions in the four village samples compared with the transitional and modern organisations. The results confirm the theory which states that the 312 local respondents of the village samples prefer to utilise traditional elderly care institutions (70.8%), in comparison with transitional (19.2%) and modern elderly care organisations (9.9%). The results reveal the various levels of significance of the correlation between the independent and intervening variables concerning the dependent variables. The determinants which emerge from the stepwise quantitative analysis in Chapter VII can be summarised as follows:

Independent Variables:

Block 1 Predisposing Socio-Demographic Variables:
- Relationship of household head with elderly
- Age
- Education
- Place of birth
- Ethno-cultural affiliation
- Religious affiliation
- Marital status
- Occupation
- Employment in family business/farm

Block 2 Predisposing Psycho-Social Variables:
- Knowledge of transitional elderly care
- Knowledge of modern elderly care
- Belief in traditional elderly care
- Belief in transitional elderly care
- Belief in modern elderly care
- Opinion on transitional elderly care
- Opinion on modern elderly care

Block 3 Perceived Needs Variables:
- Perceived needs for using elderly care

Block 4 Enabling Variables:
- Monthly income of the household head
- Monthly income of the household members
- Socio-Economic Status (SES)

Block 5 Institutional Variables:
- Accessibility cost of modern elderly care
- Geographical accessibility of transitional elderly care
- Geographical accessibility of modern elderly care
- Financial support availability from traditional elderly care
- Financial support availability from modern elderly care

Block 6 Environmental Variables:
- Type of residence

Intervening Variables:

Block 7 Government or Private Programme Variables:
- Impact of government regulation on traditional elderly care
- Impact of government regulation on transitional elderly care
- Impact of government regulation on modern elderly care
- Impact of private promotion on traditional elderly care
- Impact of private promotion on transitional elderly care
- Impact of private promotion on modern elderly care

The subsequent mutual correlations analysis shows the dominating influence of the block of socio-demographic variables (9) on the dependent variables, followed by the block of psycho-social variables (7), intervening variables (6), institutional variables (5), enabling variables (3), perceived needs variables (1), and environmental variables (1).

The results of multiple regression analysis on the blocks of variables shows that the blocks of socio-demographic variables and psycho-social variables have highly correlated coefficient results with some independent variables. The high correlation is shown between the block of socio-demographic variables and psycho-social variables (r= .720), between the block of socio-demographic variables and institutional variables (r= .704), as well as between the block of socio-demographic variables and the block of intervening variables (r= .830). Moreover, a very high correlation is shown between the block of socio-demographic variables and the block of environmental variables (r= .968). Meanwhile, a high correlation is shown between the block of psycho-social variables and the block of institutional variables (r= .862). A very high correlation is also shown between the block of psycho-social variables and the block of intervening variables (r= .938), while, the block of psycho-social variables shows high correlation with all blocks of dependent variables. This means that the block of psycho-social variables is important to determine respondents' behavioural patterns.

The Tenggerese people still believe in and practice their traditions related to the care of the elderly. Most people who utilise modern elderly care organisations come from Tlogomas representing the urban (23.3%, n=20 respondents) and Ditotrunan representing urban villages (15.9%, n=11 respondents). Moreover, the respondents from Tlogomas (27.9%, n=24 respondents) also utilise transitional elderly care organisations. In general, respondents prefer to utilise traditional elderly care institutions as their first prefers; the majority of respondents still show preference to take care of and support the elderly by themselves with their family.

Socio-demographic variables, as mentioned in Table 7.2 show the most strongly significant correlation between the relationship of the household head with the elderly to the respondent's behaviour in the utilisation of elderly care institutions (χ^2 = .000). In line with these results, Cramer's V (V= .423) value shows that the variables are extremely strong. Respondents who live with their parents (77.2%, n=139) or parents-in-law (75.0%, n=69) utilise the traditional elderly care institutions more frequently than average (70.8%). Meanwhile, only 17.6% (n=3) of respondents living with other kin (*e.g.* uncle/aunt) use care and support services from traditional elderly care institutions less frequently than average.

Meanwhile, cross-tabulation of 'socio-economic status' and the dependent variables shows a very strongly significant relationship (χ^2 = .007) that is weakly associated with Cramer's V value of .184. Respondents categorised with poor socio-economic status (81.4%, n=48) prefer traditional elderly care institutions more frequently than average (70.8%). Meanwhile, respondents categorised with average socio-economic status (54.7%, n=29) report the utilisation of traditional elderly care institutions less frequently than average. Furthermore, 22.5% of respondents categorised with rich socio-economic status prefer transitional elderly care organisatios more frequently than average (9.9%). Hence, the relationships among the variables of 'monthly income of the household head,' 'monthly income of the household members,' and 'socio-economic status' with utilisation of elderly care institutions show a significant result for each variable. This means that those variables can be used to determine the behaviour patterns towards preference for elderly care institutions.

This study also conducted a multivariate analysis after the bivariate analysis. The multivariate analysis is implemented with the Non-Linear Generalized Canonical Correlation Analysis, which is known as OVERALS. The OVERALS procedure is part of the SPSS, allowing variables to have different measurement levels: nominal, ordinal, or interval, within the same analysis. The approach enables combining phenomena that cannot be measured under the same level; some variables are in categories that reflect a rank or classification, with intrinsic or semantic differences, typical for ethnoscience research (*cf.* De Bekker 2020). Similar studies also use OVERALS, *e.g.* Slikkerveer (1990), Agung (2005), Ibui (2007), Leurs (2010), Djen Amar (2010), Ambaretnani (2012), Chirangi (2013), Aiglsperger (2014); Saefullah (2019), De Bekker (2020), and Febriyanti (2021).

In this study the multiple regression and canonical correlation analyses are conducted, while at the same time OVERALS is also applied to indicate the relationship among sets of independent variables. Seven blocks of independent variables, including one intervening variable, are used to analyse its influence on three dependent variables of the behavior patterns of utilisation of the plural elderly care system. In addition to assessing the correlation among the sets of variables, OVERALS evaluates the correlations between the canonical variates and the original variables, known as 'canonical' or 'component' loadings. Component loadings indicate to which extent each variable contributes to the canonical variate variance and whether they can estimate each variable's significance in the overall model. In general, the higher the component loading of the single variable, the more significant the variable's contribution to the overall model in the utilisation of elderly care systems. The majority of people in the villages under study prefer to utilise traditional elderly care institutions, compared to transitional and modern ones.

The multivariate analysis shows the correlations of local people's preferences to utilise elderly care institutions, which is influenced by the six blocks of independent variables and one block of intervening variables. It shows how each variable correlates to another block of variables, including the dependent variables. The higher the correlation coefficient, the higher the strength of its correlation among the block of variables.

The psycho-social variables have a strong correlation in the utilisation of the plural elderly care system: r= .778 for the traditional, r= .756 for the transitional, and r= .784 for the modern elderly care organisations. Moreover, the socio-demographic variables have a strong correlation in the utilisation of traditional (r= .524), and modern (r= .758) elderly care organisations. Additionally, the socio-demographic variables have a moderate correlation in the utilisation of transitional elderly care organisations, with a correlation coefficient of .330.

8.2 Implications

8.2.1 Theoretical and Methodological Implications

The present research adopts an 'emic' perspective and applies the concept of Indigenous Knowledge Systems (IKS). The study on the IKS connects with the cognitive aspect of investigating local systems of knowledge, practice, and belief in the behavioural components of the development process and changes within the community. The IKS is used to deepen the understanding of local systems of the knowledge, practice and belief of local people regarding the behaviour patterns of care and support for the elderly in Tengger, a part of the Javanese ethno-cultural groups in East Java.

Moreover, the studies of Slikkerveer & Dechering (1995), Warren, Slikkerveer, & Brokensha (1995), as well as Slikkerveer, Baourakis, & Saefullah (2019) conclude that it is important to incorporate cultures into development which underscores the approach of sustainable development. Culture is a particular example of how an 'emic' view differs from one community to another. In this research, the 'emic' view refers to how adult children perceive care of the elderly and their preferences to utilise elderly care institutions. Those perceptions can be understood and evaluated in terms of cultural contexts, where adult children utilise care of their elderly. Olson *et al.* (2011) and Keith (1992) state that cultural norms influence the way people practice their daily life within the community. For example, cultural norms influence concepts of lineage, which is important to determine particular kinship groups, residence, and inheritance patterns.

The Leiden Ethnosystem and Development Programme (LEAD) also designed the IKS-based Integration Model (IKSIM) which embarks on integration and interaction with local and global systems of knowledge, practices, and institutions towards Integrated Community-Managed Development (ICMD) (*cf.* Slikkerveer, Baourakis, & Saefullah 2019). IKSIM of ICMD encompasses the three interrelated worlds as the foundation: indigenous knowledge systems, institutions, and cosmology, focusing on the decision-making processes of the community members and developing the vertical 'bottom-up' approach towards sustainable community development (*cf.* Slikkerveer 2019a).

This means that the position of indigenous institutions is important to develop a strategy process to implement ICMD. Indigenous institutions involve the perspectives of local people on their culture and life. In Indonesia, the indigenous institutions have existed for many generations with local values such as cooperation, mutual aid, and neighbourhood support at the community level, *e.g. gotong royong*.

One of the implications of the study of *bakti* and *sayan* local traditions among the Tenggerese people in East Java is the support of the IKSIM model through ICMD for case management of care of the elderly. As this study argues, that local people's knowledge and beliefs are important, particularly in relation with the care and support for the elderly.

In Indonesia, community-based activities originate from the concept of *gotong royong*, representing the local principle connected to the indigenous knowledge systems and cosmologies at the community level, which enable a 'bottom-up' approach to achieve sustainable development. The ICMD approach is also used to achieve sustainable elderly care development in East Java, in order to improve their well-being and health in the communities.

