

**Health Service Delivery in Papua New Guinea and  
Determinants Influencing Health Outcomes: The Case of  
Women and Health**

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A thesis submitted for the degree of Doctor of Philosophy of  
The Australian National University

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## Declaration

To the best of my knowledge and belief this thesis:

- (i) Contains no material previously submitted by any other person except where due acknowledgment has been made;
- (ii) Contains no material which has been accepted for the award of any degree or diploma in any university.

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Ellen Kulumbu  
September 2019



# **Dedication**

For Leo Apurel Kulumbu



## Acknowledgements

My PhD journey has been very mixed. While I have enjoyed the privileges of living in a developed country, the experience of doing a PhD has been humbling and taught me about pain and sacrifice. I lost my soulmate and father of my children a month before completion; I was fatherless during the first year, after I lost my dad in January 2015, and friendless when acquaintances passed on in the weeks before I started in July 2013 and during my years of absence from home. However, certain individuals and families in Australia and Papua New Guinea helped me to remain on track in numerous ways and thus, they deserve a mention.

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## **Abstract**

This study aims to uncover the determinants influencing health outcomes and investigates health service delivery in Papua New Guinea (PNG) within the context of women and their health. Despite extensive research on health and health service delivery in PNG over the past three decades, little or no improvement has been made to attain better health outcomes. Various factors which were found to contribute to PNG's poor health outcomes, include poor financial management and resource allocation, complex institutional structures and challenges following government's reform policies, lack of capacity, rugged geographical conditions and lack of essential infrastructure. These are mainly provider side factors with experiences of health service users largely understudied. My research adopts qualitative data collection methods, including focus groups discussions, questionnaires, in-depth interviews, observations, body-mapping exercises and illness narratives to understand women and their health service usage, and health workers providing health care. Fieldwork was conducted in three geographically, linguistically, culturally and religiously diverse locations in PNG. Over 100 people participated, including health workers and women.

The subsequent data was analysed and showed that women were prevented from using health services by factors existing on user and provider side, such as financial constraints, unfriendly health workers, and long waiting time at health facilities. Their personal values encouraged them to seek health care, such as consideration of familial responsibilities and trust in health workers. Although determinants were similar across the three locations, the degree of influence of the determinants varied in the context of the geographical and socio-economic environments. Medical pluralism exists in PNG with a large number of women using natural therapies and home remedies in rural and urban areas. Informal agencies were influential sources of their health knowledge. Health was narrowly confined to biomedicine and efforts to improve health outcomes handled solely by the health sector. However, health outcomes are not the result of use of biomedical health services alone but result of economic policies, political systems, educational programmes, social and cultural beliefs and practices regarding wellbeing. Thus, health outcomes need not be confined to biomedical disciplines but be a multidisciplinary and multisectoral responsibility, involving formal and informal institutions impacting all determinants and dimensions of people's health.

Intersectoral collaboration between relevant disciplines, sectors and agencies at various levels are suggested in recognition of this. Many factors discussed in this study are likely to be amenable to interventions that are beyond the scope of the health domain. The PNG Department of Health has relatively little influence over many issues affecting individuals providing and using health services. While medical standards and training health workers may be within its scope, improving rural roads to increase access to health services often require assistance from other sectors. Multidisciplinary and multisectoral approaches are needed to address all determinants of health and improve health outcomes. Preventive primary health care through community-based approaches should be the focus. Appropriate methods that adequately capture human phenomena be used in health research. Any service delivery and development studies should include providers and users of services.

## **Note**

All names apart from those used in the acknowledgements are pseudonyms.



## List of Acronyms

ADB	Asian Development Bank
AM	Alternative Medicine
ANC	Antenatal Care
CAM	Complementary and alternative medicine
CHW	Community Health Worker
CM	Complementary Medicine
DoH	Department of Health
DSIP	District Service Improvement Program
HDI	Human Development Index
HEO	Health Extension Officer
HSB	Health-seeking behaviour
INCMH	Indian National Commission on Macroeconomics and Health
LLG	Local-level Government
LLSIP	Local-level Service Improvement Program
MCH	Maternal and Child Health
MHCP	Maternal Health Care Providers
MRAC	Medical Research Advisory Committee
MOMASE	Morobe Madang Sepik region (MO = Morobe, MA = Madang, SE = East Sepik and West Sepik)
NCD	National Capital District
NCDC	National Capital District Commission
NDoH	National Department of Health
NGO	Non-government Organisation
NO	Nursing Officer
NRI	National Research Institute
NSO	National Statistical Office
OLPG	Organic Law on Provincial Government
OLPLLG	Organic Law on Provincial and Local-level Government
PHC	Primary Health Care
PID	Pelvic Inflammatory Infection
PMGH	Port Moresby General Hospital
PMV	Public Motor Vehicle
PNG	Papua New Guinea

PSIP	Provincial Service Improvement Program
RAM	Rotary against Malaria
SDA	Seventh Day Adventists
SDOH	Social Determinants of Health
SHP	Southern Highlands Province
SIC	Sister-In-Charge
SIP	Service Improvement Program
SPHC	Selective Primary Health Care
SSA	Sub-Saharan African
SSGM	State, Society and Governance in Melanesia
STI	Sexually Transmitted Infection
TCM	Traditional Chinese Medicine
TM	Traditional Medicine
UNCF	United Nations Children's Fund.
UNFPA	United Nations Population Fund
WHO	World Health Organization

## Terminology and Definitions

**Alternative Medicine** describes various products, systems and practices for diagnosing, preventing, healing or treating disease which are not part of conventional (western) medicine, such as acupuncture, Ayurveda, chiropractic, homeopathy, naturopathy, faith healing.

**Complementary and Alternative Medicine (CAM)** describes medical products and treatment practices that are used instead of or with western medicine. They are based on scientific research and are manufactured. Whereas complementary medicine is used together with western medicine, alternative medicine is used in place of western medicine.

**Culture** refers to the ideas, customs and social behaviour of a particular group of people.

**Department of Health (DoH) and National Department of Health (NDoH)** refer to the same entity.

**Faith healing** is a system of prayer-based healing to alleviate disease and suffering, mainly with the Pentecostal churches which involves the laying on of hands and prayer.

**Christian healing** refers to an individual praying for healing and treatment. Whereas faith healing is sometimes public and anti-medicine with reliance on prayer for healing, Christian healing is private and complements medicine.

**Health care** refers to the actions taken to improve an individual's well-being through medical procedures and interventions, or other alternatives, such as changing a person's lifestyle.

**Health care services** and **health services** mean the same thing and both are used in the discussions throughout this thesis.

**Informal treatment practices** refer to traditional medicine, natural therapies, home remedies, faith healing, traditional healing and other treatment practices outside of biomedicine.

**Interdisciplinary approaches** is used to describe approaches that combine or involve two or more disciplines or fields of study into one activity.

**Provider side** refers to the suppliers and providers of products, goods and services.

**Multisectoral** approaches describe approaches that combine or involve two or more sectors or agencies into one activity.

**Tradition** is not only the transmission of values but comprises those values, beliefs and information from generation to generation through oral means or practice. Also includes social norms.

**User side** refers to the recipients and consumers of services.





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## Prologue

*'Hey, you should not be crying. You are a big girl. See your small sister. She should be the one crying for your mother. But she is not and you are the one crying'.*

These were the words of my aunty Aroya, who stood next to us on the road when an ambulance came to pick my mother to take her to the hospital for the delivery of a baby. I was few years older than my small sister, who was just over two years old. While she stood bravely to see the driver close the ambulance door and drive away with our mother inside, I began to cry for our mother. I had so many things running through my mind. Seeing my mother taken away in the ambulance with the siren on and the stretcher carrying her reminded me of the few times I had seen an ambulance on our street. It had come to take away very sick people to the hospital, who never came home. 'Will I see my mother again?' 'How long will she be away from home?' These were some of the questions that generated fear within me and made me cry for my mother.

My mother was in hospital for few days and returned home with our baby sister. Over the years, I heard her say that if she had stayed in the village, she would still be giving birth. Her birthing experience in Port Moresby General Hospital was different from her previous births. I heard her say:

When you are lying down, every male or female nurse just comes and pushes their hands inside you as if you are not a human being. You do not express your pain in the normal way you do, for fear of being shouted at.

My mother was always afraid of hospitals and everything about them, including the food and overall environment. She even reminded us when we played that she would not stay with us in the hospital ward if we broke an arm or leg. The only time she said to end up in a hospital would be for a serious illness and eventual death. She would often say, 'I do not want to close my eyes with white walls surrounding me'.



# Chapter 1: Introduction

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Service delivery is considered the primary function of the state (Ejumudo 2013:35) and aligned to public policy and the political economic context of a country. However, health service delivery is complex, not only because it entails the scientific and biomedical understanding of diseases and treatment but also because it requires an understanding of human behaviour and the society in which the providers and users of health care live. The experience from developing countries suggests that health service delivery has overwhelmingly focused on the biomedical, to the exclusion of the understanding of human behaviour and the society. The strategies recommended for improving health service delivery and eventual universal health coverage have focused on political reforms and economic aspects within formal institutions.

This current study examines health service delivery in PNG and the factors that influence health outcomes using the case of women and their health. The study situates itself within the domain of health policy and planning and adopted a multidisciplinary approach. It examines two sides of health service delivery: supply (provider side) and demand (user side). The study was conducted in three geographically, culturally and linguistically diverse communities in PNG over seven months: one rural coastal, one rural highlands, and one within the urban suburbs of Port Moresby. This was done by adopting a qualitative multiple-case study approach and use of several qualitative methods considered most appropriate for understanding the sociocultural dynamics of humans involved in the delivery of health services at the facility level and the use of those facilities. The subsequent data was then analysed to determine factors influencing delivery and use of health services.

## 1.1 Aims and Scope of the Study

The primary purpose of this study is to uncover and explore the underlying factors in health service delivery that determine health outcomes for PNG. Focusing on women and their health, the study has three main aims.

First, to explore the underlying reasons behind PNG's poor health outcomes despite its strong economic growth, and political reforms aimed at improving service delivery in the last decade.

Second, to investigate approaches and methods used in health research and health care provision in PNG. Third, to investigate the linkage between the concept of health and current approaches adopted in health service delivery.

## **1.2 Service Delivery Agenda**

Improving the delivery of health services and the attainment of better health outcomes<sup>1</sup> is one of the fundamental aims (Au et al. 2014) of all governments, international development organisations and financial institutions. One of the major interventions employed to achieve this aim has been the policy of decentralisation. In the past three decades service delivery arrangements in developing countries have undergone massive shifts and changes due to decentralisation and subsequent health service reforms.

For instance, Bangladesh's health system went through a number of reforms following its independence from Britain (Ahmed et al. 2015: xvi). Similarly, India restructured its national health system to one in which the state would 'play a leading role in determining priorities and financing, and provide services to the population' (Indian National Commission on Macroeconomics and Health ([NCMH] 2005:39). In Latin America, Chile was a major instituter of decentralisation, with an extreme form of devolution to municipal authorities (Bossert et al. 2000:71). The public health systems of many sub-Saharan African (SSA) countries were reformed as part of decentralisation (Streefland 2008:139). Nigeria undertook reforms to improve the performance of its health system for better health status of the population (Ejumudo 2013:41). Similarly, Papua New Guinea's (PNG's) health system underwent two major political and structural reforms through the 1977 Organic Law on Provincial Government (OLPG) and 1995 the Organic Law on Provincial and Local-level Government (OLPLLG). Both reforms were aimed at improving service delivery (PNG Constitutional Law Reform Commission (CLRC) 2009:vi) and involved devolving management of rural health service delivery from the national- to provincial- and local-level governments. The 1995 OLPLLG led to further massive decentralisation of public services (WHO 2012:3), including the delivery of health services. This was to address the problem of health services not reaching the majority of the population in rural areas and to improve key health indicators that were not showing progress by the 1990s (Izard & Dugue 2003).

Decentralisation was part of the World Bank's broader process of political, economic and technical reforms; however, it brought mixed results (World Bank 1998, cited in Bossert et al. 2000:1). Although some improvements had been made in some areas of health,

significant health issues and life expectancy gaps between developing and developed countries remained. The delivery of quality and equitable health services has continued to remain a major challenge, with access and the use of health services varying widely within countries, between rural and urban communities, and between the wealthy and the poor. This puts the attainment of better health outcomes out of the reach of many developing countries, as was demonstrated when many did not meet their Millennium Development Goal of increasing the life expectancies of women and children by 2015 (Turin 2010).

Many questions have arisen as to why devolving power and responsibilities from the central level to lower levels has been unable to improve health service delivery. In increasing power and encouraging participation from the local level, why did decentralisation policies not produce the desired health outcomes?

One explanation for this is that the decision to transfer decision-making powers and functions away from the centre to lower levels is made without considering the pre-conditions for successful implementation. These include such things as capacity building of sub-national entities, which should precede decentralization. However, capacity assessments do not take place in many instances. The functioning of local administration to manage and implement the delegated responsibilities and requirements from the centre depends on the capacity of local technical staff. Although political commitment is the essential condition for implementation of decentralisation (Rondinelli 1982:43-60), this is missing. Despite moving government closer to the people, lack of interaction and information flow between politicians and citizens exist. There are no clear structures and arrangements for decentralised institutional frameworks and mechanisms to engage with civil society and conduct activities in developing countries. Local governments have failed to serve as critical spaces for encouraging local actors, citizens and interest groups to interact and shape local and national policies. Political leadership and will is different to that of the people. The sub-national governments do not create an environment for people's participation and involvement in decision-making process, sharing the benefits of development programs, and evaluating programs. Proper planning and accountability mechanisms for appropriate power-sharing arrangements and equitable allocation of resources at the local level is lacking (Olum 2014:23-32). Furthermore, the absence of services, infrastructure and other incentives at the local levels do not create a conducive environment for encouraging movement of human resources from the centre to sub-national levels for performing delegated responsibilities.

In the wake of reform processes in developing countries, numerous studies have been carried out at the global and country level to determine why decentralisation has failed and to understand the ways in which developing countries can better deliver health services, so they can attain better outcomes. In Chile, decentralisation did not have much impact on the performance of the health system, although it resulted in a variety of innovative practices (Bossert et al. 2000:71). Streefland provides a similar assessment for SSA countries during the 1980s and 1990s where the measures of the World Bank and International Monetary Fund (IMF) contributed to the poor delivery of public health services for many (2008:141). Similar experiences have been reported in PNG, where the decentralisation process is said to have contributed to poor health service delivery among other factors (Asante & Hall 2011:3; PNG Department of Health (DoH) 2001; Thomason & Kase 2009:117).

Consequently, many countries have conducted studies to identify the causes of the problems and solutions, reviewing their health systems and charting out new paths for improving the delivery of health services and health outcomes for their populations. In Brazil and other Latin American countries, the role of governments in the delivery of health services was re-evaluated and the responsibility for health service delivery was transferred to the private sector. This led to the growth and development of private health care insurance markets, between 1983 and 1997. In the public health sector, the shift was slowly made from being provider driven to purchaser driven and in the private sector, the trend moved very quickly from the purchaser-driven stage to consumer-driven health care service delivery (Ferraz 1998:315).

A number of studies were conducted in India on health status and health-seeking behaviour (HSB) using various methods, including data from surveys. For India, the approaches suggested for improving health service delivery and health outcomes fell into three focus areas: (i) the relationship between levels of morbidity and health expenditures; (ii) the linkage between health, development, and socio-economic factors; and (iii) multisectoral and intersectoral linkages. Studies that examined the changes in morbidity and health expenditure argued that growth and health have a positive two-way relationship. They suggested increasing the allocation of funds to health expenditure by (a) raising more resources; (b) reprioritising expenditure allocations in favour of medical and public health, water supply and sanitation; and (c) targeting the expenditure to regions in which the health indicators were poor and required help to improve their health status. Conversely, studies that promoted the linkage between health, development and socio-

economic factors suggested improving people's nutritional and health status. Other studies considered health systems to be highly contextualised and influenced by exogenous factors, such as societal values, epidemiology and disease burden, the availability of financial resources, technical capacity, individual preferences and the nature of demand. Such studies promoted multisectoral approaches and intersectoral linkages for a vibrant health system. Proponents of this approach argued that investment in infrastructure and the establishment of a physical facility did not automatically translate into better health outcomes. Rather, it was the combination of factors such as distance, availability and quality of health workers, infrastructure and access to alternative sources of care, which influenced HSB and determined outcomes (NCMH 2005:5–7, 41, 43, 47–48, 316).

Numerous studies have also been conducted in SSA countries, at country and regional levels, on finding ways of improving health service delivery and health status. One of the recommended approaches from these studies was the promotion of the relationship between good governance and health service delivery (Ejumudo 2013; Mooketsane & Phirinyane 2015; Streefland 2008). This approach highlights the role of the state as the main provider of health services and focuses on (i) collaboration between the state and various agencies, such as regional bodies, civil society and donors (Mooketsane & Phirinyane 2015); (ii) addressing problems of scarcity in countries at the basic health centre level by 'lowering the level of analysis to investigate issues at the district level health centres, small rural hospitals and daily practices of health workers' (Streefland 2008:139–140); and (iii) orientation of a service delivery culture and consideration of the user side through training of health workers and improving their performance (Ejumudo 2013:42) and improving the relations between workers and patients (Streefland 2008:140). Several studies in India have focused on the relationship between health outcomes and health expenditure, suggesting the need for improved health-financing structures and sectoral allocations (Ejumudo 2013; Turin 2010). Other studies that focused on the idea of health and health systems being influenced by external factors promoted multisectoral, sector-wide and holistic approaches to improve health systems and health service delivery (Tumusiime et al. 2007:5, 23). Some of the approaches included community-based delivery of health services (Zekeng n.d.) and consideration of traditional medicine (TM) as an alternative to reach more people (Turin 2010). The fourth category focused on the development of private sector involvement in medical products and health service delivery (Zekeng n.d.).

Although Nigeria, Brazil and India may differ from PNG in population size, some aspects of their socioeconomic conditions are similar to PNG, particularly when rapid economic growth does not necessarily translate into better development outcomes. Despite the PNG Government undertaking several major policy and political reforms, the health outcomes on the Human Development Index (HDI) remained unchanged. Several studies have examined different aspects of health service delivery since the late 1980s. These studies have been conducted mainly at national and local levels to identify the factors that contribute to poor health service delivery and health outcomes. Their findings were similar to those for other developing countries. For instance, the notion that health expenditure affects health service delivery was highlighted by some authors, such as Asante and Hall (2011:3) who reiterated under-investment and lack of health funding by the government. More than a decade earlier, Connell (1997) had observed that the cause of PNG's poor health outcomes was that the health budget concentrated on urban areas. Recent studies have found weaknesses in management and use of funds related to health financing, in addition to lack of financial accountability (Howes et al. 2014). Other studies that have considered the significance of the linkages between health, development and socio-economic factors and have promoted linkages between disciplines and partnerships between relevant sectors. For instance, Campos-Outcalt (1989) emphasised the effect of economic development, productivity and quality of services on improved health status, rather than expansion of the health system. McNee (2012) suggested the adoption of top-down planning approaches and the need for a health system to engage and link with relevant informal institutions. Similarly, McKay and Lepani (2010) suggested the inclusion of demand-responsive mechanisms, which consider cultural factors within the health systems, to encourage utilisation of health services. Partnership approaches, including those between the government and churches, have been suggested by other authors (Ascroft et al. 2011:1). Thomason and Hancock (2011:24) argued for the importance of partnerships between the government and the private sector, particularly the extractive industries that are actively involved in health service delivery.

Several major studies in PNG have focused on the health system and the delivery of health services within the health sector. Campos-Outcalt (1989) noted deficiencies in the provision of health services, with more emphasis on curative care than on prevention. Lieberman and Heywood (1995) identified poor health administration, including supervision arrangements of health workers and deteriorating facilities and equipment, as contributing factors to difficulties in delivering health care. A similar observation was



made by Connell (1997) who pointed out poor maintenance of rural health centres, health workers being absent from work and lack of discipline, and health workers having limited skills and access to resources. Health workers were highlighted as problems in the health system by the World Bank's study, which observed that the health system was facing a crisis, with low supply of health workers due to aging, as a consequence of training institutions being unable to produce the required quantity and quality of workers (World Bank 2011). Others have seen poor health information systems as one of the causes of problems (Lieberman & Heywood 1995:85). Au et al. (2014) observed lack of information to be contributing to an inefficient allocation of resources among health facilities and health service delivery. They argued that decisions to allocate resources should not be based only on indicators, but on data from the health information system. Other authors have considered physical and geographical conditions of the country as causes of the problem, combined with lack of rural infrastructure, including roads, bridges, transportation, water, electricity and communication (Izard & Dugue 2003:18). As mentioned earlier, some have singled out decentralisation contributing to weaknesses in management, planning, budgeting, structures and leadership at lower levels of government (Asante & Hall 2011:3; PNG DoH 2001; Thomason & Kase 2009:117). The other studies that have identified lack of capacity to deliver health care services have promoted capacity development in relationships, financing arrangements, skills of health workers and institutional rules (Bolger et al. 2005:vi).

As shown by the experiences of developing countries, including PNG, the path to improving health service delivery and health outcomes is not uniform. While the majority of recommended health policy interventions and studies have focused on addressing the barriers that providers confront when trying to improve health service delivery, very few have considered the users as essential to achieving better health status. The majority of the focus on providers has tended to emphasise the formal, provider-driven biomedical health systems and economic factors. Consequently, limited attention has been paid to other sectors and disciplines, including informal health care practices and factors influencing users of health services. This imbalance has resulted in inefficiencies in providing health care, since it does not meet the needs of the user. Greg Tegart aptly points out, 'The idea that the customer really has to be the centre has never really been the case' (White 2016:4). It happens that the majority of decentralisation policies and interventions that have been adopted have been focused on the provider side, without much attention on the users of the services. Much of the focus has been on the

management level and not on the facility level, where the providers and service users interact. There is relatively limited knowledge about the users of health services in many developing countries, although service delivery is incomplete without users or consumers.

Tim Ensor and Stephanie Cooper (2004:69) asserted, 'Evidence suggests that demand-side barriers may be as important as supply factors. ... Yet very little attention is given, either by policy makers or researchers, to ways of minimizing their effects'. As shown in different sections of this study, there has been an increase in studies and literature on health-seeking or HSB in developing countries in both general health service utilisation and maternal health service use. Some of these studies have adopted quantitative methodologies, while others have employed qualitative methodologies. The experiences of developing countries and the widening gap in their health outcomes have shown that health service delivery has been confined to the health discipline and health systems. The strategies recommended for improving health service delivery and eventual universal health coverage have focused on political reforms and economic aspects within the formal biomedical health institutions. As highlighted earlier, these have focused on the provider side of the health service delivery equation. Although few studies have investigated the interaction of providers and users in health service delivery, researchers are increasingly emphasising the need to investigate the interconnectedness between demand-side and supply-side factors in health service utilisation (Ejumudo 2013; Ensor & Cooper 2004; Streefland 2008). An understanding of the relationships between the providers and users of health services will assist governments and development practitioners to design appropriate interventions for improving health outcomes. Health service delivery only becomes a necessity when someone becomes ill, but the overall aim for individuals and countries is to prevent illness and death. This requires an understanding of the environment in which individuals live, since this provides the necessary conditions for keeping the individual healthy and living longer, thus improving their health outcomes.

### **1.3 Research Questions and Approach**

This study has transcended the narrow boundaries of inquiry of previous studies on health and health service delivery in PNG by adopting qualitative data collection methods. These methods assisted in identifying the knowledge gaps in the limited attention that has been given to the significance of sociocultural factors shaping women's health beliefs, their HSB and use of health services. These methods have also been used by other health researchers (Eves 2010; Fordham 2015; Whittaker et al. 2009). They allow us to

investigate the interaction of socio-economic and cultural factors that influence the way women in PNG perceive health, illness and healing and the consequences of this on how and when they utilise health services. Second, they allow us to investigate the way health workers interact with women who are seeking help and factors that affect their attitudes in delivering health services.

The key questions that this research set out to address were:

- Question 1: Why are political reforms and economic growth in PNG not improving its health outcomes?
- Question 2: What are the factors determining women's use of health care services during illness and childbirth in PNG?
- Question 3: What are the factors determining behaviour of health workers towards women in health service delivery in PNG?
- Question 4: How can PNG's health outcomes be improved with internal and external efforts?

The next sections provide the background context for this thesis, including PNG geography, socio-economic conditions, health system and women's health. The factors that motivated me to conduct this study, other relevant details and the structure of the thesis follow in the subsequent sections.

## **1.4 Background of the Study**

As mentioned earlier, PNG's poor health outcomes, particularly the high number of maternal deaths, have been widely acknowledged (Mola & Kirby 2013). As shown in Table 1.1, life expectancy at birth in 2011 had increased to 62.8 years (World Bank 2012 cited in WHO 2012). PNG faced a double disease burden, with both infectious diseases and lifestyle diseases causing almost equal morbidity and mortality. The HIV epidemic continued to be a risk to health, though the prevalence is relatively low, compared to that of SSA. TB was increasing in prevalence and becoming a much more serious public health issue than malaria, and maternal and child health (MCH) issues were continuing to be challenging (PNG DoH 2010:10). The PNG Report of Taskforce on Maternal Health explained:

Antenatal coverage rates are low, supervised delivery rates are low, little postnatal care is offered or utilised, contraceptive use is low. There has been little positive change in the levels of utilisation of these services over the past 10 years. The rate of outreach is

low and static in most provinces. Access, quality and acceptability of health services in PNG has deteriorated (2009:vii, ix).

However, despite highlighting problems of access, acceptability and low health service utilisation in PNG, there have been relatively few studies investigating the reasons for these problems (but see Andrew et al. 2014; Vallely et al. 2014; Agale & Yaipupu 2001; Yaipupu & Eves 2002).

The next section provides the background context for this study: the first briefly describes the geography and socio-economic situation of the country while second focuses on the health systems and health service delivery. The presentation covers both the biomedical system and informal TM and treatment practices.

#### **1.4.1 Geography and Socio-Economic Contexts**

PNG is a lower middle-income country with a population of around 7.6 million, according to the 2011 National Census. More than 80 per cent of the people live in rural areas (PNG National Statistical Office ([NSO]) 2011; United Nations Development Program ([UNDP]) 2012). With over 800 languages, it is one of the world's most linguistically and ethnically diverse countries. The country is divided into four regions (Southern, MOMASE, Highlands and New Guinea Islands), 24 provinces, including the National Capital District (NCD) and 89 districts. Because of the mountainous terrain, scattered islands, poor road conditions and security issues, the main mode of transport between Port Moresby and provinces is by air, which can be costly (UNDP 2012).

PNG enjoyed stable economic growth for 13 years, according to the World Bank and ADB (ADB 2013; World Bank 2013). In 2011, it was recognised as the seventh-fastest growing economy in the world by the International Monetary Fund, due to strong growth in the resource sector (International Monetary Fund 2013). Table 1.1 shows PNG's development indicators from the 1970s to 2000s. While some indicators have undergone positive changes, such as life expectancy at birth, mortality of under-fives and literacy, others such as maternal mortality rate have not or have been inconsistent over the decades. In the 2016 HDI, PNG ranked 154 out of 185 countries in the 2016 HDI (UNDP 2016).

**Table 1.1: Papua New Guinea Development Indicators 1970s-2000s**

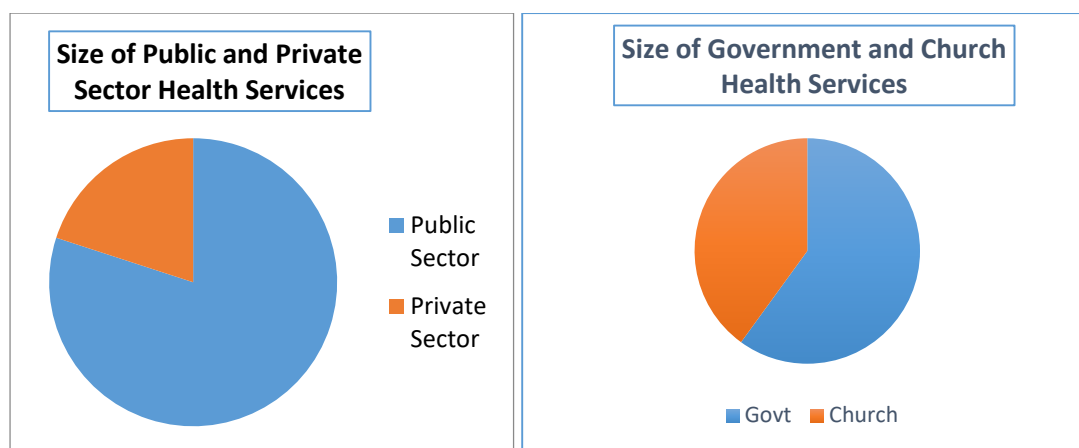
**Sources:** Faal (2006), Gibson & Rozelle (2002), Kassebaum et al. (2014), Morris & Stewart (2005),

<b>Indicator</b>	<b>1970s</b>	<b>1980s</b>	<b>1990s</b>	<b>2000s</b>
Population			4.4 million (1996)	7.6 million (2010)
HDI	.425 (1975)	.467 (1986)	.515 (1995)	.525 (2003)
Maternal mortality rate per 100,000 live births			390 (1990) 370 (1996)	300 (2000) 733 (2006) 594 (2014)
Life expectancy at birth	49	53	54	54 (2000) 62 (2016)
Under-5 mortality per 1,000 live births	147 (1970–1975)	111 (1980)	95 (1996)	87 (2000) 93 (2004)
Infant mortality	77	78 (1980)	83 (1999)	61 (2001)
Literacy			51% (1996)	56% (2000)
Completing Grade 6			37% (1996)	39% (2000)

World Bank (2005), World Bank (2006)

#### **1.4.2 Papua New Guinea’s Health System and Health Services Delivery**

PNG’s health system is divided into two forms: formal (biomedical) system and informal which includes traditional medicine (TM), comprising natural therapies, home remedies and other alternative medicine (AM). The biomedical health system comprises a large public health care provider and a small for-profit health care provider. Health services are delivered by four main providers: the government, churches, non-government organisations (NGOs) and the private sector. As illustrated in Figure 1.1, the public health system is the largest and the government is the major financier and provider of most of the health services, being responsible for the national referral hospitals, specialist, regional and provincial public hospitals (Ascroft et al. 2011; Bolger et al. 2005:3; Howes et al. 2014:9; Izard & Dugue 2003:9; Thomason & Hancock 2011:4; WHO 2012:3; Wiltshire & Mako 2014:9). The churches provide 40 per cent of health care services, generally to the most remote areas, in which government presence is absent or minimal (Izard & Dugue 2003).



**Sources:** Based on statistics from ADB 2011; Ascroft et al. 2011; Bolger et al. 2005; WHO 2012b

**Figure 1.1: Composition of Papua New Guinea's Health Care System**

Formal health services in PNG began with the development of the colonial administration from 1884. However, churches had provided health care with the arrival of Christian missionaries and nurses in the late 19th and early 20th centuries (Matheson et al. 2009; Ascroft et al. 2011:4). With the invention of drugs more generally, the focus was on curative health and characterised by great campaigns against malaria, tuberculosis and leprosy. Following the Second World War, the state took over the responsibility for health of the whole population. The churches continued to provide health services that were mainly informal and were supported by very little professional expertise, mostly on an ad hoc basis (Denoon 1989:3). Between the 1950s and 1960s, the development and delivery of health services was influenced by the welfare approach, which was based on the view that health services should be available to all. Health services expanded massively during the 1950s when the government assumed responsibility for the health of the entire population.

Prior to independence, government health services were managed centrally by the National Department of Health (NDoH) in the capital Port Moresby. However, by the time of independence, rural health services had been established by the government and the churches and basic health services were available to the majority of the population. Access to health facilities improved, with most of the population living within a two-hour walk of a health facility (Alto 1996:315). As mentioned earlier, PNG went through a process of decentralisation in 1977. This resulted in changes to the health service delivery structure and saw the transfer of administrative and financial responsibilities from the national to provincial governments. Further changes and revisions were made to devolve fiscal and administrative powers and functions for health service delivery with the 1995 OLPLLG (Izard & Dugue 2003; Asante & Hall 2011:11).

The PNG government is responsible for the regulatory, legislative and policy environment in which the health care system operates. Further, the system is guided by key policies such as the National Health Service Standards 2011–2020 and National Health Plan 2011–2020, developed within the framework of international commitments, such as the Millennium Development Goals, the Paris Declaration and several key national documents, such as Vision 2050 and PNG Development Strategic Plan 2010–2030 (PNG DoH 2010). In addition, the health system works within a regulatory framework of several pieces of legislation. For instance, the Public Health Act 1973 provides procedures and regulations for matters related to public health, including the handling of food, the supply of potable water, pests and diseases, and various diseases affecting human beings; the Public Hospitals Act 1994 made hospitals quasi-statutory authorities, with implications for rural health service delivery; and the Public Hospitals (Charges) Act 1972 provided for user fees to be charged at public hospitals. Other relevant legislation includes the Poisons and Dangerous Substances Act 1952, Public Health Act 1973, Disaster Management Act 1984, National Health Administration Act 1997, HIV/AIDS Management and Prevention Act 2003, and the Provincial Health Authority Act 2007 (WHO 2012b).

Health services in PNG are delivered through a seven-level hierarchical structure. At Level 1, aid posts in villages provide the least complex basic primary health care (PHC) services. The national referral hospital, which provides the most complex and tertiary health services, is at Level 7. The delivery structure is laid out in Figure 1.2.

<b>Level</b>	<b>Level of Care</b>	<b>Health Facility Type</b>
7	Tertiary	National Referral Hospital

6	Specialist	National/Provincial Hospitals
5	Secondary	Provincial Hospitals
4	Secondary	District & Rural Hospitals
4	Primary	Urban Clinics
3	Primary	Health Centres
2	Primary	Health sub-centres
1	Basic Primary	Aid posts

Source: PNG DoH (2010) and WHO (2012b).

**Figure 1.2: Levels and Structure for Health Service Delivery**

**Box 1**

Aid posts serve a population of about 1,000.  
 Health Centres and health sub-centres serve 5,000–20,000 people.  
 District and Rural hospitals cover 40,000–300,000 people.  
 Urban clinics cover similar populations as the health centres and provide similar services.

As illustrated in Figure 1.2 and mentioned earlier, aid posts operating at the village level are staffed by a community health worker (CHW) with two year’s training. Some of the basic health care services include mother and child health services and community-based health promotion. Health sub-centres and health centres

operate in the district and operate as intermediary referral points between lower level facilities and district hospitals. They provide the same services, including management of chronic and acute conditions, basic surgical care, deliveries and paediatric care. The district and rural hospitals provide full basic health services, including medical, surgical, obstetric, paediatric, trauma and 24-hour emergency care for both inpatients and outpatients. Each province has one provincial hospital, which offers major clinical services and specialist medical services provided by medical specialists and specialist nurses. In addition, they provide a wide range of clinical support and public health programmes (Ashwell & Barclay 2010:2; WHO 2012b). Table 1.2 provides details on the number of health facilities in PNG and the custodians of the facilities.

**Table 1.2: Public Health Facilities in Papua New Guinea**

Level/Type of Facility	Government	Church	Other	Total
Provincial hospitals	20	2		22



District & rural hospitals	5	7	2	14
Urban clinics	48	10	11	69
Health centres	149	48	4	201
Health sub-centres	158	263	7	428
Aid posts (open) as of 2008	2,672			2,672
Aid posts (closed) as of 2008	776			776
Total	3,828	330	24	4,181

**Source:** PNG National Health Plan 2011-2020 (2011) and World Bank, ADB, AusAID (2007)

Access to health services clearly remains a barrier for many people in PNG. The difficulty of accessing rural facilities in isolated and remote areas also makes it difficult for supervisory visits, which are important for maintaining the quality of the facility (WHO 2012b:7).

As highlighted earlier, churches are an integral part of PNG's national health system and are widely acknowledged as partners in the delivery of social services, including health and education (ADB 2011). Churches have a monopoly and influence on healthcare delivery in PNG, much as is the case in some developed countries, such as the United States of America (Levin 2016) and developing countries, such as the Philippines (Barmania & Aljunid 2016). At the implementation level, churches are responsible for delivering approximately half of the health services in PNG's rural areas. Table 1.2 shows churches are responsible for half of the rural and remote health facilities, particularly the 263 health sub-centres (Ascroft et al. 2011:4; Bolger et al. 2005). Health sub-centres provide facilities for childbirth and antenatal care, obstetric referral, family planning and child health (NDoH 2010; Mapira & Morgan 2011). Through education and training of health workers, church doctrines, values and principles are imparted to health workers who deliver healthcare. Churches train healthcare professionals in PNG through their nursing and CHW training schools (Bolger et al. 2005:7). For example, churches operate six of the nine nursing schools and all 14 CHW training schools in the country (WHO 2012:3). Churches also administer two of the three universities providing health worker training schools in the country (Janovsky & Trans 2007; Mapira & Morgan 2011).

Because of the long association with medical care during the colonial period, churches continue to play a major role in the delivery of primary health care (PHC) services in the provinces (Ascroft et al. 2011:4; Bolger et al. 2005; Matheson et al. 2009; Thomason & Hancock 2011). Churches began providing healthcare in PNG with the arrival of Christian missionaries and nurses in the late 19th and early 20th centuries (Matheson et

al. 2009). In addition to preaching the gospel missionaries used the provision of healthcare and education as important aids for conversion. In communities throughout PNG church-based health facilities are very connected to the people and correspondingly have a much stronger presence and have more influence than government-based health facilities (Bolger et al. 2005:7). In remote parts of PNG, where there is minimal or no government presence, churches are the only service providers and are influential in health service delivery. This means that the social responsibility of government to provide healthcare is shifted to churches. Although the government subsidises these services, with over 80 per cent of the service costs financed, this is done without any formal contractual arrangements. In the absence of contractual arrangements the views of churches override the government's principles and values in the provision of healthcare (Madeley 2003).

As illustrated in Table 1.3, the private sector involvement in health care includes services provided by large companies in the extractive industry sector, individual to medium-sized for-profit private practitioners, international NGOs, employment-related health care programmes and women's organisations. The size of the contribution to health care by the private sector in PNG is small and restricted to larger urban areas. The large companies involved in the extractive industries are involved in health service delivery and improving health conditions in the remote and inaccessible parts of the country in which they operate. These areas generally have poor access to government services and benefit from the operations of the industries (Thomason & Hancock 2011:16, 24).