In this context, the plural elderly care system is related to several existing institutions that focus on providing care and support services to maintain the elderly's well-being. This research supports the concept of the Plural Medical System by Slikkerveer (1990), which enables the classification in this research into three types: (1) 'traditional institution,' (2) 'transitional organisation,' and (3) 'modern organisation.' The concept of the plural systems has also successfully been applied to ethnoscience research in Indonesia (*cf.* Agung 2005; Leurs 2010, Djen Amar 2010, Amberatnani 2012, Erwina 2019, Saefullah 2019, Febriyanti 2021; in Kenya Ibui 2007; in Greece Aiglsperger 2014; and Tanzania Chirangi 2013 and De Bekker 2020). In this research, the concept of the plural elderly care system is applied to East Java, particularly to the Tengger Region.

This research also supports the model of Cantor's (1977) as cited in Cantor & Brennan (1999) for social support for the elderly. Cantor has conceptualised the social support system of the elderly as a series of concentric circles, each containing a different type of support element or sub-system (*cf.* Cantor & Brennan 1999). The older person is at the centre and the source of support radiates outward from the older person based on the degree of social distance (*i.e.* nearest to the farthest) and the support element's organisation (*i.e.* informal to formal). The inner two circles contain informal support systems such as kin, friends, and neighbours. Meanwhile, the two outer circles include other players in society, namely mediating structures such as the community and formal sources of social support (*cf.* Cantor & Brennan 1999). Commonly, the elderly receive care and support services from kin, friends, and neighbours who live near the elderly. This kind of support is known as an informal support relationship.

The methodological implications of this study prove that the 'Leiden Ethnosystems' Approach' introduced by Slikkerveer (1990; 1999) and Warren, Slikkerveer, & Brokensha (1995) provides a detailed analysis of local systems of knowledge, belief, and practice to assess past and present patterns of behaviour with regard to the object of study in the community in a particular research area. Moreover, this study shows that the combined research methods, both qualitative and quantitative, involving the 'Participant's View' (PV), 'Field of Ethnological Study' (FES), and 'Historical Dimension' (HD), can describe and support understanding of all the relevant factors which play a role in local people's utilisation of the plural elderly care system in Tengger, East Java. This study also supports the importance of using mixed methodologies in research combining subjective conclusions through an in-depth study of the field and objective generalisations through household surveys in the research area.

In a nutshell, the ICMD should be considered as an advanced approach to the development of a new strategy towards the design of the envisaged integrated elderly care systems, with special attention for the provision of care for the elderly in indigenous institutions. As this research has shown, the 'Leiden Ethnosystems' Approach' can be used to analyse local systems of knowledge, belief, and practice in indigenous communities.

8.2.2 Practical Implications and Recommendations

The practical implications of the study include factor identification which strongly contributes to the utilisation of elderly care institutions from the local people's perspective. The results of this study show that traditional institutions play an important role in the process of care of the elderly. Local people prefer to utilise traditional elderly care institutions as their first preference, transitional ones as the second, and modern ones as the last. It means that the majority of local people still prefer to provide care and support for the elderly in their home (family home care).
In addition, local people prefer to utilise transitional elderly care organisations, combining care and support from family and community. This means that the community plays a role to help each family to take care of and support the elderly in their community.

The integration of the *bakti* and *sayan* local traditions of the Tenggerese people provides culturally appropriate care of the elderly, pertaining to their improved health and well-being. An important implication of the study refers not only to the local people's practices of both local traditions, but also to their cosmovision which influences not only their daily life but also their practice of the provision of care of their elderly. The Tenggerese people believe in *Catur Guru Bakti* which means practicing devotion and obedience to their beloved *Guru* to seek wisdom, spiritual discipline, and enlightenment, as such supporting Sutarto (2008) who argues that the Tenggerese people show respect and filial piety to four *Guru* known as *Bekti Marang Guru Papat*.

In this context, the research also underscores the notion that the Tenggerese people regard their parents as *Guru Rupaka* whom they should pay respect to, guard, and take care of. *Bakti* as a local tradition, is not only practiced between parents and children, but also towards the elderly or older relatives. Moreover, the *sayan* local tradition is practiced to provide care of the elderly in groups through mutual aid in local communities. The practical implications of the *sayan* local tradition have a positive function among the Tenggerese people regarding the provision of care of the elderly. The local community implements the *sayan* local tradition, such as visiting the elderly and bringing them food or money. Local people pay a visit to the elderly not only when they are sick, but also when they have special events, such as *slametan* or other events. The Tenggerese people practice *sayan* as a form of respect for each other, shown by attending an invitation to a particular event where *bakti* also plays a role (*cf.* Haryanto 2014).

The present study also proposes integration between the traditional elderly care institutions and the transitional and modern elderly care organisations. The practical contribution of the study is that the integration has to be implemented by a 'bottom-up' approach in which due attention is paid to the user's perspective described above. The transitional elderly care organisation provides care of the elderly in the community. The management of transitional elderly care organisations comes from local people's initiatives with the involvement of other organisations from outside of the community. Therefore, management of care activities of the elderly has to be fully accepted and implemented by the local community members with local government support.

Meanwhile, modern elderly care organisations are based on care delivered by trained professionals. Care of the elderly in modern care organisations implement binding and compelling rules to all involved. The management of care of the elderly is fully managed by the modern organisations provider. However, to implement the programs for the elderly, the organisations suffer from unequal distribution of available resources, particularly in rural areas. Some challenges and obstacles in providing care of the elderly may come from other aspects. For example, on the one hand, the local people need more knowledge and information about the care of the elderly in both the transitional and modern care organisations. It is important to make local people understand the benefits of those organisations. On the other hand, the government also needs to provide adequate resources and good management to meet the elderly's needs in the community.

The results of this study, specifically on the availability of the elderly care system in the research area and the various behavior patterns towards elderly care institutions as reported by local people, have a predictive value for elderly care planning purposes. Moreover, the behavior patterns in the utilisation of elderly care institutions are analysed from the respondent's view rather than the care

provider's. Furthermore, this study introduces integrated care at the service delivery level through case management. It provides comprehensive services for community-based care of the elderly which encourage the elderly to be able to live independently, feel happy, and stay healthy in their environment. Thus, the knowledge, belief and practice of the local people to provide care of the elderly need to be considered in programme implementation, particularly in transitional and modern elderly care organisations. Integration between the local traditions of *bakti* and *sayan* of the traditional elderly care institutions and the transitional and modern elderly care organisations will support and improve the care of the elderly in their health and well-being, particularly at the community level.

In conclusion, it is important for the Government of Indonesia to promote not only modern care organisations but also to integrate other types of elderly care. The government should provide support for policy planning and implementation of the the integration of the traditional elderly care institutions with the transitional and modern elderly care organisations in order to ensure a more culturally appropriate plural elderly care system. Such an integrated elderly care system, combining its three components of institutions and organisations may assist the government in providing improved protection and care for the elderly throughout Indonesia in a sustainable way in the near future.

Integrated care based on the Indigenous Knowledge Systems Integration Model (IKSIM) is used to make recommendations based on the Integrated Community-Managed Development (ICMD) approach to provide care for the elderly to enhance their well-being. The ICMD approach aims at achieving sustainable development by integrating local and global systems of knowledge and technology in all community sectors through capacity building and local people's participation. Integrated care at the service delivery level through case management, particularly for the elderly, involves an approach that considers specific needs, preferences, and challenges of the elderly care. The integrated care brings together inputs, delivery, management, and organisation of services related to diagnosis, treatment, care, rehabilitation, and health promotion. Therefore, integrated care aims to provide comprehensive services in access, quality, user satisfaction, and efficiency for the elderly.

The care and support services schemes for the elderly above, (*e.g.* health, social care, and security) are provided by many ministries and agencies, and these need to be managed on the basis of the elderly's necessity in the community. Case management aims to improve the coordination of modern health and social care that needs interventions from case managers *i.e.* health professionals or social workers. Professional case managers and social workers should be familiar with the community's resources to make an effective link between the elderly needs and existing resources. On one hand, it is important to create a multidisciplinary team consisting of health care professionals, social workers, psychologists, nutritionists, and other relevant experts. On the other hand, those teams need to collaborate with local community organisations, NGOs, and government organisations in elderly care. *Karang Werda* and *Posyandu Lansia* are forms of community organisations that provide health and social care for the elderly. Moreover, *Puskesmas Santun Lansia* is a form of government organisation that focuses on health care services. Also, management of integrated care for the elderly is conducted by case managers is also important since the implementation of integrated care of the elderly needs some step-by-step activities.

Elderly need to be identified based on their own illnesses, disabilities, or those who live alone which includes an assessment of their physical, emotional, social, and mental health needs, as well as their living conditions and their social support systems. After identifying and assessing them, the team needs to make care plans for each elderly that should address their medical and social needs, psychological well-being, and functional abilities. To make the elderly care produce effective outcome, the team needs not only to communicate and discuss the plans, goals, and outcomes of the care plan with the elderly themself and their family but also to incorporate the elderly's cultural norms, backgrounds, beliefs, socio-economic, and preferences in utilise elderly care institutions and organisations. The process of elderly care involves family members including educating them about the elderly's condition and training them on how to provide proper care, support, and assistance. The role of the community is also important in creating support networks and social activities for the elderly. Moreover, the team can also collaborate with community organisations to provide additional resources, activities, and services.

Last but not least, effective communication channels among team members, elderly individuals, family, and community are important to ensure the elderly care plan is updated on the progress of each case. Using technology, such as communication platforms and electronic health records, it is easier to monitor the elderly's health, and overall well-being, and to assess the progress of each care. Evaluation of the effectiveness of the integrated care approach is conducted through feedback from the elderly and their families, and all the agencies participating in the elderly care and support services provision. The evaluation result can be used to improve and refine the case management process. Additionally, collaboration with government agencies and stakeholders can be developed to ensure adequate resources, knowledge, skills, accessibility, and support for integrated care programs, particularly for the elderly. In a nutshell, implementing integrated care through case management for the elderly requires collaboration, effective communication, a person-centered approach based on the emic view, and bottom-up approach. Physical, emotional, social, and cultural aspects are important to consider to enhance overall elderly well-being and sustainability for all aspects of life.

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Summary

The study focuses on how the Tenggerese people in East Java are perceiving and providing their care of the elderly. The ethno-cutrural group has specific indigenous institutions encompassing traditional norms and values which they maintain, influencing the way of how local people provide care of their elderly. This study has been conducted in four villages representing the Tenggerese living together with the Javanese people in the province of East Java, Indonesia, *i.e.* the villages of Ngadas, Argosari, Ditotrunan, and Tlogomas. The focus is in particular on the implementation of the indigenous knowledge, belief and practice of the indigenous institutions *bakti* and *sayan* to provide care of the elderly. Moreover, this research analyses the reported patterns of elderly care behaviour from the adult child's perspectives. Thus, this study aims to document, analyse and explain the reported preference of the adult children for the available institutions and organisations for the care of their elderly.

The context of elderly care in this research embarks on the socio-cultural background of the provision of care for the elderly. Among the locations providing care of the elderly are the family homes in the community such as the *Karang Werda*, and the elderly care organisations known as old-age homes. Care of the elderly is provided by families, volunteers, the state, or by the private sector (*cf.* HelpAge International 2013). This research has implemented the concept of the plural elderly care system, analysed on the basis of the research methodology of Slikkerveer (1990), which system is divided into three types: (1) 'traditional institutions', (2) 'transitional organisations' and (3) 'modern organisations'. There are various approaches to study these institutions and organisations in order to analyse a specific users perspective' on the provision of elderly care in the research area.

The *first approach* refers to the *emic* ('insiders') view of development. In order to fully understand the local cultures related to the care of the elderly, it should indeed be based on the 'emic' view, rather than the 'etic' (outsiders) view. Warren, Slikkerveer, & Brokensha (1995) are also providing ample empirical evidence for the importance of adopting such an 'emic' approach for sustainable development, based on the cultural dimensions. Uphoff (1992) also states that the 'emic' approach in development involving cultural aspects is considered as the 'universe of experience' which provides many successful cases for mobilising and sustaining collective actions for self-help and self-management in the modern world.

The *second approach* is to consider the two opposite concepts of development of respectively 'top-down' and 'bottom-up' development approaches. The 'bottom-up' approach emphasises the role of local people's knowledge, beliefs and practices for local-level decision-making with full local participation, largely using the community's internal resources.

The *third approach* is based on the practical implementation of research findings through integration of different institutions and organisations of elderly care in the community. It links up with the Indigenous 'Knowledge Systems-based Integration Model' (IKSIM) to formulate practical recommendations through the approach of 'Integrated Community-Managed Development' (ICMD) in the provision of care of the elderly (*cf.* Slikkerveer, Baourakis, & Saefullah 2019).

As these approaches are primarily embarking on the documentation of the socio-cultural context of elderly care in the research area, the shared Tenggerese and Javanese bilateral kinship system is described as it refers to important relationships from both parents, making children equally tied up to relatives of both the mother's and father's lines. It means that the children have an equal opportunity to provide care of their parents from both the mother's and father's sides. Living arrangements for the elderly will affect the family member who plays a dominant role in providing care of the elderly.

There are three groups of kinship which operate in the Tenggerese communities (*cf.* Atmojo 2014): *sa'omah* ('main family as the smallest kinship group'), *sa'dulur* ('kindred'), and *wong Tengger* ('Tenggerese people') being the largest group. Meanwhile, the *sa'dulur* ('kinship system') includes not only the father, mother, older and younger brothers/sisters, grandfather, and grandmother, but also recognises other relatives such as cousins from both father's and mother's side, second generation cousins from both father's and mother's side, relatives from both father's and mother's side, and so forth. *Wong Tengger* is the largest kinship group which also holds religious activities, traditional ceremonies, and other activities held in unity as a group.

The care of the elderly in the Tengger Region is not only provided personally by their families but also by groups through mutual cooperation or assistance. In this context, *bakti* and *sayan* as the indigenous institutions of norms and values play an important role for the family to provide home-based care of the elderly. The Tenggerese people believe in *Catur Guru bakti*, which means practising devotion and obedience to the beloved four *Guru* to gain wisdom, spiritual discipline, and enlightenment. The Tenggerese people also show respect and filial piety to four *Guru* known as *bekti marang guru papat.* There are four traditional principles by which the people should pay respect to: *Guru Swadhyaya* ('God namely *Sang Hyang Widhi* in the community's belief'), *Guru Rupaka* ('a person playing a role as parents'), *Guru Waktra* ('a person playing a role in teaching knowledge or teachers'), and *Guru Wisesa* ('the government which is responsible for making rules to improve the people's welfare').

In this context, the concept of cosmologies refers to the vision of indigenous knowledge, beliefs, and cultural practices related to the care and support provision for the elderly. The Tenggerese cosmology *catur guru bakti* places parents as *Guru Rupaka*. Therefore, the children should pay respect to guard and take care of their parents in their old age because their parents raised them until they can live independently. Likewise in the Tenggerese and Javanese culture, the respondents have a perception of *hormat* ('respect'), filial responsibility, and affection for their elderly. Children need to return the *balas budi* ('favour') to their parents by looking after them in their old age.

This responsibility to take care of the elderly is based on *bakti* which has been a part of their culture to take care of the elderly. The Tenggerese people believe that when children are not taking care of their parents, *karma yang buruk* ('bad karma') may happen in their life. Children who ignore and do not take care of their elderly will be unlucky in their future lives. Moreover, the Tenggerese community will judge children who are not able to take care of their elderly as *anak durhaka* ('rebellious') and even give them social sanctions. In contrast, the Tenggerese people believe that the children who take care of their parents or older relatives will be happy, lucky, prosperous, and proud to be able to care for their parents in their life (*cf.* Field Notes 2018). Based on the respondents' perception, *bakti* refers to the relationship between the adult children and their parents, even though *bakti* can also refer to the relationship between adults and elders or senior relatives.

Meanwhile, the *sayan* tradition refers to mutual cooperation or assistance where community members in the research area are morally obliged to provide support and care for the elderly in their communities. The local community members practice the *sayan* tradition, such as visiting the elderly and bringing food or money to those who need it. The local people pay a visit to the elderly not only when they are sick, but also when they have special events such as a *slametan* ('a communal feast based on religious or cultural events') or other events. Members of the local community are also regularly visiting and talking to each other in the afternoon.

In the Tengger Region, older parents can freely choose with whom they will be staying in their old age. The most important is that whoever the parents live with - their children, kindred, or relatives – they can make them comfortable and happy in their old age. The people who provide care and support for the elderly during their old age will get inheritance from them. In the Tengger Region, the inheritance share system depends on whom the elderly live with. The elderly can choose with whom they live with so that they can get sufficient care and support services, so that they feel comfortable and happy in their old age. The local people use the term *sak srekke* ('at will') to show what the elderly want and like. For example, the adult married child who provides care of the elderly will get more inheritance from their parents than the other siblings, because they will take care of their parents until they die. All families will receive the decision with relief and do not create jealousy. The person among the family or relatives who is willing to provide care of the elderly until they die is called '*sendenan tuwo*'. Therefore, the elderly believe, that those family members are taking care of them and provide support services in their old age (*cf.* Field Notes 2018).

The couples who do not have children can adopt a child from their relatives, known as '*anak angkat* ('adopted children'). In fact, couples in the Tengger Region can adopt children under an unwritten agreement between the two families. Most importantly, the process of adoption must be known, agreed, and without compulsion between the two families. The researcher found that couples in the Tengger Region are not ashamed to say that they adopt a child. They even said that they acquire and raise the

adopted children as their biological children. Meanwhile, children adopted by relatives can still pay respect to and take care of both their biological and adoptive parents, because most Tenggerese people mention that they have a close relationship with each other. Besides, the elderly prefer to stay in their village until they die. They believe that they still can relatively firmly hold on to their traditional customs for generations by staying in their village. Hence, the people in the Tengger Region perceive themselves as secure and comfortable as long as they live near their families and relatives in the community.

The knowledge of local people about care of the elderly is also crucial to conduct research. The study of Indigenous Knowledge Systems (IKS) links the cognitive aspect of investigating local systems of knowledge, belief and practice to the behavioural components in the process of development and change in the community. Integrated care for the elderly in the community needs as such to be developed to the indigenous institutions of better achieve sustainable care, implementing the Indigenous Knowledge Systems-based Integration Model (IKSIM) to formulate practical recommendations through the Integrated Community-managed Development (ICMD) approach in the provision of care of the elderly. In this way, the ICMD approach aims at achieving sustainable development by integrating local and global systems of knowledge and technology in all sectors of the community through capacity building and local people's participation (*cf.* Slikkerveer, Baourakis, & Saefullah 2019). A popular model of integrated care at the service delivery level is the case management approach which attempts to integrate care systems to provide comprehensive services for the elderly in the community.

The general aim of this research in East Java is to document, study, and analyse the utilisation of the plural elderly care system by the local people in the research area. The study encompasses the identification, documentation, and analysis of significant factors influencing the local people's utilisation behaviour of care of the elderly. In particular, the study also analyses the knowledge and practise of *bakti* and *sayan* from the 'emic' perspective among the Tenggerese people to understand the traditional care of the elderly. In order to realise the general aim, this study has focused on the specific objectives as follows:

Firstly, the theoretical orientation is described in Chapter II, emphasising on the definition of the plural elderly care system. In this context, the plural elderly care system relates to the provision of care of the elderly utilising traditional elderly care institutions, and transitional and modern elderly care organisations. Chapter II also elaborates the conceptual and theoretical approaches encompassing the introduction to the concept of care (both health and social care services) and support system, particularly for the elderly based on the place and provider of the elderly care institutions and organisations. Moreover, Chapter II points at the importance of incorporating local people into the development process which also underscores the approach of sustainable community development.