**Table 1.3: Private Sector Health**

<b>Level/Type of Facility</b>	<b>For-profit</b>	<b>Extractive Industries</b>	<b>Non-state Actors</b>	<b>Total</b>
Hospitals	5	4		9
Health centres				
Clinics	>100		20	>120
Specialist services and facilities	1	1	5	6
Total				135

**Source:** PNG National Health Plan 2011-2020 (2012) and World Bank, ADB, AusAID (2007)

Non-state actors is a broad category to include organisations that are not part of the state, such as churches and NGOs. There are 3 private hospitals in Port Moresby and 2 in Lae.

As indicated earlier, the government is the major financier of health expenditure, with the funding come from general taxation. In addition, several development partners contribute significantly to the total health expenditure annually (WHO 2012b:5). These include Australia's Department of Foreign Affairs and Trade, New Zealand Ministry of

Foreign Affairs and Trade, ADB, UN agencies (UNICEF, UNFPA, WHO, UNDP), China, Korea and Japan.

Apart from government health expenditure, there are several sources of financing for the health care system, including out-of-pocket payments (user fees) and a relatively small amount of money from private health insurance (WHO 2012b:5), health function grants and Service Improvement Program (SIP) grants. The Public Hospitals (Charges) Act 1972 sets user fees in public hospitals but all public health and PHC services should be provided free of charge (Howes et al. 2014:107; WHO 2012b:5). The user fees have contributed to the increase in out-of-pocket payments by those using public health services, although at a slower rate (WHO 2012b:5). Health function grants are payments made by government to provinces annually, with the aim of supporting and financing the core operations of health facilities, including maintenance and conducting outreach patrols to villages, as well as drug collection and delivery (Wiltshire & Mako 2014:8). Provinces are required to distribute the funds to health facilities in the province through their recurrent budgets, or as in-kind support from the provincial and district health office for materials and activities. The national funding allocations for health facilities operated by churches are administered by Christian Health Services and there are vast differences in financing between church and government-run facilities (Howes et al. 2014:107–108, 125).

There are three sources of financing for health services at the provincial-, district- and local-level governments under the government's SIP, including the District Service Improvement Program (DSIP), Provincial Service Improvement Program (PSIP), and Local-level Service Improvement Program (LLSIP). The funds under the SIP programs are given to Members of Parliament to spend in their electorates. Originally, this funding was referred to as the Electoral Development Fund but in recent years, the name has been changed to SIP. Each local-level government (LLG) is allocated PGK500, 000 through the LLSIP. There are about three or four LLGs in one electorate/district. Each of the 89 districts is allocated PGK10 million under the DSIP. Provinces are given PGK5 million for each open electorate through the PSIP. A province may have two or three open electorates. Prior to 2015, the Joint District Planning and Budget Priorities Committee was the key decision-making body for the DSIP. Since the establishment of the District Development Authority and changes to the PNG Public Services Management Act (2014), the politicians have influence in the appointment of district administrators, who are most likely to respond to the politicians (Wiltshire 2016:178). SIP funds are to finance infrastructure, including improvements to service delivery. The administrative guidelines

for spending SIP funds provides that 40 per cent of funding under all three programmes is to be spent on improving health services (DIRD 2013; Howes et al. 2014:128–130).

Following the general election in 2012, the PNG Government introduced a ‘free’ health care policy in 2012. The principal aim of the policy was to make health services accessible to all and offset fees that are normally collected by health facilities by providing subsidy payments from the NDoH (Wiltshire & Mako 2014:7). With the availability of possible sources of financing for health service delivery, there are reports of real improvements in the levels of funding and spending on frontline rural health services (PNG National Economic and Fiscal Commission (NEFC) 2012; World Bank 2013:11). However, the general government health expenditure has been decreasing as a percentage of the total health expenditure, due to economic growth, although per-capita spending on health has been increasing since 2002 (WHO 2012b:5). The health financing system and additional sources of funding do not reach the health facilities. Nor do they provide a reliable means for consistent delivery of health care, especially when the health function grant is not commonly used to fund health budgets, but is kept at the provincial and district offices and provided to health facilities as in-kind support (Howes et al. 2014:123). This implies that funding is absent at the facility level because small procurement decisions for operational resources are taken at a higher level by those managing funds without them understanding the situation facing health workers at the frontline of service delivery. Consequently, user fees have become a common practice for many health facilities, despite the Public Hospitals (Charges) Act 1972 not permitting them to charge fees (DPLGA 2009; Howes et al. 2014:107; Sweeney & Mulou 2012). The funds collected through consultation fees for services provided and fees for drugs and medical supplies help in meeting expenses for maintenance and other operational activities.

The number of health workers in PNG is low and does not match the growing population, with the overall ratio of 5.3 nurses or midwives and less than one doctor for 10,000 people (World Bank 2011; WHO 2012b:6; Gerawa 2015:1–2). The low supply of health workers is a challenge for the delivery of services. In addition, there is an imbalance in the composition of health professionals. For instance, CHWs comprise almost 35 per cent of the total health workforce, while nursing officers (NOs) comprise about 30 per cent, which is more than medical officers (doctors), health extension officers (HEOs) and other allied health professionals, who comprise less than 8 per cent. There is also an uneven spread of facilities in the country, with approximately 94 in urban centres and approximately 2,652 in rural areas, with the delivery of services in rural areas suffering

most from the low supply of health workers. Most doctors work in urban areas, with most rural facilities operated by HEOs, NOs and CHWs. Many aid posts are closed because of the lack of staff to work in them, which is due to a number of factors, including low motivation to go and work in remote rural areas that do not have easy access to basic services for the staff and their families (WHO 2012b:5).

According to a World Bank study, the human resource problem of PNG's health system is the result of several factors. First, the diffusion of responsibility for oversight of the training of health professionals shifting from the NDoH to the Office of Higher Education contributed to lack of information on the output of training institutions and the needs of the health facilities within an area. Because the Office of Higher Education provided scholarships to students based on grade point average for entry into training institutions, there was no link between the training provided and the workforce requirements of the NDoH. When the NDoH and Department of Personnel Management were in control of the training of health workers, there was coordination between the training of health workers and the needs at the facility level. Second, the existing workforce is aging and there is increasing demand from an ever-growing population. With the majority of current workforce aged over 55 years, there is a serious concern that the supply of health workers will not meet demand when those over 55 start retiring. Moreover, the capacity of training institutions to produce the required number of health workers has not kept pace with the increasing population and in fact, has actually fallen over the years (PNG DoH 2010:15; World Bank 2011:xvii, 15).

Health professionals are trained in government and church-operated institutions. While doctors, dentists and several specialist cadres of the health workforce are trained at the government's University of Papua New Guinea, NOs and CHWs are trained in either government- or church-run training institutions. Doctors undergo more than five years of training and entry requirements for medical school are high and limited to a few from elite schools in the country. There is only one training institution for HEOs, which provides a three-year diploma programme. The institution, which was once government owned, is now affiliated to a church-run university. There are eight nursing schools in PNG with six owned and run by churches, while two are government owned. NOs undergo a three-year diploma course in general nursing and undertake in-service training depending on their special nursing roles. There are 12 CHW training schools and all are owned and run by the church. CHWs go through a two-year training programme (World Bank 2011:24, 55, 59–60, 77, 81).

Despite having a functioning National Health Information System and a National Discharge Information System, there are numerous challenges in providing accurate and reliable information because PNG's health information and communication technology is underdeveloped (PNG DoH 2010:28). Like other countries in the Pacific region, the weak statistical and health information systems make it difficult to measure critical health indicators and track performance. In addition, there is a lack of analytical capacity to use health data and conduct robust statistical calculations (United Nations Population Fund [UNFPA] 2014). The NDoH is responsible for setting policies and developing standards and guidelines for the procurement of pharmaceuticals, medical supplies and commodities (WHO 2012b:1). The Standard Treatment Guidelines, Essential Medicines List and National Medicines Formulary, which were updated in 2012 following the WHO guidelines, aim to provide access to safe medicines at an affordable price for the entire population, as well as define priorities for medical products and the roles and responsibilities of all formal health care providers in health service delivery.

The procurement and distribution of essential medical supplies and vaccines to health facilities is a major challenge, with basic drugs and medicine consistently in low supply despite assistance from development partners (PNG DoH 2010). PNG faces problems with stock-outs of medicines and some health facilities go without drugs for up to six months in a year. PNG's medical supply system has been dysfunctional for more than a decade despite increases in government funding (Wiltshire 2016; McNee 2011:1). The work of Howes and others confirmed decline in the availability of some key drugs and medical supplies (2013: x). For example, in mid-2018, Port Moresby General Hospital ran out of essential drugs and items crucial to standard medical practice, such as antiretroviral medicines, oxytocin and surgical sutures (Mola 2018:1). However, there is commitment from the Government to improve procurement and distribution through reforms. For instance, third-party procurement and distribution channels for drug kits have been arranged with the support of development partners because provincial transit stores do not have adequate facilities to store and distribute medicines and vaccines. The kits of essential medicines and vaccines are progressively improving to cover the population needs of the clinic catchment (WHO 2012b).

TM is not officially recognised in the health system, however, it exists and is utilised as discussed in the next section.

### 1.4.3 Informal Traditional Medicine

The existence of medical pluralism in PNG has been highlighted by several anthropologists. For example, Stephen Frankel and Gilbert Lewis asserted that in the context of local people willing to use both Western medicine and their own methods of treatment, ‘new treatments and places for medical care were not seen as comparable or alternatives. Instead they were something new to add or try out’. In addition, they said:

[The] discussions of medicine in PNG are most often and obtrusively couched in a different form – that of dualism or pluralism ... one that is between Western medicine and the local system ... [it is] better to have two or more ways of doing something than just one (Frankel & Lewis 1989:30–32).

Informal TM, sometimes described as ethno-medicine, folk medicine or native healing, refers to healing practices that different societies use to deal with illnesses. TM is a broad and diverse category because different societies have their own indigenous healing methods (Abdullahi 2011:115) and there is great diversity of indigenous healers in various cultures (Knaub 1985:6). The term TM is interchangeably used with CAM or CM (complementary medicine) to describe various health care practices, therapies and forms of treatment that do not involve the use of biomedicine. The WHO defines TM as:

the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness (2000:1).

This definition helps in distinguishing between TM and CAM despite their close association. While healing and treatment from TM draws heavily from indigenous cultural beliefs and practices, CAM is based on research and evidence, with most of the products scientifically tested and produced. In addition, TM is commonly designated to the practices of the ‘medicine man’ of non-literate, small-scale tribal societies, while CAM or CM is aligned with officially established non-Western medical systems with literacy and scholarly traditions, scripts, texts and formal training institutions, such as Ayurveda, Unani, Arab and Chinese medicine. The TM practitioner is referred to as *marasin man*, *glas man* (diviner) or *dokta bilong ples* in Melanesian Tok Pisin and they are usually without formal training, and acquire their skills through inherited knowledge, apprenticeship or practical experience (Jilek 1985:11; Knaub 1985:6). The WHO (2000a:11) defines a traditional healer as:

a person who is recognised by the community where he or she lives as someone competent to provide health care by using plant, animal and mineral substances and other methods based on social, cultural and religious practices.

Achsah Carrier (1989:179) found formal biomedicine and informal treatment practices to be ‘complementary rather than ... [radically] different’ in Ponam of Manus province. Andrew Strathern saw with the Melpa people of the Mount Hagen area that medical practices were combined ‘where the causes are held to be ones outside of Western purview’ (1989:143). Medical plurality was demonstrated in Paul Roscoe’s study of the Yangoru Boiken of East Sepik province (1989:199). In recent years, other anthropologists have expanded the discussion on existence of TM and informal treatment practices (Byford 1999; Eves 1998, 2000a, 2000b, 2010:497; Keck 2005; Whittaker et al. 2009), while others have suggested the integration of TM with biomedicine (Macfarlane 2005). Whittaker et al. found the use of home treatments, including herbal remedies, water and steam/sweating therapies, to be popular and ‘three times as many respondents’ in the nine provinces of PNG ‘said that they would use home treatment first before seeking treatment at the clinic’ (2009:105).

However, TM and CAM is not formally recognised in PNG’s health care system, despite the existence of medical pluralism as shown by the studies, the increased use of other forms of therapy and informal treatment practices in rural and urban areas, and the recognition and recommendation of the 29th World Health Assembly for engagement of TM practitioners in PHC. There are currently five informal treatment options that are commonly utilised in PNG. These include traditional healers, natural therapies and home remedies, Christian healing, faith healing and individual distributors of health and wellness products manufactured by international companies.

According to the WHO, the use of certain herbs and plants as medicine for treating common ailments and illnesses is widely accepted and practised in rural and urban areas of PNG. Some of the medicinal plant preparations are used to treat infections, such as sexually transmitted infections (STIs), tuberculosis, asthma, diarrhoea, body aches, headaches, abdominal pains, boils, sores, colds and malaria. The number of people using informal practices for treating illnesses is higher in rural areas, where access to aid posts and health facilities is difficult and allopathic medicine is unaffordable. However, despite their wider utilisation and acceptance in PNG, the practices are not well documented (WHO 2012:11).



There is a distinction between the use of plants, water and other substances for the treatment and healing of illnesses practised by individuals without consulting a traditional healer. TM practitioners may also use plants, water and other substances on their own but they may combine their use of these materials with magical rituals or the incantation of spells or songs as part of their healing practices. This division puts the usage of herbs and other natural therapeutic home remedies without the use of magic under the category of AM. It should also be pointed out that while some of the natural therapies and methods of treatment practised and used by individuals are purely traditional and used by members of a certain society, other therapies have circulated from different parts of PNG and even from the wider Pacific region, through connections made via church programmes, work or other social networks. For instance, the use of coconut oil combined with the roots and fruits of the *noni* tree and pawpaw leaves is believed to have come from other Pacific Island countries, such as the Cook Islands, Fiji and Solomon Islands.

There are 400 TM practitioners in PNG listed in the national TM database (WHO 2012:11), though the actual figures are likely to be higher than this. Moreover, there is no additional information on the type of practitioners and the illnesses they are capable of healing or the types of treatments they use. As there are differences between individual TM practitioners, there is a need to distinguish between the types of practices they use. Some traditional healers use plants and other natural substances for both healing and helping; such products can also be used to harm, with some practitioners being considered both healers and sorcerers (Jilek 1985:11). Other practitioners are known for only healing and helping people, such as traditional birth attendants. The treatments they use can vary because some treatments involve a combination of social, psychological and ritual aspects (Hill 1985:115).

The use of a type of TM practitioner is determined by how the illness is classified (Eves 2010:509), based on perceived cause or the length of time it will take to heal. In many cases, a traditional practitioner is visited if the individual perceives the cause of illness to be sorcery-related or that biomedicine would be unable to enact a cure. As Richard Eves observed among the Lelet of New Ireland Province, biomedicine is appropriate for the illnesses the Lelet consider Western, such as tuberculosis, but not for other illnesses. TM was deemed appropriate for *sik bilong ples* (illnesses of the place/village), perceived to be caused by sorcery or attack by spirits (Barker 1989:76; Chowning 1989:236; Frankel 1986:182; Frankel & Lewis 1989; Eves 2010:498). The Yangoru of the East Sepik province classify illnesses in similar fashion to the Lelet. For the Yangoru, illnesses such

as ‘fever, dizziness, headaches are symptomatic of the *sik nating* sub-category’, which can be diagnosed and treated using biomedicine. In contrast, *sik bilong ples* was ‘traditionally caused’ and was explained by sorcery or some other local cause and thus required local forms of treatment (Roscoe 1989:202–211). A similar situation was observed by Verena Keck (2005:145) for the Yupno of Madang province, who consider symptoms to be ‘natural’ or ‘normal’ for physical disorders, such as cuts, fractures, cough, headache and diarrhoea. Examples of treatment that is based on the perceived cause of illness are treatment by male ‘heat extinguisher’ or female ‘heat extinguisher’, depending on the kinds of symptoms observed (Keck 2005:148–150).

Christianity is the major religion in PNG and Christian teaching and ideas have greatly influenced the understanding of illness and healing throughout the country (Cox and Phillips 2015), although how this is realised varies between churches. Consequently, various forms of Christian healing ‘are more often the first preference with more people becoming convinced that conversion offers a powerful form of healing that can cure any illness regardless of origin, even sorcery’ (Eves 2010:499). There is no clear line drawn between Christian healing and faith healing because both practices have similarities and differences. One of the similarities is that both involve the belief that God heals people by faith through prayer. Prayer is considered a treatment strategy on its own, as well as being complementary to the use of biomedicine and other treatment practices (Eves 2010:500).

Christian healing and faith healing differ in the following ways. First, faith healing is associated with Pentecostal churches (Pentecostalism), while Christian healing is associated with the mainstream Christian churches, including Lutherans, Baptists and Seventh Day Adventists (SDAs). Second, Christian healing generally does not involve gestures, whereas faith healing can involve the ritualistic practice of prayer and gestures, such as laying of hands by pastors to elicit divine intervention on behalf of the sick person. In Christian healing, the sick individual either prays alone for recovery while taking medicine, or involves other people, including family members or the church congregation. Third, while forgiveness and healing are fundamental to the beliefs of Christian churches, Pentecostalism links the idea of salvation and health; that if an individual wants to be healed, he or she must first accept God’s offer of salvation, repent of their sins to be forgiven and believe in God’s power to heal. The strong emphasis on being ‘born again’ and desire to receive spiritual powers from the Holy Spirit is a

fundamental aspect of Pentecostal theology (Anderson 2002:525; Eves 2010:500; Pirinduo 2015).

Nutrition and optimum health products, which are internationally manufactured and produced, are distributed in PNG by individuals through party plans and multi-level marketing networks. The products range from nutrition and vitamin packages, hygiene and sanitary pads to cosmetics. Network marketing has been becoming increasingly popular in urban areas during the past two or three decades, including Pro-Ma Systems, First Vita Plus, JM Ocean Avenue and Swisse Wellness. With limited research into these various networks of health care products, it is difficult to determine the major users of them. However, anecdotal evidence indicates that the number of women using the products is higher than the number of men. In addition, the distributors are more likely to be women than to be men, whether employed or unemployed, and with different levels of education and occupying various positions in private and public sector organisations. Anecdotal evidence indicates that many of the female distributors of the products would normally occupy very low positions, as demonstrated in the testimonies provided by product distributors. The length of operation of the distribution networks varies. Some of the networks are relatively large and provide many with opportunities to run their own businesses and attend training, demonstrations and seminars on the products, both within and outside the country. Without strict regulations on the registration of business names, these networks grow mainly through party plans. Distributors present seminars on the products to interested clients and register distributors to increase their network.

#### **1.4.4 Women and Health in Papua New Guinea**

Improved living conditions, education and health, including declining mortality have all had a positive impact on the health of women in general in PNG. Life expectancy for females at birth has generally improved, from 41 years in 1971 to 51 years in 1980, and from 55 years in 1990 to 62 years in 2011 (UNDP 2013; WHO 2012). The education of girls has had positive effects on the health of women, changing their status and labour patterns, including patterns of lifestyle, disease and mortality trends. A recent study by Howes et al. observed that ‘there are more girls enrolled in primary schools’ and ‘growth in enrolment was much faster among girls’, with the total number of girls enrolled in schools growing from 30 to 46 per cent between 2002 and 2012 (2014:v). However, these improvements have not been uniform across the country, nor consistently reflected in the UNDP HDI. The health of women in PNG, as indicated by the internationally accepted

indicator of maternal mortality, tells a mixed story of the lives of women. Women's health cannot be generalised because it is largely determined by socio-economic and cultural factors of the places in which they live (Lewis & Kieffer 1994), which in turn has implications for their patterns of illness and death, including trends in using health services.

Several studies on women's health in PNG have focused on maternal health issues (Wells 1985; Alto et al. 1991; Andrew et al. 2014; Avue & Freeman 1991; Garner et al. 1994; Vallely et al. 2014; Yaipupu & Eves 2002). This is because PNG's maternal mortality rate, at 230 per 100,000 live births, is relatively high for the Pacific region (World Bank 2007:1). A large proportion of maternal deaths occur in hospitals, so mortality and morbidity statistics do not capture the populations who do not have access to, or seek treatment from, health facilities. The leading causes of death in women are obstetric haemorrhage, malaria and HIV/AIDS (PNG NDoH 2010:vi). However, the leading causes of death in PNG are communicable diseases, malaria, tuberculosis, diarrhoeal diseases and acute respiratory diseases (WHO 2012b:2).

While the focus on maternal mortality reflects the seriousness of the problem in PNG and the government's focus on it as a priority, it excludes women who have not experienced pregnancy in their lives and if their deaths are not related to maternal health. There has been little research relating to other health issues affecting women in PNG; however, in recent years, an increasing number of illness and deaths in women have been due to two major health issues related to their gynaecological functions and breasts. Paul Crouch-Chivers confirms that:

as women become more educated ..., and with greater access to health services, the frequencies of malignancies in females will rise. Breast cancer now forms a major part of the radiotherapy workload in Lae and maybe more common than ... from the 1980s (2010:50).

However, there is limited discussion of diseases, which are commonly referred to in PNG as '*sik bilong mama*' (disease of mothers) or '*sik bilong meri*' (women's illness). In an interview during the fieldwork for this current study, one of the participants, who had undergone a hysterectomy in 2015, said:

Many women in PNG are undergoing hysterectomy. My question is why do we not know and understand what hysterectomy is? Is it because there is no information on causes of '*sik bilong meri*'? Being an educated woman and having worked in the health

sector, I had to educate myself on women's health problems and not rely on doctors (Urban mother, October 2015).

Currently, significant knowledge gaps severely limit our understanding about the health of women (Birn 1999), their HSB and their utilisation of health services in PNG. There is also limited understanding of the scope of illnesses affecting women in urban and rural areas, the socio-economic status and age groups affected by certain illnesses and the provinces and regions worst or least affected by certain illnesses.

#### **1.4.5 Why the Need for Another Study on Health Service Delivery?**

Various studies conducted in PNG have highlighted the supply-side barriers affecting health service delivery and the demand-side factors influencing health service utilisation. The supply-driven barriers show that policy reforms and changes have not corresponded positively with PNG's human development outcomes and indicators. PNG's ranking in the UNDP's HDI continues to reflect persistent weaknesses in service delivery. Most supply-driven reforms and policies focus on structures and systems, rather than on social and human capital. When the human aspect is missing from reforms and policies, social development indicators are not captured because structural and system indicators cannot be used to measure human development indicators. Further, supply-focused studies will continue to highlight the supply-side barriers in service delivery and overlook the demand-side barriers, which influence health service utilisation and thus, health outcomes. In addition, the approaches adopted and the levels at which the studies are conducted provide limited knowledge of access, acceptability, affordability and utilisation issues on the demand side. Finally, health outcomes cannot be improved by health discipline or sector alone, as is the current practice.

The problem of women's health and the high maternal mortality rate is not unique to PNG. The UNFPA says that millions of women in developing countries experience life-threatening and other serious health problems related to pregnancy or childbirth (Chakraborty et al. 2003:327; European Commission ([EC])/United Nations Population Fund ([UNFPA]) 2000). The poor health status of women and their well-being in most developing countries is widely acknowledged and abundantly documented.

What is puzzling about PNG is that although some gains have been observed in PNG's demographic indicators over the past decades, such as increase in life expectancy, other health indicators have not corresponded positively to general improvements made in the

health system (Batten 2010:3). For example, the introduction of modern medicine, improvements in birthing and weaning practices, and the availability of drugs and more local doctors and health workers have not translated into better health indicators. It is even more puzzling when health outcomes have not kept pace with the:

- country's economic growth over the past decade
- investments made in health by donors and international development institutions, which have increased over the years
- increase in public health expenditure, including health function grants to provinces (Howes et al. 2014:107)
- number of females enrolling and attending schools increasing since the 1960s (Howes et al. 2014:36)
- investments in health from the extractive industries operating in PNG
- interventions by non-state actors, both international and local, to assist with women's health issues.

As a development practitioner from the Gulf Province working in the health sector, I was inspired to conduct this study to understand why in context of significant funding the health situation for women remains dire. I was also motivated by the desire to understand the reasons for my own mother's fear of hospitals as described in the prologue. PNG's poor health outcomes, reflected in its high maternal mortality rate in the HDI, made me interested in undertaking research that could uncover some of the underlying factors behind the death of a woman or a mother. The study would address some of the unanswered questions, including why women were dying despite the advances in medicine and why women feared visiting hospitals and did not utilise the health services. My motivation level was increased further when I lost two very close female friends in 2013, just a few weeks before I left Port Moresby to come to Australia and commence my PhD. These women did not live in remote parts of the country, but lived in the city, with easy access to health facilities. Jofina died while giving birth to her third child in Port Moresby General Hospital (PMGH). Twenty-four hours later, while visiting Jofina's *haus krai* (mourning house) and openly mourning, as is customary, Beverly, another close friend, lost her life due to complications in breathing associated with asthma. Their deaths and the pain felt by their children, husbands, family and community made me ask many questions about women's attitudes and behaviours in seeking health care, as well as the health system more generally, including the facilities, resources and capacity to prevent unnecessary deaths.

Another driving force was the opportunity I had to facilitate and participate in several health service delivery studies in PNG, conducted by the World Bank's health sector team between 2010 and 2012. This included studies on human resources for health, constraints and barriers to family planning services and other related analytical pieces of work. These studies used both quantitative and qualitative methods, with the focus being on the supply side (service provider) of health delivery. However, the service users' responses to the 'how' and 'why' questions were not captured adequately, largely because the studies were funded by development partners following requests from the government. These studies made me aware of the importance of considering the environment in which both the provider *and* the receiver of health services operated, giving me the impetus to explore both sides of health service delivery.

There were two other major reasons for me to focus on women's access to health care. First, women are universally considered the guardians and dispensers of health care in families. They tend to sick children and family members and are the first to recognise the symptoms of illnesses, using knowledge learned from older women as well as from the culture to which they belong. Second, as women are major recipients and consumers of health services, for both themselves and their families, they are best placed to provide feedback on the nature and quality of the health services provided (Fee 1983:17), which may assist in improving health outcomes.

Few studies have been conducted with regard to the demand-side perspective (Andrew et al. 2014; Avue & Freeman 1991; Garner et al. 1994; Gillet 1990; Hinton & Earnest 2010; McKay & Lepani, 2010; Vallely et al. 2014; Whittaker et al. 2009; Yaipupu & Eves 2002). Most studies have focused on maternal health and health service utilisation, highlighting a combination of factors on both the demand side and the supply side. Demand-side factors include costs for treatment, cultural or customary beliefs and practices, and distance to the facility. The behaviour and attitude of the health workers, the quality of the services, and the availability and effectiveness of treatment options are supply-side factors. In relation to maternal health, Joy Gillet (1990:9) observed that it was a poorly understood area, given low priority in actual health service delivery. She argued that the needs of mothers were not being addressed effectively in the MCH services because service providers were overwhelmed with the needs of the children. Valerie Everett amplifies the argument:

The M of MCH is often a very small one. ... Many MCH clinics have little time for maternal care. ... By the time all the children have been weighed, given their immunisations and had their acute illnesses treated, it is late. ... Well-informed mothers, who present themselves for care, will be seen but little or no attempt is likely to be made to look for other pregnant women and persuade them to come for advice and antenatal care (1987:12–122).

On the general health of women, Rachel Hinton and Jaya Earnest (2010), using a rights-based approach, argued that women's right to health in PNG was determined by violence, heavy workloads, lack of economic opportunities and limited use of health services.

## **1.5 Structure of the Thesis**

This thesis consists of eight chapters. This first chapter has provided the introduction and background context to the study. Chapter 2 presents a literature review of the key concepts related to the study. Chapter 3 explains the research design and methodology and the techniques used for data collection.

Chapters 4 to 6 are three case study chapters. Chapter 4 discusses the Tubulamo of Rigo in Central Province; Chapter 5 discusses the Moka Gomo of Imbonggu in the Southern Highlands; and Chapter 6 discusses Port Moresby North-West Suburbs in the NCD. The three case study chapters are structured in the same way in three sections: the background context, the findings, a discussion of the findings and conclusion with recommendations.

Chapter 7 discusses the overall findings of the three case studies and focuses on several selected themes, noting the limitations of this study and areas for further research. Chapter 8 concludes the study and provides recommendations based on the findings.



## Chapter 2: Literature Review

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Given that this study was concerned with health service delivery and health outcomes in PNG, it required a close examination of the idea of health. This literature review provides the conceptual framework for this study. The first section contains definitions of health, followed by an examination of the current approaches and practices in the delivery and utilisation of health care services, including models for understanding the two sides of service delivery. Section 2.3 links the concept of health with these current approaches and the way they affect health outcomes.

### 2.1 What is Health?

Health is difficult to define because it is an unspecific or a residual condition in an individual's life and mostly cannot be seen. However, it is easy for people to know when illness disrupts their normal life. It is only when people are ill through the loss of certain abilities and their sense of well-being that they reflect on their health condition (Eyles & Donovan 1990:29–32). This links health and illness so closely together that it is difficult to consider them as separate entities.

The concept of health varies among the different groups within a single society and between societies, as well as within any single society over time (Morris 1975). Consequently the different meanings attached to the idea of health have led to several definitions and perspectives for understanding health, such as biomedical, social determinants of health (SDOH), medical sociological, economic, creative adaptation and interpretative. The definitions relevant to this study have drawn on two major perspectives: biomedical and SDOH.

The advocates of the formal biomedical definition of health define health as 'freedom from clinically ascertainable disease' (MacLean et al. 2009:ix). This definition is very much concerned with the physical structure, human anatomy and the biological functions of the body and its disease processes. It is also associated with belief systems and the practice of medicine, which originated in ancient Greece (Boruchovitch & Mednick 2002:175). However, the concept has evolved and adapted over time with developments in society, new diseases and new treatments, as well as in response to pressure from established interests and public anxiety about illness and the level of demand for health services. For instance, the Black Report which reviewed Britain's National Health

Service, considered the ‘social model’ of health more relevant than the medical model. The social approach sees health as being a comprehensive concept and those advocating for this approach argue that health works both within and outside medicine. This approach emphasises that health and disease have their origins in the way people live together and this approach to health fits closely with the World Health Organization’s (WHO) definition of health.

As an authority on global health established following the Second World War in 1948, the WHO provides an overarching and comprehensive definition of health, stating that health is ‘a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity’ (WHO 1948; Grad 2002:982). This definition has been expanded further by several other approaches. For the practitioners of informal TM and CAM, health is holistic, a state of perfect harmony between all the organs and systems of the body, and does not merely relate to the absence of disease but to the person as a whole. Health includes the emotional, mental and physical aspects of the human being. Conversely, the economic approach views health as ‘an end in itself that can be created by the activities that individuals undertake such as receiving medical care, engaging in self-care through exercise and proper diet’ (Jacobs & John 2002). The lifespan approach holds that health and illness are part of human life, including the conditions that the individual accumulates from before birth and throughout the course of their lifetime (Institute of Medicine 1996). For René Dubos, health was more a behavioural than biological state. He asserted that health is a creative adaptation and a measure of success experienced by a person in responding adaptively to environmental challenges (Dubos 1967).

The various definitions show that the concepts of health and illness can vary according to discipline, focus, time and place. As the SDOH approach was adopted for this study, additional information on this concept is provided in the following section.

### **2.1.1 Social Determinants of Health**

The SDOH refer to the ‘conditions in which people are born, grow, live, work and age’ (Solar & Irwin 2010:2). In turn, these conditions are shaped by the distribution of money, power and resources at global, national and local levels (Solar & Irwin 2010). In recent years, the concept has been increasingly considered in health research because of the need to address the health inequalities that have accompanied economic growth in many developed and developing countries (Watt 2002:241). Thus, the focus has been on the

socio-economic determinants of health, rather than on genetic and biological factors as key determinants.

Efforts to address socially determined health inequalities have their roots in the 1974 Lalonde Report of Canada and the United Kingdom's 1980 Black Report. Although the recommendations of the Black Report were dismissed by Margaret Thatcher's Conservative Party, the report generated a strong interest in certain scientific communities (WHO 2010: 18–19). The effects of social gradients on health were further clarified by Michael Marmot and colleagues in their research on health inequalities existing within and between countries. In Canada, an interdisciplinary research group was established, comprising experts from the fields of public health and social science, to explore the determinants of the health of the population. The objective was to improve scientific knowledge and identify effective policy options for addressing the question of 'what can be done to improve ... nation's health status?' (Solar & Irwin 2010:19). The group's findings generated debates in Canada and elsewhere.

In 1996, Alvin Tarlov was one of the first to employ the term SDOH systematically. He identified four categories of health determinants: (i) genetic and biological factors; (ii) medical care; (iii) individual health-related behaviours; and (iv) social characteristics within which living takes place. However, he asserted that 'the social characteristics predominate' among these categories (Solar & Irwin 2010:19). The four frameworks were developed to enable SDOH policies and programmes to be compared for similarities and differences (Solar & Irwin 2010:19).

Dahlgren and Whitehead's social ecological theory of health was based on the concept of layers of influence on health (2007). This model mapped the relationship between the individual, their environment and the disease, with the individual at the centre of analysis. It held that the individual is surrounded by three layers of influences that affect his or her health. The first layer is personal behaviour and ways of living, which can either promote or damage health, such as choosing to smoke or drink alcohol. The second is social and community influences, which provide mutual support when there are challenges that affect health. The third layer involves structural factors, such as housing, working conditions and access to services (Dahlgren & Whitehead 2007; Valentine & Solar 2011:7; Solar & Irwin 2010:19). In contrast, Diderichsen's model considered social and policy contexts, with the social position of the individual determining the specific exposures they face, such as disease or injury and ill health as the overall social

consequences (Valentine & Solar 2011:7). Marmot and Wilkinson's model linked social structures to health and disease through material, psychological and behavioural pathways, with genetics, early life and cultural factors being important factors affecting population health (Valentine & Solar 2011:7). Finally, Mackenbach's (2012) model focused on the effect of an individual's childhood on their socio-economic position and incidence of health problems during adulthood. His model considered that childhood environment, cultural and psychological factors determined health in childhood; in adulthood, lifestyle factors, structural and environmental factors, as well as psychosocial stress-related factors, affected the incidence of health problems.

These frameworks are useful for classifying SDOH policies according to their entry points and the stage of the social production of disease and can be influenced by intervention. Further, SDOH shows health and health outcomes as being a 'social production chain' of linked mechanisms that lead from underlying social stratification to an inequitable distribution of health outcomes (Solar & Irwin 2010:19).

The momentum for use of the term 'social determinants of health' began around the late 1990s and 2000s (Irwin & Scali 2007:250). However, the idea of SDOH has been advocated by the WHO since its establishment in 1948 and included in its Constitution. The concept was later critically reviewed by WHO and its member states during the Alma-Ata Conference in 1978 (Shaikh 2008).

SDOH is based on three major concepts. First, it emphasises the importance of the social, cultural, economic, political and physical circumstances in which an individual lives. Therefore, the factors determining people's HSB may be seen in physical, socio-economic, cultural or political contexts. Second, health issues are complex and require systematic knowledge extending beyond the biomedical perspectives of health. The creation of this knowledge involves a multidisciplinary and cross-sectoral approach. Third, there is a relationship between health outcomes and the social conditions in which people live and work, with the latter seen as the root cause of disease and health inequalities. Therefore, tackling the social conditions in which people live may improve health outcomes for them (Solar & Irwin 2010:19).

### **2.1.2 Social Determinants of Health in the PNG Context**

Health is understood in a holistic sense in PNG and constitutes the physical, social, emotional and spiritual dimensions of life (Lawson 1992; Hinton and Earnest 2011).

Health is not limited to one aspect of an individual's life, such as the biology. A balanced integration of body, mind, spirit and social aspects results in good health (Boulton-Lewis et al. 2001:1).

The classification of illnesses in PNG (Eves 2010:509) discussed earlier, further demonstrates the influence of social, cultural, spiritual, environmental, and lifestyle factors on health. In PNG generally minor and common ailments or *sik nating*, such as fever, coughs or flu are perceived to be caused by the changing weather or environment. Other ailments such as headaches or body pains are recognised as physical manifestations of workload, worry, and other mental and emotional conditions of people's lives (Hinton & Earnest 2011:186). Serious illnesses or *bikpela sik*, such as cancer or diabetes are the result of poor social and economic conditions in PNG and lifestyle factors (Hinton & Earnest 2010). Spiritual dimensions are important for health and illness in PNG. *Sik bilong ples* refers to illnesses that biomedicine cannot easily detect and treat, and is understood to be caused by attack by spirits, sorcery and witchcraft (Witchcraft: *sanguma*, Sorcery: *poison, puripuri*). Accidents or acute conditions are also associated with social and spiritual causes rather than physical (Hinton & Earnest 2011:186). *Sik bilong ples* can only be treated by TM and other treatment options, such as Christian prayer. Social and cultural dimensions of illness are considered in complicated health conditions. For example, in some places in PNG the death of a child is perceived to be caused by disputes over non-payment of bride price (Keck 2005). The connection between social and health is further observed in the negative consequences of gender inequality on women's health (Hinton & Earnest 2011:186). Health is also defined within the context of relational and interpersonal contexts of people's lives. Well-being or health is perceived to be a result of an individual having a good relationship with others and living in harmony with people in the village, nuclear family or extended family (Boulton-Lewis et al. 2001:6). *Poison* or *Puripuri* may be used to cause illness if the relationship is bad, there is jealousy, or when food or money is not shared. In such circumstances a family will get together and give food and pigs to those believed to be aggrieved, as well as pray for the treatment of any illnesses perceived to be due to poor social relations. Health is determined by socioeconomic conditions that people live in and their relations in the social environment (Shulz & Lempert 2004).

Within this context, the next section examines two conceptual frameworks that are pertinent to understanding the provision and utilisation of health care services.

### **2.1.3 Conceptual Framework on Health-Seeking Behaviour of Users**

HSB is one of the key concepts associated with health and utilisation of health services. It has been increasingly adopted in public health research and has evolved over time, with various models developed to describe and predict the behaviour of people.

The concept of HSB refers to ‘any activity undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy’ (Ward et al. 1997:21). HSB is

what people do in order to maintain health and/or return to health, ranging from individual behaviour to collective behaviour. It concerns specific steps taken (sometimes called hierarchy of resort) and what is done and why (Scrimshaw & Hurtado 1984:4).

These could involve self-care, asking a relative for help, going to a pharmacy or going to a health centre and may not be a hierarchy of resort, as people may go back and forth between resources and sources of help (Scrimshaw & Hurtado 1984:4). To seek or not seek health care depends on health care decision making, which is a process of deciding on a course of action in relation to maintaining or restoring health, including factors and/or people who influence the decision and reasons for the decision. HSB is part of the broader concept of health behaviour, which encompasses activities undertaken to maintain good health, to prevent ill health and to deal with any departure from a state of good health (WHO 1995:4). HSB falls within the sub-discipline of the health belief model, which seeks to specify certain beliefs that can account for individual motivations and contribute towards health behaviour (Abraham & Sheeran 2000:4).

An understanding of people’s HSB is crucial for several reasons. First, it helps organisations know what determines the use of health services and what drives people to do regarding their health. Second, the psychological theories and models used in preventive approaches and public health actions have limitations in influencing individual health behaviour. Finally, the existence of health inequalities in many countries, despite economic growth, has shifted the focus away from the socio-economic determinants of health (Watt 2002:241) and towards analysing people’s HSB.

The development of models for describing and predicting HSB began in the 1960s. According to Mackian, Bedri and Lovel, there are two dominant approaches to HSB modelling: the pathways model, which describes the series of steps people take towards

health care; and the determinants model, which identifies the factors that affect the pathway (2004:137).

In terms of the pathway model, Edward Suchman (1965) first described HSB in a logical sequence of steps, beginning with the individual's perception and evaluation of symptoms and then the decision about whether or not to utilise health services. He asserted that each illness episode undergoes five different phases: experiencing symptoms, assuming the sick role and exploring lay referral systems for the validation of the role, contacting medical and professional health workers, being a patient, and recovery from illness and relinquishing the patient role (Suchman 1965:127; Wolinsky 1988). Although Suchman's five stages are useful for breaking down the process of an illness episode, studies have found that Stages 3 and 4 of his model are not relevant for developing countries. The model fails to consider the differences in the quality of health care and experiences people undergo when seeking a professional health worker. According to Diana Dutton (1978:362), studies that do not take into account these differences and variations are not likely to explain different utilisation of health facilities adequately. Therefore, the model is not relevant for developing countries, including PNG. There is a huge disparity between the number of professional health workers in developed and developing countries, which affects people's experiences of seeking health care services and treatment from professional health workers. Other pathways models have been developed by Horacio Fabrega (1973) and Igun (1979), with 11 stages. These models are useful for understanding the processes people may follow to seek health care. However, they do not help us understand the way certain decisions are made and the factors that influence them (Tomison 2013:18).

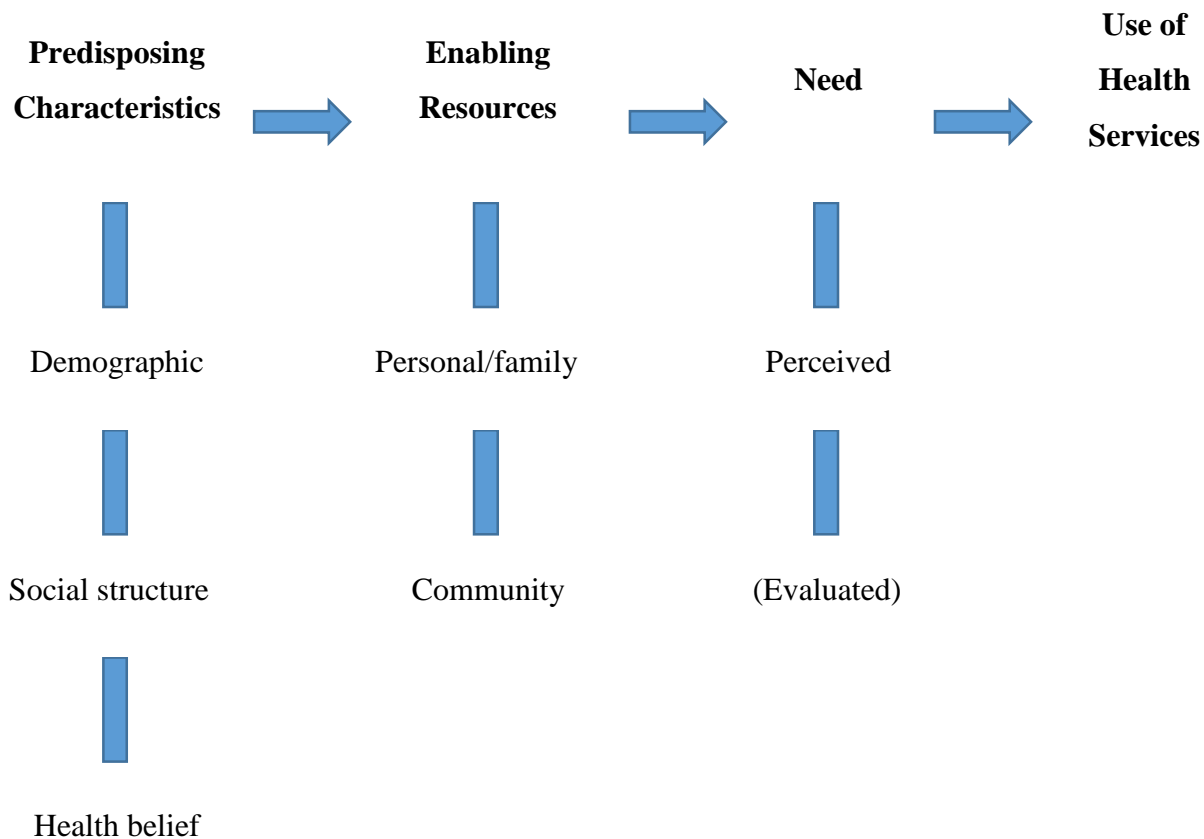
A number of determinants models have been constructed to identify factors that influence health care choices and reasons for seeking treatment. Some of these are shown in Table 2.1.

**Table 2.1: Determinants Models**

<b>Model and Focus</b>	<b>Main Proponent</b>	<b>Relevance to PNG</b>
Zola: Individual, personal and social life	Irving Kenneth Zola	Not relevant
Mechanic: Social, cultural and psychological	David Mechanic (1968, 1972)	Relevant. Understanding of health include sociocultural aspects, spiritual and physiological illnesses
Andersen: Predisposing characteristics, enabling resources and need factors	Ronald Andersen (1973, 1975, 1978)	Relevant. Predisposing characteristics consider sociocultural factors and enabling resources that influence HSB

**Source:** Andersen & Newman (1973), Mechanic (1972) and Zola (1973)

Irving Zola (1973) argued that an individual’s personal and social life has an influence on their seeking treatment. Mechanic’s (1968, 1972) model was based on the idea that HSB is a socially and culturally learned response. Andersen’s (Andersen & Aday 1978; Andersen, Kravits & Anderson 1975; Andersen & Newman 1973) initial HSB model considered three factors that influence HSB and the utilisation of health services, as shown in Figure 2.1.



**Figure 2.1: Andersen’s Health-Seeking Behaviour Model**



As shown in Figure 2.1, an individual is more or less likely to use health services according to their predisposing characteristics of demographics, position within the social structure and beliefs about the benefits and usefulness of health services and treatments. Their perceptions regarding utilising health services are enabled by the resources that are available to them at various levels, including household and community. The need to use health services is based either on an individual perceived need, or on a social or clinically perceived need (Wolinsky 1988).

The above models were constructed within the context of developed countries and do not adequately describe or predict HSB in developing countries, including PNG where medical pluralism is common. For instance, Mechanic's and Andersen's models assumed that people seek health care services and treatment from biomedical providers, facilities and institutions. This is not the case in developing countries, where health workers are limited in number and do not serve the entire population. Alternative medicine, including herbal treatment and traditional healers, is used in the absence of professional health workers. Faith healing is increasing in popularity in sub-Saharan Africa (Manglos & Trinitapoli 2011:113). A similar pattern is occurring in certain parts of PNG and other Melanesian countries. Eves (2010:496–497) observed that the Pentecostal Church in New Ireland Province in PNG has shaped the 'realm of therapy and understanding of illness among the Lelet of New Ireland, who tend to apply certain aspects of Christian beliefs "into their healing strategies'.

However, some aspects of Mechanic's and Andersen's determinants models are useful and provide a basis and framework for the analysis of HSB in developing countries: (a) Mechanic's focus on the social, cultural and psychological context in which illness occurs; and (b) Andersen's predisposing characteristics, enabling resources and need factors. Mechanic's (1968:4) emphasis on sociocultural and psychological determinants in explaining the utilisation of health care services is relevant for HSB in PNG, where decisions to access and utilise health care services are influenced by household and community members. Further, understanding the psychological aspects of HSB is useful for investigations in PNG because their understandings of health see symptoms as spiritual and physiological illnesses (Rivers 1924:7). Andersen's model includes crucial aspects of enabling resources, which is relevant in a developing country context in which access to health is more difficult, as well as predisposing characteristics, which consider sociocultural factors that may affect an individual's HSB.

One limitation of these models is that they exclude the influence on the users of health services of the provider of health care. Their focus has been on the user side but has failed to include the institutional factors on the provider side. The next subsection examines the frameworks for understanding the behaviour of health workers.

#### **2.1.4 Conceptual Frameworks for Health Worker Behaviour in Health Service Delivery**

In the past, extensive interest and research on health service delivery in PNG and elsewhere has been committed to understanding the provider side of health systems, including financing to make services accessible and available. As highlighted elsewhere in other sections of this thesis, there has been some attention on infrastructure, management arrangements and capacity of staff. While these are important to making health care delivery work better, certain aspects on the provider side have not been examined and analysed adequately. One of these is health service. Too often, this is emphasised and generalised without adequately identifying specifics, such as the type of health worker, section of the health facility and the specific services provided.

Peter Berman contended that when analysing provision of health services, two aspects on the supply side are crucial: the nature of health care services and the determinants of provider behaviour. He noted that there has been very little research on assessing the simple interactions between the provider and the user, where the health services are provided (1999:4-6). The HSB and health service utilisation studies have centred on the determinants influencing people's use of services. Although human resources for health have been considered crucial (World Bank 2011), the focus has been on quality and quantity in service delivery. Although health worker-patient relationships have a direct impact on HSB, this aspect of health service usage and health outcomes are neglected areas of empirical studies. Exploring the determinants influencing the behaviour of health workers in the delivery of health services is as important as investigating the determinants influencing the HSB of health service users. As Phylis Noerager Stern pointed out, 'health care is influenced by the beliefs of providers as well as consumers' (1986a:123). Similarly, van den Broek and Graham saw the significance of understanding both sides and argued that 'the use of services and maternal health outcomes are the result not only of the provision of care but also of women's experience of that care ...' (2009:18).

Health care comprises a diverse set of products, which may be produced in diverse settings by different individuals with different skills and educational levels. Services can

be a specific type or class of health care services, such as ambulatory illness treatment, or more narrowly focused on a specific intervention or procedure (Berman 1999:8).

A health care provider can be an individual or a recognised legal or administrative entity that organises and carries out the production of health care services. They can range from individual practitioners working out of their homes with minimal resources to large hospitals or facilities with many workers. The provider is normally referred to as the person treating the patient. However, an organisation is not the provider, as it merely provides a setting and the resources for workers to deliver services. Thus, there is a need to understand both the macro- and micro-structures of health care provision and look beyond the individual health worker or the organisation that is enabling the production of services. Distinguishing the levels of influence on the health care provider within the environment in which the services are delivered is useful for making improvements (Berman 1999:4, 6).

This study examined health care services provided at primary and secondary levels in urban and rural settings in PNG, including MCH. It adopted several frameworks for understanding the behaviour of health workers in the delivery of health services, both generally and in maternal health care specifically. These are shown in Figure 2.2. Berman's framework was used for the internal and external environment of providers. A combination of Holmes and Goldstein's conceptual framework for analysing the relationship between maternal health care providers (MHCPs) and patients was used (2012:12), as well as the conceptual framework for health worker motivation and demotivation by Thu et al. (2015:3).

Berman's framework was adopted for understanding and analysing the determinants of provider behaviour within the macro-and micro-structures because the questions of 'What are the underlying motivations driving the health care provider behaviour, and how are those related to different structures of provision?' were closely aligned to the questions of this study. Berman's framework describes the delivery of health services as being along a line, with the left side concerned with macro-structural issues and the right side concerned with micro-structural issues. The nation and market operating at the macro level account for higher level factors, such as policies, legislation, regulations and financing for the provision of health care. The size and composition of the provision of health care is at an aggregate level. The internal environment of the organisation and individual is described as the micro-structure of health care provision.

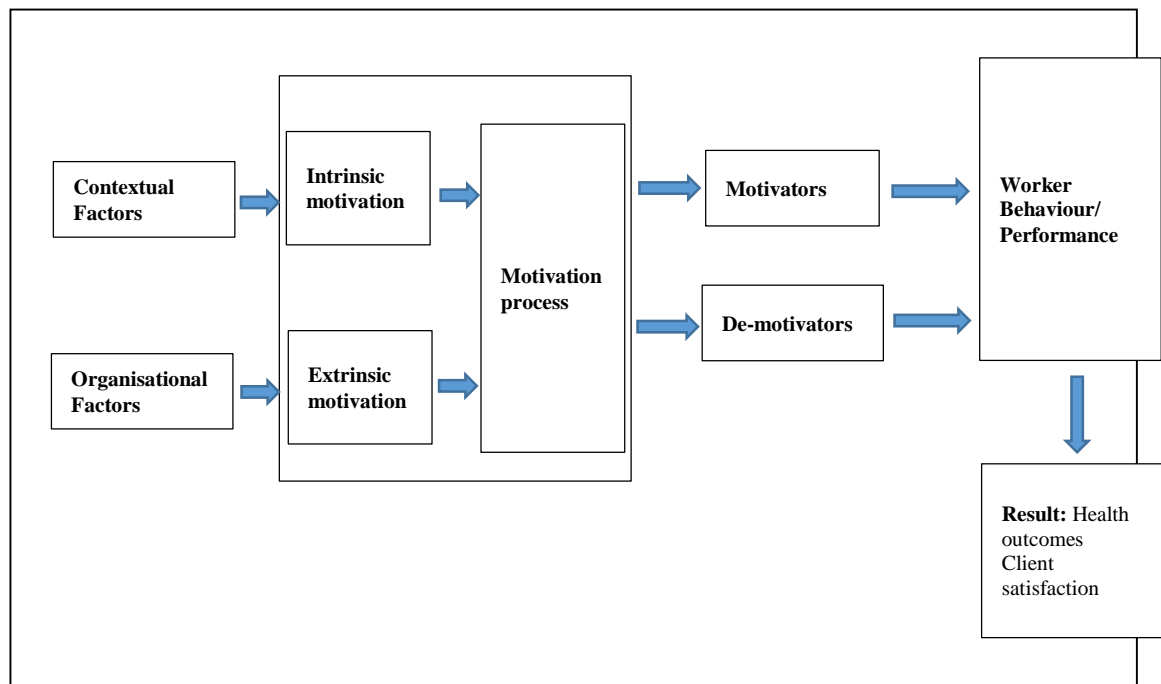
Holmes and Goldstein's conceptual framework was developed specifically for analysing the attitudes and behaviours of MHCPs, owing to relatively low utilisation of health services and poor maternal health outcomes in developing countries such as SSA, Southern Asia, Southeast Asia, Latin America and the Middle East (2012:5,10).

The framework shows that the relationship between MHCPs and their patients affects the delivery of health care and maternal and newborn health outcomes. The quality of the interpersonal relationships affects other elements of quality of care and the satisfaction of MHCPs, influencing their self-esteem, motivation and confidence in their work. The factors influencing relationship between the MHCP and the patient exists on both sides. For instance, the factors influencing the attitudes and behaviours of the MHCPs may include their working conditions, workload, stress, lack of privacy, fear of infection, level of training and communication skills, norms in the workplace (including the influence of role models), personal characteristics (gender, culture, ethnicity and class) and personality attributes (self-confidence, caring, courtesy and charisma). The attitudes and behaviour of the patient may be influenced by their previous experiences with MHCPs, social, cultural or ethnic differences and personal characteristics (e.g., shyness, level of autonomy) and self- confidence.

A good relationship between a patient and health worker has been described as one in which there is mutual respect, openness and a balance in their respective roles (Govender & Penn-Kekana 2008). Negative attitudes from MHCPs, such as poor communication because of poor interpersonal relationship skills (Gilson et al. 1993), have the potential to dissuade a patient from seeking health care.

Thu and colleagues consider motivation as a key element affecting worker behaviour and performance. They describe motivation as a force energising the individual to make rational choices to take action. In the work context, motivation can be defined as 'an individual's degree of willingness to exert and maintain an effort towards attaining organisational goals'. Their framework was used to analyse health workers in rural districts of Vietnam who provide PHC services, including maternal health (see Figure 2.2). They argued that a health worker is motivated or demotivated by organisational and contextual factors. Organisational factors include the characteristics of the facility, working environment, training opportunities and working conditions. Contextual factors are characteristics of the population being served, including their perception of the service quality and their ethnicity. In the following figure, a distinction is made between intrinsic

and extrinsic motivation, with the former being based on the worker's knowledge, skills, ability and individual values and the latter relating to organisational factors (2015:2-3).



Source: Thu et al. (2015:3)

**Figure 2.2: Conceptual Framework for Health Worker Motivation and Demotivation**

The frameworks that have been presented here have both similarities and differences. The factors in relation to motivating and demotivating health workers are similar. Gaining the respect of the community and good interpersonal relations are factors that motivate workers to perform better and thus, satisfy clients and encourage the use of health services. The factors demotivating workers include distrust by the users, lack of satisfaction at work, inability to provide good quality services, lack of supervision and heavy workload (Holmes & Goldstein 2012:12–14; Thu et al. 2015:3).

## **2.2 Current Approaches and Practices: Health Service Delivery and Utilisation**

The literature indicated that several trends are emerging in the current approaches and practices for the delivery and use of health care services. First, health care service delivery practices and approaches tend to operate within a series of dichotomies. Second, health policies and practices are disease focused and health services are geared towards the treatment of illness; that is, only when the individual is ill, but not for all phases of human life. Third, health care services are selective rather than comprehensive, which results in

concentrating more on certain groups and less on other segments of the population. These approaches are discussed in detail in the next sections.

### **2.2.1 Dichotomies in Health Service Delivery**

Several dichotomies can be observed in the delivery of health care services. Some of these are rigid and exclusive to each other; some are mutually inclusive; and others are opposed and contradictory to each other and compete for space, power and resources. Specific issues include the dichotomies between primary preventive health care versus curative health care; biomedical science versus social sciences; formal biomedicine versus informal TM; health service delivery based on economic ideology versus PHC involving community-based preventive or curative services (Hall & Taylor 2003:17); and focus on the providers versus the users of health care services. The two notable dichotomies relevant to this study are those between (i) preventive PHC versus curative health care; and (ii) formal biomedical science versus informal TM.

The dichotomy between the provision of preventive health care and curative health care services arises because health care services in developing countries are delivered through a range of approaches, including curative or preventive focus and comprehensive or selective models, by government, private sector or civil society organisations. The academic debates on these approaches have been influenced by global health foci and priorities as well as global development policies. They reflect a global politics dominated by the neoliberal macroeconomic and social policies of developed countries. Consequently, this breeds a ‘series of dichotomies’ with ‘competing agendas’ (Lawn et al. 2008:920), as described in the following discussion.

First, the current health care systems of many countries are inclined to focus much more on curative health care approaches than on preventive PHC approaches. Curative care refers to the clinical treatment of illness by technically capable health workers (Heggenhougen 1984:218, Gautham et al. 2011:628). Primary health care, on the hand, is the first level of care and stresses the importance of community participation and awareness of their situation to prevent illness (Lawn et al. 2008:1001, Heggenhougen 1984:218, Muldoon et al. 2006:409). Subsection 2.2.2 elaborates on these two approaches further.

Another dichotomy in the delivery of health care services is between the use of formal modern biomedicine (also termed Western, conventional or orthodox medicine) and

informal TM and AM. In his study of traditional and modern medicine in primary care in a district of South Africa, Mohamed Chhaya emphasised the ‘constant dichotomy between biomedical and bio psychosocial approaches to curing and healing’ (2009:4). As noted in Chapter 1, TM and AM are utilised in many countries, despite advancements in medical research and technology. At the PHC level in PNG, TM is used primarily on its own, or to complement biomedicine. TM is used for illnesses that are classified as ‘*sik nating*’ or ‘*sik bilong ples*’, while biomedicine is used for illnesses classified as internal, complex and life threatening.

There are obvious and significant differences between the two approaches. First, biomedicine pays little attention to the conditions in which people live and which influence their health. Health problems are closely intertwined with other structural and socio-economic issues, such as housing, water supply, sanitation, access to health facilities, unemployment, poor nutrition and others (Roux-Kemp 2010:287). Second, for diagnosis and treatment, biomedicine focuses on fragments of the human body. In the process, the sight of the patient as a unique individual is lost (Roux-Kemp 2010:287). Third, the biomedical approach requires the patient to surrender all authority and responsibility to the medical practitioner, losing control of their own capacity to heal and becoming dependent on the medical practitioner. Conversely, healing through TM is a social, spiritual and collective process where the individual uses treatment alone or with help from other members of the family. In biomedicine, the *symptoms* are crucial for diagnosis. In TM, the *causes of illness* are an important focus, which may be social and linked to the patient’s physical environment (Botha 2004; Roux-Kemp 2010:287). Fourth, biomedical workers are clinically trained to work in sophisticated modern hospitals and operate equipment and facilities to deliver their services. That is, biomedicine operates within a certain environment and follows a particular system or organisation (Roux-Kemp 2010:287). However, it is observed that workers may also share the same cultural and spiritual backgrounds if they come from the same places, so they may not necessarily be strictly following biomedical approaches. TM, however, can operate in any environment.

One significant issue contributing to the dichotomy between the two healing systems is the idea of one being modern and the other not being progressive. TM is often described as being ‘scientifically unfounded, backward, superstitious or a dangerous relic of the past’ (Botha 2004; Elujoba et al. 2005; Roux-Kemp 2010:288). It is viewed as being uncivilised, within the context of indigenous knowledge that is common to a certain group of people and embedded in their culture and passed on orally through apprenticeship or

spiritual guidance, seldom documented and with few or no written texts (Kibuka-Sebltosi 2008; Roux-Kemp 2010:289). In TM and/or CM, the use of the term ‘traditional’ connotes being local, indigenous or native, but can also be more pejorative, such as being backward or primitive. In many developing countries, the cultural imperialist idea that local traditions are worthless has had a significant effect on the acceptance and use of TM in their health care systems. In many areas where the influence of Christianity is strong, the use of TM and AM in healing and treatment practices (mainly those involving spiritual forces or magic) is condemned but the use of natural therapies with no connection to magic may be accepted and utilised. With rapid modernisation in developing countries, the aspiration of many is to be ‘modern’, forward looking and civilised.

When assessing the degree of collaboration between formal biomedicine and informal traditional and CAM in the health care systems of countries, four levels have been defined: exclusive or monolithic, tolerant, inclusive and integrated. In an exclusive or monolithic health care system, only biomedical practice is permitted by law and other health practices are restricted and forbidden (Roux-Kemp 2010:275; Stepan 1983; Jilek 1985:20). In a tolerant health care system, only biomedicine is recognised officially and the health system is primarily based on it, but certain TM and CAM practices are tolerated and/or regulated by law, which is the situation in PNG (Jilek 1985:21; Roux-Kemp 2010:276). In an inclusive health care system, also referred to as a parallel system, TM and CAM are recognised officially and legally if practitioners conform to certain standards. Although TM is recognised, it is not integrated into all aspects of health care. It is only partially regulated and official education and training in traditional health practices may be absent, or health insurance may not cover treatment and other practices performed by TM practitioners (Jilek 1985:20–21; Roux-Kemp 2010:276). The countries operating under this system include India, Pakistan, Bangladesh, Myanmar and other Anglophone countries in Asia and Africa, such as Zimbabwe, South Africa, Nigeria, Mali, Ghana and Guinea (Roux-Kemp 2010:276). India has a pluralistic medical culture with a well-documented history and practice of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH), which existed before the introduction of formal health system. India’s health care services in cities and villages are delivered by a three-tier public healthcare system, private healthcare market, and the Indian System of Medicine (ISM), which comprises practices of alternative medicinal forms and AYUSH. AYUSH practitioners are placed in public health facilities across rural areas and play an effective role in maintaining health in prevention and cure. Private sector healthcare



accounts for about three quarters of the total outpatient care visits and is dominant in providing both biomedical and AYUSH outpatient healthcare services. The private healthcare market is, however, unregulated in villages and cities. As such, AYUSH services for outpatient care in rural areas is largely driven by public health facilities. However, despite AYUSH being an integral part of Indian culture and AYUSH healthcare services being institutionalised through the creation of the Department of ISM and Homeopathy in 1995 (now Department of AYUSH), India has not integrated ISM with biomedicine. ISM has been neglected and marginalized since the pre-independence era. The abolition of ISM schools and creation of medical bureaucracy, influences of caste, class and communal or language-based politics have undermined the legitimacy, potential and scope of ISM expansion (Rudra et al. 2017:2, 4-15).

Finally, the integrated health care system is one in which there is full integration of modern biomedicine and TM within one health care system, including full integration of the training of health staff. TM is officially recognised and incorporated into all areas of health care provision. The countries that have attained an integrated health care system include China, Korea (Jilek 1985:20–21) and Vietnam (Summerton 2006; Roux-Kemp 2010:275). China's health system is one of the four in the world that has achieved the highest degree of integration between biomedicine and TM/CAM alongside Vietnam, South Korea and North Korea (WHO 2002). Traditional Chinese Medicine (TCM) comprising the main therapeutic methods, herbal medicine, acupuncture, moxibustion, therapeutic massage, food therapies, and qi gong is included in the national health care system (Xue & O'Brien 2003). Integration occurs at the clinical level with biomedicine and TCM delivering both types of services at all three-tier model of care system, including clinics, health centres and hospitals. TCM and biomedicine practice alongside each other in most health centres and clinics (Griffiths et al. 2010:387). TCM accounts for around 40 percent of all health care delivered, and treats approximately 200 million patients annually in China. TCM hospitals account for 13.8 percent of China's 38,492 hospitals (Xu & Yang 2009). About 75 percent of all health centres have a TCM or integrated TCM-biomedical department and about one-third of the total service provision in these centres is provided by TCM practitioners (Griffiths et al. 2010: 387). About 90 percent of biomedical hospitals have TCM outpatient departments which run in parallel with biomedical outpatients (Griffiths et al. 2010:387). The integration has created three distinct categories of clinicians: TCM, biomedical workers, and integrated TCM practitioners-biomedical workers. The percentage of TM doctors in medical facilities

(hospitals and clinics) is the second highest in China (Unschuld 1988). The formal TM education system consists of a 5-7 year bachelor's degree and a 7-year bachelor's degree and a Master's degree. There are also other types of TM education. The activities of TM doctors are defined by law and regulated by the government (Park et al. 2012:1-8). China has also succeeded in having public and private insurance cover for both TCM and biomedicine (WHO 2013; Song et al.1991; Griffiths et al. 2010:386).

Because of the power relations between the two healing systems, many developing countries have enacted legislation to recognise formally the popular usage of TM and CAM in parallel to biomedicine. In sub-Saharan Africa, the African heads of states declared 2001 to 2010 as a period for the development of African TM (Roux-Kemp 2010:274). While some of the countries in sub-Saharan Africa had legislation prior to 2001, some of the countries began the process following the declaration. For instance, Tanzania's law allows TM practitioners to operate alongside the modern biomedical health system. In 1968, it was estimated that 1,000 TM practitioners treated over 20,000 patients daily (Ann Beck 1979; Roux-Kemp 2010:282). Similarly, Nigeria's inclusive health care system has allowed modern biomedical and traditional health practices to exist side by side since the late 1970s (Roux-Kemp 2010:282). Even Ghana's health care system has seen scientific and traditional medical paradigms exist in a mutually independent context since the late 1980s, with little prospect of one displacing and/or fusing with the other. Ghana's Traditional Medicine Practice Act 2000 regulates TM practice (Twumasi 1979; Roux-Kemp 2010:282). Zimbabwe's Traditional Medical Practitioners Council Act of 1981 is considered the most comprehensive legislation to govern the practices of TM (Elujoba et al. 2005; Roux-Kemp 2010:283; WHO & UNICEF 1978). Since the declaration, South Africa has made huge progress towards having legislation. It now has the Traditional Health Practitioners Act (Act No. 35 of 2004), which formally recognises TM and related practices as an integral part of health care delivery in South Africa (Chhaya 2009; Roux-Kemp 2010:273–278). This Act defines and interprets the concept of traditional health practice, the services to be provided by traditional healers and the types of traditional healers recognised and it requires all traditional health practitioners to be registered (Roux-Kemp 2010:278).

There are several reasons for many developing countries to enact legislation and formally recognise TM and traditional healing practices. These include limited health resources, the accessibility and affordability of biomedical health services, the HIV epidemic and increasing prevalence of chronic diseases and the holistic nature of TM practices (Chhaya

2009:5). TM has been recognised in the policies aimed at combating certain priority diseases such as tuberculosis and STIs. TM practitioners are partners in the national response to the HIV epidemic and it is estimated that 70 to 80 per cent of South Africans consult traditional health practitioners and up to 97 per cent of people living with HIV first use TM in their treatment (Summerton 2006; Roux-Kemp 2010:284). The other compelling factor for the utilisation and incorporation of TM practitioners into PHC service delivery is the limited number of PHC providers in rural areas and the greater availability of informal TM workers; for example, the Health Professions Council of South Africa showed that 300,000 traditional healers were registered, compared with 32,000 doctors in South Africa in 2003 (Chhaya 2009:5).

There are both advantages and disadvantages to the coexistence of pluralistic and alternative health care options and practices, without integration. Some of the disadvantages include patients getting different medical opinions and not receiving optimum health care. Conversely, patients can gain benefits from different healing and treatment options (Summerton 2006; Roux-Kemp 2010:282). For example, patients can seek treatment from other care providers if their illness is not treated.

The WHO's Traditional Medicine Strategy and Plan of Action 2000–2005 (see Box 3) provided clear steps for countries to follow in institutionalising TM into their health care systems (Roux-Kemp 2010:284). However, recognising and fostering the use of TM in national health care systems is difficult because of mistrust and scepticism between formal biomedicine practices and practitioners and TM practices and practitioners. In addition, there are difficulties in regulating TM practices because of the wide variation in the health traditions that are included in the generic term TM. The secrecy surrounding the practice of TM and the lack of resources for in-depth examination and assessment of its methods, remedies and efficacy are further problems (Romero-Daza 2002; Summerton 2006; Roux-Kemp 2010:286). The heterogeneity and lack of organisation among

**Box 3: WHO Traditional Medicine and Plan of Action Strategy 2000–2005**

Steps for countries to:

- (i) carry out scientific research on medicinal plants in collaboration with traditional health practitioners to validate claims to safety, efficacy and quality of TM
- (ii) formulate intellectual property rights to protect indigenous knowledge of TM
- (iii) create an enabling economic, regulatory and political environment for the local production of TM and develop industries that can produce standardised remedies to increase access
- (iv) register TM and disseminate information to the general public regarding the knowledge and proper use of TM
- (v) build human and material resource capacity to accomplish institutionalisation strategies for the development of TM in modern health systems

traditional health practitioners is a major obstacle to collaboration (Summerton 2006; Roux-Kemp 2010:286).

Advocates for a parallel health care system argue that it is an appropriate system for the collaboration between modern and traditional health practices. For them, integration is not an option because there is the possibility of one system compromising the process of integration and it is argued that TM would be easily suppressed in such a process. However, this argument is contradicted by the case of China, where modern biomedical practices and traditional Chinese medicines exist in a fully integrated system. China's medical schools have departments for both health systems. Most hospitals also have separate TM units (Roux-Kemp 2010:282–283). Similar arrangements are observed in Thailand, India and Indonesia. In Indonesia, the Health Law Act 23 of 1992 promotes TM as an integral part of health care delivery and regulates TM (Twumasi 2008; Roux-Kemp 2010:283).

The dichotomy between biomedicine and TM and the attitudes towards informal AM practices in healing illness reflect the structure of value and power that dominates the current health system in many parts of the world (Roux-Kemp 2010:291). The obvious cultural imperialism in healing systems shows biomedicine to hold more power than do TM and other indigenous healing practices, including in health research. Drawing on the case of HIV in Thailand, Graham Fordham provided an interesting analysis of the power relations between biomedicine and other social sciences, particularly anthropology, in HIV research and interventions. Fordham pointed out that biomedicine was the most dominant model for addressing the epidemic. Although his argument aimed to demonstrate the usefulness of anthropological analysis for understanding the HIV epidemic and health programmes more generally, Fordham highlighted the power that biomedicine exerts over other health disciplines and practices. In the case of HIV in Thailand, he asserted that the inequality between the biomedical regime and other social science approaches failed, as well as influencing 'the conditions conducive to the spread of HIV/AIDS' (Fordham 2015:xi, 2).

It is clear from the literature and from Fordham's argument that biomedicine, with its systematic processes, is more likely to be universally accepted and practised than TM and other AM for providing health care.

### 2.2.2 Comprehensive Versus Selective Health Care Services

The current approach for delivering PHC services in developing countries, including PNG, is based on a 'selective' model rather than a comprehensive one. There are services specifically targeting women in childbearing years (15–45) and children up to five years, including family planning and immunisation programmes. Most public health facilities have MCH sections for delivering such services.

As mentioned in Chapter 1, the focus and approaches for delivering health care have changed over time, as most developing countries gained independence from colonial governments. Between the 1960s and 1970s, governments had a prominent role in providing health, education and welfare services. One of the major events that influenced global health was the Alma-Ata Conference<sup>2</sup>, which adopted the declaration on PHC.

The PHC approach is defined as the:

essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process (Lawn et al. 2008:918).

The idea of PHC was based on WHO's constitutional definition of health (Lawn et al. 2008:919), which was discussed earlier in this thesis. The key tenet of PHC is universal coverage of basic services, notably through education on methods of preventing and controlling health problems; promotion of food security and proper nutrition; adequate safe water supply and basic sanitation; MCH, including family planning; vaccination; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs.

The emphasis of PHC was on community-based delivery of services, rather than on large hospitals and the approach was intersectoral, involving agriculture extension officers, teachers, civil society organisations (such as women and youth groups, ministers of

religion and others). The community was to be involved in the planning and implementation of its own health care services through its leaders and community Primary Health Committees. Village Health Workers were to be trained and used as a formal part of the health care system where Western-trained doctors and nurses were not available (Hall & Taylor 2003:17). Some countries, including China, Tanzania, Sudan and Venezuela adopted this comprehensive approach to serve their rural populations (Denoon 1989; Hall & Taylor 2003:17; Spencer 1999).

However, a year after the Alma-Ata declaration, the focus shifted from comprehensive PHC to selective primary health care (SPHC), when Julia Walsh and Kenneth Warren presented it as an interim strategy to begin implementing PHC (Walsh & Warren 1979; Magnussen et al. 2004). Their reason for being selective was mainly to reduce costs, because they argued that the scope of Alma-Ata was too costly for implementation and so would be unattainable. Instead, they argued that a selective attack on a region's most severe public health problems would greatly improve health in developing countries. In their view, 'the best way to improve health was to fight disease based on cost-effective medical interventions' (Magnussen et al. 2004:169). Four factors were identified to guide the selection of target diseases for prevention and treatment: prevalence, morbidity, mortality and feasibility of control, including efficacy and cost. Their argument laid the foundation for developing countries to focus on four vertical programmes: growth monitoring, oral rehydration therapy, breastfeeding and immunisation. Family planning, female education and food supplementation were added later. This narrow selection of specific conditions for these population groups was designed to improve the health statistics but not to improve the health of all. In the process, Alma-Ata's focus and goals of social equity and health systems development were omitted and there was a transformation from a comprehensive health care approach to a selective one (Magnussen et al. 2004:169).

The idea of having communities involved in planning and implementing their own health care services was not favoured by politicians and aid experts; the concept of SPHC was preferred. Its advocates argued that comprehensive PHC was expensive and too idealistic. Other reasons included ordinary people viewing PHC as a cheap form of health care and preferring health care services from secondary- and tertiary-level centres; the occurrence of natural disasters and civil wars in many countries; lack of political commitment to sustain PHC; and governance issues in the use of resources. SPHC was considered a much

simpler approach, with the selection being based on epidemiological and technological justifications and affordability (Hall & Taylor 2003:18–19; Lawn et al. 2008: 921).

In contrast to this view, the major topics of debate in global health between the 1980s and the 1990s were on the dichotomies of comprehensive versus selective health care; horizontal versus vertical delivery approaches; and top-down versus bottom-up planning and management processes (Lawn et al. 2008:920). In addition, the market-driven economic reforms of the 1990s marked major changes in the way the government services were to be delivered throughout the world. Further shifts were made in the focus and approach in delivering health care services. The World Bank's World Development Report (WDR) 1993 on 'Investing in Health' influenced changes in the orientation of the way health care services were to be delivered. The focus was on the link between health and development and several practices were promoted, such as the greater involvement of the private sector and Disability Adjusted Life Years (DALYs) for rational selection of a cost-effective set of interventions, further emphasising the SPHC approach. DALYs are based on the epidemiological estimation of the burden of disease (the extent to which populations suffer from diseases) and economic calculations (costs and effectiveness of curative and preventive health interventions to reduce burden of disease), and improvements in government spending on health (World Bank 1993:63; Paalman et al.1998). Further, the World Bank's approach introduced health sector reforms that emphasised the private sector model, which advocated the introduction of user-pays, private health insurance, cost-recovery initiatives and public–private partnerships for the delivery of health care services. The main emphasis was on reducing the role and involvement of the state in all aspects of society and the promotion of market-led development, which was seen as the ideal model for service delivery. In the process, the roles of other sectors and communities were neglected (Hall & Taylor 2003:19; Lawn et al. 2008:920).