The cultural context can influence a wide variety of aspects, such as family values and behaviours, communication between parents and children, power and gender roles, work and the family, ethical and religious values, and the role of the extended family and people outside the immediate family for managing family matters. The socio-cultural characteristics of familiy life is also important which involve the extended-family, and the related traditional norms and values.

In Indonesia, particularly among the Tenggerese and Javanese people, the values of kinship and family structure are essential in influencing the ways of local people who are providing care of the elderly. They have a same bilateral kinship system which refers to relationships from both parents, making children have an equal opportunity to provide care of their parents from both the mother's and father's sides. Moreover, a social support system for the elderly is also important, providing the sources of support from nearest to farthest social distance from the older person, and from informal to formal support elements.

The primary informal support comes from those who are closest and most involved in the elderly's daily life such as spouses, children, children-in-law, and grandchildren. Additionally, the informal support relationships come from other kin such as friends and neighbours. Thereafter, some organisations or groups serve a link between the individual and society, and have a role as mediating structures.

The outer support system from the older person is a formal support system provided by public and voluntary service organisations. Finally, the chapter introduces integrated care which focuses on the service delivery level through case management. It provides comprehensive services for the community-based elderly, which focuses on two primary purposes: quality and cost of care. The case management aims to improve health and social care coordination, which needs intervention from case managers. Case managers who are often social workers are more likely to encourage cooperation among the elderly's own strengths, family, friends, and the community to make independent living possible, rather than health professionals.

Secondly, the selected research methodology and the related appropriate analytical model are described in Chapter III. The 'Leiden Ethnosystems' Approach' is described as a useful approach developed by Slikkerveer (1990, 1995), representing a specific ethnoscience methodology to analyse local knowledge systems from the local participants view within a particular cultural area. The 'Leiden Ethnosystems' Approach' is chosen to better understand and explain the indigenous perceptions, practices, beliefs, values, and philosophies associated with the concept and practices of providing care of the elderly among the respondents in the research areas, including highlands-lowlands, rural-urban zonation, and environmental areas. The 'Leiden Ethnosystems' Approach' follows three methodological principles: the 'Participant's View' (PV), the 'Field of Ethnological Study' (FES), and the 'Historical Dimension' (HD).

The chapter also provides the complementary combination of qualitative and quantitative data which is used to have an in-depth explanation and general picture of the spread of the local people's behaviour in the utilisation of the co-existent elderly care institutions and organisations. The qualitative data have been collected through observations and interviews with key-informants, followed by quantitative survey methods. The quantitative data are collected through household surveys with the structured questionnaires. The appropriate conceptual model is constructed on the basis of the Transcultural Utilisation Model, developed by Slikkerveer (1990, 1995) allowing the assessment of the cognitive and behavioural components of particular groups or communities as 'systems' in a rather process-oriented mode. The research uses a multidimensional approach which focuses on indigenous knowledge systems with ethno-economic and ethno-management approaches based on the significant evidence that an individual's behaviour is influenced by a number of categories of determinant factors *i.e.* socio-demographic, psycho-social, perceived needs, enabling, institutional, environmental and intervening variables. The collected data have been analysed through a stepwise bivariate, mutual correlations, multivariate, and multiple regression analysis.

Thirdly, the sociography of the research area is presented in Chapter IV which includes Indonesia, and the Tenggerese and Javanese people in East Java. The brief description of Indonesia includes a geographical and historical background, the administrative government, the socio-demography, and the socio-economics, particularly focusing on ageing population trends. Moreover, this chapter also describes the cultural area of Indonesia, particularly Javanese people who are one of the Indonesian majority ethno-cultural groups predominantly located in Central and East Java. This research focuses on East Java as one of the provinces with a high percentage of ageing population and on the Tenggerese people as part of the Javanese ethno-cultural groups which maintain, carry out, believe in, and practise their local traditions in their daily life.

In this research, the Tenggerese and Javanese people are represented by two *tlatah* or cultural areas: Malang as *Arek tlatah* and Lumajang as *Pendalungan tlatah*. Understanding the local people's characteristics of ethno-cultural groups, kinship systems, knowledge and living arrangements in the community is important to understand the behaviour patterns related to the utilisation of care of the elderly in each ethno-cultural group. Moreover, a description of the research setting is presented on the basis of qualitative research in the form of the geography, socio-demography, and socio-economics, and cultural division of the province of East Java, focusing on the research area.

Fourthly, the description of the four villages is presented in Chapter V, which focuses on the provisions of care of the elderly in traditional elderly care institutions, and transitional and modern elderly care organisations. It emphasises on the health and social care services based on the place and provider of the elderly care institutions and organisations. Traditional institutions refer to the 'family

home care' meaning care of the elderly are provided by family at home based on the indigenous knowledge, beliefs, and practises of the local people. *Bakti* and *sayan* as the indigenous institutions play an important role for the family providing care of the elderly at home among the Tenggerese people.

Meanwhile, transitional elderly care organisations refer to community-based care meaning that the provision of care comes from local people in the community, supported by the local government. The management of transitional elderly care organisations come from local people's initiatives with the involvement of other organisations from outside the community, such as the local government. In this study, the *Posyandu Lansia* and the *Karang Werda* are included in the transitional elderly care organisations. Lastly, the modern elderly care organisations refer to the care provided by trained professionals. Modern organisations are introduced and established to the local people by outsiders of the local community, such as the government and private organisations. Moreover, the elderly receive their care also in the *Panti Jompo* and the *Puskesmas Santun Lansia* which are fully managed by the modern organisations. The plural elderly care system, consisting of the traditional elderly care institutions, and the transitional and modern elderly care organisations, are presented in selected factors, including the knowledge, beliefs, opinions, financial support, and accessibility of care of the elderly, based on the local people's perspectives in the research area. In addition, the plural elderly care system is also described in this chapter.

Fifthly, culture, history, cosmology, and lifestyle of the Tenggerese people are described in Chapter VI. The Tenggerese community strongly clings to their traditions and the noble values of their culture. The devotion to local traditions is reflected from traditional ceremonies, including *Adat* ceremonies. In this study, the cosmology concept refers to indigenous knowledge, beliefs, and cultural practices related to care of the elderly. The Tenggerese people belief in *Catur Guru bakti* which means practising devotion and obedience to gain wisdom, spiritual discipline, and enlightenment. The Tenggerese people show respect and filial piety to four *Guru* known as *Bekti Marang Guru Papat.* There are four traditional principles whom people should pay respect to: *Guru Swadhyaya*, *Guru Rupaka*, *Guru Waktra*, and *Guru Wisesa*. The meaning of *Guru Swadhyaya* is God, and it fits the Tenggerese community's beliefs of the God, named *Sang Hyang Widhi*, while *Guru Rupaka* is a person playing a role as parents. Moreover, *Guru Waktra* is a person playing a teaching role, and *Guru Wisesa* means the government who is responsible for making rules to improve the people's welfare.

This research focuses on the parents as *Guru Rupaka* meaning that the children should pay respect to, guard, and take care of their parents in their old age because their parents raise them until they can live independently. Children need to return the *balas budi* ('favour') to their parents by looking after them in their old age. This responsibility is based on the indigenous institutions of *bakti* and *sayan* which have been a part of their culture to take care of the elderly. Regarding the Tenggerese lifestyle, they have three groups of kinship to care of the elderly, *i.e. sa'omah, sa'dulur* and *wong Tengger*. In addition, this chapter also describes the socio-demographic and socio-economic status of the Tenggerese people related to the care and support for the elderly. This study uses ethno-economics and ethno-management focused on the care of the elderly.

Sixtly, the results of the stepwise bivariate, mutual correlations, multivariate, and multiple regression analysis of the quantitative data from the household surveys are presented in chapter VII. The analysis shows and explains the relationships between the independent and intervening variables in relation to the dependent variables, and their role in determining the utilisation behaviour of the traditional elderly care institutions in the four village samples compared with the utilisation of the transitional and modern elderly care organisations.

The bivariate analysis is a starting point for the quantitative analysis of the data sets for utilisation rates which refers to the reported preference of household heads in utilising the plural elderly care system. The results of the analysis confirm the theoretical orientation on utilisation behaviour of care of the elderly, where out of the 312 respondents of the village samples report that nearly three-quarter (70.8%) has utilised the traditional elderly care institutions in comparison with one-fifth (19.2%) of the respondents has utilised the transitional elderly care organisations and only one-tenth (9.9%) of the respondents has utilised the modern elderly care organisations

The subsequent mutual correlations analysis further underscores the importance of the significant variables, represented in the blocks of significant variables in the model. As illustrated in Chapter VII, the Model of the Mutual Correlation Analysis indicates the key factors which influence the behavioural patterns as significant varibles in the utilisation of elderly care institutions and organisations, *i.e.* the socio-demographic variables (9), the psycho-social variables (7), the intervening variables (6), the institutional variables (5), the enabling variables (3), the perceived needs variables (1), and the environmental variables (1).

The multivariate analysis measures the correlationships between the independent variables and the dependent variables, and the correlationships between the multiple dependent variables. The multivariate analysis focuses on the interrelationships and interactions among all variables identified in the analytical model. By using multivariate analysis techniques, it is possible to determine which variables have the strongest impact on the interrelationship of the variables. While the bivariate and multivariate analyses illustrate the significant relationships between different variables in the model, multiple regression analysis seeks to calculate the maximum correlation between blocks of variables. Specific multiple regression analysis was used to calculate the relative importance of the block of variables and the block of dependent variables. It compares the various blocks of variables in the model to determine the relative strength of interaction. The results of multiple regression analysis on the blocks of variables shows that the block of psycho-social variables and the block of socio demographic variables are important to determine respondents' behavioural patterns in the elderly care, consisting of traditional elderly care institutions, and the transitional, and modern elderly care organisations.