After the 1993 WDR, the idea of PHC was lost. However, the WHO continued to use the term until the World Health Report 2000, 'Health Systems: Improving Performance'. This marked the end of the use of PHC by the WHO as the vehicle for delivering health care services in developing countries (Hall & Taylor 2003:19). Henceforth, the debates on health service delivery shifted towards combining the strengths of both comprehensive PHC (horizontal) and SPHC approaches (vertical) and using selective programmes to strengthen the health systems to deliver more comprehensive health care. In recent years, the debates of community-based versus facility-based health care have shifted towards

having integrated health systems (Lawn et al. 2008:917, 922). Within the last three decades, ‘health has moved from under-investment, to single disease focus, with increased funding and multiple new initiatives’ (Lawn et al. 2008:919), such as the Global Fund to Fight AIDS, Tuberculosis, and Malaria and the Global Alliance for Vaccines and Immunisations.

### **2.2.3 Comprehensive Versus Selective Health Care in PNG Context**

As discussed earlier, health services in PNG are delivered through seven levels, which combine the comprehensive and selective primary health care approaches. Selective primary health care (PHC) has dominated PNG’s health care system. Some of the selective PHC interventions have experienced significant reduction in under-five mortality and morbidity in different parts of the country. Programmes targeting the control of diarrhoeal diseases through oral rehydration therapy (ORT) and improved case management have reduced diarrhoea-associated mortality among children under-five compared to the pre-independence era. The expansion of the immunisation programme has contributed to increased immunisation coverage in most of parts of the country and considerably reduced the prevalence of mortality from neonatal tetanus, diphtheria, polio and measles. Malnutrition levels and stunting in growth have increased over the past decade despite the existence of growth monitoring programmes. Health workers are trained to have a narrow approach to diagnosis and treatment of disease and do not have the capacity to intervene appropriately for malnourished children in tough socioeconomic conditions. While family planning has improved crude birth rates in some parts of PNG, the annual population growth rate is relatively high in the Pacific Region. PNG’s maternal mortality ratio is also the second highest in the Asia-Pacific Region despite interventions targeting the reduction of maternal mortality rates (NDoH 2006; NDoH 2009).

The comprehensive model, on the other hand, has wider responsibilities and health workers spoke of how in the past they visited communities and schools for health promotion and awareness apart from working in the health facilities. Institutional support for community engagement is currently non-existent. Health workers at Level 1-4 facilities have no interaction with the communities. There is no involvement and participation of the communities in health service delivery in PNG although PHC is community-based.

PNG is shifting from heavy reliance on selective PHC to comprehensive PHC. This is shown by the current National Health Plan (NHP) 2011-2020’s focus on *Back to basics*:



*strengthening primary health care for all and improved service delivery for the rural majority and urban disadvantaged: health is everybody's business.* Three out of the eight key result areas (KRAs) of the NHP address comprehensive PHC, while the other three KRAs focus on selective primary health care. The move towards adoption of the comprehensive approach is necessary when PNG's health outcomes have not improved with current approaches in health service delivery. The aim is to bring health care closer to the people through community health posts (DoH 2010:36).

The establishment of community health posts under the current NHP and the existence of aid posts and health sub-centres helps achieve comprehensive PHC's focus on prevention and promotion of well-being. In addition, the burden of health care in PNG is overwhelming with decreasing health budgets, and the increased burden posed on health services by HIV/AIDS, tuberculosis and other communicable and non-communicable diseases. Furthermore, with limited resources for distribution among the seven levels of care, especially when PNG has experienced a number of periods of drug shortages in the past 10 years (Howes et al. 2013; McNee; Wiltshire 2016; Mola 2017), combined with few health workers in remote rural communities, means the government needs to be innovative and harness human resources at community level to make preventive primary health care accessible to more people. NHP's vision of strengthening primary health care would be achieved through a comprehensive approach which offers many benefits to communities.

## **2.3 Implications of the Concept of Health and Current Approaches on Health Outcomes**

This section examines the concept of health and the current approaches adopted in the delivery of health care services and the implications these have on the attainment of better health outcomes. The discussion begins with an examination of the definition of health outcomes, including terms such as health indicator and health status, which are often used interchangeably.

### **2.3.1 Health Outcomes and Related Terms**

'Health outcomes' refer to:

a change in the health status of an individual, group or population which is attributed to a planned intervention or series of interventions, regardless of whether such an

intervention was intended to change health status. These interventions may include government policies and consequent programs, laws and regulations, or health services and programs. They may also include the intended or unintended health outcomes of government policies in sectors other than health. Health outcomes are normally assessed using health indicators (Nutbeam 1998:357).

This definition suggests a relationship between health outcomes and interventions and implies that one does not exist without the other. Outcomes are generally the result of actions taken to improve an identified problem in the health of individuals or a population, so a country's health outcome cannot be confused with the health status and be generalised, without linking specific interventions taken by the government and other stakeholders.

In contrast, 'health indicators' are:

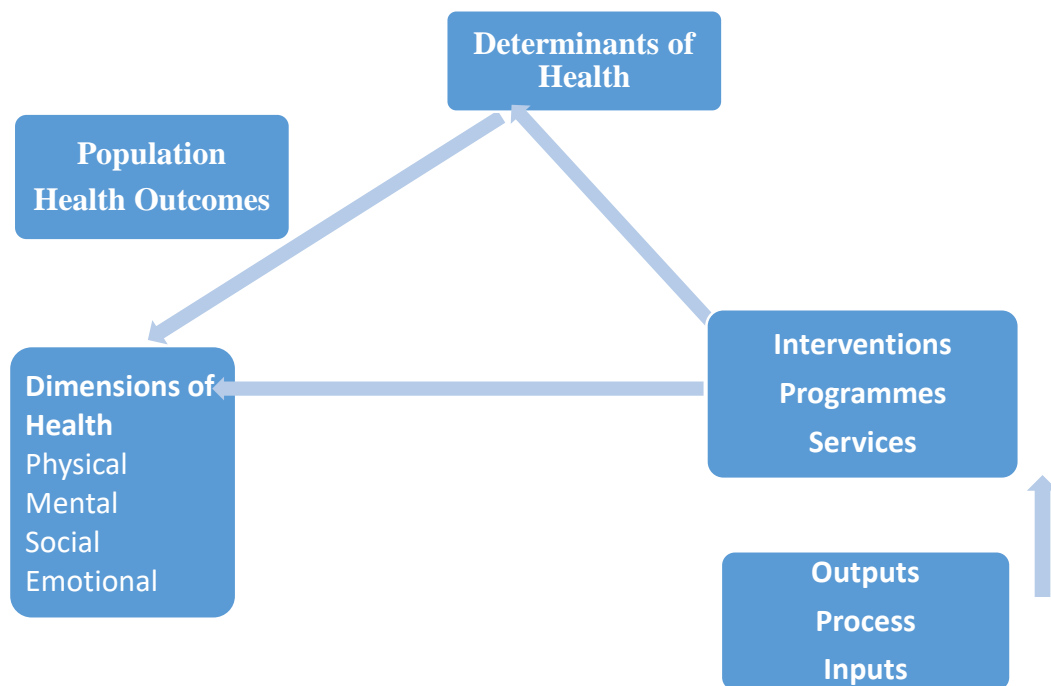
characteristics of an individual, population or environment which is subject to measurement, whether directly or indirectly, and can be used to describe one or more aspects of the health of an individual or population. Health indicators can be used to define public health problems at a time in a level of the health of a population or individual, to define differences in the health of population, and to assess the extent to which the objectives of a program are being reached (Nutbeam 1998:356).

Health indicators may also include measurements of illnesses or diseases that are commonly used to measure health outcomes, or positive aspects of health such as quality of life, life skills or life expectancy, including an individual's behaviours and actions that are related to health. They may include indicators measuring social and economic conditions and the physical environment as it relates to health, health literacy and public policies on health (Nutbeam 1998:356).

'Health status' is a description or measurement of the health of an individual or population at a particular point in time against identifiable standards, usually in reference to health indicators (Nutbeam 1998:358).

These three concepts, including the definition of health from the SDOH approach given earlier in this chapter, are further explained in Figure 2.3, which has been adapted for this study from Jan Sansoni's Health Outcomes Framework. There are several points to draw from the figure. First, health outcomes are a reflection of interventions undertaken to address determinants of health, as provided in the definition. This implies that a health

outcome depends on the type of interventions selected, the choice of the determinants of health to be addressed and the outputs committed, including processes and inputs within a health system. If interventions are selective and directed at certain target groups, the health outcomes will reflect only that group but not others. Second, health outcome is a result of a number of relationships between policies, practices, resources, and processes involved in implementing interventions that affect the various determinants of health of an individual or a population. Third, the dimensions of health that affect the health of a population are consistent with the SDOH concept that health is not only physical.



Source: Adapted from Sansoni (2016).

**Figure 2.3: Health Outcomes Framework**

Figure 2.3 shows that health outcomes can be either direct or intermediate and it is useful to differentiate between the interventions that have a direct effect on a health outcome and those that do not. Sansoni (2016:6–7) maintained that intermediate health outcomes are changes in behavioural risk factors from the interventions but they will take some time before they are noticed, such as a reduction in mortality or morbidity for a particular disease or condition. Health outcome measures include only clinical or biomedical indicators, health outcomes-related performance indicators, standard clinical assessments and outcomes-related outcome measures.

### **2.3.2 The Definition of Health and Service Delivery Approaches in the Context of Health Outcomes**

Two major perspectives of health were presented earlier in this chapter. To obtain a better understanding of the relationships and establish a background against which different country contexts can be analysed, the definitions of health from the biomedical and SDOH perspectives are compared here with the health service delivery approaches adopted in developing countries, where efforts to improve health outcomes have been discouraging.

The biomedical view of health focuses on the absence of disease and adopts biomedicine to maintain the physical structure and biological functions of the human body. In contrast, the SDOH approach sees health as being more comprehensive and not just the physical state and absence of disease. As such, it focuses on addressing the mental, social, environmental and cultural determinants of health. The biomedical definition of health appears to be dominant in influencing the current disease focus and selective approaches for delivering health services that are adopted by developing countries. Targeted interventions, such as the control of many infectious diseases and family planning, have contributed to improvements in health status and increased overall life expectancies of many developing countries. However, diarrhoea and malnutrition remain the leading barriers to the health of children (United States Fund for UNICEF 2004 cited in Magnussen et al. 2004:171), despite immunisation of children against the five major childhood diseases decreasing infant mortality rates (Berman 1999:2).

Several implications can be drawn from this conceptual framework to be considered when developing policies and strategies for attaining better health outcomes. First, disease-focused interventions are concerned with curing illness using biomedical processes and biomedicine and concentrate on only one disease at a time; thus, they do not address the causes of disease or prevent it from recurring. The illness could be related to multiple causes that may not be easily traced, as these could be determined by the social, economic, cultural and environmental factors in which the people live. This focus confines health to one dimension and ignores the mental, emotional and social health of individuals. Consequently, when health as a state of well-being is not addressed, the broader understandings of health and illness are overlooked, as well as the broader context of development. For example, health care services in the health facilities of many developing countries, including PNG, do not cater for the mental health of the individual. They

provide medication to treat illness but do not offer counselling support services. Further, when health care is concerned only with curing the disease, it overlooks social equity and social justice, which are valued in both PHC and SDOH approaches. The objective of combating one disease at a time promotes specific aspects of health but does not contribute to improving the general health status of the population (Magnussen et al. 2004:170). While this is happening, other individuals may suffer from other illnesses and die, thus contributing to a poor health status through reduced life expectancies and other health indicators.

Second, targeting specific segments of the population, such as women of childbearing age and children below five years, excludes the rest of the population, including women who are yet to have children, young people and men. When health policies and practices neglect the general population, this results in a high burden of infectious diseases and mortality among people of various age groups. For example, the burden in many developing countries of HIV and AIDS among people of 20 to 39 years is a clear indicator of the neglect of this group in health interventions (Magnussen et al. 2004:170).

Third, health outcomes are normally a result of formal modern biomedical interventions addressing prioritised and targeted illnesses that contribute to high rates of morbidity and mortality in a country. As reflected in Figure 2.3, the health outcome framework captures the formal interventions for treating diseases but not the informal interventions that promote the social and mental well-being of individuals and prevent afflictions. The sociocultural factors affecting the physical and mental well-being of the human life are ignored in the framework. Although the framework acknowledges intermediate health outcomes as a result of indirect interventions, it does not include TM and AM, which exist outside the formal health systems in many developing countries, including herbs and diet, as well as religious beliefs and practices that promote health and well-being. For example, some Christian churches, such as the SDA Church, prohibit members from smoking, drinking alcohol, using illegal substances and eating certain foods. When health outcomes are attributable to only government interventions (i.e., biomedical policies, regulations and practices), they overlook other sources that contribute to changing people's behavioural risk factors for health and illness, and their health status. Of significant concern is that health outcomes are not necessarily a reflection of government interventions in the health field but can be a result of religious and cultural beliefs and practices intersecting with each other, including education and the programmes of other sectors and agencies. It becomes difficult to capture in the framework other sources that

contribute to people's health and health status that are outside government interventions. In addition, it would be a negative depiction of a country's health status if there were no interventions to address other illnesses and to describe its status based on health outcomes of selected interventions in only one sector.

Finally, given the economic constraints of developing countries with limited resources, inputs and outputs in systems, health is often donor-driven and priorities for interventions are determined by technocrats, as shown in Figure 2.3. As such, the selected interventions are provider driven and centred in urban hospitals and health facilities. There is no opportunity or space for users to participate in interventions to promote health within communities and achieve better health outcomes (Magnussen et al. 2004:170).

## **2.4 Summary of Discussion**

The discussions in this chapter have established the theoretical foundation for this study, including the definitions of health from various perspectives and their histories. The two main definitions of health that this study has adopted from the biomedical and SDOH models have been presented. The discussion has covered the approaches and practices adopted for delivering health care, including a brief background of events that have contributed to the approaches taken. In addition, the health outcomes framework has highlighted what may be some of the underlying factors behind developing countries tending to not improve their health outcomes.

In addition, several models and frameworks for delivering and utilising health care services have been presented. These will be applied to some extent in analysing and discussing health workers and users of health services in Chapters 4, 5 and 6, as well as in the overall discussion in Chapter 8. Although the two conceptual frameworks for health worker behaviour were created specifically for MHCPs (workers), they were adapted for this study because health workers delivering PHC services include MCH. In addition, the frameworks were relevant and appropriate for understanding the determinants influencing the behaviour of health workers generally in developing country settings.

## Chapter 3: Research Methodology

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This chapter describes the research design and methodology adopted to investigate the research questions outlined in Chapter 1. It begins with a brief description of the study sites, followed by the research design and methodology, then the reasons for using particular data collection techniques and other relevant information. As explained in Chapter 1, both the demand side and the supply side of health service delivery, using the case of women and health, were the subjects of this research into the determinants influencing health outcomes in PNG.

### 3.1 Study Design and Methodological Perspective

I adopted a case study approach because this methodology is appropriate when the behaviour of the participants cannot be manipulated; contextual conditions believed to be relevant to the phenomenon under study need to be considered; and boundaries between the phenomenon and the context are not clear (Yin 2003; Baxter & Jack 2008:545). This method had the potential to answer the why, what and how of the complex issues and assist in exploring, explaining and describing the complex context of health in PNG (Harrison et al. 2017:17). This method is based on a constructivist paradigm, which argues that truth is relative and dependent on an individual's perspective (Stake 1995; Yin 2003; Miller & Crabtree 1999:10; Baxter & Jack 2008:545). The approach is built on the idea that reality is socially constructed (Searle 1995; Baxter & Jack 2008:545). The participants describe their views of reality through their stories, which enable the researcher to have a better understanding of the participant's actions and environment (Lather 1992; Robottom & Hart 1993; Baxter & Jack 2008). Establishing boundaries in case studies is crucial because it indicates what will, or what will not, be studied. This is achieved by binding the case by time and place (Creswell 2003), time and activity (Stake 1995) and definition and context (Miles & Huberman 1994). To ensure the case studies remained within reasonable scope, I selected three communities in PNG. The selection was based on their location, access to health facilities and other services, and consideration of my security and mobility in view of the country's rugged geographical conditions and the risks faced by women. To avoid having too many questions and objectives, I determined what the case would not be. I chose a population group that often uses health services, as it would be unreasonable to look at all of the men and women in their 30s or 40s in the whole district who had used health services. The boundaries were

set by having a specific category of women who had experienced illness or experienced childbirth in which the women had received health care, how they made the decision to visit the health facility, types of care providers, how they treated illness, and the period of illness or treatment.

I adopted a qualitative multiple-case study approach and identified several cases of the phenomenon, based on the research questions, to investigate their characteristics closely as well as the main themes that were emerging. I compared the cases with similar themes within and across the three settings with the findings of similar studies in PNG and other countries and adopted several data collection techniques. The evidence created from multiple-case studies within a case study framework is considered robust. This addresses the approach's weakness related to lack of robustness and rigour (Yin 1984:21; Zainal 2007:5) and its focus on a single case, or long ethnographies with huge amounts of information, making case studies a poor basis for scientific generalisation (Tellis 1997 & Yin 1984:21; Zainal 2007:5).

Data collection took place over a seven-month period between May and November 2015. From the recipients (users) of health services, data was collected on general demographic and socio-economic characteristics, health beliefs, preferences and pathways for treatment of illness, and determinants influencing access and utilisation of health care services. Data on health care services provided and utilised by people, the factors influencing the decision to utilise health care, and patient–care provider relations and interactions were obtained from health care providers.

A total of 110 respondents participated in the data collection, including 86 recipients of health care services and 24 health care providers. Of these, 15 were men and 95 were women. The respondents provided either verbal or written consent depending on their level of literacy. At all the sites, discussions were held in the *lingua franca*, Tok Pisin, although for the urban site, a combination of English and Tok Pisin was used. (Hiri Motu is used mainly in Southern Region of PNG and was used only in the rural coastal site.) When the participants were unable to fully understand and speak Tok Pisin (Moka Gomo in Imbonggu) or Hiri Motu (Tubulamo in Rigo), translation of the vernacular was provided by other local women. Translation occurred only when participants needed further clarification on questions or when providing details on their responses. The questions focused on what had influenced women's decision to access health care services; what they understood about the causes of their illnesses; where they had learned



about health; and the steps taken to treat, and recover, from illness. For the health care providers, only respondents who were at work during the study were interviewed. The questions for these participants were aimed at understanding the way these workers responded to women, factors influencing the delivery of health care services, the worker's perspectives on women's beliefs and their attitudes towards seeking care and treatment, and the barriers preventing access and utilisation of services by women.

### 3.2 Locations and Sites of the Study

Data collection was carried out in three different locations: Rigo District in Central Province, Imbonggu District in Southern Highlands Province (SHP) and Port Moresby North-West Electorate in the NCD. Figure 3.1 shows the sites and their approximate distance from the capital, Port Moresby. The three sites were chosen for their geographic, linguistic, cultural and religious diversity. Security concerns made me use existing church and family networks. In addition, these sites provided a representative insight into the similarities and differences between coastal and highlands, rural and urban communities and their respective health knowledge and beliefs, attitudes and practices in accessing and utilising health care services. Brief descriptions of the locations are provided in the subsequent sections and further details are presented in the case study chapters (Chapters 4, 5 and 6).



**Figure 3.1: Map of PNG and Study Locations**

### **3.2.1 Rigo**

Rigo is one of the four districts that make up Central Province in PNG. The district is bordered by Milne Bay Province to the east and Oro Province to the north. The Rigo District is divided into three LLG areas: Rigo Central, Rigo Coastal and Rigo Inland Rural. The population of Rigo is distributed around the three LLG areas and comprises several major ethnic and language groups, including Hula in Rigo Coastal, Balawaia and Sinaugoro in Rigo Central and Tubulamo in Rigo Inland Rural. Several other language groups are scattered further east and north towards the foothills of Owen Stanley Ranges. Rigo District is about 54 kilometres south-east of Port Moresby and is connected by the Magi Highway, which runs from Port Moresby to Kupiano in Abau District (PNG Central Provincial Government 2014). Details of the site, including sociodemographic characteristics are provided in Chapter 4.

### **3.2.2 Imbonggu**

The Imbonggu District is one of the five districts of SHP in the Highlands Region of PNG. It is bordered on the west by Mendi, the provincial capital, on the south by Pangia and Kagua- Erave Districts, and on the north and east by the Western Highlands Province. Imbonggu includes Ialibu Basin between Mt Ialibu to the south and Mt Giluwe to the north, the Iaro Basin, parts of Mendi, Anggura and Kaugel Valleys (CSIRO 1965; Wormsley 1978). Imbonggu District is divided into three LLG areas: Ialibu Basin Rural, Imbonggu Rural and Lower Mendi Rural. The estimated population of the district is over 68,000.

The Imbonggu and Ialibu districts are viewed as one by many people because electoral boundaries between the two districts are not clear. Even vital public services, such as education, health and administration have been established and delivered from Ialibu District since colonial times (Wormsley 1978). Imbonggu District headquarters at Walume was established in the last 10 years. One distinct feature is the language groups in the district. The population of Ialibu District comprises Imbonggu, Kewabi and Wiru-speaking peoples within the Ialibu-Pangia Electorate. In contrast, the population of Imbonggu District is predominantly Imbonggu. Both districts are over an hour's drive west of Mt Hagen in Western Highlands and a two-hour drive east of Mendi. Chapter 5 provides additional details regarding Imbonggu.

### **3.2.3 Port Moresby North-West**

There are eight suburbs and five settlements in the Moresby North-West electorate. The suburbs of Hohola and Tokarara, including June Valley, have the highest population compared to the rest of the suburbs in the North-West electorate and two other electorates. The specific study setting included five suburbs of Tokarara, June Valley, Waigani, Ensis Valley and Rainbow Estate. The characteristics of the site, including sociodemographic details, are provided in Chapter 6.

### **3.3 Site Preparation**

Entry to the study sites varied. In the two rural sites, discussions were held with members of the selected villages who were working and residing in Port Moresby. These key members communicated with the village elders and leaders in the villages, who gave approval for me to stay in the villages. Community leaders, including women, proved to be the key persons for organising the logistics of the study. They made it easy for me to be accepted into the villages and to conduct the study. Upon arrival in the village, the first meeting with the villagers, in which the aims and purpose of the study were introduced, was organised by the village elders and leaders, including men, women and young people.

### **3.4 Sample**

The population being studied was drawn from three sites, which included participants from seven rural highlands villages, seven rural coastal villages and five urban suburbs in Port Moresby, representing different socioeconomic levels. An attempt was made to select equal proportions of women from different age groups and provinces in the urban site, to ensure a diverse set of health beliefs, attitudes and treatment practices.

The simple sample selection criteria were based on Stake (1995) and Yin (1984)'s approaches for establishing boundaries in case studies by time, place, activity (Creswell 2003), definition and context (Miles & Huberman 1994). The boundaries were established through the criteria of having a specific category of women who had experienced illness or experienced childbirth within the last five years and had received health care; the way they had made the decision to visit the health facility; the types of care providers they had visited; how they treated the illness; and duration of their illness and treatment. Entwistle's description was also used to select the study participants (2005:537), as follows:

- women who had experienced health conditions or disabilities
- women who had used particular health services, or who had not used them
- past, current or regular users of particular health services
- family members and informal carers of the sick
- members of particular social or cultural groups (based on age, ethnicity, occupation, religion, education)
- women living in a particular geographic area
- leaders of communities.

In the rural villages, because I could not travel to very remote locations, the news of my research was communicated to elders and women representatives of those villages by elders from the villages where I stayed. Women voluntarily turned up to meet with me and interviews were conducted using purposive sampling and snowballing methods. This was considered to be the most feasible and economical method of sampling. Purposive sampling was also used to select the health care provider participants who were drawn from the four health facilities and leaders in the villages and communities. Key informants were identified based on their knowledge or experiences of life in the different communities. All the participants who were purposively selected by the women leaders and myself to join the study agreed to participate. An explanation of what the participation meant was provided before they took part in the study.

### **3.5 Data Collection Methods**

As this study was concerned with understanding the nature of human phenomena as experienced and the interpretations that people attach to their perceptions, beliefs and actions, data collection in the three sites was achieved primarily through qualitative data collection methods. These methods included in-depth interviews, using structured and open-ended structured interview guides, focus group discussions, observations at health facilities at the district level, body-mapping exercises, the collection of illness narratives, and informal discussions with key informants. The summary of the methods used is presented in Table 3.1 and the details are discussed in the following sections.

**Table 3.1: Data Collection Methods Used in the Study**

<b>Method</b>	<b>Population Group</b>	<b>Variables Investigated</b>
Body-mapping exercises	Users	<ul style="list-style-type: none"> <li>• Common illnesses in the area</li> <li>• Perceived causes of illness</li> <li>• Barriers to access and utilising health care</li> </ul>
Focus group discussions	Users	<ul style="list-style-type: none"> <li>• Perceived causes of illness</li> <li>• Factors influencing decision to access and use health services</li> <li>• Barriers to accessing and utilising health care services</li> </ul>
Structured interview guides	Users	<ul style="list-style-type: none"> <li>• General demographic and socio-economic information</li> <li>• Health knowledge and beliefs, causes of illness</li> <li>• Sources of health knowledge</li> <li>• Pathways taken and treatment practices</li> <li>• Factors considered in decision making for using health care services</li> </ul>
	Providers	<ul style="list-style-type: none"> <li>• General demographic and socio-economic information of health workers</li> <li>• Services provided, accessed and utilised in the facilities</li> <li>• Factors influencing patients' access and use of health care services</li> <li>• Barriers to utilisation</li> <li>• Care provider and patient interaction and relations</li> </ul>
Observations	Providers and users	<ul style="list-style-type: none"> <li>• Care provider and patient interaction and relations</li> <li>• Barriers to utilisation of health care services</li> <li>• Factors influencing patients' access to and utilisation of health care services</li> </ul>
Illness narratives	Users	<ul style="list-style-type: none"> <li>• Illness experiences and histories</li> <li>• Pathways taken and treatment practices</li> </ul>
Key informant discussions	Users	<ul style="list-style-type: none"> <li>• Health care resources in the village/community</li> <li>• Common terms for use in study</li> <li>• Women's health and death patterns</li> </ul>
Informal discussions	Providers and users	<ul style="list-style-type: none"> <li>• Barriers to access and utilisation of health care services</li> <li>• Approaches to improving health care services</li> </ul>

### 3.5.1 Structured Interview Guides

Interviewing is the most common technique used to gather information (Grbich 1999:84; Manderson et al. 2006) and involves asking questions in various forms: individual face-to-face verbal interchange, face-to-face group interviewing, mailed or face-to-face

questionnaires, and telephone surveys. Interviews can be structured, semi-structured or unstructured (Fontana & Frey 1994:47–48), and can be informal or guided (Grbich 1999:93). For this study, the use of close-ended questionnaires was rejected because they are prescriptive and do not encourage participants to express opinions on health beliefs and health service utilisation. In contrast, open-ended questionnaires would encourage participants to discuss cultural and traditional beliefs and practices, without any influence from the interpreters or me.

The questionnaires used to collect data for this study were approved by the PNG Medical Research Advisory Committee (MRAC No. 15.02). As shown in Table 3.1, the interview questions were used to obtain general demographic and socio-economic information, knowledge, beliefs, perceptions and understanding of health and causes of illness, health of the participants and the way they accessed and utilised the health facilities for care and treatment. They were also used to identify health problems the women had experienced, the actions and steps they had taken to become well and what had made them decide on their actions. The questionnaire for health care providers was designed to collect information on their general demographic and socio-economic status, the services they provided, their perceptions and understanding of the health beliefs of the users and factors influencing their decisions to seek health care, and patient–care provider interaction and relations. Four different categories of health care providers were examined: biomedical formal health care, informal traditional (healing including herbs), faith healing and distributors of AM.

A total of 86 in-depth interviews were held with recipients of health care services and a total of 24 interviews were held with health care providers. The interviews lasted for up to 45 minutes, or two hours if translation was required or respondents discussed other issues. One-on-one interviews were conducted in private, away from other people, in the meeting grounds of villages, or in their own homes. I used probing and question-rephrasing techniques to clarify questions and seek elaboration from the respondents. The respondents were not required to answer all of the questions. In addition, informal interviews were conducted with women, health workers and selected participants from the villages, as well as people from district and provincial health facilities. Interviews were recorded, with written field notes serving as a backup in most cases.

Three different questionnaires were used for collecting data (see Appendices 1, 2 and 3). They were all designed to be filled in by me during the one-to-one interviews. For users

(recipients) of health care in rural sites, 21 open-ended questions were used; for recipients in the urban site, 18 open-ended questions were used; and for the health care providers, 25 open-ended questions were used. I developed the questionnaires specifically for this study in consultation with my supervisory panel. Some questions were adopted from similar studies conducted in other developing countries and others were based on themes in the overarching research questions.

### **3.5.2 Body Mapping**

‘Body mapping’ is a way of telling stories using images or visual aids that contain symbols, to show different meanings and is ‘the process of creating body maps using drawing, painting or other art-based techniques to visually represent aspects of people’s lives, their bodies and the world they live in’. This differs from ‘body maps’, which broadly refer to ‘life-size human body images’ (Gastaldo et al. 2012:5). Body mapping has been found to be a useful tool by those involved in health research and other studies. In this study, the data from body mapping was complemented by the other methods such as focus group discussions and in-depth interviews.

I adapted the body-mapping model as one of the qualitative participatory health research instruments for collecting data on selected variables mentioned in Table 3.1 (Gastaldo et al. 2012:6). I believed that my study was congruent with the visual method or technique that represented the body and how women would understand and contextualise health and illness. Further, it seemed to be an appropriate method to use in a group setting to explore and elicit the perceived health status of women, perceived causes of illnesses and barriers to access and use health care services. In addition, the method would enable the women to visualise and reflect on the parts of the body in which they experienced pains, discomforts and illness, and to communicate with me in a meaningful way about themselves, their perceptions and their experiences. The visual method was considered relevant in a society with high illiteracy rates because it offered participants a means to communicate ideas, experiences, meanings and feelings (Gaunlett & Holzwarth 2006:83–84, 92) even if they could not read, write or speak English, Tok Pisin or Hiri Motu.

59 percent of PNG’s population has completed primary school, and many of those who do finish lack basic literacy (82 percent) and numeracy skills (64 percent). Half of all school aged children do not attend school and only one in three children complete their basic education (International Finance Corporation. 2019). This contributes to low primary school completion rates with 45 percent for girls compared to 59 percent for

boys. The average level of formal education for adults in PNG is less than 4 years. Between 2006 and 2016, 12.2 percent of the 25 years and older population had at least some secondary education (UNDP 2018). Within this context and with over 80 percent of PNG's population living in rural areas, and children in rural areas less likely to complete their education than those in urban areas, illiteracy level of rural population is relatively high (UNICEF 2015).

Body mapping was used to open a dialogue between the participants and myself and draw attention to women and health problems. Having women gather around me with the image of the body enabled them to participate freely in focus group discussions and in-depth interviews, as shown in Figure 3.2.



**Figure 3.2: Body Mapping and Focus Group Discussion with Komakul Village Women in Imbonggu**

Body mapping helped to identify common illnesses affecting women, as illustrated in Figure 3.3. In one picture, a woman is pointing to the part of the body in which she was experiencing an illness. If she had been suffering from more than one illness, she would have indicated this with two or three labels. The yellow stickers in the second picture in Figure 3.3 show the number of women in that group who were suffering from illnesses affecting those parts. The picture provided information by the number of labels on the part of the body, on whether an illness was common or unique in the area.





**Figure 3.3: Body Mapping Images with Women**

Participants were then asked if they were receiving treatment and if not, their reasons for not seeking treatment. This exercise provided an opportunity for the women to share their health conditions with me and with other women in the group and enabled them to tell me their stories about using facilities for treatment. In addition, it provided me with the opportunity to answer questions from women about health issues affecting them and what they could do to prevent illness.

A total of 12 body-mapping exercises were carried out with women at the three sites: four in Rigo, two in Port Moresby North-West and six in Imbonggu. Notes of the discussions were recorded and photographs of the body map for each village were taken. The issues that had been raised were reviewed and summarised at the end of each day.

**Table 3.2: Data Extraction and Analysis**

For analysis of data from body-mapping, data was extracted as shown:

<b>Interview Prompt</b>	<b>Participant Response indicated on Picture</b>	<b>Theme from Data</b>
Indicate the part of your body that you experience discomfort, pain or illness	Coloured sticker on the part of the body	Common illnesses in the area; Perceived causes of illness; Barriers to access and use health services

The number of coloured stickers placed by women on various parts of the body were counted, and these numbers were compared to determine the most and least of the number of stickers on part of the body. The numbers of stickers were then matched with the

responses provided by women in the interview on the type of illnesses experienced to determine whether the illness was common in the area (de Jager et al. 2016; Lys 2018). Additional contextual information was collected including social and cultural beliefs and practices, population groups, churches, education, settlement patterns and occupation. The content information was obtained by re-reading my notes and the themes emerging from the stickers, and searching for similarities and differences across the pictures in different villages in the district.

To ensure rigor during data analysis, a critical reflection was done on how body-mapping was developed and applied in other studies, particularly its contribution to other qualitative health research (Gastaldo, Rivas-Quarneti & Magalhaes 2018).

### **3.5.3 Focus Group Discussion**

Focus group discussions are designed to gather information about beliefs and values. In recent years, they have been adopted by health professionals to explore perceptions and attitudes regarding health and illness (Khan & Manderson 1992:56; Morgan 1998). Focus groups are group discussions organised to explore a specific set of issues (Kitzinger 1994:103). They differ from group interviews because they are guided by strict rules of structure and procedure, with group dynamics as an important feature (Khan & Manderson 1992:56–57).

The participants for the in-depth individual interviews were chosen using purposive sampling to meet the required sample size for each village. To complement this data, focus group discussions were considered the most appropriate qualitative method, gathering a greater number of responses from more women and achieving the study's aim to compare the beliefs, perceptions and values across the three sites. The focus group discussions captured the overlapping social contexts in which people lived, formed ideas and made decisions about certain issues and practices. Specifically, they captured the influence of social networks on women's beliefs and perceptions, as well as their practices (Calderon et al. 2000:91). The discussions focused on three themes: causes of ill health; reasons for not seeking treatment; and what to do to prevent illnesses and remain healthy.

The group discussions were organised with pre-existing clusters of women who knew each other already, lived in the same village or suburb and socialised together. This was useful, beneficial and economical for this study, as it is common for an individual to discuss their health concerns with their family and friends. Bringing together women who

knew each other already meant they could relate to the experiences and views of each other in their shared space. Another positive aspect of the group composition and dynamics was that it allowed for the discussion of ‘taboo’ topics, with participants helping each other to overcome shyness and providing mutual support in expressing feelings (Kitzinger 1994:111). As the sample were selected mainly because they were women and lived in the sites, the group discussion helped to explore and capture their diverse beliefs. The women varied in educational levels, places of origin, number of children, marital status and illness experiences.

A total of 15 focus group discussions were conducted, with 10 participants in each. I facilitated the sessions and the discussion generally lasted one hour. Some of the participants of these discussions also participated in individual in-depth interviews. This number of focus group participants represented an adequate number for the sample size of this study.

The sessions were conducted in a relaxed manner, with each discussion session having its own dynamics. Each session started with the body-mapping exercise, to both elicit data and encourage engagement and interaction between us all. As a result, the discussions went in new and unexpected directions. In the seven villages that I visited in the rural highlands site, most of the women in the focus groups also volunteered to be interviewed (unlike the other two sites, where it was difficult to meet the sample size). I found the women in the rural highlands site were willing and open when discussing their health issues. As there were sample size requirements for each village, a simple random selection was made to ensure that each village was represented by a selected group of women. It was difficult to have discussions with women in highlands villages, with women screaming and shouting each other down and not allowing each other to speak. This was not the case in the rural coastal site and the urban site, where the women respected the views of each other or were quiet when another woman spoke.

#### **3.5.4 Observation**

As well as the above methods of data collection, structured and unstructured observations were employed in the three sites. Observations allowed me to capture some of the attitudes and behaviour of health workers embedded in the way they related to users of the health facilities, which were considered useful for this study. The underlying purpose of placing the research investigators in the same situation as the research participants is

to gain deeper understanding of their world than can otherwise be achieved through interviews and other data collections methods (Savage 1995, 2000).

Structured observations were carried out in the waiting areas and in examination rooms during outpatient and antenatal care (ANC) clinics at four biomedical health facilities over a period of two months on selected days in each site. The facilities included one Level 5 hospital, one health centre, one health sub-centre and one clinic. Several areas of health care service provision relevant for this study were observed, including patient–care provider relations, general working environment and conditions, treatment procedures for patients and encouraging the use of services, and the type of users.

A total of 24 periods of observation were carried out in the formal biomedical health facilities, two with herbal healers and three with a traditional/shaman healer. A week prior to observing, a meeting was held with the Medical Officer or Officer-In-Charge of the facility and copies of the letter of approval from MRAC and the provincial health adviser were provided, to comply with organisational protocols. A tour of the health facility and introductions to staff were made during the first day when I attended. The periods of observation lasted six hours in the formal biomedical health facilities and between one and two hours with the herbal and traditional healers. In addition, I undertook conversations with patients, with sessions generally lasting 20 to 30 minutes, depending on the time the patient had spent waiting. Most of the patients were willing to share their experiences at the facility. The timing of observations varied across the sites, depending on the type of facility and the level of care provided. Differences were observed in waiting times, opening hours, types of cases presented, severity of illnesses and attitudes of workers.

Unstructured observations were carried out in the villages and suburbs as I interacted with the people. Asking questions and taking notes of the responses were the only tools I employed to capture the lived experiences of the people, including the important socio-economic and cultural factors affecting their lives, emotional experiences, attitudes and practices for seeking treatment.

### **3.5.5 Illness Narratives**

An illness narrative is a recounting of an individual's experience with illness, and usually traces the situation from onset through diagnosis, treatment and recovery (Alsaker et al. 2009:1156). Illness narratives are normally told by seriously ill people as a means of

recovering from an illness (Ellis 2009:25; 30). Through illness narratives, the stories of pain and suffering provide an insight into the private inner world of patients, including various meanings the patient gives to their illness, their reaction to the illness, the interactions they have with health workers and others, the outcome of the treatment sought and the process of recovery (Kleinman 1988; Frank 1993). The use of this method helped elicit data on several themes from the perspective of the health service users, including health beliefs, causes of illness, sources of beliefs, pathways followed for treatment and recovery, and patients' experiences in accessing and using health care services.

Illness narratives were collected from participants in the three sites in response to the interview question that asked participants to describe their illness experience, the steps they had taken to become well and where they had sought treatment. Narratives were collected as a stand-alone example in some cases if it was considered that the participant would not fully answer all of the in-depth interview questions or did not have the time to answer the questions adequately, owing to other responsibilities.

A total of 33 illness narratives were collected, with most participants preferring that their experiences be recorded in writing rather than audio-recorded. I facilitated all the sessions, but if a participant had difficulty explaining certain issues, their words were translated by one of the people assisting me. Each discussion lasted 30 to 45 minutes, with the sessions conducted in private between the participant and me, or in some cases, with a translator. All illness narratives were grouped according to three common plots, following Arthur Frank's framework or 'plotline': restitution narrative, chaos narrative and quest narrative (Costello 2012). The illness narratives collected as part of this study were from women who had previously been ill and their stories reflected very much Frank's point that the structure of narrative evolves as illness progresses. The analysis of storylines using Frank's framework is relatively straightforward because it gives voice to suffering and provides an opportunity for people to express what it means to be ill (Lars-Christler 1997:64).

The analysis of illness narratives was done by re-reading the accounts of illness and then determining under which categories they could be classified. Chaos narratives are those that do not recognize recovery as a possibility in future and recovery is deemed unachievable. The stories take on *and then and then* structure without reflection because the individual is shocked at what has happened. Narratives are mainly a venting of

feelings about an illness. Restitution narratives emphasize recovery of the self as it existed before the onset of illness and storylines emphasize the restoration of health. This category is considered a therapy as it encourages sick people to accept their condition or situation (Radley 1997:98). Quest narratives consider illness as a calling and recovery is dependent on acknowledging a changing world view and sense of self (De Salvo 1999:199). In addition, the analysis involved tracking three major phases from the storylines:

- (i) Departure - when illness started
- (ii) Initiation – trials in the form of suffering and illness
- (iii) Return – healed but changed by illness with a new perspective (Ellis 2009:34).

### **3.5.6 Key Informant Discussions**

Informal discussions with key informants provided additional data for the study. By informal it is meant that the discussion was not based on any structure, schedule or theme but through conversations and interactions during the period of fieldwork. As an outsider visiting another culture, I did not comprehend the ‘full repertory of forms, meanings and functions’ of that culture (Marshall 1996:96). I needed to hear from those who had a deeper insight into what was going on in the community because of their position and knowledge. Further, the limited time I had in collecting quality data made me rely on key people for certain information (Marshall 1996:92, 96).

Following consultation with some members of the village living in Port Moresby, three to four potential key informants were selected using Tremblay’s criteria: role in the community, knowledge of, and access to, the desired information, and willingness to cooperate and communicate their knowledge in an intelligent, impartial, objective and unbiased manner (Marshall 1996:92, 96). Most were well regarded in their communities, as they demonstrated exceptional leadership characteristics and occupied positions of responsibility and influence (Sjoberg & Nett 1968). Individuals from a wide range of professions and capacities were involved: doctors, HEOs, departmental heads, senior public servants, teachers, church leaders and elders, catechists and nuns, village women’s representatives, engineers, ward councillors and youth.

When I arrived in a village or community, I was introduced to key individuals by the village representative who was working and living in the city. A brief meeting was held to inform them of the purpose of my study and the voluntary nature of their participation. All of the key informants conveyed a generally positive attitude and a willingness to participate in the research. Prior to commencing data collection, I asked them to provide

me with information about the community, including the services and resources the community had at its disposal, local terminology for illnesses, symptoms of illnesses and related concepts, to facilitate obtaining more detailed information in the interviews and discussions.

A total of 21 people were interviewed as key informants at the three sites, providing information about women's health, family sizes, access and use of health care, the types of care providers available in the community and the pathways taken by women in seeking treatment. The interviews were recorded as field notes and summarised at the end of each day, to ensure that all of the topics of interest that had been discussed were captured.

### **3.6 Ethical Considerations**

This study (Protocol: 2014/624), including the research design and methodology, was reviewed and approved by the Human Research Ethics Committee of the Australian National University on 26 March 2015 and the PNG Medical Research Advisory Committee (MRAC No. 15.02). As mentioned previously, informed consent was sought from all participants prior to the interviews. Oral consent and other forms of consent were used. Consent was obtained by approaching participants for discussions prior to the interviews. This was to ensure that all participants had time to consider and understand the project aims and how the information they provided would be used. It was insensitive and inappropriate to ask participants whether they were able to read and sign consent forms in villages where most participants lacked the requisite literacy skills. To avoid the risk of embarrassing participants, a translated Tok Pisin (in the Imbonggu villages) or Motu version (in the Tubulamo villages) of the information sheet and consent form was read aloud and explained to the participants. Participants indicated with a mark on the form if they agreed to be interviewed. The participants were informed that participation was voluntary and that they did not have to answer all the questions. In situations where the participant had agreed to be interviewed but appeared to be distracted and unwilling to answer questions, the interview was terminated early without all the questions being answered.

As indicated pseudonyms were used to mask personal identity. A small number of participants who became distressed during interviews were assisted by my assistants and Women's Fellowship Group leaders.

## **3.7 Data Analysis**

The following steps were undertaken for data analysis:

### **3.7.1 Data Recording**

During the fieldwork, I kept three separate journals (one for each location) for field notes and for recording my observations following each interview. In addition, each day I recorded all discussions with key individuals, interviews, focus group discussions, observations and body-mapping exercises. On returning from the field at the end of each day, I went over the notes and compared them with the interview guidelines and questions in my thesis proposal, to see whether they were answering my questions. As I was unable to use my laptop computer in rural areas because there was no electricity, when I got to Port Moresby, I transcribed the data from the in-depth interview questionnaires into Excel spreadsheets for each research site. These were saved under two main categories: users and providers of health care. For users, there were six spreadsheets containing data on the general demographic and socio-economic details; barriers to health care; access and utilisation of health care; health knowledge and beliefs; sources of health knowledge; and preferences for treatment. The illness experiences collected from at least 10 women in each location were compiled into case studies for drawing out themes, patterns and trends. For providers, five spreadsheets contained general demographic and socio-economic details; factors discouraging or encouraging worker behaviour; provider–patient relations; service delivery environment; and health facilities.

### **3.7.2 Data Sorting and Analysis**

Categories for sorting and organising the data were developed based on the themes from the research questions for users and providers. The data from interviews and focus groups were transcribed and grouped under similar thematic categories as those in the Excel spreadsheets.

A case study methodology (Yin 2009) was adopted for the analysis of the three locations to gain in-depth understanding of the sociocultural contexts of the issues highlighted in the aims of the study. For each location, I developed a profile of:

- (i) health workers, based on interview data recorded in the Excel spreadsheet under the categories of sociodemographic data, factors motivating and demotivating



work; relations with women patients; provision of services; use of services by women

- (ii) women, based on interview data from Excel spreadsheets under categories of sociodemographic data; health knowledge; utilisation of health care and treatment practices; determinants encouraging and discouraging health care seeking.

Because qualitative analysis aims to explain patterns, trends and linkages between different categories (Polit & Beck 2003), dominant themes from the field notes were extracted (Emerson et al. 1995). For analysis of the health workers, I selected two or three workers in each district (depending on the number of health facilities and staff) and compiled a case study for in-depth analysis with a specific focus on the hospital and facility context; reporting arrangements; beliefs about work and approaches taken for providing health care, including relationships with women; and the factors influencing their work. For analysis of the users, I developed three to six cases studies of women for the major themes and sub-themes, to draw out trends and patterns. Next, I compared the patterns and trends with the relevant conceptual frameworks discussed in Chapter 2. The conceptual framework of Andersen and Newman (1973) and Mechanic (1972) was used to guide the analysis of the users, while the frameworks of Berman (1999), Holmes and Goldstein (2012) and Thu et al. (2015) guided the analysis of the health workers and the delivery of health services.

## **3.8 Quality Criteria**

### **3.8.1 Credibility**

Triangulation was adopted to compare the data obtained through the different methods of data collection (focus groups, interviews from questionnaires, body-mapping exercises and observations). This method was adopted by Andrew et al. (2014) and Johansson et al. (2000:39). Bar graphs and pie charts were used for graphical presentations and percentages, to confirm the patterns and trends.

Member checking was done for validation of findings and conclusions from interviews and discussions (Korstjens & Moser 2017:121). I consulted the teams assisting me in the communities and villages, including elders and women leaders for clarification and accuracy of the information. I had a long-lasting engagement in the field with participants and invested sufficient time to become familiar with the setting and context. This allowed me to build the necessary trust to get reliable data. Spending time with the participants

helped me identify the elements which were most relevant for the study and what I needed to focus on for details.

### **3.8.2 Trustworthiness and Dependability**

An audit trail was maintained and my research path was transparent. This began with initial research proposal for the scholarship, to development and presentation of the thesis proposal, fieldwork for data collection, reporting of findings and completion of the research. Some of the records of the research have been kept through: (i) presentations and updates made at PhD colloquiums, seminars and conferences organised by the Department of Pacific Affairs; and (ii) regular semester progress reports to ANU Australia Awards Scholarship Manager.

### **3.8.3 Transferability**

To ensure findings from my study would be generalized or transferred to other contexts, settings, situations, times and populations, my description of case studies includes not just the behavior and experiences, but also details of the context in which the study takes place and where participants live (Korstjens & Moser 2017:121).

### **3.8.4 Reflexivity**

I maintained a reflective journal and took field notes in order to recognize and make explicit any personal biases (Korstjens & Moser 2017:121).

## **3.9 Summary and Reflections**

The research confirmed the observation that the use of open-ended questions allowed the participants to express their views and opinions openly, without interference (Marshall 1996:92, 96) and influence from the investigator, as opposed to pre-coded or close-ended questions, which do not encourage open dialogue. In addition, the use of visual data collection techniques such as body mapping proved useful in identifying common illnesses affecting women within a locality and stimulated the women's enthusiasm for participation in the research. This was reflected in the positive interactions, expressions in their response to questions, willingness and availability to participate in in-depth interviews, provide illness histories or narratives and participate in focus group discussions. Some of the women participants in rural highlands would arrive at the place where I was staying at odd hours to be interviewed and provided their illness history

willingly, including medical reports, only to be turned away in some instances because the sample size had been reached. Further, the enthusiasm of the women demonstrated the need for community engagement and interaction with government and agencies involved in service delivery. People, particularly the women, really wanted to participate. However, this kind of participation ultimately depends on the data collection methods employed and especially the type of questions, and the way they are framed and asked. Having a smaller number of participants in FGDs is one of the lessons learnt for managing FGD experiences in future. It is also important to set ground rules for focus groups at the beginning of discussions, such as participants to refrain from reacting or having side conversations to what is said in the group, or allowing one person to speak at a time than one or two participants dominating the discussion. Furthermore, the researcher's role as a moderator to facilitate, stimulate and guide the conversation in the focus group has to be clarified at the outset of discussions.

Finally, sensitive researchers with the right attitude can encourage the marginalised and vulnerable, to participate so their voices can be heard and captured. It is rare for villages in many parts of the country to have a government official visit and discuss their concerns. In almost all the villages and suburbs I visited, I was thanked and appreciated because the women needed someone to sit with them and hear their concerns. As long as the investigator lives in the same location and has the right attitude, participants are willing and available to provide information about issues affecting them and their communities.

These methods helped to investigate and understand the social and cultural world of the participants, and explained why people adopted particular behaviours or attitudes, and their views regarding health and illness as they defined them, based on the world and environment in which they lived (Whittaker et al. 2009:97). The collection of illness histories and narratives provided access to the kinds of information that is often lacking in some health research. The methods used enabled me to understand each woman's health knowledge, beliefs and attitudes to seeking care and treatment for illnesses.



## Chapter 4: Case Study 1- Tubulamo of Rigo District

This chapter focuses on the rural coastal site of the study, the Tubulamo group of Rigo District in the Central Province (see Figure 4.1).



**Figure 4.1: Location Map of Tubulamo Language Group**

### 4.1 Study Setting: Geographical and Linguistic Description

The Tubulamo are located inland and inhabit the hills and plains towards the Owen Stanley Ranges above Hula and Hood Lagoon villages on the south-east coast. They identify themselves as the Rigo people and Tubulamo is spoken in several villages between Matairuka village and Ormand River within Rigo Inland Rural LLG area. The estimated population of the LLG area is over 12,000 (PNG NSO 2012:12), with each village having between 2,000 and 3,000 residents. Most Tubulamo villages are situated either along the Magi Highway or on ridge tops, while some are scattered within walking distance from the roads and highway (see Figure 4.1). The geography of the area is predominantly lowland mountains, with large areas of savannah grassland and smaller patches of forest with the more densely forested mountains further towards the north-west (Bennet 2009).

Like other coastal Melanesians, the Rigo generally have a long history of contact with external influences, including government and church, in health, education and the cash economy. Some of the significant events that mark these contacts include the arrival of Reverend William Lawes in Port Moresby at the end of 1874 and the London Missionary Society pastors establishing residences at Hula, Kerepuna and Aroma on the coast. They then began evangelising inland among the Rigo from 1882 onwards. Following the 1884 annexation of Papua by the British, European settlement was established and the Papuan people, including the Rigo, saw miners and missionaries much earlier than many other parts of PNG. In 1888, the colonial administration established Rigo as the first permanent post outside Port Moresby. The establishment of a training centre for Papuan clergy near Gabagaba village on the coast in 1894 enabled further contact with the Rigo. This training institution is now located at Kwikila (Fitzpatrick 2011:16–17).

#### **4.1.1 Demographic, Socio-Economic and Health Context**

The population density is very low in the Rigo Inland LLG villages and concentrated in small villages. A village comprises small clusters of houses that can be grouped in the same area or isolated from each other. The houses are a mixture of semi-traditional style and permanent houses and normally raised off the ground. There are pit toilets, which are built following the style introduced by the Adventist Development and Relief Agency. Most houses have a water supply close to the house or three families sharing a water pipe, particularly in Inuma Village, where water is piped from a nearby creek. The church is a key building in many of the villages and in some cases, there is more than one church in a village.

Inuma and other villages situated on the Magi Highway have direct access to Port Moresby on public motor vehicles (PMVs) that run daily, giving the residents easy access to health services in Kwikila and Port Moresby. However, residents of Alepa, Konakou and other villages far from the highway have to travel mainly by foot, as the feeder roads leading to the main road are all in poor condition. Most people have family members who work and live in Port Moresby, so there are ongoing connections and regular flows of people and resources between the villages and city.

The Tubulamo follow a patrilineal system of descent, with the son inheriting land from his father. Although the clan is an important organisational unit among the Tubulamo, family units are much stronger social units than clans. People live in small communities

based on clan relationships and members of the same clan build houses close to each other. A village may consist of several clans.

The village of residence for this study was Inuma, which is located adjacent to the Magi Highway. Inuma is part of Alepa village, which is more geographically isolated, being located further from the highway. In an interview, Gumuna Dubana informed that originally, Alepa comprised seven clans: Toubasi, Kwaruve, Lebo, Geragwarubu, Bole, Rouka and Kavarubu (G. Dubana, 2015, personal communication, 24 June). However, the people from the Kwaruve clan broke away and moved to their current location near the Magi Highway during the early 1980s, following some disputes. Inuma is a small community of around 20 households. About 30 families from Inuma are based in Port Moresby city and work in the public and private sectors (Bennet 2009), mostly in management, medicine, law, teaching and other trades.

The choice of residence was based on distance between villages, mode of access and security. As access to most of the villages was by foot, involving a walk of more than two hours, it was not feasible to cover most of the villages. Inuma's location as the headquarters for the Rigo District's SDA Church, and easily accessible to most villagers, allowed participants from other Tubulamo villages to attend and participate in the research.

#### **4.1.2 Political and Governance Structure**

The Rigo Inland Rural LLG is the political governance body for the Tubulamo language group area. Several villages make up a ward, which in turn constitutes an LLG area. Each ward has a councillor who represents the villages in the LLG Council, which is presided over by a Council President, who represents the LLG in the Provincial Assembly. However, the LLG governance structure does not have much influence over the lives of the people.

There is no visible chiefly structure in Tubulamo villages, unlike other districts in Central Province, such as Kairuku-Hiri, where chieftainship is established and influential in social and political decisions. However, the emphasis is on the older male figure and leadership is exercised by a male who is endorsed by members of the clan, based on several attributes, including the ability to influence change and command authority. Even if the person does not physically live in the village because he is working in urban areas, he is influential. Like other parts of PNG, the traditional leadership roles in Tubulamo villages,

and within Rigo District, are changing because of external influences from institutions (such as the churches and schools) and modernity in general. The churches play a central role in the Tubulamo area, shaping their social structures, values and norms and today the primary leadership models in Rigo come from the church. One aspect of churches providing new leadership models is greater representation of women and youth, rather than the traditional emphasis on older men and the hierarchy of chiefs. Although men still dominate, women are slowly beginning to be recognised as equal partners and encouraged to assume some roles (Sullivan et al. 2013). This change in leadership is coming about because women are becoming more organised, such as in the United Church's Women's Fellowship or SDA's Community Services.

#### **4.1.3 Livelihood and Economic Activities**

The local economy in Rigo District is based on subsistence agriculture, with no cash crops and limited opportunities for earning cash. Income-generating activities generally involve operating trade stores, the sale of garden produce, betel nut and fuel, and running PMVs between the village and Port Moresby. A large number of people rely on remittances from family members who are formally employed in Port Moresby and elsewhere.

The Tubulamo are involved in agriculture for both income generation and personal consumption, with banana as their staple food. Banana is grown with other vegetables, such as yam, pineapples and cassava, which are sold in Port Moresby markets. At the time of this research in 2015, a multimillion-kina cassava bio-fuel project was being developed by Changhae Tapioka (PNG) Ltd, a South Korean group of companies and located at Saroakeina on the Magi Highway. This project was expected to employ a large number of local people and generate income-earning opportunities for rural people, including those at Tubulamo. However, despite the signing of the Memorandum of Understanding between the government and the developer in 2005, the project had not yet commenced operations.

#### **4.1.4 Services and Service Providers in Rigo District**

Kwikila is the district headquarters for Rigo, with telecommunication, electricity, retail shops, police, health, and education services available, including a secondary school. However, most people visit Port Moresby to access the services, as the distance between the villages and Port Moresby is less than two hours by vehicle for villages located on the Magi Highway and over two hours for villages situated further inland. Of the 102



elementary schools, 26 community and 32 primary schools in Rigo District, Tubulamo has seven elementary schools and four primary schools (PNG NRI 2010:21). However, access to schools and aid posts means walking for hours along bush tracks and the Magi Highway. Rigo district has 5 health centres and 28 aid posts based on National Research Institute's survey in 2010 (PNG NRI 2010:21). Health services for the Tubulamo are provided by the health centre at Kwikila and three aid posts, with a small number of villages forming the catchment for each aid post. All of the health facilities in Rigo are owned and run by the government, but one operates through a partnership between the government and an NGO. For instance, the Toule aid post, located at the Toule Adventist School, services students and people from Tubulamo and villages further upstream along the Ormand River (see Figure 4.2). To reach the more remote villages requires a two-hour dinghy ride up the river during the rainy season. This study was conducted during the worst El Nino-related drought in the country compared to previous droughts. This meant people living in some of the remote Rigo villages situated in the interior had to walk more than 10 hours, climbing and descending hills and crossing streams, because the water level was too low for the dinghy to travel as shown in Figure 4.2 (Chambers 2012: 1).



**Figure 4.2: Ormand River during drought in July 2015**

However, most people preferred to get treatment from the health facilities in Port Moresby and bypassed the services provided by the village aid posts and Kwikila Health Centre. Table 4.1 shows the characteristics of health facilities, which are utilised by the Tubulamo at the district and in villages as described in sub-section 4.1.4. The Table describes the major aspects of health facilities which make health service delivery possible. All Rigo District health facilities do not have medical officers but have paramedical staff and CHWs. The availability of drugs is a major problem in most of the

facilities. However, basic equipment and facilities are available although the location of facilities is easily accessible to some users and not easily accessible to others.

**Table 4.1: Facility Characteristics**

Facility Description	Rigo District Health Facilities	
	Yes	No
<b>Health personnel</b>		
Medical staff		√
Paramedical staff	√	
CHWs	√	
<b>Drug availability</b>		
		√
<b>Equipment and facilities</b>		
Adequate beds	√	√
Delivery rooms	√	√
Examination rooms	√	√
Facility open 24 hours	√	
<b>Location of facilities</b>		
Easily accessible	√	
Not easily accessible	√	
<b>Infrastructure</b>		
Access to communication; e.g., phone	√	√
Access to electricity	√	√
Access to water and sanitation		√
<b>Other quality variables</b>		
Procedures; e.g., numbering		√
User fees		√

Adapted from Kumar and Dansereau (2014: 8)

Generally, it is uncommon to find international and national NGOs in villages, since most of them only operate in urban areas. However, in Rigo District, an international NGO, Childfund Australia, operates in the Tubulamo villages. Childfund uses Salvation Army networks to establish community projects in selected villages. The emphasis of their programmes is on food security, water and sanitation, HIV awareness and children's rights.

Several mainstream and Pentecostal Christian churches, such as the Revival and Foursquare, exist in some villages. The Salvation Army and SDA Churches are popular in Tubulamo and other Rigo Inland Rural areas. Because the government presence in most villages is either minimal or non-existent, most people rely on churches and NGOs,

like Childfund Australia for services such as schools, aid posts, water and sanitation, and other projects that develop physical infrastructure. Church health facilities in PNG are government funded but church managed. It was observed that the status of the villages along the Magi Highway was more or less determined by the architecture and size of their church buildings or the organisations working there. Villages with a modern church building considered themselves more privileged than those without one, since this reflected the number of educated and employed members a village had, as well as the connections these people had to access resources for the construction of the church.

Churches play a leading role as peace mediators. For instance, land disputes and other social problems traditionally would be resolved through exchange feasts and a form of reconciliation would be imposed on the rival parties by the chief or a traditional leader. Today, churches are usually the first level of recourse. Churches provide a forum and facilitate negotiation, rather than imposing decisions or direct arbitration in community matters. Communities use the church resources and networks to establish themselves and build social cohesion (Sullivan et al. 2013). If churches are unsuccessful in resolving social problems, villagers may have recourse to the government.

## **4.2 Findings of the Tubulamo Study**

The findings of this case study have been divided into two parts: women and health service usage and health workers.

### **4.2.1 Women and Health Service Usage**

Twenty-two women from 12 Tubulamo villages participated in this case study. The majority were from the Tubulamo language group, with a few from other parts of the country but living in the area because of their spouse's employment or because they had married Tubulamo men. Table 4.2 provides the socio-demographic details of the participants.

**Table 4.2: Socio-Demographic Characteristics of the Tubulamo Participants**

No.	Education Level	Church	Church Attendance	Age Category & Marital Status	No. of Children	Occupation
R1	Bachelor's– Degree	United Church	Weekly	Cat1 M/1 <sup>i</sup>	2	Formal Sector
R2	Grade 6	SDA	Daily	Cat4 Widow	6	SG <sup>ii</sup>
R3	Grade 6	SDA	Weekly	Cat3 M/1	7	SG
R4	Grade 6	SDA	Daily	Cat4 M/1	4	SG; Church Leader
R5	Grade 5	SDA	Weekly	Cat2 M/1	4	SG
R6	Grade 10	SDA	Daily	Cat4 M/1	7	Housewife
R7	Grade 9; College Certificate	SDA	Weekly	Cat4 M/1	5	Women's Leader
R8	Nil	SDA	Daily	Cat3 M/1	4	SG
R9	Grade 10	SDA	Daily	Cat3 M/1	0	Self-employed
R10	Grade 4	SDA	Weekly	Cat4 M/1	5	SG
R11	Grade 7	SDA	Weekly	Cat2 M/1	2	SG
R12	Grade 6	SDA	Weekly	Cat4 M/1	1	Informal Sector
R13	Grade 10	SDA	Daily	Cat3 M/1	5	Formal Sector
R14	Grade 6	SDA	Daily	Cat4 Widow	5	Formal Sector
R15	Grade 10	SDA	Daily	Cat2 M/1	1	Self-employed
R16	Grade 10	SDA	Daily	Cat3 M/1	5	Housewife
R17	Grade 5	SDA	Daily	Cat3 Single	0	SG
R18	Grade 11	SDA	Daily	Cat1 M/1	2	SG
R19	Grade 2	SDA	Sometimes	Cat4 Single	N/A	SG
R20	Grade 6	SDA	Daily	Cat3 M/1	3	SG
R21	Grade 5	SDA	Weekly	Cat3 M/1	1	SG
R22	Grade 6	SDA	Not indicated	Cat3 Single	N/A	SG

Notes: Age categories (Category (Cat)1-18-25 yrs, Cat 2-26-35 yrs, Cat 3-36-45 yrs, Cat 4-46 + yrs); Marital status (i) M refers to married. M1 – married to man with one wife; M2 – married to man with two wives, M3 – married to man with three wives (ii) SG – Subsistence Gardener

Table 4.2 shows that the number of women between the ages of 35 and 45 years who participated in the study was slightly higher than the number of women over 46 years of age. The number of women in the age ranges of 18 to 25 years and 26 to 35 years was much lower. One explanation for this is that more of the participants in the two latter age

categories were living outside the villages for education and work purposes. This is consistent with PNG's official age for work and education, which is 18 years old and above.

All but one of the participants had been to school. The majority had only completed school at primary and secondary levels, with only one participant having a university degree and another with a tertiary-level certificate. The number of women with Grade 6 education was slightly higher than the number of women with a Grade 10 education. The number of women who had finished their education at primary school level was higher than those who had finished at high school level. There are several explanations for not completing education at primary and secondary levels: the financial challenge of paying school fees is a major factor affecting rural families and the difficult geographic conditions of the district (Chambers 2012: 1) impose a constraint on children completing their education. Although all children are affected by the constraints of fees and accessibility, female children are the most affected. Without other alternatives for continuing education in the villages, they end up getting married at an early age. A few women with high school education performed leadership roles in the villages and were employed in small family income-generating businesses.

Table 4.2 also shows that apart from three single women and two widows, all the other participants were married and in monogamous relationships. Church has a strong influence in the villages and have shaped their social structures, and sought to minimise social problems such as marital conflicts caused by alcohol and substance abuse.

With regard to family size, the highest number of children belonging to one woman was seven, with two participants having this many children. The number of women with five children was higher than the number of women who had one to four children. When classifying their livelihood activities, five categories were used: formally employed, small businesses, informal sector activities, subsistence gardening, and unemployed for those who had been formally employed before returning to the village or for the spouses of teachers and pastors working in the area. Table 4.2 shows that the majority of women were engaged in subsistence gardening. Only three participants were formally employed, while another two operated small family trade stores and PMVs travelling between Port Moresby and the village. Only three women were unemployed after resigning from formal employment and returning to live in the villages.

The majority of women attended church regularly. The number of women attending daily programmes was higher than those who attended on a weekly basis or irregularly. The frequency of church attendance indicates the central role of the church in the lives of the women, influencing their beliefs, knowledge, behaviour and attitudes, including those regarding health.

#### **4.2.2 Beliefs with Regard to Health and Illness**

The details of five Tubulamo women's lives are presented in this subsection to provide insight into their beliefs and knowledge with regard to health and illness, including sources of their health knowledge. Hanua, who did not complete primary school, perceived that a person's health or illness is shown in their skin, as well as in the things they do, such as sleeping or coughing. Her perception of the causes of illness and the way to remain healthy centred on notions of hygiene, particularly those of the person and household. In her view, to remain healthy required both good hygiene and access to good water and sanitation practices. Hanua's sources of health knowledge and beliefs came from school, church and family members.

Leka, who had completed primary school, had similar ideas to Hanua, also perceiving that illness and health is indicated by the physical appearance of a person. However, Leka believed that illness was caused by gossip and worry and that remaining healthy entailed seeking appropriate advice from health workers and church workers. Leka drew her understanding of health and illness mainly from the church, even though she had completed primary education.

Noga, who had not completed high school, held similar views to Hanua, believing that health and illness were indicated by a person's physical appearance and their actions. Like Hanua, Noga thought that hygiene contributed to good health, as well as diet. In addition, Noga believed that illness could occur if a person engaged in physical labour without adequate rest. Her sources of health knowledge were derived from school and family members, but the not church.

Minama, who had completed high school and had been in formal employment for many years in Port Moresby, also saw health and illness as being indicated by the physical appearance of an individual. She also saw hygiene and diet as a cause of health and illness, particularly if they were not adhered to properly. Unlike the other women, Minama's source of health knowledge and beliefs was the school.

A similar understanding of health and illness was shown in the case of Gunua, who had a tertiary level of education. However, Gunua's understandings were elaborated further when she noted that 'smoking, chewing betel nut', eating sweets and stress (worry) could cause illness. Gunua's knowledge was from similar sources to those of Hanua, Noga and Leka.

These five cases showed that there were many similarities in the women's understandings of health and causes of illness, but few differences. They showed that regardless of different education levels, age and place of origin, the majority of Tubulamo women considered physical appearance an indicator of health or illness, especially aspects that could easily be observed externally, such as physical build, weight and skin. All of these women mentioned physical factors with regard to ill health, such as saying that a sick person was not eating well, had lost weight, was weak or always coughing, or was not actively involved in sports and work. Only a few women included emotional aspects of health and described a sick person as one who was worried, socially withdrawn from others and shy. Remaining healthy was linked to good hygiene (personal and household) and the majority of women spoke about the need to look after 'myself with my diet and drink and eat good food, drink water and exercise', which were commonly known facts for healthy living. A healthy person was recognised as having the opposite characteristics of an individual who was sick, as mentioned above. Some unique examples that were provided in ideas about health and illness were the need to go to church, to seek help and advice from a health worker or church worker, to pray, socialise and to provide for one's needs, to prevent stress and worry that would cause sickness.

When the women were asked about their perceptions regarding the causes of illness,<sup>3</sup> the majority of the participants in Tubulamo area indicated that the causes of illness were related to poor nutrition, smoking, chewing betel nut, poor personal and household hygiene, lack of water and sanitation, and lack of exercise. Half of the participants indicated lifestyle choices as causes of illness, while emotional and mental health, environment and social relations were perceived to cause illness as well. There were a few differences in their understandings of what caused illness, such as not resting properly or poor social relations. Some women blamed 'Not resting and working too much, marital problems, stress, gossip and worry' for causing illness. Only a few of the participants mentioned sorcery as the cause of illness.

The Tubulamo case study found that the three major sources of health knowledge for the women were school (15), church (15) and family members (7), as well as women's fellowship groups and the international NGO working in the area. Very few women linked their source of health knowledge to cultural ideas passed down from an older person, such as their mother or grandmother. The research findings illustrated the important role played by schools and churches in educating people about health.

Although the women shared some common knowledge regarding health and illness, some of their perceptions varied, showing that their knowledge about health was based on their personal experiences and the environment in which they lived. For instance, Leka, who was from another province but was married to a Tubulamo man, believed that illness could be caused by gossip and worry. As an 'outsider' from another place, she had to deal with her in-laws' expectations of her. Her in-laws gossiped about her when she did not meet their expectations and this stressed her so much that she became ill. To alleviate this illness she approached a health worker or church worker to discuss her problems so she could feel better. Another woman, Gemo, linked marital problems, stress and worry to illness. As a young mother of two children, she attributed her children's illnesses to her neglect of them when she was busy with household chores. Another participant, a widow and volunteer missionary, said that she experienced illness when her essential needs were not met, thus making her stressed.

The findings showed that the sources of health knowledge were both formal and informal, such as church, family members, people in the community and organisations working in the area. Health knowledge was not transmitted in classes in a formal setting.

### **4.2.3 Treatment Options**

Five cases of women from Tubulamo are presented in this subsection, providing insight into the treatment options and preferences of the women who participated in the research. These cases show the types of health facilities the women visited and the different services they used to become well and remain healthy.

The case of Boga illustrated the common preferences followed by many women in Tubulamo when they are ill. The formal public health system was the only option for many women and like Boga, they had positive experiences of public facilities. She said:

My feet started getting cold with itchiness in my throat (neck) and watery eyes. This led to swelling of my throat and my younger sister advised me to get herbs and avoid



taking sweets, because the swelling always increased as I ate more sweets. I could not talk because of itchy throat and watery eyes. I did an X-ray, scan and other tests before I got admitted to the hospital and went through surgery for eight hours. I got 13 stitches and was hospitalised. I now do not have major illnesses except colds and flu.

However, some women, such as Gunua, preferred to use the formal private health providers:

I used to have pains when having my menstruation but did not take any action about it. One day in late 2014 (November) when I was doing laundry, I had very severe pains. So, in December, I went to see my doctor at the private hospital for medical check. The tests showed that I had fibroid in my uterus and required surgery. During my second visit to the doctor, I was advised of the costs (PGK8, 560) of surgery at the private hospital. So I made arrangements with Micro Bank (financial institution) for a loan. Upon successfully securing the loan, I called the doctor and confirmed. In February 2015, I went through surgery and spent three nights in the ward. When I got discharged, I did not come home to the village due to difficulties in moving round to use toilet facilities but spent four nights in a lodge.

Gunua's case was not the norm, because many women are unable to afford the fees at the private health facilities. Gunua could afford the medical fees, including after-surgery care in a lodge, because she owned a small business in the village. Her case clearly demonstrated that there were options available for women with access to financial resources. Other women use both public and private health care providers. For instance, Gemo visited the private health facility when the services provided at the formal public health facilities did not help her condition to improve. She said:

I had gastroenteritis during one night in March 2015 and was in so much pain. The first choice was to come to Kwikila Health Centre because that is the nearest health facility to me. I was carried into the health centre because I could not walk. But I was told by health workers to go home and talk about my problem because they assumed it was related to a family dispute or sorcery-related, and gave me chloramphenicol and Panadol and return every six hours for injection. However, there was no change. The next day, I asked for referral letter to PMGH and after two days, I went to St Mary's Clinic in Port Moresby. Because I had only PGK200, I could not afford the scan but the doctor explained the cause of my illness and gave me medicine. I later went to PMGH for scan, X-ray and blood tests, which showed I was anaemic, hence my illness.

These cases illustrate the treatment options taken by many women who use only formal biomedicine. In addition, they illustrate that biomedicine was able to diagnose and treat their illnesses. However, some village women rely on relatives to take them to private health facilities, as seen in Nita's case. She said:

I fell very ill around early February 2015. My throat was blocked and swollen and I could not eat for two weeks but only drink water. I went to a private doctor and was given medication after tests. But this did not help because tablets were blocked in my throat so I went for X-ray three times but nothing was detected. So I returned home and resorted to prayer. I went again to another private doctor and was put on IV fluid. In just an hour, the drip was finished. The doctor called my brother in and we prayed. Immediately, the blockage was removed and something green came out of my throat. I felt better and returned to the village. However, when I came to the village and went to lie down again in my house, one side of my body started becoming numb from head to feet. My husband called my brother in Port Moresby to come and take me to see a doctor. When I went to my brother's house, the numbness and sick feeling disappeared. So I came back to the village again. But when I came into the house, I felt numb again. This time I was taken to Kwikila Health Centre and got medication. After this, we had family discussions and prayed. I was healed at the end of February.

Thus, Nita's illness was treated by using formal private and public health providers and informal healing options, such as family discussions and prayer which is considered to play a role in healing. Biomedical and traditional treatment options are generally combined if an illness is not cured by the first care provider, with the next option pursued being dependent on the individual's resources. In Nita's case, her brother was able to transport her quickly to Port Moresby, so she could seek the services of a private health provider and visit the nearest district health facility when she was back in the village and needed help. However, many women do not have family members or relatives who are formally employed and living in Port Moresby, so this option for support is not available and their lives are more at risk. In some parts of PNG, including the Tubulamo area, when an illness is unable to be treated by biomedicine and is understood to be caused by disharmony in social relations, a common option is for family members to sit together and discuss possible causes. In such circumstances, there will be discussion of any grievances with other people and the option of resolving the dispute will be considered (Strathern 1968a; Strathern 1968b).

The widespread dominance of Christianity in PNG means that prayer is a treatment option or combined with taking medicine or using home remedies and other natural therapies, as was demonstrated by the case of Kala. She said:

I had a boil on my left arm, which started from a small spot-like a pimple in 2014. The boil grew big each week with discharge until it grew worse. I got medicine from the village aid post but stopped after two months because there was no change in the sore. The CHW was unable to apply any medicine on the sore because it was difficult. My husband and I resorted to prayer and applied herbal mixture from pawpaw leaves and coconut oil to heal the boil. This took many months and the boil finished in January 2015, leaving me with a scar (see Figure 4.3).



**Figure 4.3: Kala's Scar**

Thus, when the formal public health provider was unable to treat her condition, Kala preferred to use informal healing and treatment options, including natural therapies and prayer. Kala lived in a remote village and access to services, including health care, was difficult. She also had three small children, no income and was dependent on subsistence gardening, so it was difficult for her to leave the village and seek treatment in Kwikila or Port Moresby. Kala's case illustrated some of the treatment options pursued by women in remote Tubulamo villages when they are ill or when their illnesses cannot be treated by biomedicine.

One of the findings of the Tubulamo case study was the coexistence of biomedicine and informal treatment practices. There were two options for treatment under the biomedical

health care system: public and private health providers. The case studies showed that the choice of the health provider was determined by the financial resources individuals had at their disposal. Public health provider was the preferred option rather than the private health provider. Several informal traditional treatment practices were utilised, including natural therapies and home remedies (involving herbs, barks, leaves and other natural objects) and Christian prayer. A second finding was that use of the different treatment practices was dependent on the women's choices, which were determined by factors such as income, education, age, culture and religion, as well as the perceived benefits of the treatment option pursued. Tubulamo women classified illnesses in terms of their seriousness. They said *liklik sik* (minor illness) to describe illnesses considered less severe and *bikpela sik* (major illness) to describe illnesses considered serious, complex and potentially life threatening, such as diabetes, TB and gynaecological-related illnesses. For minor illnesses, such as colds, flu, fever and body aches, they generally used natural therapies, reserving formal biomedicine for illnesses they deemed serious. While the majority of women had several treatment options, there were some women with more limited treatment options available to them. Third, the treatment option used was not linked directly to the women's health knowledge. For instance, the majority of women trusted biomedicine for treatment but they used informal treatment practices for various reasons. In the case of Nita, there was family discussion and prayer when biomedicine did not cure her illness. Kala could not go beyond the village aid post and seek help from a larger health facility, because of distance and inability to afford the costs of transport and treatment. A few women visited traditional healers for illnesses that biomedicine could not cure and that they considered natural, but this was done secretly because the doctrine of the church in the village prohibited the use of traditional healing. Some Christian churches disapprove of traditional healing particularly those using magic and often label these satanic practices.