Seventhly, the conclusions, and the theoretical, methodological, and practical implications are presented in Chapter VIII. In this context, the theoretical implications are related to the provisions of care of the elderly, encompassing the plural elderly care system, subdivided into the traditional elderly care institutions, and the transitional and modern elderly care organisations.

This research supports the concept of the 'plural elderly care system' introduced by Slikkerveer (1990) in his conception of the complex plural medical system in the Horn of Africa, which classifies this concept in East Java into three sub-systems: the traditional elderly care institutions, and the transitional and modern elderly care organisations. In addition, this research emphasises the results of the 'emic' approach and applies the concept of Indigenous Knowledge Systems (IKS) for understanding the local systems of knowledge, beliefs and practices of local people underlying their reported patterns of utilisation behaviour of elderly care among the Tenggerese and Javanese ethno-cultural groups in East Java. Moreover, this research also supports the theory of Cantor's model (1977) as cited in Cantor & Brennan (1999) for social support for the elderly. Commonly, the elderly receive care and support services from their kin, friends, and neighbours who live near the elderly. The implementation of the distinction of the traditional elderly care institutions, and the transitional and modern elderly care organisations further adheres to the comparative approach needed for the development of ethno-management as a discipline which is based on a cultural orientation in the research area.

The chapter also proposes a strategic model of Integrated Elderly Care (INTEC) which is based on the IKS-based Integration Model (IKSIM) operationalised in the Integrated Community-Managed Development (ICMD) introduced by Slikkerveer (2017). Both models are based on the 'bottom-up' orientation and the 'emic' approach of development at the community level, where the behaviour of the people are largely determined by their indigenous systems of knowledge, belief and practises. The methodological implications of this study prove that the 'Leiden Ethnosystems' Approach' provides a highly functional detailed analysis of local systems of knowledge, beliefs, and practises for understanding and explaining the relevant indigenous phenomena related to the provisions of care of the elderly.

Finally, special attention is paid to the development of a strategic model of integrated elderly care as a way to provide comprehensive community-based care services for the elderly. Since one of the practical implications of this study of *bakti* and *sayan* traditions among the Tenggerese people in East Java refers to the recommendation of the introduction of IKSIM-based model of Integrated Elderly Care (INTEC), the study provides an evidence-based starting point for future policy planning and

implementation of culturally-appropriate care of the elderly in East Java. In this way, the study introduces a new strategic model of Integrated Elderly Care (INTEC) at the community level through a special form of case management. It provides comprehensive services for community-based care for the elderly which encourages the elderly to be able to live independently, feel happy, and stay healthy in their socio-cultural environment.

Moreover, the ethnoscience study, particularly operationalising an ethno-management study of elderly care among the Tenggerese and Javanese population groups in East Java can be used as a bottom-up strategy at the community level for appropriate elderly care provision based on the Tenggerese and Javanese traditional culture. Such recommendation implies that the indigenous knowledge, beliefs, and practises of the local people to provide care of the elderly need to be taken into account in the design of future projects and programmes, followed-up by the implementation of the strategic model of Integrated Elderly Care (INTEC) at the community level, encompassing the traditional institutions, and the transitional and modern organisations providing various forms of elderly care in East Java.

The integration between the knowledge, belief and practises of the indigenous institutions of *bakti* and *sayan* guiding and supporting the traditional elderly care institutions among the Tenggerese people with the transitional and modern elderly care organisations will sustain and ensure the care of optimal health and well-being of the elderly, and as such contribute to the timely realisation of sustainable care of the elderly in the research area of East Java and elsewhere throughout Indonesia.

Samenvatting

Het onderzoek richt zich op de wijze waarop de Tenggerese bevolking in Oost-Java hun ouderenzorg opvatten en practiseren. Deze etno-culturele sub-groep heeft specifieke inheemse instituties die traditionele normen en waarden omvatten die zij behouden en van invloed zijn hoe de lokale bevolking hun ouderen verzorgen. De studie is uitgevoerd in vier dorpsgemeenschappen die representatief zijn hoe de Tenggerese en de Javaanse inwoners samenleven in de provincie van Oost Java in Indonesia, *i.e.* in de dorpen Ngadas, Argosari, Ditotrunan, en Tlogomas. De focus is in het bijzonder gericht op de toepassing van inheemse kennis, geloof en praktijken van de inheemse instituties *bakti* and *sayan* om de zorg van de ouderen te verlenen. Bovendien analyseert dit onderzoek de gedragspatronen van ouderenzorg vanuit het perspectief van de volwassen kinderen. Aldus beoogt deze studie de gerapporteerde voorkeur van de volwassen kinderen voor de beschikbare instituties en organisaties voor de zorg van hun ouderen te documenteren, analyseren en verklaren.

Het kader van de ouderenzorg in dit onderzoek richt zich op de socio-cuturele achtergrond van het verlenen van zorg voor de ouderen. Tot de locaties waar de zorg voor de ouderen wordt verleend behoren de huizen van de familie in de gemeenschappen, zoals de *Karang Werda*, en de organisaties zoals de huizen van de zorg voor de ouderen. De zorg voor de ouderen vindt plaats door families, vrijwilligers, de overheid en door de private sector (*cf.* HelpAge International 2013). Dit onderzoek heeft het concept van het ‘plural elderly care system’ gebruikt op basis van de onderzoeks-methodologie van Slikkerveer (1990, 1995). Dit op de *ethnoscience* gebaseerde concept verdeelt het systeem in drie typen, t.w. (1) ‘traditional institutions’, (2) ‘transitional organisations’ en (3) ‘modern organisations’. Er zijn daarbij verschillende benaderingen ontwikkeld om deze instituties en organisaties te onderzoeken vanuit een specifiek ‘users perspective’ op het verlenen van de zorg van ouderen in het onderzoeksgebied.

De eerste benadering verwijst naar de *emic* (‘van binnenuit’) en het *etic* (‘van buitenaf’) perspectief op ontwikkeling. Warren, Slikkerveer, & Brokensha (1995) documenteren ruimschoots empirisch bewijs voor het belang van een 'emic' benadering van duurzame ontwikkeling, gebaseerd opde culturele dimensies. Uphoff (1992) stelt ook, dat de 'emic' benadering in ontwikkeling waarbij culturele aspecten betrokken zijn, wordt beschouwd als het 'ervaringsuniversum' dat vele ervaringen zou kunnen bieden voor het mobiliseren en ondersteunen van collectieve acties voor zelfhulp en zelfmanagement in de moderne wereld.

De tweede benadering beschouwt de twee tegengestelde concepten van 'top-down' en 'bottom-up' ontwikkelingsbenaderingen. De 'bottom-up'-benadering benadrukt de rol van de kennis, overtuigingen en praktijken van de lokale bevolking voor besluitvorming op lokaal niveau met volledige lokale participatie, gebruikmakend van de interne middelen van de gemeenschap.

De *derde benadering* is gebaseerd op de practische toepassing van onderpoeksresultaten door de integratie van verschillende instituties en organisaties van ouderenzorg in de gemeenschap. Dit sluit aan op het 'Indigenous Knowledge Systems-based Integration Model' (IKSIM) om practische aanbevelingen te formuleren door middel van de benadering van 'Integrated Community-Managed Development' (ICMD) op het verlenen van de zorg van ouderen (*cf.* Slikkerveer, Baourakis, & Saefullah 2019).

Aangezien deze benaderingen primair uitgaan van de documentatie van de socio-cultural context van de ouderenzorg in het onderzoeksgebied, is het door de Tenggerese en Javaanse gedeelde bilaterale verwantschapssysteem beschreven, aangezien dat verwijst naar de belangrijke relaties vanuit beide ouders, die de kinderen verbinden aan hun familieleden van zowel van moeders als van de vaders zijde. Dat betekent, dat de kinderen een gelijke gelegenheid hebben om zorg aan hun ouders van beide kanten te verlenen, zowel van de kant van hun vader als van hun moeder. De leefomstandigheden van de ouderen beinvloeden ook degene die een dominante rol vervult in het verlenen van de zorg van de ouderen.

In de Tenggerese gemeenschappen zijn drie verwantschapsgroepen te onderscheiden (*cf.* Atmojo 2014): *sa'omah* ('hoofdfamilie als de kleinste verwantschapsgroep'), *sa'dulur* ('verwanten') en *wong Tengger* ('Tenggerese bevolkingsgroep'), die de belangrijkste religieuze, traditionele en andere activiteiten binnen de groep als eenheid uitvoert.

Zorg en ondersteuning van ouderen in de Tengger Region worden niet alleen persoonlijk gegeven door hun families, maar ook door groepen door onderlinge samenwerking of hulp. In deze samenhang spelen *bakti* en *sayan* als inheemse instituties van normen en waarden een belangrijke rol om de thuiszorg van ouderen te bieden. De Tenggerese bevolking gelooft in *Catur Guru Bakti*, hetgeen betekent dat het beoefenen van toewijding en gehoorzaamheid aan de geliefde vier *Guru* om wijsheid, spirituele discipline en verlichting te verwerven. De Tenggerese bevolking toont ook respect en kinderlijke vroomheid aan vier *Guru* die bekend staan als *bekti marang guru papat*. Er zijn vier traditionele principes waarvoor de mensen respect moeten tonen: *Guru Swadhyaya* (''God namelijk Sang Hyang Widhi') in het geloof van de Tenggerese gemeenschap), *Guru Rupaka* ('persoon die een rol speelt als ouders'), *Guru Waktra* ('persoon die een rol speelt in als onderwijzers van kennis of leraren'), en *Guru Wisesa* ('de regering die verantwoordelijk is voor het maken van regels om het welzijn van de mensen te verbeteren').