Biomedicine and natural therapies were the two major treatment options preferred by the women in this area. However, they did not follow a straight path in any sequential order. As noted earlier, whether a person used biomedicine or other treatment options depended on their assessment of whether the illness was *liklik sik* or *bikpela sik*. For major illnesses, the women used formal public or private health providers depending on the factors highlighted earlier, such as access to money and transport. However, natural therapies were utilised before, after and at the same time as biomedicine and the women moved between biomedicine and informal treatments if their illnesses were not cured or if they

were not satisfied with the treatment they had received. Many women made more than one visit to the same formal public health provider or to others. A small number of women chose the services of the private health provider but the majority used natural therapies. Table 4.3 presents the different treatment options that were available and the number of women who used them.

**Table 4.3: Tubulamo Women’s Use of Health Services by Type**

Type					
Formal Health Care		Informal Health Care			
Public	Private	Traditional Healers	Faith Healers	Herbal Treatments	Over-the-counter Treatments or Pharmacies
22	5	2	0	12	3

**Note:** Some participants used more than one type of health care provider for the treatment of illness

Table 4.3 highlights several significant aspects. First, the greater number of women using formal public health services was consistent with the women’s socio-economic status and sources of income in Tubulamo, with fewer than 10 women having a regular source of income. Second, the two most common informal treatment options that the women used were natural therapies and Christian prayer, because traditional healing was unpopular in the area; half of the women used natural therapies and fewer than three visited a traditional healer as a last resort when the biomedical health provider was unable to treat the illness. Christian prayer was one of the most common options used by the majority of women. Such women did not necessarily visit a pastor or use other treatment options for their illnesses. The combination of biomedicine and informal treatment practices was very popular among the women, with many more women using natural therapies than self-treating by taking medicines bought from chemists.

#### **4.2.4 Determinants Influencing Women’s Health-seeking Behaviour**

Tubulamo women’s use of health services was influenced by several factors. The majority of the women used biomedical health care because they believed biomedicine would effect a cure. One woman remarked that she had ‘belief in the medicine given at the hospital to treat my sickness’ while another said she had ‘belief in the health workers to cure me’. As one of the woman continued, ‘Hospitals have all the facilities and equipment for testing and treating with medicine, which enables health workers to know the cause of illness and treat you after diagnosis’. Others considered that ‘proper checks were given at hospitals and clinics’. Many women went to the health facilities when they experienced

severe pain because they considered they would provide quick relief. In addition, hospitals were the only places known for treating certain illnesses, such as diabetes.

The second major factor encouraging women to seek treatment was the ‘fear of death’. For these women, the health facilities provided them with the hope of living rather than dying. Another factor was their desire ‘to become healthy quickly’. For some women the inability to look after their children when they were ill forced them to seek help at the health facilities, because ‘who will take care of my family if I am sick or when I die?’

In contrast, some women were reluctant to seek health care for several reasons, such as:

It is a long distance to travel to aid post and hospital. I have no money and there is no transport available to take me to the hospital. (KB)

I rely on herbs and this stops me from going to hospital. (AG)

The health workers are not trained well and have poor interpersonal skills. They lack the knowledge to use equipment for testing patients. (LG)

Financial constraints were a major barrier to seeking treatment. Although the services at Kwikila Health Centre were free, there were other costs such as travel to Port Moresby if a referral was given and prescribed medicines. ‘I have no money’ was the most common response when women were asked why they did not seek treatment when ill. Without income from formal employment, most of the women lived marginal lives and did not have enough money for health care. The money they earned from the sale of vegetables at markets in Port Moresby was used for food, household expenditure and their children’s school-related expenses.

Distance was another major barrier to seeking health care because of poor road conditions and lack of transport from the remote villages. When ill, some women had to walk long distances to the main highway and then wait for transport to the health facility. Family members using bush materials to carry women to access transport and health care, and long waiting periods for transport are typical experiences of many women as shown below:

In July 2013, I experienced swelling in my feet twice. I could not walk and so could not seek treatment. During one of the episodes, my brothers carried me on a stretcher, made from sticks, to the main highway so I could [get] a PMV to Kwikila Health

Centre. We waited for more than one hour for a vehicle to arrive and take me to Kwikila, where I was checked and treated. (SG, rural woman)

As noted earlier, the unfriendly attitudes of health workers prevented some women from seeking treatment. One woman's bad experience at the hospital deterred her from attending antenatal checks and having supervised deliveries. She said:

My first experience stopped me from having my second child in the hospital and I delivered the baby at home in Port Moresby with the help of my mother. When I was pregnant with my fourth child and went to clinic, the nurse criticised me ... saying, '*isi long wokim*'. As a result, I stopped going for antenatal checks after four visits and gave birth in the village with help from my mother again. (CG, rural woman)

The other barriers were sociocultural and religious beliefs. It was common to hear women say, 'I rely on herbs and do not go to the hospital' or 'my belief and trust in God stops me from going to the hospital'. The latter response was typical of many Christians who demonstrated their faith by relying on prayer, rather than using biomedicine or other therapies. This response agreed with findings from other scholars who have worked in PNG. For example, Richard Eves' (2010:499–500) work among the Lelet of New Ireland Province found that Christianity had a profound effect on local understanding of illness and its treatments. Prayer was a treatment strategy that complemented both formal biomedicine and informal treatment practices. Similarly, Stephen Frankel's (1986:166) study of Huli responses to illnesses found that Christian prayer implied that people placed their illnesses in God's hands. However, other women had personal reasons for not wanting to go to the hospital because of 'the fear of surgery' and the 'fear of not wanting to see other patients whose conditions are worse than mine'. Some commented that they were 'afraid of some practitioners giving me medicine that is not good for me' or 'I do not like taking malaria tablets'.

Table 4.4 shows that Tubulamo women were discouraged from seeking treatment by factors on both the user side and the provider side of health service delivery. However, the barriers on the user side outnumbered those on the provider side of the equation.

**Table 4.4: Determinants Discouraging Tubulamo Women from Using Health Care Services**

<b>User-side Factors</b>	<b>Provider-side Factors</b>
Financial constraints – no money to pay transport, fees for medicine and tests	<ul style="list-style-type: none"> <li>• Unfriendly and poor behaviour and attitude of health workers</li> </ul>
Physical/geographical – long distance to travel from village to aid post/hospital and long delay in waiting for transport	<ul style="list-style-type: none"> <li>• Long waiting time</li> </ul>
Sociocultural beliefs – reliance on herbs, belief and trust in God	
Personal reasons – fear of surgery, condition of other patients, medicine and drugs, allergies	

#### **4.2.5 Health Care Providers**

The study aimed to cover Rigo District health providers that Tubulamo women visited, including formal biomedical health workers in public, private, government-run and church-run facilities as well as informal practitioners. However, there were no private and church-run health facilities in the district. The use of traditional healers was common in Rigo but was not very popular in the Tubulamo area, with only a few healers living in the villages. Because traditional healing involves the use of magic and was subject to disapproval from churches, traditional healers practised in secret. Indeed, some churches imposed penalties on any member seen visiting a traditional healer. These penalties included disciplinary measures, such as stopping them from performing church duties, taking the lead in church programmes and even expelling them from membership of the church.<sup>4</sup> The government provides almost all the health services in the district. The Kwikila Health Centre, which provides services to the people in Rigo, lacked capacity in many areas and often referred patients to PMGH.

At the time of this research, a new building had been constructed at the Kwikila health centre by the Korean Office of International Cooperation Agency, with inpatient wards, a labour ward, a minor theatre and a dispensary. Although the new facility was equipped with modern technology, the staff had not yet been trained to use it. Low water pressure in the labour ward prevented it from being used for mothers in labour. The aid posts at Toule, Dubanateboa and Alepa villages provided the basic health needs for the people. However, they were underused, as most villagers preferred the health facilities in Port Moresby or Kwikila. This study carried out observations at the Kwikila Health Centre and aid posts in Alepa and Dubanateboa villages.



#### 4.2.6 Socio-Economic and Demographic Description of Health Care Providers

Eight health workers participated in the research. The sociodemographic characteristics of the workers are provided in Table 4.5. These characteristics were consistent with similar studies conducted on health workers in other countries (Kumar & Dansereau 2014; Stern 1986a; Thu et al. 2015).

**Table 4.5: Socio-Demographic Details of the Tubulamo Health Workers**

Sex/Age Category <sup>i</sup>	Education Level/Training	Type of Facility	Years of Work	Years in District
M/4	Grade 10 – CHW Certificate	Govt	35	31
M/3	Grade 12 – Diploma – HEO	Govt	9	1 yr 10 mths
M/3	Grade 9 – CHW Certificate	Govt	> 30	13
M/3	Grade 8 – CHW Certificate	Govt		3
M/4	Grade 9 – CHW Certificate	Govt		21
F/3	Grade 10 – CHW Certificate	Govt		20
M/3	Grade 10 – CHW Certificate	Govt	19	7 yrs 1 mth
M/3	Grade 10 – CHW Certificate	INGO/ Govt	21	9

**Note:** (i) Age categories: 1: 18–25 years; 2: 26–35 years; 3: 36–45 years; 4: 46 years+

Table 4.5 shows that seven of the biomedical health workers were males and only one was female. Although the table only provides the number who participated in the study, it indicates the general picture of staff composition in the PNG health sector, with a gender imbalance in the health workforce in many places, including Rigo.

Health workers who participated in the study included one HEO and seven CHWs. Two of the CHWs were in charge of village aid posts. The majority of workers were in the age range of 36 to 45 years, with only two aged over 46 years. Of the eight health workers, the HEO was the only one with an education above Grade 12, being the paramedical training that is required as an HEO. Four of the CHWs had a Grade 10 education, while two had only a Grade 9 education and one had a Grade 8 education, but all had gone through training and received the CHW certificate. Medical officers work only in Level 5 rural hospitals while HEOs manage rural health facilities below Level 5 in PNG. Seven of the eight workers were from Central Province and one was from a different province (see Table 4.5). Of the seven from Central Province, five were from the same district and

two were from different districts. Of the five workers from the same district, four were from the same language group and one was from a different language group.

In the table, the number of years worked does not necessarily mean that the health workers were knowledgeable about the processes involved in the delivery of health care and were familiar with patients' HSB. Many health workers in PNG do not get in-service training and their medical knowledge can be quite outdated. One of the eight workers had worked for over 35 years, three between 30 and 35 years and two for over 20 years. The others had worked less than 10 and 20 years respectively. Most of the workers had worked in the same district and health facility for more than 10 years, while the other four had been employed for less than 10 and five years respectively. Because family relations can negatively affect the performance of workers and their subsequent dealings with patients, it was important to examine marital status (see Table 4.5). Only one worker was in a polygamous marriage – all of the others were in monogamous marriages.

For insight into the delivery and use of health services, selected cases of health workers who were attending to patients directly are provided next, describing the facility contexts in which they worked and the factors influencing their work practices.

#### ***Bonnie – CHW at Kwikila Health Centre***

Bonnie was aged between 36 and 45 years and came from the Highlands Region. She was married to a Central Province man and they were both CHWs at the Kwikila Health Centre. Bonnie finished Grade 10 and completed her CHW training at the Togoba CHW Training College in Western Highlands Province. She had worked for 20 years at the Kwikila Health Centre and assisted with MCH services.

The Kwikila Health Centre was perched on a slope overlooking the Magi Highway. Before the new facility was opened in April 2016 (see Figure 4.5), the health centre consisted of a single long building that was built during the colonial era (see Figure 4.4). The building housed several sections, including children's and adult's outpatients, disease control, an MCH clinic and a small delivery room. The STI/HIV clinic (see Figure 4.6) and labour ward were in separate buildings away from the main compound. The STI/HIV clinic was funded by the Australian Government through the Department of Foreign Affairs and Trade (then AusAID) and was about 7 metres from the main compound. Because the building was isolated (see Figure 4.6) and exposed to the public, the clinic

was hardly used. As a small district centre, everybody knew each other, so people needing treatment for STIs and HIV travelled to facilities in Port Moresby.



**Figure 4.4: Kwikila Health Centre – Old Wing**

The old wing housed the MCH section and delivery room, since the new labour ward was on poles and wheelchairs could not be used to move mothers in and out of the delivery room.



**Figure 4.5: New Kwikila Health Centre**

At the time of this research, more than 20 staff worked at the facility, including two male HEOs, three female NOs, 26 CHWs, one dental therapist and two drivers. There were more male CHWs than female CHWs.



**Figure 4.6: Kwikila Health Centre – STI/HIV Clinic**

The health centre was generally treating between 100 and 150 patients per day. Patients came from villages around Kwikila District and remote inland areas. Bonnie treated between 30 and 60 patients per day. The common illnesses for which women were seeking treatment were pelvic inflammatory infections (PIDs) and urinary tract infections, which were treated at no cost. Bonnie spoke Tok Pisin and English. She greeted patients when they first entered the health centre, took down their illness history, carried out a physical examination and provided advice about health conditions. The order in which patients were treated depended on their time of arrival. When patients arrived, they sat on benches, waiting for their turn. As there were no examination rooms, patients could easily overhear the conversation and illness history of others. The patient was taken to a separate examination room only if a physical examination was required. In this area, for a woman to speak openly about their illness, it is crucial to ‘Be friendly and interview them privately in a closed room’. Bonnie believed the factors influencing women to come to the health centre were:

Because they think of their life, especially if women know they have been with many sexual partners, they get scared of getting HIV and want to get tested quickly and know their status.

Bonnie's approach for delivering health care reflected her skills and nursing training. However, it was hard to ascertain the extent to which her work practices aligned with her training, culture and religion. She reported to the Sister-In-Charge (SIC) of the MCH services, who in turn reported to the HEO. At the time of this research, the SIC and the other NOs were not at work.

### *Aia – CHW at Dubanateboa Village*

Aia was a male CHW, aged between 36 and 45 years, from one of the remote areas of Rigo District in Central Province. He was the CHW in charge of Dubanateboa aid post, a government facility, and lived with his family in the village. Aia finished Grade 10 at one of the high schools in Port Moresby and got his CHW certificate from St Margaret's CHW training college, an Anglican Church-run training institute. He had worked for 19 years, with the last seven being at the Dubanateboa aid post. Aia reported to the Health District Health Coordinator at the Kwikila Health Centre. He used his own funds to collect medical supplies from Kwikila Health Centre. On one occasion, the vehicle that I had hired to take me to my research site helped to transport Aia and his son with boxes of medicine.

The Dubanateboa aid post provided free basic health services, including MCH (ANC, immunisations, family planning) and other general health services to Dubanateboa and several villages within its catchment, including Pougoro, Goata, Bakiboki, Konakou, Toule and other inland villages. It was a small building with a waiting area used for the screening and treatment of patients and a separate room for physical examinations and delivery of babies. There was no examination bed and because the aid post did not have electricity, there were no ceiling fans or other equipment that used electricity. For night-time emergencies, the CHW used a generator or other types of lighting. Severe cases and emergencies were referred to Kwikila Health Centre, PMGH or Gerehu Hospital.

Aia treated fewer than 15 patients daily and less than 100 patients per week. The main illnesses that he treated at the aid post were coughs and colds, sores and fever associated with malaria. He used rapid diagnostic test kits, provided by Rotary against Malaria (RAM), to carry out malaria tests on patients. Women who visited the aid post when they experienced excessive bleeding after missing monthly periods were mostly referred to doctors in Port Moresby. Although the aid post provided ANC, this did not account for much of Aia's work because most of the mothers did not attend the aid post for this kind of care. They only attended if their children were sick or in need of immunisation. Aia

reported that there had been a recent case of an infant death. This incident involved a woman from Dubanateboa village, who was in labour at the aid post for a whole day and delivered the baby at 9:00 p.m. Unfortunately, the baby died because according to Aia, ‘the membrane was not ruptured, so baby died from lack of air. The mother survived but the placenta was still inside, so I referred her to Kwikila Health Centre’.

The study found that Aia’s approach to providing health care was influenced by his training, culture and language. For instance, he remarked that, ‘when women are reluctant to tell me (about their illness), I tell them that I’m trained in both female and male body parts. And this makes them become open with me’. In one of the emergency cases he handled in 2015, Aia’s training helped him ‘save the life of a child’, whose forehead had been cut by the propeller of an outboard motor on the Ormand River. He was carried by students from the Toule School to the Dubanateboa aid post, as the CHW at the Toule aid post was unavailable that day. Aia had to rely on his training and experience to treat the young patient. When asked to describe the procedures he followed to treat the patient, he said:

I set up a tray with necessary equipment including syringes, hand gloves, etc. After consultation, I applied lignocaine to desensitise the spot to prevent pain and sutured four stitches on the cut.

When providing family planning services to women, Aia, being from the same district, was influenced by the cultural practices common in Rigo, remarking that, ‘certain questions need to be asked and methods explained before administering various family planning methods’. As he did not speak the Tubulamo language of his patients, Aia had to adopt appropriate methods to reach the women, saying that ‘language is a factor if CHW is not from the same village’.

Aia demonstrated very good knowledge of his training and applied this when required, such as in the case of the young patient whose forehead needed suturing. It is common for CHWs in remote areas to attend to emergency cases and stabilise the patient before transferring them to Level 2 and 3 facilities. He also understood that the barriers preventing women from visiting the aid post were not only on the women’s side but also on the provider side of health care. As he said:

Most mothers don’t approach me with health problems but come at late stage. Some mothers are open to talk to health workers but others are not and this may be due to culture, especially for family planning services. Education has an influence on their

health-seeking behaviour. The more educated they are, the more open they are about using health services. The language, [the] sex of [the] CHW, lack of appropriate facilities for women and location of the aid post [all] prevent mothers from seeking treatment.

Aia encouraged women to use health services by providing them with health education. According to him, ‘men usually don’t seek health care’, so he did not know whether the sex of the health worker affected the women’s decisions regarding seeking health care. He said women using the health services ‘prefer female CHWs’ and gave the example of women not visiting the facilities at Toule and Dubanateboa aid posts, which both had a male CHW.

Aia’s approach in his work reflected his cultural and educational background. His secondary education in a city school gave him the confidence and language skills to work effectively. Indeed, he was the only health worker who ‘found the interview questions ... educational and a learning opportunity which enabled him to see things differently and provide better health services for women’. He said:

This is my first time to be involved in such interviews. It is good to have such discussions because it helps me learn. If you come back to interview me another time, you will find that I will be doing things differently as a result of the interview. It has made me think.

Although, Aia did not make this explicit, his approach to work was influenced by religion. I met Aia when he was attending an SDA Church seminar that had been organised for several Tubulamo villages. He suggested to me that the operation of the aid post was flexible and suitable for the majority of village people who were SDAs.

### ***Gabriel – CHW at Alepa Village***

Gabriel was the CHW at the Alepa aid post and lived there with his family. He was aged between 36 and 45 years and was from Dubanateboa village. He had completed Grade 10 at a SDA high school in Central Province and had obtained his CHW certificate from Gaubin CHW Training College, a Lutheran Church-run training institution in Madang Province. Gabriel had worked for 22 years, nine of them at Alepa. He was supervised by the District Health Coordinator based at Kwikila Health Centre.

The Alepa aid post provided general health services, such as immunisation and family planning, to people living in villages within its catchment, including Konakou,

Poletuguna, Boku and Inuma. However, patients from Inuma did not visit the aid post but rather, visited the Toule School aid post, which was closer. The Alepa aid post was built as part of a partnership agreement between the government and Childfund Australia because the community had gone many years without access to health services. Under the arrangement, Childfund Australia built the aid post while the government, through the Central Provincial Division of Health, provided medicines, management and staff salaries.

Gabriel treated fewer than seven patients per day and fewer than 50 patients per week. As he did not have many patients, he said, 'In a day, I may see only two or three patients, so I go and stay at home and patients come to the house and knock. There are no queues for medicine'. People sought treatment 'mostly for simple coughs and colds', although 'malaria cases were high during the first four years' of his work there. The malaria cases had declined considerably since RAM distributed bed nets and provided training on rapid diagnostic tests for Gabriel to use. Most of the RAM nets are provided through a Global Fund grant to the government and then RAM distributed the nets. Women mainly visited the aid post for family planning and the treatment of sores and sometimes sought treatment for urinary tract infections, but this was not common. Mothers took children to the aid post when they were ill and adults went there when they experienced aches in their body and needed painkillers. Men visited the aid post for urinary tract infections, which were 'common with men over 45 years of age'. Fractures were common in children aged between five and 10 years; Gabriel attended to simple cases and referred complex ones to PMGH. The health services were not free and Alepa people paid 50 toea per visit, while people from the other villages paid PGK1.00 per visit. This user-fee policy contributed to some people not using the aid post.

Gabriel's efforts to provide health services were influenced by several factors, including his training, cultural background, relationships with people (through family and marriage ties) and language. Being a Tubulamo person and maintaining relationships with people in the area through family and marriage ties particularly influenced his interactions with women patients. He commented, 'I am part of them and my way of interaction with them encourages women to visit the aid post'. Having similar cultural values and language enabled him to speak to the women in a language they could understand about the importance of ANC and supervised deliveries. He actively encouraged women to deliver their babies at the hospital and to go for ANC. In addition, his CHW training enabled him to encourage women to speak openly about their illnesses when they were reluctant. He



said, 'I explain myself and inform them that I am trained to help them so they have to be open'. However, his relationships and cultural background also discouraged some women from seeking help. Because Tubulamo culture prohibits a brother-in-law from associating closely with a sister-in-law, many women could not visit the aid post because they were related to Gabriel. As Gabriel said, 'Tambu, tambu (in-law relationships)<sup>5</sup> stop women from approaching me for treatment'. These women had to go to PMGH or Gerehu Hospital for ANC and deliveries.

According to Gabriel, his willingness to assist women arose because of their limited education and particularly, their inability to read and write. He said that women with no education found it hard to understand what the health worker told them and often did not take their medicine at the right time. In addition, he had experienced situations in which the sex of the health worker influenced the interactions, providing an example from his previous post in another district in Central Province, saying, 'I saw women with all the illnesses, but they preferred a female health worker. Men are free to see any of the [health] workers'.

Gabriel's work practice reflected his cultural background, relationships, education and language. He was discouraged by the women's low level of education and inability to comprehend the importance of health care. In addition, he exhibited some influence from religion in his approaches, such as not opening the aid post on the weekend because of church attendance.

The examples of these three CHWs reflected the diverse influences of culture, language and religion on health workers in Rigo. While one of the CHWs was from the language group of the villages under study, the other two were not. In addition, the CHWs differed in their responsibilities, including the type of health facility, the level of resources available and their working environment. Whereas two were responsible for aid posts and worked alone with limited resources and institutional support, one worked in a team in a larger district health centre. The number of patients each of these workers treated differed, owing to the level and type of the health facility. Bonnie treated more patients at the district health centre than the two male health workers in aid posts. Gabriel treated the least number of patients and operated very differently, with patients often visiting him at home when they needed care. All three CHWs had attended church-run CHW training institutions.

Despite their differences, there were similarities among the three CHWs. All three workers were in the same age group, had similar educational qualifications and training and had finished high school at Grade 10 level before obtaining their CHW certificates. There was some similarity in their level of service, with all of them having worked for many years (19, 20 and 22 years). While one had worked for 20 years in the same district, the other two had worked in the same health facility for seven and nine years respectively. The health services that they provided for women were very similar, with a focus on MCH, including family planning and ANC. All other women's health issues were referred to other health facilities or the PMGH.

The three case studies showed that several factors determined patient-worker relations, particularly those with women: the type of health facility, the culture and language of the CHW, religion, the sex and education level of the CHW and the working environment. Such factors were not neatly categorised and did not always simply encourage or discourage the use of health facilities, but varied according to how a particular CHW related to an individual woman. For example, I observed that the two male CHWs had much closer relations with women patients than the female CHW did. There were several explanations for this. Both of the male CHWs lived and worked in the village and so knew the women and their families well. In contrast, Bonnie lived far from the women and only met them when they came for treatment. However, for Gabriel, the sex of the CHW was a major factor in the interactions between a male health worker and many women in other parts of the province. Culture and language could be both a factor that encouraged or discouraged health workers in their interactions with women. Bonnie, who was from another province, did not speak the local language and did not know the culture of the patients. Accordingly, she was disconnected from them and she did not exhibit any enthusiasm or personal drive to help them. Language barriers and different cultural beliefs prevented her from having good interactions with women, as demonstrated by the way she responded to questions and her general lack of motivation to improve her relationships with women so they would visit the health facility.

Similarly, Aia, who was from the same district but from another language group from the people with whom he worked, found that mothers did not approach him because of the language barrier. He thought that cultural factors, such as women's limited education, the sex of the health worker and the distance to, and location of, the health facility all prevented him from having good interactions with the women. In contrast, Gabriel, who was from the same district and language group as the women he served, did not have

problems interacting with female patients, apart from the cultural practices regarding in-laws, which prevented women from using the health facility.

Religion influenced the CHWs in their delivery of health services. While Bonnie lived and worked in the district and did not participate actively in daily village activities, Aia and Gabriel both related well to their patients because they lived in the village and attended the same church activities, and so were able to interact well with people when they were not visiting the health facility.

### **4.3 Discussion of the Tubulamo Findings**

This research provided some insights into the health of Tubulamo women and the CHWs providing health care. The findings showed that women's ailments reflected their sociocultural environment. The majority of women suffered from backaches because of gardening and carrying loads, as determined by their cultural practices. Women's health knowledge differed depending on their individual experiences. Informal institutions, such as the church and family members, were found to be influencing women's health knowledge, as well as school. Health was the responsibility of the family and the type of treatment options to be taken was determined according to the level of resources available to them. The findings showed that women's use of health services was determined by factors on both the user side and the provider side.

The study found that the use of biomedical health services by women was low, for several reasons. For example, Tubulamo people used various forms of treatment that could take place before, after or at the same time as their use of biomedicine. As explained in Chapter 1, medical pluralism in PNG is not new (see Frankel & Lewis 1989; Whittaker et al. 2009) and it is found in other countries as well (Abdullahi 2011:116–117, 2013:37), including developed countries (Abdullahi 2011:117; Amzat & Abdullahi 2008; WHO 2001, 2002a). This suggests that the use of AM therapies in a pluralistic or single health care system does not necessarily determine good health outcomes. This is shown by the fact that the health systems of developed countries recognise AM but continue to have better health outcomes than developing countries. Therefore, positive health outcomes are not achieved by the use of biomedical health services alone because health outcomes reflect the general quality of life and the environment in which people live. This suggests that there is a need to go beyond the domain of biomedicine to improve the environment in which people live.

The women's use of health services was encouraged by their belief in the ability of biomedicine to treat them. However, while many women hoped that the formal health services would enable them to become well again, the some of the women were discouraged from using these service because they could not afford to pay the treatment fees or the transport costs incurred when travelling to the facilities. Access to financial resources has been found to be a barrier to the use of health care by women in both urban and rural areas in many developing countries. For example, Lubbock and Stephenson found that women in Nicaragua were prevented from using maternal health services by financial constraints. In this current study, socio-economic status was positively associated with women's use of health services when women had access to money and could afford treatment and these women were much more regular users of health services than those whose socio-economic status was lower (2008:92). As has been found in studies of other countries, other factors discouraging the women in this study from using health services were their beliefs in, and reliance on, informal treatment practices, as well as the distance between their homes and health facilities (Andrew et al. 2014; Johansson et al. 2000; Lubbock & Stephenson 2008; Muriithi 2013; Siddiqui et al. 2011; Tomison 2013; Uchendu et al. 2013; Vallely et al. 2014; van der Hoeven et al. 2013; Whittaker et al. 2009).

The women's use of health services did not follow the sequence of Mechanic and Andersen's HSB frameworks. For instance, the women's predisposing demographic and socio-structural characteristics were not found to influence their HSB. Their health beliefs were more significant in influencing the type of provider to visit and treatment options. These case studies showed that provider-side determinants influencing HSB, such as distance to travel, location of health facilities, treatment procedures and CHW behaviour were significant, but had been overlooked in Mechanic and Andersen's HSB framework. This showed that the HSB framework was not completely suitable for the analysis of health issues in developing countries.

The uncaring and disrespectful behaviour of CHWs was found to have a bigger impact on women's HSB than the poor condition of the hospitals and other provider-side factors. Poor family planning was found to have a negative relationship with maternal health service use when CHWs were unfriendly towards mothers with high parity and poor spacing of children. These findings were consistent with previous studies in PNG, with Garner and colleagues observing that poor staff attitudes towards patients was a barrier for women delivering at a health centre in one East Sepik District. Despite a high

proportion of obstetric complications in birth, most women chose to deliver at home (Garner et al. 1994). Andrew and colleagues (2014) found that in Madang, the negative attitudes of health workers had a major effect on women's use of health services. Very few studies have examined the significance of the interactions between health workers and patients and their impact on HSB and health outcomes, as most HSB studies have centred on service users and factors influencing their use of the services. Although human resources are considered crucial (World Bank 2011), previous studies conducted in PNG have addressed the provider-side barriers, which relate to the health facility's organisational arrangements and processes.

The factors encouraging or discouraging health workers in their work were influenced by their cultural, religious and educational backgrounds, as well as conditions and resources of the health facility in which they worked. Similarly, the factors encouraging or discouraging women with regard to using health services were influenced by their cultural, religious and educational backgrounds, as well as their socio-economic status and previous experiences with health workers and the treatment procedures at the health facilities. This suggested that health outcomes could not be improved by focusing only on the use of biomedical health services. Morbidity and mortality are dependent on various factors, such as the general environment in which people live in, their access to services and their social and cultural beliefs and practices regarding food and nutrition, health and illness.

Culture and language were observed to have both negative and positive effects on the HSB of women. While CHWs were encouraged to assimilate with villagers, this was a barrier for women because of social and cultural norms. For example, Gabriel at Alepa aid post stayed at home because he had so few patients. This did not encourage women to use the health facility. Carrier's study of Ponam in Manus Province found that the status of the aid post orderly affected his ability to provide health services because he was also 'an important man in the village, a clan leader and councillor'. As such an important man, he kept irregular clinic hours and although he responded to requests for help, some people were reluctant to approach him because of his status (1989:161). Another PNG study by Howes and colleagues found that some aid posts in remote communities did not have regular opening hours and operated on a 'needs basis', opening when there were patients (2014:65).

None of the health workers interviewed offered any suggestions for improving the use of health services or conducting activities to improve the health of the population. This differed from observations made by other PNG researchers. For example, in the mid-1960s, Andrew Strathern observed an aid post orderly in Pangia in the SHP, who provided community education about health by digging latrines and fish ponds for the local community, as well as advising women on childbirth. However, he also pointed out that health workers in Mt Hagen neglected their work in favour of social activities (1989:144). The original idea was to have CHWs (formerly aid post orderlies) from the same area working with their own people. It was thought that if the CHW and patients understood each other, PHC needs would be met more easily than if the CHW was unfamiliar with a community (Frankel 1984 cited in Carrier 1989:161). Strathern observed that 'healthcare is unbalanced if [the] emphasis is on medicine and there is ... no ongoing community education in healthcare' (1989:144). Although CHWs are required to undertake health promotion in the villages, this research found that this was hardly ever done, even though there were churches, schools and groups in villages with which the CHWs could collaborate for conducting health promotion. People's lack of knowledge about health and the benefits of health care services not only contributed to lower use of health care facilities but also drove them away from being helped. The irregular opening hours of facilities and poor conditions and infrastructure contributed to aid posts not meeting the expectations of women and these could be seen as examples of institutions driving patients away from using the health services.

#### **4.4 Conclusion and Recommendations**

This discussion has shown that health services provided at the district facility and aid posts differed according to the level of care. They were selective and targeted at childbearing women and young children below five years of age. There were no preventive approaches taken through health promotion activities by health workers. The facilities only provided treatment for patients but did not go beyond this to prevent illnesses. Many patients visited hospitals in the city for specialist care because they were unable to get treatment at the facilities at the village and district levels. No other services were provided for addressing non-physical determinants of health, such as mental health. With limited sectoral agencies operating in the district (e.g., agricultural, economic and social development), there were no services available for tackling social and emotional health and improving access to finance. Although churches were the only institutions with influence in the communities, they were not effectively engaged in health issues. There

were no relationships between health workers, schools, churches and groups in the communities. The resources allocated for implementing targeted interventions were limited to the village and district levels.

Improving health outcomes among the Tubulamo would require the idea of health to be expanded beyond disease and the curative focus of biomedicine to adopt preventive PHC approaches. Health workers would need to be trained on the importance of multidisciplinary and multisectoral approaches, requiring partnerships between formal and informal agencies in the villages and communities, such as schools, churches and groups for health promotion in resource-scarce environments. Partnerships between health workers, churches and individuals practising or providing remedies that promote health would need to be established at the village and district levels.

The findings have suggested the need for comprehensive health care covering all populations and addressing the determinants of health through the combined efforts of agencies in the villages. Having Village Health Committees in the villages, comprising representatives of agencies, including men and women, would be an appropriate approach for oversight of health service delivery and guiding health promotion activities in the villages.

## Chapter 5: Case Study 2- Moka Gomo of Imbonggu District

This chapter focuses on the rural highlands site of the study, the Moka Gomo villages of Imbonggu District in the SHP (see Figure 5.1). The Moka Gomo villages are Kou, Imbupali, Topel, Maitana, Walume, Komakul, Pokal, Kowangil, Pakule, Konapulu and Orei. They are located within two LLGs: Ialibu Basin Rural LLG and Imbonggu Rural LLG. The estimated population of the two LLGs is over 38,000 (PNG NSO 2012), with the population of Moka Gomo villages at around 15,000. Most of the villages are situated on the Highlands Highway.

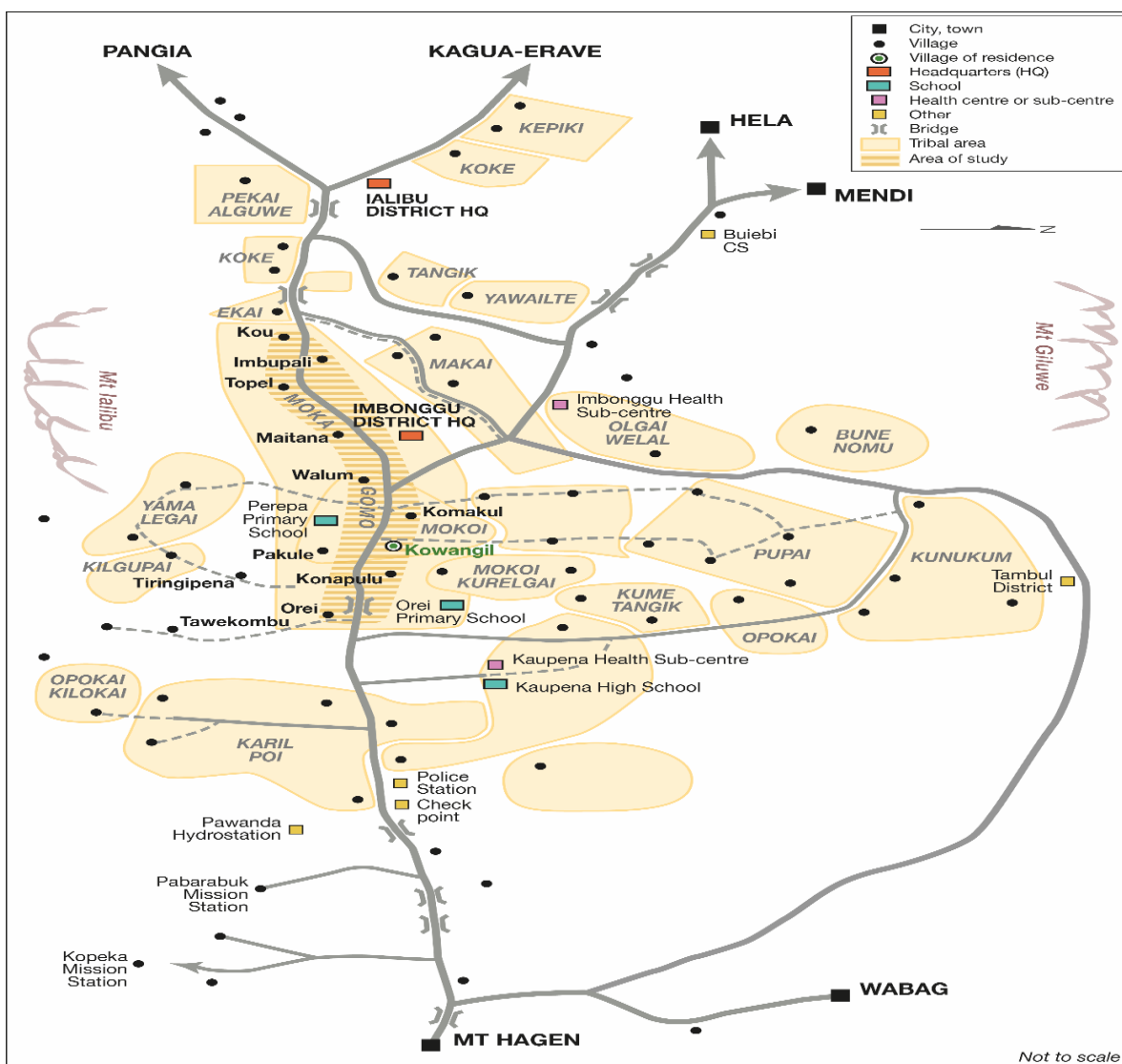


Figure 5.1: Location Map of Moka Gomo Villages



## **5.1 Background and Study Setting**

Few studies have examined the reasons for the relatively high number of maternal and infant deaths in the SHP (Alto et al. 1991:613). Several anthropological studies have examined the sociocultural aspects and responses to illness of some ethnic groups in the province (Haley & May 2007), including the Huli (Frankel 1986; Schieffelin & Crittenden 1991), Wiru (Clark 2000) and the Duna (Haley 2002; Stewart & Strathern 2000, 2004). The majority of studies on women's health in the Southern Highlands have been on the topic of reproductive health and birthing among the Huli, before the area where they reside became a separate Hela province (Alto et al. 1991; Alto & Irabu 1996). Having the PNG Institute of Medical Research centre based in Tari has enabled the collection of a considerable amount of data on health issues among the Huli. However, very little has been written about women's health, birthing and other social aspects in other ethnic groups in the SHP, such as the Kewabi, Wiru and Imbonggu, apart from a few studies conducted by either individuals or organisations. William Wormsley's 1978 PhD thesis on Imbonggu culture and change is perhaps the only detailed work on the Imbonggu. In the past few years, the ADB's environmental impact assessment for the work on the Highlands Highway (2014) has provided some material on the recent social and economic situation of the people and the area. Perhaps there is an assumption that the Imbonggu have easy access to services and this contributes to them being overlooked in studies of issues affecting the district. However, generalisations about the health of women in the SHP cannot be made from the few studies based on small samples, especially when very little research has been carried out on other language groups. The findings of this study have helped to fill this gap in the literature and have provided some insights into the health of women in the district and their HSB.

### **5.1.1 Geographical and Linguistic Description and Colonial History**

Imbonggu refers to the people and language spoken by those living in the Imbonggu District (Wormsley 1978:12). Prior to the construction of the Highlands Highway from Mt Hagen to Mendi in 1974, the only access to Ialibu and Imbonggu was by foot or light aircraft, as well as a road along the eastern slopes of Mt Giluwe from Mt Hagen through Tambul District, which was built in 1959 (Wormsley 1978:14).

During the research I resided in Kowangil Village (see Figure 5.1), which has two clans: Kowangil and Lapiki. At that time, the population of the village was about 500 people, in approximately 50 households, although some members were living in Port Moresby, Lae

and other highlands provinces. The houses are very dispersed on the Moka Gomo land, with some perched on the hills further from the Highlands Highway, while others are located on hill slopes and next to the Highway. Kowangil is situated adjacent to the Highlands Highway and therefore, is accessible to all basic services. It takes less than one hour to travel by vehicle to the district administration centre at Walume or Ialibu, which have banking and postal services, health facilities and markets. The road and transport system in Imbonggu and Ialibu are generally efficient. While access to health services is difficult for many people in other districts of the Southern Highlands, taking more than eight hours to get to most services, people in the Imbonggu and Ialibu districts have easier access, at less than four hours (ADB 2013)<sup>6</sup>. However, some villages have no road connections and people from these villages have difficulty in accessing health services.

The Imbonggu and Ialibu people have a relatively short history of European contact, compared to coastal PNG and some other parts of the highlands. Europeans were first sighted during the 1950 patrol that passed through the Ialibu Basin to Mt Hagen (Wormsley 1978:14)<sup>7</sup>. Francis Puringi informed in a discussion that tribal fighting was common during this time in Imbonggu and numerous government patrols went sent there from Mt Hagen and later, from Mendi, to suppress the fighting. Villages formed alliances with other groups for the purpose of fighting and these alliances were defined by the geographical location of the villages and identified by a common plant or part of a natural object in the area. Moka Gomo is an example of such traditional tribal grouping of villages: *Moka* is the name of a common tree found in the area and *gomo* means leaf in the Imbonggu language. Other tribal groupings include Kambe Gomo, Nondi Gomo and Nondi Piri. Since the arrival of missionaries and establishment of government services, tribal fighting has been uncommon in the district (F Puringi 2015, personal communication, 17 June).

As in many other areas of the highlands the Imbonggu social system and traditional way of living coexists with a modern way of life. Certain ceremonies, such as *moka* and exchange of pigs and money, bride price and compensation payments for deaths are conducted regularly. *Moka* is an exchange system but is closely linked to the idea of 'big men', because the men who organise it are motivated by the desire to demonstrate their wealth and acquire prestige. The ceremonial exchange of pigs and money are a feature of several societies in highlands, including the Melpa of the Western Highlands Province (*moka*) and the people of Enga Province (*tee*) (see Strathern 1971 for Melpa and Feil 1984 for Enga). The Imbonggu *moka* follows the basic pattern of the Melpa exchange, although

with slight variations in purpose, organisation and the items exchanged. Whereas the Melpa *moka* is undertaken by an individual to acquire prestige, the Imbonggu exchange is organised by a group of important men who seek the support of lesser men to provide a large number of pigs for exchange (Wormsley 1978:191, 195, 198).

### **5.1.2 Demographic, Socio-Economic and Health Context**

The population density in the two LLGs is very high. However, they differ in the size of villages, since a village is established along tribal lines and made up of one or more clans. The number of houses in a village may range from 20 to 50, with the population big enough to comprise a ward. As a village is considered to comprise one family, intermarriage within the same village is prohibited. Marriages are arranged with other villages that have no maternal link to the parties. Patrilineal descent is the norm among the Moka Gomo, with land passed from father to son.

Many people in Imbonggu are now beginning to build permanent houses, but some are still living in traditional '*kunai*' (imperata) grass-roofed houses with walls woven from '*pitpit*'. All traditional houses have a central open fireplace and partitions forming rooms, but some families build a separate house for a kitchen and fireplace and use the main house only for sleeping. All houses have small gardens around them, with sweet potato (*Ipomoea batatas*), cabbages, shallots, beans and other leafy vegetables growing. The larger gardens are cultivated some distance from the village. Women do most of the planting and cultivation, although men are responsible for heavier tasks, such as clearing land, digging drains and building fences to keep out animals. Sweet potato, or *kaukau* in Tok Pisin, is the staple crop and is grown all year round, along with other crops (Vail 2002: 113).

### **5.1.3 Political and Governance Structures**

The Imbonggu Rural LLG is the governing body for the Moka Gomo villages. Several villages make up a ward, which in turn constitutes an LLG. Each ward has a Councillor who represents them at the LLG Council, which is presided over by a Council President. The Council President, in turn, represents the LLG at the Provincial Assembly. The Imbonggu District comprises an open electorate for national parliamentary elections. It is represented at the national level by an Open Member of Parliament and at the regional level by the Governor of the Southern Highlands.

The Imbonggu do not have a highly structured system of political organisation and leadership, unlike those that have been reported in Enga Province (Meggitt 1973) and Chimbu Province (Brown 1967). Leadership status is achieved, not ascribed and Imbonggu leaders are similar to the ‘big men’ reported for other parts of PNG. To be recognised as a leader, a person has to demonstrate various ‘qualities and abilities’, including having wealth and having the ability to acquire wealth and manipulate it in *moka* exchanges (Wormsley 1978:225–226).

Churches play a significant role in the lives of the Imbonggu and have a strong influence on village life. Although men still dominate, women are slowly being recognised and encouraged to assume some leadership roles. The structures of the LLG do not have much influence on the lives of people, unlike the churches, which dominate the people’s way of living.

#### 5.1.4 Livelihood and Economic Activities

Because of the area’s high altitude, low temperatures and cloud cover, the Imbonggu people are unable to cultivate coffee or other cash crops (Allen 2007). Compared to the Western Highlands and other highlands provinces, there is limited opportunity to produce fresh vegetables for sale. Despite the constraints imposed by the environment, agriculture remains the main source of cash (ADB 2013:20). Basket making is an industry in Imbonggu and Ialibu and people mainly work in subsistence farming and the informal sector. Pigs are highly valued and the sale of pigs is a major source of income because the demand for pigs for use in exchange is high (Strathern 1968:545; Wormsley 1978:198). Table 5.1 shows the top five economic activities in Imbonggu households in 2010.

**Table 5.1: Top Five Economic Activities of Imbonggu Households, 2010**

<b>Economic Activity</b>	<b>% Engaged</b>	<b>% Engaged for Cash</b>
Food crops	76.2	6.2
Livestock	56.8	7.8
Coffee <sup>8</sup>	32.1	30.3
Poultry	15.8	7.0
Betel nut	5.5	2.9

Source: PNG National Research Institute (NRI) (2010, Imbonggu District Profile 2010)

Another source of income in the village is remittances from relatives working away from the village in formal employment. Other options in the village include running trade

stores, PMV businesses, mechanical workshops, fast food shops and service stations. Almost everyone sells something, either at the market or roadside stalls next to the Highlands Highway. The products sold include vegetables, petroleum products (petrol, diesel), cooked and uncooked food, commercially manufactured goods bought from shops and other general merchandise. A small number of people in a village may be in a formal employment as an elementary or primary school teacher, health worker, office assistant or driver of PMVs. Generally, most village men leave to find jobs in other provinces and make irregular visits home. This absence of men leaves the women with the burden of child rearing and the responsibility for the household, as well as subsistence agriculture and the raising of pigs. The mobility of the men has consequences for health of their wives, which is discussed in the section on women and health.

### **5.1.5 Services and Service Providers in Imbonggu District**

Walume is the district headquarters for Imbonggu but apart from the district administration complex and a few stores, most of the services are provided in Ialibu. People access health care, banking, electricity, postal services, police station and retail shops there. However, most of them travel to Mount Hagen for many other services.

At the time when the NRI conducted their survey in 2010, there were four health centres, two health sub-centres, one district hospital and eight aid posts in Imbonggu, with one aid post serving four or five villages in its catchment. There are no medical doctors in any of the rural health facilities (PNG NRI 2010), which are managed by HEOs (World Bank 2011). The delivery of health care to very remote areas remains a challenge (ADB 2013:18). Moreover, there are a range of health providers in Imbonggu with the government, church and traditional healers providing treatment options for women.

Traditional healers are uncommon in Imbonggu, but can be found in neighbouring Pangia and Kagua-Erave Districts. Some people from the Moka Gomo visit traditional healers in the other districts and the healers use herbs, natural materials and in some cases, utter spells to effect healing.<sup>9</sup> There are no traditional birth attendants in the Moka Gomo villages. Faith healers are mostly used by women who are members of Pentecostal churches. According to the Imbonggu District Profile compiled by the NRI, the area has 76 elementary schools, four community schools, 22 primary schools and two high schools (PNG NRI 2010).<sup>10</sup>

Almost everyone in Imbonggu belongs to a church. The Catholic Church is the largest because it was one of the earliest to establish a base in the SHP. Following the establishment of the government station at Ialibu in the 1950s, several churches were established there, including Catholic and Lutheran Churches and the Evangelical Bible Mission in Kaupena. By 1957, all the churches were fully established. The SDA Church arrived in the 1970s (Wormsley 1978:15). However, despite well over half a century of Christianisation, elements of the past continue remain, including the exchange system mentioned above.

## **5.2 Findings of the Moka Gomo Study**

The findings of this case study have been divided into two parts: women and health service usage and health workers.

### **5.2.1 Women and Health**

The majority of the 23 participants for this case study were from Imbonggu District. Three participants were from other neighbouring districts in Southern Highlands and four were from other highlands provinces but married to Moka Gomo men. The number of participating women between the ages of 26 and 35 years was higher than the other two age ranges (36–45 years and over 46). The sociodemographic characteristics of the women, including their education level and other details, are provided in Table 5.2.

**Table 5.2: Socio-Demographic Characteristics of the Moka Gomo Women**

No.	Education Level	Church	Church Attendance	Marital Status	No. of Children	Occupation
R23	Grade 7	CLC	Weekly	M/1 <sup>i</sup>	4	SG <sup>ii</sup>
R24	Grade 3	CLC	Weekly	M/1	4	SG
R25	0 <sup>iii</sup>	Catholic	Sometimes	M/1	2	SG
R26	Grade 6	CLC	3 days	M/1	3	SG
R27	0	Catholic	Weekly	M/1	3	SG
R28	Grade 2	Catholic	Weekly	M/3	3	SG
R29	Grade 6	Catholic	Weekly	M/2	7	Informal sector
R30	Grade 6	Catholic	Weekly	M/1	2	Informal sector
R31	0	CLC	Weekly	M/2	4	Informal sector
R32	Grade 5	CLC	Weekly	M/2	2	SG
R33	Grade 10	Catholic	Weekly	M/1	4	SG
R34	Grade 10	Catholic	Weekly	M/2+	4	Unemployed
R35	Grade 6	Catholic	Sometimes	M/2	0	SG
R36	0	Catholic	Weekly	Widow)	6	SG
R37	Grade 8	Catholic	Weekly	Separated	1	SG
R38	0	Catholic	Weekly	M/2+	0	SG
R39	Grade 8	Baptist	Sometimes	M/1	6	SG
R40	0	Catholic	Weekly	M/1	12	SG
R41	Grade 6	Catholic	Weekly	M/1	8	SG
R42	Grade 4	Baptist	Weekly	M/1	0	SG
R44	Grade 10	COC	Weekly	M/1	4	SG
R45	Grade 8	Revival	Weekly	M/2	1	SG
R46	Grade 10	COC	Weekly	M/1	5	Formal sector

Notes: (i) M refers to married. M1 – married to man with one wife, M2 – married to man with two wives, M3 – married to man with three wives; M/2+– married to man with many sexual partners (ii) SG – subsistence gardener (iii) 0 means not schooled.

This table shows that the majority of these women had been to school, with only a small number never having attended school. Only one woman had tertiary-level education, while four women had finished Grade 10 and another five had completed primary school. Of the women who did not complete schooling, four did not complete high school and another four did not complete primary school. The table also shows that 14 women were married to men with one wife while seven were married to men who had either two or three wives. The table provides a picture of the economic status of the women, which fell into three categories: formally employed, informal sector activities and subsistence

gardening. Although the table shows that the majority of women were engaged in subsistence gardening, the women could be engaged in all three categories, or two of the three: many women who were engaged in subsistence gardening also sold things to earn money and even women who had formal employment engaged in subsistence agriculture and informal sales to generate extra income for the household.

### 5.2.2 Beliefs with Regard to Health and Illness

The details of five Moka Gomo women's lives are presented in this subsection to provide insight into their beliefs and perceptions with regard to health and illness, including sources of their health knowledge. These five women had varying education levels.

Mone, a mother of three, had never been to school. Her understanding of health came from conversations with her family members and from what she heard from other members of the community. Mone perceived illness to be caused by working too hard and not resting well, not eating the right food and not eating meals at the right time. She believed illness could be treated through *tokaut* (confession and admission) of wrongs committed by parents. Mone recognised a sick person if '*em i no wokabaut gut, werim buruk buruk kolos, i no tingting na stap gut o harim gut toktok na bekim gut*' (the person does not walk properly, wears old and torn clothes and does not behave and respond well). She used '*nondi leaves*' or '*salat*' (see Figure 5.2) for her body aches, especially knee and joint pains.



**Figure 5.2:** *Laportea Decumana* (Nondi – ‘Salat’)



Nondi (*Laportea decumana*) is a stinging nettle that grows in the highlands, as well as in other parts of PNG (Nombo & Leach 2010:70). It is used for treating body pains, including joint or back pain, with the affected area being rubbed with leaves from the plant. According to Nombo and Leach (2010:70), the skin will swell up where it has been in contact with the leaves and the pain will disappear. For all other illnesses, Mone visited the health centre. However, if her illnesses were not cured quickly, she resorted to buying herbal products and in one case, she bought some water from a man in Mt Hagen, who claimed it would heal her. This man prayed over the water and claimed he was given the power to heal by God. Despite drinking the water, she was not cured. Mone's belief that she needed to confess (*tokaut*) any wrongdoings as a therapy reflected the influences of traditional beliefs and Christian practices, which held that after confession, Christian prayers were effective in healing. There were some similarities here to the idea of '*popokl*' for the Melpa, as described by Andrew Strathern (1989:147–148). For the Melpa, *popokl* refers to anger that arises when a person has a grievance or conflict with another person. As *popokl* can cause illness, open discussion and resolution of the conflict could provide relief for the ill person.

Laura was married, without children, and was a member of the Baptist Church. Laura had not completed primary school, leaving school in Grade 4. Her sources of health knowledge were the church and nurses at the health facilities. When ill, Laura visited the health centre and used herbal remedies. She described a sick person as having *dust kirap* skin, which has lost its lustre. She believed that bathing daily, eating good food, washing her hands after the toilet and before eating and adhering to the doctor's advice could keep her healthy. Being dirty, not bathing, work very hard without rest and not eating balanced meals could cause illness.

Jedda was a young mother of four children. She had a Grade 7 education and was originally a member of the SDA Church but now attended COC, a Pentecostal church. She believed that illness was caused by smoking cigarettes, not eating good food (or eating fatty food) and having dirty hands, utensils and house. She believed that to remain healthy, she should bathe daily, eat food three times a day and drink plenty of water. Like Mone and Laura, Jedda associated health and illness with physical appearance and the actions of the individual. She said poor health in a person could be recognised by their skin colour being different from normal skin tone and the person bending their back while walking. Her two sources of health knowledge were school and church. When ill, Jedda bought medicine from the chemist and visited the health centre.

Josie was a mother of four children from Pangia District. She had a Grade 10 education and she was married to a Moka Gomo man. Despite her high school education, her perception and understanding of health and illness was not much different from that of Mone, Laura and Jedda. For her, the signs of a person being sick were the way they dressed, having yellow skin and poor appetite, needing to sleep a lot, not working or walking around and not being happy. She believed that to be healthy, she needed to bathe regularly, be monogamous, eat and rest well and avoid eating store-bought food, especially that with too much oil. She learned about health from the church and the hospital.

Alice was a mother of three children and had a Grade 10 education, with further training in elementary teaching. She was an elementary school teacher and church pastor for the Pentecostal Church in one of the villages. For her, the signs of a person being sick were their physical appearance (e.g., a swollen face), difficulties with breathing and the way the person walked. A woman's illness was caused by the use of the same dirty rags during menstruation flow and having an unfaithful spouse. For her, health was maintained by having showers and drinking water daily, keeping away from other sick people and having a positive and cheerful attitude. Alice had been diagnosed with high blood pressure in the past year but she did not take medicine. She relied on faith healing, prayer and having a positive attitude in life. Church was her source of health knowledge.

Several issues emerged in these five cases. One was that the women's understandings with regard to health and illness varied. The majority of women interviewed during this research recognised ill health by a person's physical appearance and their inability to perform normal tasks and attend to daily activities. The five cases showed that the women associated certain physical appearances with illness (e.g., tone and colour of skin and eyes, thinning hair, weakness in movement, weight loss and the type of clothing), as well as by certain actions of an individual. Very few of them considered emotional well-being as part of health, describing an ill person as unhappy and *pes nogut nogut* (not smiling). Some had more understanding of mental health and considered that someone not thinking clearly was evidence of them being ill. Some believed that illness was indicated by an individual not behaving in the normal way and having irregular menstrual flows.

Despite their varying degrees of education, these women's understanding with regard to health and illness were similar in some areas. For instance, Mone, who had never gone to school, believed an individual was ill if the person did not walk properly and wore old

and torn clothes. These types of description were given by women who had attended school as well.

The five cases reflected the perception of the majority of women who considered good health to be associated with good personal hygiene, eating good food, drinking clean water, having sufficient rest and having a positive outlook. The Tok Pisin expression *lukautim yu yet gut* (taking good care of self) advocates healthy consumption and generally living well, including embracing positive habits. Although there was no difference in understanding of what an individual should do to remain healthy among the women with different levels of education, there were some different understandings among the women that reflected differences in their individual experiences of illness in their family members.

The Moka Gomo women's understanding of illness causation were generally very similar. The issues mentioned most often in the interviews were poor hygiene, not eating good food, heavy physical labour without adequate rest and men having many sexual partners. The idea of 'not looking after the body well' reflected the general understanding of many people in PNG, which connects lifestyle to illness. Thus, anything an individual did in the course of living could give rise to illness, including what one ate, drank and the clothes they wore. This concept even extended to social relations with others and could include extramarital affairs.

The differences in the understandings of the causes of illness demonstrated that in many cases, the way an individual understood illness was based on their experiences of illness. For instance, the women who believed that men having many sexual partners was a cause of illness had been affected by STI as a consequence of their husbands having extramarital affairs. Given there have been two decades of HIV prevention messages, it was highly likely that some of the women's health knowledge derived from these sources. Although I did not have statistics to indicate the nature of the HIV epidemic in Imbonggu, anecdotal evidence and discussions with the women revealed that there may have been some deaths from AIDS-related illness, with respondents saying several people in each village had died because of AIDS. During my fieldwork, I witnessed the return from Lae of the body of an Imbonggu businessman, for burial in the village. This man was said to have died from AIDS because his wife had also died from AIDS-related illnesses in the past few years.

Sorcery (*poison*) was not clearly identified by the women as the cause of illness, although the treatment options taken by some of them indicated their belief in traditional healing. The majority of the women had several sources for knowledge about health and illness, mainly being church, health workers and family members, with school as a less common source of health knowledge.

### **5.2.3 Treatment Options**

This research showed that Imbonggu women used a number of different treatment options when ill, including formal biomedicine and informal treatment practices. The five cases that follow provided exemplars of the women's preferred options for treatment. Because the government was the main provider of health services in Imbonggu, more public biomedical health facilities were run by the government than by any other provider, although there were some church-run facilities in some parts of the District. As a result, all the women who participated in this case study had visited the formal public biomedical health facilities as their first option. There were no private health practitioners in the two districts, except in large provincial centres, such as Mt Hagen and Mendi.

The case of Manda demonstrated the experience of many women who relied on formal public health providers:

My illness started after I delivered my second child. I had gonorrhoea because my husband was having an affair with another woman. The right side of my body was swollen and partly paralysed and the doctor told me that I was unable to have another child. Now I have eye problem that is due to thyroid growth and have spent five years in Port Moresby trying to get better. The eye specialist told me that my eye problem was due to fluid in the eye (Hyperthyroid – Thyrotoxicosis) and after giving me medicine, he told me not to stay in a smoke-filled house and recommended further checks and surgery. When I returned to the village, I went to Mount Hagen Hospital and they did blood tests but I was not given medication. I am experiencing severe body aches, but I have no money and the fear of travelling alone to Goroka for surgery prevents me from getting treatment.

Manda's case was typical of many Moka Gomo women. While some women received treatment for their illnesses, others continued to suffer, for a variety of reasons. A small number of women used both formal public and private health providers when they were not satisfied with the services provided by public facilities or when they wanted a quick and efficient service. However, this option was only available to women with money or

with family members who could assist them. During my research, I found that only three women in the Moka Gomo group used the services of private health providers in Port Moresby, Lae or Mount Hagen.

The case of Apagi illustrated the options taken by women who had the financial means to combine the use of formal public and private health providers:

When I was in Port Moresby in 2013, I was very sick with an infection in my uterus. The symptoms included pains when I urinated and the colour of my urine was dark yellow. I also had irregular menstrual flows. I lost consciousness twice and was admitted to Paradise Private Hospital and placed on IV fluid and recovered. However, there was a recurrence of the illness when I returned to the village, so I visited the women's clinic at Mt Hagen Hospital and was put on medication. After treatment, my case was reviewed, but as the infection remained, I had to continue with the medication until the next review. I also suffer from pains on shoulders and back, which have been relieved after I visited the HEO for treatment.

The case of Josie was an example of the different informal treatment practices that the women could turn to if they found biomedicine ineffective. Josie said:

I suffer from *sik bilong meri* (women's illness) and dizziness. I visit the *haus sik* for *sik bilong meri* and a *stone man*<sup>11</sup> for dizziness. I had *sik bilong meri* before I had my fourth child and went to Imbonggu Health sub-centre but as I was not completely cured, I visited the Ialibu Hospital. However, my condition did not improve so I went to Rebiamul Health Centre in Mt Hagen and was tested for HIV. After six months, the results showed I was negative so I was given medicine. But I was still feeling unwell, so went again to Mt Hagen General Hospital when my child was six months old. I was given medicine and was cured. My dizziness started when I was doing laundry at *Wara Kou* (Kou River) one late afternoon. My head became dizzy and I could not breathe and [my] legs went cold and numb. I visited a *stone man* in Pangia and paid PGK500 for a piece of bark for protection. However, my condition did not improve, so I visited the *stone man* again to buy another package, which costed me PGK700 this time. The package included hookworms, fish, tadpole and bark, which were smoked and ashes of this mixture were added into my food. But I prayed before I ate the food and the result was positive and I am cured.

Not all of the women who used a combination of biomedicine and traditional healing received effective treatment. For example, in the earlier case of Mone, when traditional healing was ineffective, she opted to use biomedicine again and became well. However,

some women did not consider other treatment options when biomedicine failed to cure their conditions. They simply gave up and continued to live with their illness and suffer, as was the case with Josephine, who was a mother of five children. She came from Pangia District and was married to a Moka Gomo man who was a driver on the Highlands Highway. Josephine suffered from *sik bilong meri* and since giving birth to her first two children, had experienced pain when urinating. She said:

I went to Mt Hagen Hospital for treatment and was asked to bring my husband, but he did not want to go with me and told me to bring him medicine. I was still suffering from *sik bilong meri* when I had our third child. My husband, however, left me and remarried a woman from his own village. I am now pregnant with my fifth child and have gone to Kaupena, Ialibu and Imbonggu Health Centres, but my condition has not improved. I have no money to pay for transport or medical fees.

Because of financial hardship, some women did not visit any health facilities and relied on natural therapies and home remedies. Although using natural therapies was not common in the Imbonggu, the most used herbal remedies were the use of ‘*salat* leaves’, certain ferns and water therapy as either warm water for steaming the face and water from a *wara kalap* (water fall) which falls on the parts of the body that are aching. Faith healing was a treatment option for some of the women because of the increasing prevalence of Pentecostal churches in the District. For example, Alice had had three experiences of faith healing. She said:

I was infected with STI by my husband, who worked in one of the mines and lived in Port Moresby. I had symptoms like pain around pelvis. I did not go to the hospital for treatment but relied on prayer and was healed. I also suffered from hypertension but I asked my husband and children to tell me only positive stories and not negative ones. I believe there is healing in being positive. I also had knee problem but used herbal products to heal myself. I bought seven packets of 99 products<sup>12</sup> sold at Garden City in Boroko, Port Moresby for PGK200 and followed the instructions on the packet. The pastor prayed over the herbs before I drank it and I no longer have knee problems. I was healed though faith.

These five cases have provided insight into the treatment practices adopted by Moka Gomo women, including their reasons for pursuing particular options. They have shown that seeking therapy entailed trying different biomedical providers if one provider did not solve the problem.

The major finding emerging from these research participants was the coexistence of biomedicine and informal treatment practices, with public health providers being preferred over private providers. Several informal treatment practices were used. A second finding was that the type of therapy chosen was dependent on the women's perceived options, which were influenced by factors, such as education, age, occupation, culture, religion and perceived benefit of the treatment. Therefore, not all women had the same number of treatment options. A third finding was that the treatment used was not linked directly to the women's health knowledge. For instance, not all of the women believed in unnatural causes of illness but they did use traditional healers for illnesses that they considered unnatural and which formal biomedicine was unable to treat (Josie).

The research showed that the majority of Moka Gomo women began their search for healing with the formal public health provider. They did not follow a straight treatment path in a particular sequential order. Most of the women started with the formal public health providers and if not satisfied, sought either private health providers or informal therapies. Some of them made more than one visit to the same formal public health provider or visited other formal health providers in the district and province, or even providers in a different province. The services of the private provider were not a preferred option.

Only some of the women used the services of traditional healers, possibly combined with other options such as prayer. Faith healing was used by women who were members of Pentecostal churches and prayer was a common option, either used on its own or combined with taking medicine or using natural therapies, faith healing or traditional healing. A small number of women self-treated with medicine from chemists.

#### **5.2.4 Determinants Influencing Women's Health-Seeking Behaviour**

This research showed that many factors influenced women's behaviour when pursuing health treatment. In the study, the determinants were categorised in two ways: the perceived benefits encouraging use and the disadvantages discouraging use, as outlined in Table 5.3.

**Table 5.3: Factors Influencing Moka Gomo Women’s Use of Health Services**

Perceived Benefits of Usage	Disadvantages of Usage
- Life – ‘I want to live a long time’	- No money
- Fear of death	- Long distance and fear of travelling alone
- Relief from pain and becoming well	- Shame – male health workers
- Other	- Unfamiliarity with hospital environment
	- Long queues and unfriendly workers

**Note:** ‘Other’ includes children, work, faith and trust in God to heal.

I found that three factors encouraged Moka Gomo women to use health services when they were ill: wanting to live a long life (fear of death), relief from pain and wanting to become well. The desire to live a long life was the factor that motivated the majority of Moka Gomo women to take the first step in seeking health care. This was not simply a question of the women living, but related more broadly to their desire to look after their children. This came through clearly from Jedda, who had four children and combined biomedicine and several informal treatment practices, when she remarked, ‘I want to live long and see my children grow. I am afraid of dying’. Even though Jedda perceived the *stone man* as the worst person from whom to seek treatment, she still approached him because of her desire to live.

Another woman, Essie, who had 12 children, said, ‘*Mi poret long dai. Mi laik stap laip na lukim ol pikinini bilong mi kamap bikpela* (I am afraid of death. I want to live and see my children grow)’. Many of the women feared death when they were unwell. The number of women fearing death was higher among women aged between 26 and 35 years than in the other age groups.

The other factor that often encouraged women to seek treatment was their belief and trust in the ability of health workers and the *haus sik* to address their pain or illness. The severity of illness encouraged the women to pursue treatment. As Laura remarked, she visited the health facility when ill for the relief from pain that would come with medication and several other women expressed this view. This concurred with findings of similar studies in other countries (Tomison 2013:30; van der Hoeven et al. 2008:3; Whittaker et al. 2009:106), which have shown that severe pain prompted an individual to seek treatment quickly; however, if the illness was not severe, the treatment was often delayed until their condition worsened.

The women’s role in the family was another factor that encouraged their use of health services. There was a strong cultural norm, which was emphasised by the churches that a



woman's role was to care for her children and look after the household. This was more common in the rural sites than in the urban site, as illustrated by the case of Alice, who used different treatment practices because of her desire to live for her children and grow old with them. For many women, seeking health care for their children and other members of the household was their priority and came before caring for themselves. Another factor influencing women in their treatment-seeking behaviour included their faith and trust in God to heal, as also seen in Alice's story.

Table 5.3 shows that Moka Gomo women did not visit the *haus sik* because they could not afford transportation and treatment costs. The refrain *nogat moni* (no money) was enunciated by almost all of the participants in this case study. Some women said that life was hard and consequently, they had no choice but to live with their illnesses.

Other factors discouraged the women's use of health care as well. Noeambo opted to use a *glas man* (diviner) because she believed that biomedicine would be ineffective for her. In addition, she was discouraged by the treatment procedures, the long queues and unfriendly attitude of the staff at the hospital, and the difficulties of travelling between two different provinces. These factors discouraged her from going to hospital and made her turn to traditional healers.

Waibi, who used herbal treatments, said her *tumbuna* (ancestors) had used the same herbs for treatment of the same illness and commented, '*Sampela sik i no bilong ol man long save olsem na mi noken go haus sik*' (some illnesses are meant to be kept secret, so I do not need to go to the hospital). Therefore, Waibi did not have much recourse to biomedicine. She was aware that the quality of care was better at the larger hospitals than at aid posts and health centres, because of their laboratory facilities for testing. However, it was not easy for her to visit the larger hospitals because she had no money to pay for the PMV fare or the fees at the hospital. In addition, she had nobody to go with her to the larger hospitals in Mendi or Mt Hagen and was afraid of travelling long distances alone. She was afraid of getting lost in the larger health facilities, with their many different sections.

These cases showed that there were factors on both sides of health service delivery that discouraged women from using the health services. On the user side, sociocultural factors, such as education, age, occupation, religion and culture, economic and physical distance factors were barriers, while on the provider side, the major barriers were the health facility procedures and staff behaviour.

### 5.2.5 Health Care Providers

The original intention of the study was to study both formal (public and private) and informal providers. However, as there were no private and church-run health facilities in this district, the focus was on the formal public providers as well as the informal providers. As noted earlier, some women visited traditional healers in Kagua, Erave and Pangia districts and some even went as far as Mt Hagen if necessary. The majority of health services in Imbonggu District were provided by the government, which had 17 aid posts, though only eight of these were open during the fieldwork. There was a district hospital in Ialibu, providing major health services to people in Ialibu and Imbonggu districts. The Imbonggu Health sub-centre at Pogorapul was the main health facility in Imbonggu and was used by the majority of the participants in this case study. The Kaupena Health sub-centre, run by the PNG Bible Church, was located some kilometres away along the Highlands Highway and provided health services for the villages in its catchment. An aid post in Komakul (a Moka Gomo village) provided basic health care for the people but was underutilised. In line with the National Health Plan 2011–2020, there were plans to build a Command Health Post in Perepa, between Kowangil and Komakul villages.<sup>13</sup> At the time of my fieldwork in October, the Kowangil and Kiopala villagers were preparing the site for the command health post, using their own resources (see Figure 5.3).



**Figure 5.3: Site for Perepa Command Health Post after Community Work**

## 5.2.6 Socio-Economic and Demographic Description of Health Care Providers

Nine health staff in the district participated in this study, including both formal biomedical health workers and informal healing practitioners. The socio-economic and demographic descriptions of the health workers are shown in Table 5.4.

**Table 5.4: Socio-Demographic Details of the Moka Gomo Formal Health Care Workers**

Sex/Age Category <sup>i</sup>	Place of Origin	Education Level/Training	Position	Years of Work	Years in District
M/4	Imbonggu SHP	Grade 9 – Theology Certificate & Aid Post Orderly Certificate	Pastor, volunteer CHW	> 20	15
M/4	Imbonggu SHP	Grade 6 – CHW Certificate	CHW	> 40	>20
F/4	Milne Bay	Grade 8 – CHW Certificate; Advanced CHW Certificate; Bridging NO Certificate	NO	32	15
M/4	Hela	Grade 10 – CHW	CHW	> 30	7
F/4	Imbonggu SHP	Grade 8 – CHW Certificate	CHW		26
F/3	Pangia SHP	Grade 8 – Nurse Aid Certificate; CHW Certificate	CHW	28	15
M/3	Imbonggu SHP	Grade 12 – Diploma HEO; Paramedical (CAHS) <sup>ii</sup>	HEO/OIC <sup>iii</sup>	> 20	12
F/4	WHP	Grade 6 – NO	NO	> 35	26
F/4	Imbonggu SHP	Grade 6 – NO	NO	> 35	

**Note:** (i) Age categories: 1: 18–25 years; 2: 26–35 years; 3: 36–45 years; 4: 46 years+ (ii) Officer In-Charge

This table shows that of the nine health workers, one was a male who practised both biomedical and informal healing, while eight worked in the formal system. Five of those working in the formal health system were females and three were males. The formal health workers who participated in the research included one HEO, three NOs and four CHWs. The number of those in the formal system who were aged over 46 years was higher than workers aged between 36 and 45 years. The level of education of the health workers in the district varied. The majority of health workers had been schooled to Grade 6 or Grade 8, apart from the HEO, who had a Grade 12 education and an HEO diploma, and another CHW who had reached Grade 10. The worker practising both formal and informal healing had a Grade 9 education. As illustrated in the table, the three female NOs were over 46 years of age and had worked in the health system for over 30 years. Their educational qualifications varied, with two NOs having a Grade 6 certificate and one with a Grade 8 education. All three NOs had been to primary schools and had undertaken nursing training before PNG's independence in 1975. For the CHWs, one had

received aid post orderly training before independence, while the other three attended school in the 1980s and 1990s. One of the health workers was in polygamous marriage with two wives, but all the rest were in marriages with only one wife. The majority of the health workers were from Imbonggu, two were the Highlands Region and one was from the Southern Region.

The table shows that the number of years of worked varied: one worker had worked for more than 30 years, seven of those in this district. Of the other eight workers who had been there for more than 10 years, three had worked for 15 years and three had worked for over 20 years.

For insight into the delivery of health services and the underlying factors contributing to encouraging or discouraging women from using the health services, selected cases of health workers who were attending to patients directly are provided next, describing the hospital and facility contexts in which they worked and the factors influencing their work practices and their relations with patients.

#### ***Byako - Female Nursing Officer – Maternal and Child Health***

Byako was over 46 years of age and came from Western Highlands Province. She had worked as an NO for over 35 years, 26 of them in the Ialibu and Imbonggu districts. She had been trained at a Baptist Union health centre more than 35 years earlier, after finishing Grade 6 at school, which was the requirement for nursing and CHW training prior to independence. (She was one of the privileged women selected for the nursing course during that period because the education and training of girls was not widespread in the Highlands.) Byako currently worked at the Imbonggu Health sub-centre. She was in charge of MCH services and assisted in suturing during minor operations and general health services.

The Imbonggu Health sub-centre (see Figure 5.4) was a government-run facility and under the responsibility of the Southern Highlands Provincial Division of Health. It oversaw several village aid posts in its catchment. The facility was located on the Southern Highlands section of the Highlands Highway between the Imbonggu District administration headquarters and Mendi. The services at the health sub-centre had been affected by burglaries and disputes with local landowners.



**Figure 5.4: Imbonggu Health Sub-centre**

The building was divided into seven rooms and included an outpatient room for both adults and children, a delivery room for births, an observation room for emergencies, a room for examinations and doing tests for infections, and a storeroom. One room served as an office for the HEO and another was for the use of staff. Because of the high altitude and cool temperatures, there was no need for air conditioning or ceiling fans. The health centre was closed for a month in July 2015 and did not have electricity at the time of my fieldwork because the power lines to the health facility had been cut by landowners who were disgruntled about compensation for the land on which the facility had been built. The centre was normally only open for outpatient services. It did not provide inpatient services because there was no running water, nor the other essential facilities required for inpatient services. A few long benches on the veranda of the facility served as the waiting area for patients; the space inside the outpatient room could accommodate only five people at a time. The delivery room had no proper delivery beds and equipment. In fact, when I walked into the delivery room, I was shocked when I saw the bed that the HEO told me was a delivery bed (see Figure 5.5).



**Figure 5.5: Delivery Bed in Imbonggu Health Sub-centre**

Table 5.5 shows the number of births that the centre had supervised in the months preceding my fieldwork.

**Table 5.5: Births in Imbonggu Health Sub-centre in 2015**

Month	Births	Month	Births
January	0	July	0
February	4	August	6
March	4	September	8
April	6	October	1
May	3		
June	3		

**Note:** There were no deliveries in July because of the closure of the centre

Byako provided treatment to fewer than 20 patients between Mondays and Thursdays every week, with the common ailments being colds and flu, pneumonia and malaria. If a case was severe, the patients were admitted and put under observation. Mondays and Wednesday were the busiest days for Byako because the HEO was available then. The main women's illnesses were asthma as well as PIDs for both young and old, married and unmarried women, which Byako said was the reason for infertility being common in Imbonggu District. (Urinary tract infections were common in men as well.) The outpatient fee was PGK2 and this was used for mowing the lawn at the centre. Except for a few patients from other provinces, most of the patients spoke Imbonggu language. Byako

mainly spoke to the patients in Tok Pisin and Imbonggu, because she had worked for a number of years there.