In deze context verwijst het concept van cosmologie naar de inheemse kennis, geloof en de cultuur praktijken, die gericht zijn op de zorg van de ouderen. De Tenggerese cosmologie *catur guru bakti* kwalificeert de ouders as *Guru Rupaka*. Daarom moeten de kinderen hun ouders op hun oude dag respecteren, beschermen en verzorgen, omdat hun ouders hen hebben opgevoed totdat ze zelfstandig kunnen leven. Evenzo hebben de respondenten uit de Javaanse cultuur een vergelijkbare perceptie van *hormat* ('respect'), kinderlijke verantwoordelijkheid en genegenheid voor hun ouderen. Kinderen moeten de *balas budi* ('gunst') teruggeven aan hun ouders door op hun oude dag voor hen te zorgen.

Deze verantwoordelijkheid om voor ouderen te zorgen is gebaseerd op *bakti*, dat ook deel uitmaakt van hun cultuur. De Tenggerese bevolking gelooft dat wanneer kinderen niet voor hun ouders zorgen, er *karma yang buruk* ('slecht karma') in hun leven kan ontstaan. Kinderen, die hun ouderen negeren en niet voor hen zorgen, zullen tegenspoed in hun toekomstige leven krijgen. Bovendien zal de Tenggerese gemeenschap de kinderen die niet in staat zijn om voor hun bejaarden te zorgen, als *anak durhaka* ('vervloekt kind') beoordelen en hen zelfs sociale sancties opleggen. Daarentegen gelooft de Tenggerese bevolking, dat kinderen die voor hun ouders of oudere familieleden zorgen, gelukkig, welvarend en trots zullen zijn op het feit dat ze in hun leven voor hun ouders kunnen zorgen (*cf.* Field Note 2018).

Uitgaande van de perceptie van de respondenten, verwijst *bakti* naar de relatie tussen de volwassen kinderen en hun ouders, hoewel *bakti* ook kan verwijzen naar de relatie tussen volwassenen en ouderen of senior familieleden.

Daarnaast vormt de *sayan* traditie een wederzijdse samenwerking of hulp, waarbij de leden van de gemeenschappen in de Tengger Region moreel verplicht zijn, om in hun gemeenschap ondersteuning en zorg aan ouderen te bieden. Leden van de lokale gemeenschappen brengen de *sayan* traditie in praktijk, zoals het bezoeken van ouderen en het brengen van voedsel of geld naar degenen die het nodig hebben. De lokale bevolking bezoekt de ouderen niet alleen als ze ziek zijn, maar ook als ze speciale evene menten hebben, zoals een *slametan* ('gemeenschappelijk feestmaaltijd gebaseerd op religieuze of culturele evenementen'). Leden van de de lokale gemeenschap gaan 's middags ook bij elkaar op bezoek en praat met elkaar.

In de Tengger Region kunnen ouderen vrij kiezen bij wie ze op hun oude dag willen wonen. Het belangrijkste is dat met wie de ouders ook leven - hun kinderen, verwanten of familieleden - ze op hun oude dag comfortabel en gelukkig kunnen zijn. De mensen, die ouderen op hun oude dag verzorgen en ondersteunen, krijgen van hen een erfenis. In de Tengger Region hangt het systeem van erfenisdeling af van met wie de ouderen samenwonen. Ouderen kunnen kiezen bij wie ze wonen, zodat ze voldoende zorg en ondersteuning kunnen krijgen, en zich op hun oude dag comfortabel en gelukkig voelen. De lokale bevolking gebruikt de term *sak srekke* ('naar goeddunken') om te laten zien wat ouderen willen en leuk vinden. Bij voorbeeld, het volwassen getrouwde kind, dat zorg en ondersteuning biedt aan ouderen, krijgt meer erfenis van zijn ouders dan de andere broers en zusters, omdat zij voor hun ouders zullen zorgen tot die sterven. Alle gezinnen zullen die beslissing met opluchting en zonder jaloezie accepteren. De persoon uit de familie of verwanten, die bereid is om zorg en ondersteuning te bieden aan ouderen tot die sterven, wordt *sendenan tuwo* genoemd. Daarom geloven ouderen dat die familieleden voor hen zorgen en ondersteunende diensten verlenen op hun oude dag (*cf.* Field Notes 2018).

Echtparen, die geen kinderen hebben, kunnen een kind van hun familie adopteren, bekend als *anak angkat* ('geadopteerde kinderen').' In feite adopteren echtparen in de Tengger Region kinderen op basis van een ongeschreven overeenkomst tussen de twee families. Het belangrijkste is dat het adoptieproces bekend en zonder dwang overeengekomen moet zijn tussen de twee families. De onderzoeker ontdekte, dat echtparen in de Tengger Region zich niet schamen om te zeggen dat ze een kind adopteren. Ze zeiden zelfs dat ze de geadopteerde kinderen als hun biologische kinderen beschouwen en opvoeden. Afgezien daarvan kunnen kinderen die door familieleden zijn geadopteerd nog steeds respect tonen aan en zorgen voor zowel hun biologische als hun adoptieouders, omdat de meeste Tenggerezen aangeven, dat ze een hechte band met elkaar hebben. Bovendien blijven zij het liefst in hun dorp tot ze sterven. Ze zijn ervan overtuigd dat ze, door in hun dorp te blijven, generaties lang relatief stevig vast kunnen houden aan hun traditionele gewoonten. Daarom beschouwen de Tenggerezen zichzelf veilig en comfortabel zolang ze in de buurt van hun gezin en verwanten in de Tengger Region wonen.

Het is fundamenteel om de kennis van lokale mensen over zorg en ondersteuning voor ouderen te bestuderen. De studie van 'Indigenous Knowledge Systems' (IKS) koppelt het cognitieve aspect van het onderzoeken van lokale systemen van kennis, praktijk en geloof aan de gedragscomponenten in het proces van ontwikkelings- en verandering in de gemeenschap. Bij de ontwikkeling van geïntegreerde zorg voor ouderen in de gemeenschap moet de nadruk dan ook worden gelegd op het integratiemodel dat gebaseerd is op het 'Indigenous Knowledge Systems-based Integration Model' (IKSIM), teneinde aanbevelingen te kunnen formuleren op basis van de benadering van de 'Integrated Community-managed Development' (ICMD) voor de zorg en ondersteunende diensten voor ouderen. De ICMD-benadering is gericht op het bereiken van duurzame ontwikkeling door lokale en mondiale systemen van kennis en technologie te integreren in alle sectoren van de gemeenschap en door middel van capaciteitsopbouw en participatie van de lokale participanten (*cf.* Slikkerveer, Baourakis, & Saefullah 2019). Een populaire model van geïntegreerde zorg op het niveau van de dienstverlening is de benadering van case management, die probeert om zorgsystemen te integreren om allesomvattende zorg voor ouderen in de gemeenschap.

Het algemene doel van dit onderzoek is het documenteren, bestuderen en analyseren van het gebruik van het meervoudig systeem van ouderenzorg door de lokale bevolking in het onderzoeksgebied. De studie omvat de identificatie, documentatie en analyse van significante factoren die van invloed zijn op het utilisatiegedrag van ouderenzorg door de lokale bevolking. In het bijzonder analyseert de studie ook de kennis en praktijk van de inheemse institities van *bakti* en *sayan* vanuit het 'emic' perspectief onder de Tenggerese bevolking om de zorg van de ouderen beter te begrijpen. Teneinde deze algemene doelstelling te realiseren, heeft deze studie de volgende specifieke vraagstellingen onderzocht:

Ten eerste wordt in Hoofdstuk II de theoretische oriëntatie beschreven, waarbij de nadruk ligt op het definiëren van het meervoudig systeem van ouderenzorg. In dit verband omvat het meervoudige systeem van ouderenzorg het verlenen van zorg aan ouderen door utilisatie van traditionele instituties van ouderenzorg, en van transitionele en moderne organisaties van ouderenzorg. Hoofdstuk II werkt ook de conceptuele en theoretische benaderingen nader uit, en de introductie van het concept of zorg (verlening van zowel gezondheiddiensten als sociale zorg) en het systeem van ondersteuning, in het bijzonder van ouderen, gebaseerd op de plaats en de uitvoering van ouderenzorg door de instituties enu organisaties.,Bovendien wordt in Hoofdstuk II gewezen op het belang van het betrekken van de lokale bevolking bij het ontwikkelingsproces, dat ook de benadering van duurzame ontwikkeling van gemeenschappen benadrukt.

De culturele context kan een breed scala van aspecten beïnvloeden, zoals gezinswaarden en gedragingen, communicatie tussen ouders en kinderen, macht en genderrollen, werk en gezin, ethische en religieuze waarden en de rol van de uitgebreide familie en mensen buiten de naaste familie voor het regelen van gezinsaangelegenheden. De socio-culturele kenmerken van het gezinsleven zijn ook belangrijk, waarbij de de uitgebreide familie en de sociale en de geloofssystemen betrokken zijn.

In Indonesië in het bijzonder onder de Tenggerese en Javaanse bevolking zijn waarden van verwantschap en familiestructuur essentieel om de manier te beïnvloeden waarop lokale mensen zorg en ondersteuning aan ouderen. Ze hebben eenzelfde bilateraal verwantschapssysteem, dat verwijst naar de relaties van beide ouders, waardoor kinderen gelijke kansen worden geboden om hun ouders van zowel moeders- als van vaderszijde van zorg en ondersteuning te voorzien. Bovendien is een sociaal ondersteuningssysteem voor ouderen ook belangrijk, waarbij de bronnen van ondersteuning worden geboden vanuit de dichtste tot de verste sociale afstand tot de ouderen, en van informele tot formele ondersteuningsstructuren. De primaire informele steun komt van degenen, die het dichtst bij en het meest betrokken zijn bij het dagelijks leven van ouderen, zoals echtgenoot, kinderen, schoonkinderen en kleinkinderen. Bovendien komen de informele relaties van ondersteuning van andere verwanten, zoals vrienden en buren. Daarnaast vormen sommige organisaties of groepen een schakel tussen het individu en de samenleving en vertonen ze de rol van bemiddelende structuren. Het uiterlijke systeem van ondersteuning van ouderen is een formeel ondersteuningssysteem dat wordt geboden door openbare en vrijwilligersorganisaties. Ten slotte introduceert het hoofdstuk het begrip van geïntegreerde zorg, dat zich richt op het niveau van dienstverlening door middel van case management. Het biedt uitgebreide diensten voor ouderen in de gemeenschap, gericht op twee hoofddoelen: kwaliteit en kosten van zorg. Case management heeft tot doel de coördinatie van de gezondheidszorg en de sociale zorg te verbeteren, waarvoor tussenkomst van casemanagers nodig is. Casemanagers, die maatschappelijk werkers zijn, moedigen - anders dan professionals in de gezondheidszorg - eerder samenwerking aan tussen de eigen krachten van ouderen, familie, vrienden en de gemeenschap om onafhankelijk leven mogelijk te maken.

Ten tweede worden de geselecteerde onderzoeksmethodologie en het bijbehorende analytische model in Hoofdstuk III beschreven. De 'Leiden Ethnosystems' Approach' wordt beschreven als een door Slikkerveer (1990, 1995) ontwikkelde benadering die een specifieke etnowetenschappelijke methode omvat om lokale kennissystemen binnen een bepaald cultureel gebied vanuit de visie van de lokale participanten te analyseren. De 'Leiden Ethnosystems' Approach' is gekozen om de inheemse percepties, praktijken, overtuigingen, waarden en filosofieën die verband houden met het concept en de praktijken van het verlenen van zorg van ouderen onder de respondenten in onderzoeksgebieden beter te begrijpen en te verklaren. Deze gebieden omvatten hooglanden-laaglanden, en plattelands-stedelijke zones, evenals milieugebieden.

Zoals in dit hoofdstuk is aangegeven, is de 'Leiden Ethnosystems' Approach' gebaseerd op drie methodologische principes: de 'Participant's View' (PV), het 'Field of Ethnological Study' (FES) en de 'Historical Dimension' (HD). Het hoofdstuk biedt ook de complementaire combinatie van kwalitatieve en kwantitatieve gegevens, die zijn gebruikt om een diepgaande verklaring en een algemeen beeld te krijgen van de verspreiding van het gedrag van de lokale bevolking bij het gebruik van de co-existente instellingen en organisaties van ouderenzorg.

De kwalitatieve gegevens zijn verzameld door middel van observaties en interviews met sleutelinformanten, gevolgd door kwantitatieve methoden. De kwantitatieve gegevens zijn verzameld door middel van een enquête onder huishoudens met de gestructureerde vragenlijsten. Het geschikte conceptuele model is geconstrueerd op basis van het Transcultural Utilization Model, ontwikkeld door Slikkerveer (1990, 1995), waarmee de cognitieve en de gedragscomponenten van bepaalde groepen of gemeenschappen als 'systemen' op een procesgerichte manier kunnen worden onderzocht. Het onderzoek maakt gebruik van een multi-dimensionale benadering, die zich richt op inheemse kennissystemen met etno-economische en etno-management benaderingen, gebaseerd op significante bewijs dat het gedrag van een individu wordt beïnvloed door een aantal categorieën van bepalende factoren, *i.e.* socio-demografische, psycho-sociale, gepercipieerde behoeften, in staat stellende, institutionele, omgevings- en interveniërende variabelen. De verzamelde gegevens zijn geanalyseerd door middel van een stapsgewijze *bivariate, mutual correlations, multivariate,* en *multiple regression analysis*.

Ten derde wordt de sociografie van het onderzoeksgebied gepresenteerd in Hoofdstuk IV, dat Indonesië, de Tenggerezen en Javanen en in Oost-Java omvat. De korte beschrijving van Indonesië omvat de geografische en historische achtergrond, administratief bestuur, sociaal-demografie, en socio-economische karakteristieken, met bijzondere aandacht voor trends in de vergrijzing van de bevolking. Bovendien beschrijft dit hoofdstuk ook het culturele gebied van Indonesië, in het bijzonder de Javaanse bevolking die een van de Indonesische etno-culturele meerderheidsgroepen vormen en voornamelijk in Midden- en Oost-Java wonen. Dit onderzoek richt zich op Oost Java als een van de provincies, met een hoog percentage vergrijzende bevolking en op deTenggerese bevolking als deel van de Javaanse ethno-culturele groepen, die de tradities in hun dagelijks leven in stand houden, uitvoeren, erin geloven en in praktijk brengen.

In dit onderzoek worden de Tenggerezen en Javanen vertegenwoordigd door twee *tlatah* of cultuurgebieden: Malang als *Arek tlatah* en Lumajang als *Pendalungan tlatah*. Inzicht in de kenmerken van de lokale bevolking van etno-culturele groepen, verwantschapssystemen, kennis en leef-omstandigheden in de gemeenschap is belangrijk om de gedragspatronen met betrekking tot de utilisatie van de zorg van ouderen in elke etno-culturele groep volledig te begrijpen. Bovendien wordt een beschrijving van de omgeving van het onderzoek gepresenteerd op basis van kwalitatief onderzoek in de vorm van de geografie, socio-demografie en socio-economie, en de culturele indeling van van de provincie Oost-Java, toegespitst op het onderzoeksgebied.

Ten vierde wordt in Hoofdstuk V een beschrijving van de vier dorpen gegeven, gericht op het aanbod van zorg van ouderen in de traditionele instituties van ouderenzorg, en de transitionele en moderne organisaties van ouderenzorg. Hierbij word de nadruk gelegd op de gezondheidsdiensten en sociale zorg op basis van de plaats en de instituties en organisaties van ouderenzorg. Traditionele instituties verwijzen naar de 'familie thuiszorg', dat betekent dat zorg en ondersteunende diensten voor ouderen worden verleend door families thuis op basis van de inheemse kennis, overtuigingen en praktijken van de lokale bevolking. *Bakti* en *Sayan* spelen als traditionele instituties een belangrijke rol voor het gezin door zorg en ondersteuning aan ouderen van de Tenggerese bevolking aan huis te bieden. Daarnaast verwijzen de transitionele instituties van ouderenzorg naar gemeenschapszorg, dat betekent dat de verlening van zorg afkomstig is van de initiatieven van de lokale mensen in de gemeenschap, waarbij andere organisaties van buiten de gemeenschap betrokken zijn, zoals de van de lokale overheid. In deze studie worden de *Posyandu Lansia* en de *Karang Werda* onder de the transitionele organisaties van ouderenzorg gerekend.

Tenslotte verwijzen de moderne organisaties van ouderenzorg naar de zorg die door geschoolde professionals wordt geleverd. Moderne organisaties worden bij de lokale bevolking geïntroduceerd en opgericht door buitenstaanders van de lokale gemeenschap, zoals de overheid en particuliere organisaties. Bovendien krijgen ouderen ook de zorg en ondersteuning in de *Panti Jompo* ('Bejaardentehuis') en *Puskesmas Santun Lansia* ('Ouderen-vriendelijk gezondheidscentrum'), die volledig worden beheerd door de moderne organisaties.

Het meervoudig systeem van ouderenzorg, bestaande uit de traditionele instituties van ouderenzorg, en de transitionele en moderne organisaties van ouderenzorg, wordt gepresenteerd in geselecteerde factoren, waaronder kennis, geloof, opinies, financiële ondersteuning en toegankelijkheid van ouderenzorg, gebaseerd op de perspectieven van de lokale bevolking in het onderzoeksgebied. Daarnaast wordt in dit hoofdstuk verder het meervoudige systeem van ouderenzorg nader beschreven.

Ten vijfde worden cultuur, geschiedenis, kosmologie en levensstijl van de Tenggerese bevolking beschreven in Hoofdstuk VI. De Tenggerese gemeenschap houdt sterk vast aan hun tradities en de nobele waarden van hun cultuur. De toewijding aan lokale tradities komt tot uiting in traditionele ceremonies, waaronder *Adat* ceremonies. In dit onderzoek verwijst het concept van kosmologie naar inheemse kennis, geloof en culturele praktijken met betrekking tot de ouderenzorg. De Tenggerese bevolking gelooft in *Catur Guru Bakti*, dat het beoefenen van toewijding en gehoorzaamheid betekent om wijsheid, spirituele discipline en verlichting te verwerven. De Tenggerese bevolking toont respect en kinderlijke vroomheid aan vier *Guru* die bekend staan als *Bekti Marang Guru Papat*. Er zijn vier principes die mensen moeten respecteren: *Guru Swadhyaya, Guru Rupaka, Guru Waktra en Guru Wisesa*.

De betekenis van *Guru Swadhyaya* is God, en het past bij de opvattingen van de Tenggerese gemeenschap over de God, genaamd *Sang Hyang Widhi*, terwijl *Guru Rupaka* een persoon is die een rol speelt als ouders. Bovendien is *Guru Waktra* een persoon die een onderwijzende rol speelt, en *Guru Wisesa* betekent de regering die verantwoordelijk is voor het maken van regels om het welzijn van de mensen te verbeteren.

Dit onderzoek richt zich op de ouders als *Guru Rupaka*, dat inhoudt dat de kinderen hun ouders op hun oude dag moeten respecteren, beschermen en verzorgen, omdat hun ouders hen hebben opgevoed totdat zij zelfstandig kunnen gaan leven. Kinderen moeten de *balas budi* ('gunst') teruggeven aan hun ouders door op hun oude dag voor hen te zorgen. Deze verantwoordelijkheid is gebaseerd op de inheemse instituties van *bakti* en *sayan*, die deel uitmaken van hun cultuur om voor ouderen te zorgen. Wat de Tenggerese levensstijl betreft, hebben ze drie verwantschapsgroepen voor verlening van de ouderenzorg, namelijk *sa'omah, sa'dulur* en *wong Tengger*. Daarnaast beschrijft dit hoofdstuk ook de socio-demografische en socio-economische status van de Tenggerese bevolking met betrekking tot de zorg van ouderen. Deze studie maakt gebruik van etno-economie en etno-management gericht op zorg van de ouderen.

Ten zesde worden de resultaten van de stapsgewijze *bivariate, mutual correlations, multivariate,* and *multiple regression analysis* van de kwantitatieve gegevens uit de huishoud onderzoeken gepresenteerd in Hoofdstuk VII. De analyse toont en verklaart de correlaties tussen de onafhankelijke en de interveniërende en de afhankelijke variabelen in relatie tot de afhankelijke variabele, en hun rol bij de bepaling van het utilisatiegedrag van de traditionele instituties van ouderenzorg in de vier dorpssteekproeven in vergelijking met het utilisatiegedrag van de transitionele en moderne organisaties van ouderenzorg.

De *bivariate analysis* is een startpunt voor de kwantitatieve analyse van de datasets voor de utilisatiescores, die verwijst naar de gerapporteerde voorkeur van gezinshoofden voor de utilisatie van het meervoudig systeem van ouderenzorg. De resultaten van de analyse bevestigen de theoretische oriëntatie op het utilisatiegedrag van ouderenzorg, waar van de 312 respondenten van de steekproeven in de dorpen rapporteren, dat bijna driekwart (70,8%) gebruik heeft gemaakt van de traditionele instituties van ouderenzorg in vergelijking met éénvijfde (19,2%) van de respondenten die gebruik rapporteren van de transitionele organisaties van ouderenzorg, en slechts ééntiende (9,9%) van de respondenten die gebruik rapporteren van de moderne

De daaropvolgende *mutual correlations analysis* onderschrijft verder het belang van de significante variabelen, weergegeven model de blokken van significante variabelen in het model.

Zoals in Hoofdstuk X is aangetoond, geeft het *Model of Multipele Correlations Analysis* de belangrijkste factiren aan, die de gedragspatronen beïnvloeden als significante variabelen in de utilisatie van instituties en organisaties van ouderenzorg, t.w.: de socio-demografische variabelen (9), de psycho-sociale variabelen (7), de intervenierende variabelen (6), de institutional variabelen (5), de in staat stellende variabelen (3), de variabelen van gepercipieerde behoeften (1), en de omgevingsvariabelen (1).

De *multivariate analysis* meet de correlaties tussen de onafhankelijke variabelen en de afhankelijke variabelen, en de correlaties tussen de multipele afhankelijke variabelen. The *multivariate analysis* richt zich op de interrelaties and interacties tussen alle variabelen die in het analytische model zijn geïdentificeerd. Door de technieken van de *multivariate analysis* te gebruiken is het mogelijk om vast te stellen welke variabelen de sterkste impact op de interrelaties van de variabelen uitoefenen. Terwijl de *bivariate* en *multivariate analyses* de significante relaties tussen de verschillende variabelen in het model illustreren, tracht de *multiple regression analysis* de maximum correlaties tussen de blokken van variabelen te berekenen.

Ten zevende worden de conclusies en de theoretische, methodologische en praktische implicaties in Hoofdstuk VIII gepresenteerd. In dit verband hebben de theoretische implicaties daarbij betrekking op het aanbod van zorg van ouderen, die het systeem van meervoudige ouderenzorg omvatten,, onderverdeeld in de traditionele instituties van ouderenzorg, en de transitionele en moderne organisaties van ouderenzorg. Dit onderzoek ondersteunt het concept van het 'meervoudig systeem van ouderenzorg' dat door Slikkerveer (1990, 1995) is geïntroduceerd in zijn conceptie van het complexe meervoudige medische systeem in de Hoorn van Afrika, en dat dit concept in Oost-Java classificeert in drie subsystemen: de traditionele instituties van ouderenzorg, en de transitionele en moderne organisaties van ouderenzorg.

Bovendien benadrukt dit onderzoek de resultaten van de *emic* benadering en past het concept van ‘Indigenous Knowledge Systems’ (IKS) toe om de lokale systemen van kennis, geloofd en praktijken van de lokale bevolking te begrijpen die ten grondslag liggen aan hun gerapporteerde patronen van utilisatiegedrag van ouderenzorg bij de Tenggerese en de Javaanse etno-culturele groepen in Oost-Java. Bovendien ondersteunt dit onderzoek ook de theorie van het model van Cantor (1977) zoals geciteerd in Cantor & Brennan (1999) voor sociale steun van ouderen. Gewoonlijk krijgen ouderen zorg en ondersteuning van hun verwanten, vrienden en buren die in de buurt van de ouderen wonen. De toepassing van het onderscheid tussen de traditionele instituties van ouderenzorg, en de transitionele en moderne organisaties van ouderenzorg sluit verder aan bij de vergelijkende benadering die nodig is voor de ontwikkeling van etno-management als discipline die gebaseerd is op een culturele oriëntatie in het onderzoeksgebied.

Het hoofdstuk stelt ook een strategisch model van geïntegreerde Ouderenzorg (INTEC) voor, dat gebaseerd is op het *IKS-based Integration Model* (IKSIM) geoperationaliseerd in de ‘Integrated Community-Managed Development’ (ICMD), alszodanig geïntroduceerd door Slikkerveer (2017). Beide modellen zijn gebaseerd op de 'bottom-up'-oriëntatie en de *emic* benadering van ontwikkeling op gemeenschapsniveau, waar het gedrag van de mensen grotendeels wordt bepaald door hun inheemse systemen van kennis, geloof en praktijken.

De methodologische implicaties van deze studie bewijzen dat de 'Leiden Ethnosystem's Approach' een zeer functionele gedetailleerde analyse biedt van lokale systemen van kennis, geloof en praktijken voor het begrijpen en verklaren van de relevante inheemse fenomenen die verband houden met de levering van ouderenzorg.

Tenslotte wordt speciale aandacht besteed aan de ontwikkeling van een strategisch model van geïntegreerde ouderenzorg als een manier om alomvattende gemeenschapsgerichte zorgdiensten voor ouderen aan te bieden. Aangezien één van de praktische implicaties van deze studie van de inheemse instituties van *bakti* en *sayan* onder de Tenggerese bevolking in Oost-Java verwijst naar de aanbeveling van de introductie van het op IKSIM gebaseerde model van *Integrated Elderly Care* (INTEC) (Geintegreerde Ouderenzorg’), biedt de studie een evidence-based startpunt voor toekomstige

beleidsplanning en uitvoering van cultureel passende ouderenzorg in Oost-Java. Op deze manier introduceert het onderzoek een nieuw strategisch model van *Integrated Elderly Care* (INTEC) op gemeenschapsniveau door middel van een speciale vorm van case management. Het biedt uitgebreide diensten voor gemeenschapsgerichte ouderenzorg, die ouderen aanmoedigt om zelfstandig te kunnen leven, zich gelukkig te voelen en gezond te blijven in hun sociaal-culturele omgeving.

Bovendien kan de etno-wetenschappelijke studie, in het bijzonder de operationalisering van een etno-management studie naar ouderenzorg onder de Tenggerese en Javaanse bevolkingsgroepen in Oost-Java worden gebruikt als een 'bottom-up' strategie op gemeenschapsniveau voor passende ouderenzorg op basis van de Tenggerese en Javaanse traditionele cultuur. Een dergelijke aanbeveling houdt in, dat bij het ontwerp van toekomstige projecten en programma's rekening moet worden gehouden met de inheemse kennis, geloof en praktijken van de lokale bevolking om zorg en ondersteuning aan ouderen te bieden, gevolgd door de implementatie van het strategische model van *Integrated Elderly Care* (INTEC) op gemeenschapsniveau, bestaande uit de traditionele instituties van ouderenzorg, en de transitionele en moderne organisaties van ouderenzorg, die de verschillende vormen van ouderenzorg in Oost Java aantonen.

De integratie tussen de kennis, het geloof en de praktijken van de inheemse instituties *bakti* en *sayan* die de traditionele instituties voor ouderenzorg onder de Tenggerese bevolkingsgroep begeleiden en ondersteunen, met de de transitionele en moderne organisaties van ouderenzorg zal de zorg voor een optimale gezondheid en het welzijn van ouderen verbeteren en waarborgen, en alszodanig bijdragen aan het tijdig realiseren van duurzame ouderenzorg in het onderzoeksgebied van Oost-Java en elders in Indonesië.

Curriculum Vitae

Ruly Wiliandri was born on June 17, 1983 in Malang, East Java, Indonesia. She is the first child of Suparlan and Sulistyaningrum. She is married to Fachrizal Afandi and has two children. In 2005, she received her Bachelor Degree in Economics at State University of Malang, where she also has been rewarded as the best graduate student at the Faculty. As a result, she was appointed as Assistant Lecturer from 2006 until 2008 at the Department of Management, Faculty of Economics, State University of Malang. She received her Master Degree in 2007 at the Faculty of Economics and Business, University of Brawijaya and graduated as Master of Management (MM).

She was then appointed as a Civil Servant in 2009 and started her career as a Lecturer at the Department of Management, Faculty of Economics, State University of Malang up to the present.

In 2016, Ruly received a grant from Beasiswa Unggulan Dosen Indonesia (BUDI), a scholarship for Lecturers in Indonesia provided by the Ministry of Research, Technology and Higher Education (*Kemenristekdikti*) and the Indonesia Endowment Funds for Education (LPDP). The scholarship programme allowed her to carry out her PhD research on'The *Bakti* and *Sayan* Traditions Among the Tenggerese People in East Java at the Leiden Ethnosystems And Development Programme (LEAD) at Leiden University in The Netherlands under the supervision of Prof. Dr. Dr. (H.C) L. Jan Slikkerveer since 2016.

At the LEAD Programme, she has participated since 2016 in several workshops, seminars, and conferences, including international workshops and seminars on Integrated Microfinance Management (IMM) focused on corporate social responsibility of banking institutions for sustainable development in Indonesia. She also participated in an International Conference of Integrated Microfinance Management for Sustainable Community Development. organised by the Faculty of Economics, Universitas Padjadjaran, Indonesia in collaboration with the LEAD Programme of Leiden University, in The Netherlands.

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