Byako's day began when patients entered the facility and she welcomed them with either a hug or a smile. She then checked their condition and weight, assessing the type of treatment they needed and whether they required an injection or only medicine. She and her colleagues reported to the HEO, who was also the District Health Manager.

Byako believed in providing a patient-centred service, commenting that the patients were her 'garden' and she did not get angry with patients. She believed that being happy with patients and having a welcoming and friendly attitude, treating them warmly, attracted patients to the facility. Her years of experience in the district meant she often had informal conversations with women in public spaces, such as the markets, where they communicated their health problems to her. When they reported an illness, she encouraged them to visit her at the health facility.

She was aware of their need for privacy and confidentiality and said, 'When asking patients for the history of their condition, I ask them to see me in private room, if I sense they are withholding information'. Byako believed that women were prevented from using health services by fear and shame with regard to their private parts being examined by health workers, as well as by lack of money and transport. She believed that the women sought treatment because they trusted the health workers. In addition, she thought that women were attracted to the health facility because they could get injections there, which they believed treated illnesses much faster than medicine.

Byako's approach to providing care was mainly influenced by her nursing training, years of work experience and the number of years she had spent in the district. Although she did not clearly indicate it in her discussions, it was obvious that Christian values of kindness, empathy and humility in caring for the sick were reflected in her work.

### ***Jatapu – Female Nursing Officer – General Duties***

Jatapu was from Milne Bay Province and came to Imbonggu District when she married a policeman from the Moka Gomo. Following the breakdown of her marriage, Jatapu decided to remain in the district with her children and had lived in Imbonggu for 15 years. She could understand and speak basic Imbonggu. She was trained as a nurse assistant in

1972 after finishing Grade 8 (then Form 2). After five years of work, she was sent to a Catholic Church-run CHW training school to be trained as a CHW. She became an NO after doing a bridging course on nursing in 1982.

Jatapu worked in the same health facility as Byako and was responsible for MCH and outpatient services, as well as arranging referrals for patients to facilities in Ialibu, Mendi and Mt Hagen. Jatapu treated outpatients, with the common illnesses being diarrhoea, pneumonia and malaria. Over 50 outpatients from villages in Ialibu and Imbonggu, as well as from Kagua-Erave and Pangia districts, visited the facility each week.

Like Byako, Jatapu reported to the HEO. Her approach to delivering care to patients reflected a tension among procedures, skills, professionalism and her own personality. For instance, the treatment procedures required patients to pay before treatment, but Jatapu showed less concern with the collection of fees. She said, 'We charge PGK2 to PGK3, but this depends if the patients have money'. She was guided more by her nursing ethics and training than by the treatment procedures, as demonstrated in a number of areas. First, she used a triage system to treat emergencies prior to treating other non-urgent patients and collecting fees. Second, she respected the patient's right to privacy and maintaining confidentiality, saying, 'When women are ashamed to openly talk about their illness, I talk to them in private. Some women have questions about certain symptoms, like cervical cancer'. Jatapu knew that some patients felt uncomfortable with discussing certain illnesses so she referred male patients to male health workers, while she treated the female patients. She believed that the way staff approached patients influenced the women's willingness to visit the health facilities, saying, 'They will not come back if staff ignore them'. She was aware that the way staff related to patients was a reflection of their 'internal feelings', as reflected in their appearance and attitudes. On the other hand, despite Jatapu's attempts to be connected to the patients, there was obviously a gap between them because of their language, cultural and ethnic differences. As a coastal woman, some Imbonggu cultural practices prevented her from interacting well with the local women. She was frustrated about this, saying that there was too much *haus krai* (mourning house) and the women did not think enough about caring for themselves and visiting *haus sik* when ill. She was more considerate regarding the financial constraints that prevented women from seeking treatment. However, she considered it the responsibility of women to seek help and she thought that carrying out health awareness campaigns might encourage them to visit the facility when ill or to bring their children.



### *Linus – Church Worker and Volunteer Health Worker*

Linus was over 46 years of age and came from Imbonggu District. He was a pastor with the Evangelical Bible Mission and a volunteer health worker. He received basic aid post orderly training when he was undergoing training at a Bible college in the Western Highlands Province. Linus had treated the sick people in some of the remote villages and those living at the borders of SHP and Western Highlands Province for 15 years. Some of the villages, such as the remote Tona and Peambel, were very difficult to reach by road. As a pastor, Linus reported to the church hierarchy. However, it was unclear to whom he reported for the health services he provided, as he was not under the supervision of the Imbonggu District Health Manager.

Linus worked from a small building within the church grounds and lacked the equipment of a normal health facility. He treated five to 10 patients a day and between 20 and 50 a week, with common illnesses being coughs, pneumonia, malaria and TB. He treated women suffering from cerebral malaria, breast cancer and internal bleeding and assisted women in the delivery of babies if they experienced any difficulties. In the beginning, his services were free but at the time of this research, people paid 50 toea or PGK1.

Although some people visited him when they first become ill, usually his services were used as a last resort when patients were advanced in their illness. Linus considered himself a biomedical worker because of his training and remarked, 'I follow the book (Standard Treatment Guidelines) when treating patients' but because he used prayer before examining and treating the patients, he was also considered a faith healer. He said he emphasised prayer in the treatment of severe cases such as TB, saying, 'Before I examine my patients, I pray with them and they give a donation. After assessment of a patient's condition, I pray and give them medicine'.

His statement demonstrated the influence of religion on his work. One of the factors encouraging Linus to provide health care was the opportunity it gave him to convert people to his form of Christianity. He gained satisfaction from treating patients and said, 'I have a reputation for providing instant healing. There have been no negative reports about my services in the past 15 years'. His approach to dealing with the opposite sex was influenced by his cultural values and his training; he usually asked an older woman to accompany any younger woman who visited him. His healing practices demonstrated what could be done to help people who were suffering and in desperate situations. He

combined his very basic skills and some knowledge in biomedicine with prayers to do what he could with the limited resources available.

These three examples of health providers in Imbonggu showed that the health workers' training, cultural and religious beliefs influenced the way they interacted with patients and their delivery of health care. In addition, these cases highlighted various institutional factors (e.g., resources and organisational arrangements) and the issue of individual personalities, which discouraged health workers in their work. The research found that the formal health workers were not as approachable as the informal practitioners, who were flexible and related easily to the women who came to them.

Although it was not explicit, it was noticeable in the cases of Byako and Jatapu that their personalities and backgrounds greatly influenced their work. The number of years worked and their familiarity with the people and place had both a positive and negative effect on their behaviour and attitudes. It could have a positive effect in helping them to provide an appropriate level of care but if the health workers were too familiar with the people, they could become insensitive to patients.

It was clear that the quality of the health services and the good reputation of the health workers not only encouraged patients to visit the health facilities but was also a motivator for staff to improve their work performance. For instance, the HEO was known to be very good with patients and in the villages I visited, the women spoke highly of him. The comments from one of the health workers reinforced this, 'We treat less than 20 patients in a day, but with the HEO, we treat more than 30 patients because many come to *haus sik* when HEO is available'. One villager said, 'I went to *haus sik* and saw female nurses but I did not get treated until I saw the male HEO. He gave me medicine and now I am better'. Even though Linus was unable to provide all the necessary health services, his reputation as the 'last resort for healing' encouraged patients to visit him.

The clash between a health worker's nursing training and their cultural beliefs was another factor that discouraged health workers in their work and in their relations with patients. Further factors that emerged were related to a health worker's personality, the poor working environment, the resources available and supervision by management.

### **5.3 Discussion of the Moka Gomo Findings**

This case study has shown the way health services were being delivered and used by Moka Gomo women in Imbonggu. The women's health reflected the social relations and economic patterns in the villages and the district. Their illnesses were related to heavy physical labour and the practice of polygamy, which is common in the Imbonggu society. The findings supported the idea of health being socially, culturally and economically determined, as advocated by the SDOH model's definition of health. It was interesting to find that the majority of women gained health knowledge from informal sources, such as family members, health workers and church, rather than from formal sources, such as schools. This demonstrated the influence that informal networks and families had on individuals.

The women's use of biomedical and informal treatment practices demonstrated the existence of medical pluralism in Imbonggu. Although the public health system was the most popular, the availability of other treatment practices provided another option for many women. Traditional healers, natural therapies and prayer were used when biomedicine was ineffective in treating illness.

This case study has shown that many factors found by other studies (e.g., woman's age, education, employment, number of pregnancies, husband's occupation, type of housing, access to health facility) were not significant in influencing Moka Gomo women's use of health care. Their desire to live long (fear of death), the severity of illness and trust in the health workers to provide relief were found to have positive associations with their use of health services. Women were encouraged by these perceptions more than by factors such as education, age and access to a health facility. Whereas most studies have found a positive association between education and use of health services, this case study found that most of the childbearing Moka Gomo women delivered their babies in their homes, regardless of their education level. Only three of the 17 women who had been to school had delivered all of their babies in the health facilities. Table 5.6 further illustrates this point, though in some cases women combined home and facility.

**Table 5.6: Place of Delivery (Childbirth) for Moka Gomo Women**

All in Village	All in Health Facility or Hospital	Combined (Village, Hospital or Elsewhere)	N/A or Infertile
12	3	5	3

Babalola and Fatusi explained that one of the reasons for low coverage of supervised births in resource-poor environments, such as those in SSA countries, was the unpredictability of the onset of labour and difficulties in accessing health facilities (2009:8). However, the findings from this case study did not support the explanation of distance and access, because the Moka Gomo women lived less than one hour from the health facilities. Other factors, such as financial constraints and underlying religious, social and cultural perceptions regarding the efficacy of formal biomedical versus informal treatment practices contributed to their low use of biomedical health services.

An analysis of the social context of childbirth among the Imbonggu highlighted the strong influence of cultural beliefs on childbirth and this study's finding on the role of *sem* (shame) in preventing women having supervised births concurred with Babalola and Fatusi's study (2009: 9). This case study revealed that shame played a critical role in Imbonggu childbirth and contributed to women not seeking treatment for other illnesses, although this was not necessarily something they discussed with me. The health workers told me, 'They are ashamed of nurses from same area (*wantok*) seeing their body'. As a small district in which everyone knew everyone, the fear of health workers disclosing confidential information about a patient's illness (particularly STIs) prevented them from seeking treatment and forced them to resort to other informal treatment practices. Consequently, most women delivered their babies alone in the house. In the past, small huts were built a few metres away from the main house for women to use when birthing. While the removal of such huts had given the impression that villagers were complying with health authorities' demands for women to use the health facilities when giving birth, in reality this was not the case. Women continued to deliver unsupervised in their own homes because in the Imbonggu cultural context, delivering a child alone, without assistance from another, was viewed as normal and an indicator of a woman's strength. In rare cases, a woman in labour could be assisted by her mother, mother-in-law or a close female family member.

Several studies in PNG have observed cultural beliefs and practices that were harmful to women and their babies and could frustrate the staff at health facilities. Whittaker et al. found that while some of the cultural beliefs and rituals practised by pregnant women

facilitated the progress of pregnancy, labour and delivery, others hindered the process (2009:104). Vallely et al. made a similar observation for a rural Eastern Highlands village, where some cultural beliefs around childbirth were harmful to women and their babies (2014:7). As this current study focused on women's use of general health services, it was beyond my scope to investigate the reasons for the low use of maternal health services.

Addressing the factors contributing to the low use of services on the user side went beyond addressing individual women to include the broader issue of resolving the socio-economic inequities in the wider society. This study found that an interplay of various socio-economic and cultural factors had a significant impact on the HSB of women and determined the type of health care providers they used. As shown in the cases of Waibi, Jedda and Noeambo, a number of factors determined where the women went for treatment of illness, such as the geographical conditions of the district and the economic hardship they faced because of their inability to pay for transport and treatment fees. Consequently, they could have little experience regarding using health services and little knowledge about the treatment procedures in health facilities.

There were also provider-side factors preventing women from using the health services, such as not being women-friendly, lacking proper equipment and resources, and poor staff behaviour. The poor conditions of the health facilities were also identified by health workers as a factor discouraging them in their work. The factors influencing health workers were a mixture of their nursing training, age, years of work experience, cultural and religious beliefs and personalities. Some social and cultural factors on the village women's side, such as funeral and mortuary rites, were found to annoy nurses. These findings concurred with several studies in PNG on the use of health services (Andrew et al. 2014; Avue & Freeman 1991; Byford 1999; Garner et al. 1994; Agale & Yaipupu 2001; Whittaker et al. 2009) as well as similar studies in SSA (Babalola & Fatusi 2009) and Latin America (Lubbock & Stephenson 2008; Schooley et al. 2007).

Health was being left to the health workers but they were limited to providing services at the facilities. Although they visited schools for immunisation programmes that were initiated at the national level, they did not carry out extension services but expected women to visit the health facility when ill. Apart from maternal health services, services for other women's health issues were not provided. This could have partly related to the poor condition of the health facility, preventing it being inviting and welcoming for women.

Although decision makers have a tendency to think that people living in remote areas are worse off than people living close to services, this case study showed that this is not true. As with those in remote areas, the women who lived close to health services confronted challenges that influenced their use of services, implying that service delivery interventions need to be based on proper assessments. In addition, there is a common perception that women in rural areas, particularly in highlands villages, are unable to articulate and participate in discussions. On the contrary, this study found that the women were very willing to talk. During my fieldwork, there were mornings when women from other tribal groups living far away would come to me to be interviewed, or simply tell me about their illness, when I was still asleep.<sup>14</sup> To them, there was no difference between a medical doctor and a doctoral student, even though I had no idea about how to handle medical equipment. Nevertheless, the clear message emerging from my research was that the women had health problems, needed help and wanted their voices heard. The eagerness and willingness of the women to confide in and trust a researcher with their confidential illness experiences and histories demonstrated this. Because there were many barriers for women to negotiate before they could use health services, the women needed the health workers and health services to come closer to them.

## **5.4 Conclusion and Recommendations**

This case study demonstrated the strength of adopting multidisciplinary approaches in health research, such as qualitative research methods, to gain an in-depth understanding of sensitive issues such as the health of women. Although this case study focused on women in the Moka Gomo villages, the results highlighted some of the contextual factors influencing the delivery and use of health services in Imbonggu and other districts in the SHP. The health of Imbonggu women, including factors influencing their HSB, sources of their health knowledge and the treatment options they pursued, may have been common to women in other neighbouring districts. However, this would only be confirmed if HSB studies with a larger sample size could be conducted in the district. Being the first study on women's health in the district, some health policy and practice recommendations could be drawn from its findings.

For health services to improve, the staff at the facility level were important and the context in which they worked needed to be understood. The experiences of staff, including factors influencing their behaviour towards women and the facility contexts in which they worked to deliver health care provided an insight into the way health workers in

neighbouring districts operated. The cases of both workers and users demonstrated that improving health outcomes would require addressing not only service delivery issues but also the promotion of comprehensive health among the population at the village, district and provincial levels. It would require both formal and informal institutions addressing the determinants of health through resolving the socio-economic and cultural barriers that prevent the use of health services.

There is little likelihood of change in the health status of the population if the task of promoting health is left in the hands of a few health workers who work under difficult conditions. The idea of health is comprehensive and more than just the absence of disease. Village health committees are suggested for engaging different agencies existing in the district and villages for addressing the determinants of health. This should be based on the administration's district profile and plans for addressing development outcomes at the district level. One approach would be to work through existing women's groups in the communities, to allow women to voice their health concerns.

Utilisation of health facilities in this area was low because it was influenced by factors on both the user side and the provider side of the health care equation. Staff in local facilities need to be more innovative and identify ways to reach out to women, especially if they are constrained by limited resources from doing regular health and outreach patrols to villages. One approach would be to engage youths from each village as Village Health Volunteers to assist health workers with basic treatments and the monitoring of any emerging health issues. The concept of Village Health Volunteers is being used by Childfund Australia to address health problems in remote villages in Rigo, where medical assistance is very far away for many people (Childfund Australia 2015). There are positive stories coming from this initiative.





## Chapter 6: Case Study 3- Port Moresby North-West Suburbs

The urban site for this study was the Port Moresby (Moresby) North-West Electorate suburbs of Tokarara, June Valley, Waigani, Ensisi Valley and Rainbow Estate (see Figure 6.1.)



**Figure 6.1: Location Map of Port Moresby North-West Suburbs**

### 6.1 Background and Study Setting

Port Moresby, or ‘Moresby’ as it is commonly known, is the capital of PNG and located on the coast in Central Province. It was the administrative centre during colonial period and at PNG’s independence was officially named the capital. Port Moresby is growing rapidly at 4 per cent per annum and comprises a mixture of people from every province, as well as a relatively large number of expatriates. The 2011 National Census estimated the population as over 400,000 (PNG NSO 2012).

Although Port Moresby is located in Central Province, politically it is not a part of the Province but within the NCD. The total area of Port Moresby is 240 square kilometres (PNG NCDC 2015:11). NCD is divided into three open electorates: Moresby South, Moresby North-East and Moresby North-West. The electorates are not considered districts in the same administrative sense as the other open electorates of PNG, owing to the wide-ranging authority of the National Capital District Commission (NCDC), which is the body responsible for providing municipal services to the city. Each electorate comprises several residential suburbs, settlements and informal housing, shops and markets. Moresby South electorate was the first electorate to be zoned and established after World War II. Many of the suburbs in Moresby North-West and Moresby North-East electorates were established in the 1970s, with the establishment of the National Housing Corporation (then Commission) in 1968, as part of the government’s strategy to provide cheap housing estates to resettle migrants who were moving into town after World War II (Oram 1976:191; Goddard 2001:7). Other settlements and informal housing in Moresby North-East were established between the mid-1980s and 2000s, including Erima and 9 Mile.

There are eight suburbs and five settlements, including temporary shelters in Moresby North-West, as shown in Table 6.1.<sup>15</sup> The suburbs in the electorate are located north from the central business district and west from Jackson’s International Airport. The total population of Moresby North-West is 113, 000 according to the 2011 Census. The suburbs of Hohola and Tokarara, including June Valley, have a much higher population compared to the rest of the suburbs in the electorate, with a population of 45,529 (PNG NSO 2012: 13).

**Table 6.1: Moresby North-West Suburbs and Settlements**

<b>Moresby North-West Suburbs</b>	<b>Moresby North-West Settlements and Informal Housing</b>
Hohola	Arere Street – June Valley
Tokarara	Gomosasipo – June Valley
June Valley	Morata
Waigani	Tete
Morata	Rainbow Settlement
Ensis Valley	Baruni dump temporary shelters
Rainbow Estate	Nautana (Next to National Research Institute)
Gerehu	

The suburbs in the electorate are characterised by low- and medium-cost houses built in the 1970s, with overcrowded households, high unemployment and a high rate of criminal activity in some areas. Gerehu is the largest of the residential suburbs and is divided into seven stages, with an estimated population of 36,140 (PNG NSO 2012). The suburb is similar to a small town, with basic services such as police station, hospitals and shopping centre. Ensisi Valley and Rainbow Estate suburbs are two new suburbs that were established in the 1990s. The type of houses in these suburbs is medium to high cost, reflecting the socio-economic status of the people who reside there. Morata is a low-cost residential suburb, which started with rental housing and self-help housing in 1971 and is mainly home to people from the highlands. Waigani is a medium- to high-cost residential suburb, although part of the suburb is occupied by government buildings and offices, as well as commercial premises. Prior to independence in 1975, the legislative buildings and main government offices were in the central business district, but following independence, all government offices, including the National Parliament and the courts, were moved to Waigani.

As noted earlier, the research for this case study was undertaken in five suburbs: Tokarara, June Valley, Waigani, Ensisi Valley and Rainbow Estate. The characteristics of the population there, including livelihood opportunities, the services available and other details, are discussed in the next sections.

### **6.1.1 Demographic, Socio-Economic and Health Context**

A large proportion of the population of these five suburbs are on low incomes. Ethnic groups from all over PNG live in these suburbs and there are very few expatriates there. The dominant ethnic and language groups in these suburbs include those from the Southern (Papuan) Region, mainly from Central and Gulf provinces, since it is easier to travel to Port Moresby from there. Although some suburbs have people of the same province living together, this does not occur in all suburbs, depending on the availability and cost of housing. In the past, some suburbs in Port Moresby were dominated by certain ethnic and language groups from the Southern Region. However, this trend has changed, with people from other provinces moving to the capital for work and education. The newer north-west suburbs of Ensisi Valley and Rainbow Estate have a very mixed population but certain sections of Morata and June Valley recreate the rural setting of having people of similar ethnic groups living together.

The majority of the people in the suburbs speak Tok Pisin, although English is spoken widely. There are more males than females in all suburbs (see Table 6.2 for Tokarara, Hohola and Waigani suburbs).

**Table 6.2: Selected Population Structure**

<b>Suburb</b>	<b>Males</b>	<b>Females</b>	<b>Total</b>
Tokarara/Hohola	24,175	21,354	<b>45,529</b>
Waigani/University	16,841	14,452	<b>31,293</b>

**Source:** PNG NSO (2012, Preliminary Figures Papua New Guinea Census 2011)

Note: NSO combines the population of June Valley and Tokarara; Waigani and Ensisi Valley

Each household in the suburbs follows its own cultural and religious values and practices. Most societies in PNG tend to be male dominated, with women largely being responsible for housekeeping and child rearing (UYEP 2015: 10). As most women have limited education and few opportunities for formal employment, they are often involved in informal sector activities (UN Habitat 2012:20).

The size of households varies. The typical household structure in PNG comprises a family of two parents and four or five children, as well as other relatives, either single or married with their own children. The relatives are usually close relatives of the husband or wife, as it is common to have large numbers of clansmen (*wantoks*) relying on one or two working family members, regardless of the type of housing (King 1988:204).

Like many urban areas, Port Moresby has a high number of unemployed youth. This is particularly pronounced in the low- to medium-cost housing areas and in settlements in the capital. Unemployment is so high because of the inadequate level of education, with many young people not having completed primary and secondary school education because their families did not have money for school fees. The inevitable results of this high unemployment rate among youth are a rising urban crime rate, overcrowding and economic pressure on other family members to sustain the household. Crime and lawlessness are high in NCD and account for 30 per cent of all crime in the country. The crime rate is particularly high in the suburbs of Moresby North-West, especially Gerehu, June Valley, Tokarara and Morata, which are well known for the prevalence of car-jacking, rapes and petty theft. Violent confrontations often follow excessive alcohol consumption and substance abuse and conflicts between different ethnic groups are common (PNG NCDC 2015:14, 58).

### **6.1.2 Political and Governance Structure**

The residents of Moresby North-West are represented by a Member of Parliament at the electorate level and the Governor of the NCD at the regional level. The NCDC Act stipulates that each ward in the electorate must have council representatives who are members of the NCDC. This arrangement makes the political and governance structures of urban suburbs different from those in rural areas. Much of the focus of government programmes is on populations in the provinces and LLGs. For example, the existence of the Joint District Planning and Budget Priorities Committee is largely unknown to many city residents, as is the case with the Consultative Implementation and Monitoring Council.<sup>16</sup> There is a disconnection between the political representatives and the population's awareness of the structures of governance because there is no communication strategy for urban governments and city residents (UN Habitat 2012: 14, 15).

### **6.1.3 Livelihood and Economic Activities**

The income in the electorate ranges from low to medium. In most households, only one or two people are formally employed in the public or private sectors, with the majority unable to find employment because they lack the necessary skills (PNG NCDC 2015: 13–14). Many people depend on informal sector income-generating activities, especially women because of their lack of education (Goddard 2001: 8). Informal sector activities that are the main source of cash in the suburbs include small stalls selling mainly betel nut, cigarettes, sweets and other small items; the sale and resale of fresh vegetables at markets; the sale of cooked food and used clothing; trade stores; rental housing; top-up cards for mobile phones; and informal money lending (see Rooney 2016:1). The divide between the formal and informal sectors is indicated by the poverty rates in the NCD, which have increased from 31 per cent of the population in 1996 to 43 per cent between 2009 and 2010 (PNG NCDC 2015:13).

### **6.1.4 Services and Service Providers in the Suburbs**

The common services in most urban suburbs are schools, clinics, markets and shops. Because all five suburbs are in the urban area, people have easy access to all services, including water, electricity, telecommunications, transport, education and health. While some people have their own vehicles, the majority rely on public transport to travel around the city and this reflects the differences in socio-economic status.<sup>17</sup> The distance between

most facilities and home is less than 20 minutes for services within the suburbs but may be more than 30 minutes for services in other parts of the city. There are several schools in the five suburbs, except Ensisi Valley and Rainbow Estate, which do not have schools and health facilities, as indicated in Table 6.3.

**Table 6.3: Type and Number of Schools in Port Moresby North-West Suburbs**

Type	Number		
	Public	Private	Church
Elementary	5	2	4
Community	0	2	1
Primary	5	0	3
High/secondary schools	1	0	0
Vocational	0	0	0
<b>Total</b>	<b>11</b>	<b>4</b>	<b>8</b>

Note: Table excludes schools in Hohola and Gerehu suburbs.

The formal health services in Tokarara, June Valley and Waigani suburbs are provided by the Gerehu Public Hospital, Tokarara Clinic and several private health facilities at Waigani.<sup>18</sup> Alternative treatments are sought from a few traditional healers and distributors of health and nutritional products, while self-treatment includes natural therapies and medicines purchased from stores and pharmacies.

Informal practitioners such as Ranu (see Figure 6.2) distribute health and nutritional products or herbal water, soap and relief from pain.



Ranu demonstrating two of the products that she distributes for JM Ocean Avenue

**Figure 6.2: Distributor – Health.**

Tokarara Clinic is located along Gaibodubu Street in Tokarara and is within easy access of the people living in most urban suburbs, settlements and informal housing around NCD. The services provided are general outpatient services for adults and children, STI and HIV clinic, TB clinic and MCH services (ANC, family planning and children’s well-baby clinic). The main illnesses treated are asthma, pneumonia, coughs, STIs and PID. One HIV case is seen every month and the Venereal Disease Research Laboratory sees one out of 20 to 40 women.<sup>19</sup> More than 100 patients are seen at Tokarara Clinic daily, which means that over 500 patients are seen every week. Patients pay an outpatient fee of PGK2.00 and additional fees for other services, such as suturing, laboratory tests, medicines and specialist services (see Figure 6.3 for fees).

TOKARARA CLINIC FEE	
OUTPATIENT FEE - K2.00 (5yrs and above)	
MEDICINE FEE - K 1.00	
DOCTORS FEE - K10.00	
SUTURE FEE - K8.00	
P.O.P FEE - K8.00 (Cement)	
I & D FEE - K8.00 (Minor operation)	

Day	Notes
Monday	TOKS 8-2
Tuesday	Same times
Wednesday	TOKS 8-2
Thursday	8-2 / 10-2
Friday	Tokara / 8-2

P.T.C. Co.

**Figure 6.3: Tokarara Clinic Fee Schedule**

There are two private health facilities at Waigani, which provide general medical services. One of them provides obstetric and gynaecological services as well as testing facilities. Although it is open to the public, only those who can afford the fees use its services. Patients pay an average fee of between PGK100 and 150 for a visit to the private facility, including consultation and medicines. A maximum of 50 patients are seen daily and between 100 and 150 patients in a week. Apart from Anglicare, which provides a counselling service and a drop-in-centre for HIV-positive clients, there are no civil society organisations or NGOs in the suburbs.

The civil society organisations that operate in PNG are not established in the suburbs but there are church groups for youth and women. The activities of such groups are limited to the work of the churches and do not extend to civic engagement and political participation. There are several churches in each suburb (see Table 6.4). The Baptist and Catholic Churches have primary schools in Tokarara, while the SDA Church has two schools and runs the Tokarara Clinic.



**Table 6.4: Churches in Port Moresby North-West Suburbs**

Church	Number		
	Tokarara/June Valley	Waigani/Ensisi Valley	Rainbow
Baptist	1	0	0
Catholic	1	1	0
Pentecostal	4	2	0
SDA	3	1	1
United Church	1	1	0
Total	10	5	1

Note: Table excludes churches in Hohola and Gerehu suburbs.

## **6.2 Findings of the Port Moresby North-West Suburbs Study**

The findings of this case study have been divided into two parts: women and health service usage and health workers.

### **6.2.1 Women and Health**

The participants in this case study were from provinces in the four regions of PNG, including Southern (Papuan), MOMASE, Highlands and New Guinea Islands. The majority of the women were from the Southern Region, as there were many people from that area living in some of the North-West suburbs. The number of women aged over 46 years was higher than the other age ranges and the number of women aged between 36 and 45 years was more than the number of women aged between 26 and 35 years. For further details of the socio-economic and demographic characteristics of women and an insight into their lives, three cases are provided here.

#### ***Natuna – Unemployed, married to a polygamous man, unstable source of income***

Natuna was from one of the coastal villages near Port Moresby. She was about 35 years of age and left school before completing Grade 8. She lived in a large house in a middle-income section of one of the suburbs of the electorate. Her household included over 20 people, comprising three families with children and several adults. No one in the household had a job with a steady income, as most of them had not finished their education. In the past few years, two of Natuna's family members had died of AIDS-related illnesses. For money to take care of her needs, Natuna sold betel nut and loose cigarettes near her home. More than a decade ago, Natuna married a man from the highlands who was already married and had six children with him. However, the man

lived and worked in his province and had two other wives. Natuna was unable to leave this man because she had no income and he threatened her with violence if she left, because he had paid bride money to her family.

***Loutaraka – Unemployed, unmarried and without a source of income***

Loutaraka was from the Gulf Province but had lived most of her life in Port Moresby. She was about 35 years of age and had not completed Grade 4 at school. Although she had never married, Loutaraka had four children from different men, but two of the pregnancies had ended when the babies died in the womb because of harmful abortion practices. She lived with her children, disabled mother and other family members in a makeshift temporary hut because their house had burned down over a decade earlier and Loutaraka's father had died long ago. Loutaraka's oldest daughter and several siblings were married and lived in other suburbs. Loutaraka gambled to survive and allowed her yard to be used by neighbours for gambling, for a few kina. She had affairs with married men in the neighbourhood, which caused disputes with their wives.

***Ruta – Unemployed, married with a source of income from husband and children***

Ruta was over 46 years of age and came from one of the provinces in the New Guinea Islands Region. She was married to a man from Central Province and had three children, two of whom were married with two children each but live with her. Ruta completed Grade 6 in her village school and for a time, worked as a maid in the home of an Australian family who were resident in her home province. She met her husband while she was working. At the time of this research, Ruta was unemployed and stayed at home to take care of the house and her grandchildren while parents are at work. Ruta's house and home environment was clean and well maintained. As a very committed and deeply spiritual woman, she attended church services and programmes regularly and helped to look after the church. Ruta's husband and children provided for all her needs and when she was ill, they took her to public or private health facilities.

These three cases represented three different types of experiences of unemployed women. Natuna's case captured the experience of the many women who have not completed school and have married men who already had other wives. As they were unable to find employment, these women relied on men for financial support. Most of the women in this study were engaged in income-generating activities in the informal sector because their husbands were unable to provide for all of the needs of the family. Loutaraka's case

highlighted the experience of many women who were unemployed, unmarried and had no sources of financial support. Those two cases showed the experiences of many women who have no sources of income but relied on extended family support or engaged in unhealthy social behaviour and selling sex for money to support themselves. Due to their limited education and lack of income-generating opportunities, they were forced to live a high-risk lifestyle to survive in the city, even though they were aware of the risks involved. Ruta's case illustrated the socio-economic status of many women who were unemployed but were financially dependent on working spouses.

This study's analysis of the socio-economic status of the women in the urban suburbs found six categories: employed in formal sector; self-employed in small business; unemployed after leaving formal employment; unemployed and engaged in informal sector activities; unemployed and supported by a working spouse; and unemployed without any source of income. At the time of this study, the number of women who were formally employed and self-employed in small businesses was lower than the number of women who were unemployed. Of the unemployed women, while the majority had never been formally employed, four had previously worked in formal employment. Most of the unemployed women were engaged in informal income-generating activities.

Although there were women who were formally employed or engaged in small business activities, the majority of women who participated in this study were unemployed. Except for one woman who had never attended school, most of the women had been to school and had varying education levels, from primary to tertiary education. The number of women who had finished their education in secondary school was higher than the number who had finished their education in primary school. The majority of women were married, while two had never been married. Two women were separated from their spouses, while another woman was struggling in her marriage because the husband had deserted her for another woman. All of the women in this study had children except one, who had never been married. The number of women with four children was higher than the number of women with two to six children. One woman had 10 children and one woman had only one child. All of their children had been born in hospitals.

The three cases revealed some heterogeneity in the lives of the women. While some attended church and actively participated in church activities and were responsible homemakers, others were involved in other social activities, such as gambling and drinking. All of the participants were members of Christian churches, including Anglican,

Baptist, Catholic, Lutheran, SDA and United Church, as well as Pentecostal churches. The numbers of women who were active Christians attending church on a weekly basis was similar to the number of women who did not attend church regularly.

### 6.2.2 Beliefs with Regard to Health and Illness

The majority of women had similar understandings of health and causes of illness, despite their different education levels, ages and cultural and socio-economic backgrounds. The cases of five women are provided here to give insight into the way the women understood health and illness and where they had obtained health knowledge. Their understandings of illness ranged from a focus on the physical and outward appearance and symptoms displayed by an individual, such as a strong cough or difficulties in breathing, to the person's emotional and social well-being.

#### ***Loutaraka***

I recognise a sick person by weight loss and sunken eyes. Healthy person *em stap gut nogat sik* (does not get sick). Person is to look after self by having showers, living in clean environment (inside and outside house), eating well and drinking water. Smoking, chewing betel nut, drinking, not cooking properly and living on junk food cooked in unclean conditions, and bad habits like gambling, cause illness. My mother passed on this knowledge to me.

The responses they provided with regard to recognising that someone was ill focused on the person's physical appearance and level of activity or weakness in moving and talking. A sick person could be recognised by their weakness, weight loss, sunken and pale eyes, dehydrated skin and being unable to walk properly. In contrast, a healthy person had good skin, was fit and active and was a good

#### ***Natuna***

A sick person has pale eyes, a dusty and dry skin, weak and dehydrated look and is unable to walk. A healthy person has shiny body and is fit and active. The person should eat good food, be happy, treat themselves well (with medicine), have no financial problems and not be poor to remain healthy. Sickness is caused by too much stress, poverty, what people eat (food) and drink (water), having sex with many sexual partners. Women worry and go sleeping with other men. I learned these things from church, school, my cultural background and from my mother, friends and community members doing health awareness.

weight. The majority of responses in these cases indicated that good health was related to eating good food as well as good personal and household hygiene and exercise. However, the findings also illustrated that the understandings about illness and ways to maintain good health differed significantly, according to their individual experiences and what was commonly observed in the community. This demonstrated that health

#### ***Badi***

I recognise sick person by symptoms. Example, person with TB will look thin, have strong cough, pale skin and look weak. A person is to look after himself and eat balanced meals and keep house clean to remain healthy. Illness is caused by carelessness in eating, smoking, drinking too much alcohol and overworking. I learnt this from a family member.

knowledge was contextual and based on the different circumstances of the individual. For instance, Loutaraka, who gambled in the community for survival, commented that bad habits such as gambling were a cause of illness. Natuna said that that illness was due to poverty, stress and extramarital affairs, because for her, health and illness were related to poverty. In contrast, Badi identified overworking as a cause of illness and Kathy, who attended church frequently, perceived positive mental attitude and prayer to be cause of good health, reflecting the belief of many women who attended church.

Heni frequently attended church as well, but her perceptions with regard to health and illness related to the difference between fresh and processed food, as well as social relations in the family. Although her ideas were not exactly the same as those of Mone in Imbonggu, they were closely related to the concept of '*popokl*'

***Kathy***

A person is ill or healthy by the physical appearance; how they walk and their response when communicating; i.e., weak or active. Keeping positive mental attitude, following health principles, walking and prayer make us remain healthy. Illness is caused by lifestyle choices in food and drink (what we put in the mouth; e.g., diabetes). I learned from an uncle who is herbalist, reading religious literature by Ellen G White and other lifestyle books.

among the Melpa and the idea that to enact healing, a person had to repair the damaged social relationships (Strathern 1989:152).

The sources of the women's health knowledge were both formal and informal, with family members tending to be the major source of information. School, church, books, magazines and community members also contributed to the women's health knowledge. These sources of health knowledge illustrated that the networks established between formal and informal institutions contributed to people's understanding and subsequent HSB.

***Heni***

Sick person is weak. We stay healthy by eating right food, exercise, clean environment and good social relations with family. This has mental and psychological impact on health. Example, my brother in-law was very sick and almost died following a family dispute. He became well after sitting with everyone, saying sorry and eating together. A person's health is affected by not drinking water, eating too much processed food, lack of exercise and not having good relations in the family. I learn from school, church and own experiences.

This suggested that informal institutions

had a much greater influence on women's health knowledge than formal institutions, such as schools or health facilities. One of the explanations for this is that women learned more from social circles and interactions at the family and community level than in formal institutions. For example, time and curriculum constraints in schools meant that what the women had been taught was limited. As many of the women had not completed school, their health knowledge was very limited but had been enhanced over the years through

their interactions with other people and agencies in the community. Some churches were a major source of health knowledge, such as the SDA Church, which provided health programmes, including free seminars on diet, exercise and abstinence from smoking and alcohol.

None of the participants believed that supernatural factors caused illness (i.e., illnesses that are caused by the intervention of a supernatural being, dead ancestor, deity or another person with special powers). The number of women who identified lifestyle as a cause of illness was higher than the number who thought that the causes of illness were physical, emotional and social. 'Lifestyle' related to the way an individual lived their life and the types of behaviour, activities and the choices they made regarding what to eat and drink. In addition, it included the individual's associations with other individuals or group. 'Physical' causes referred to the physical surrounding or environment in which the individual lived, with possible causes of illness being contaminated or poor quality air, water and food. Illness related to poor hygiene included household, food and personal hygiene. 'Emotional' causes were related to negative attitudes and the effect of these on an individual's ability to cope with life, including stress, unemployment, work pressure, family problems, worry and financial problems. 'Social relations' causes related to the social relationships within which the individual lived, such as illnesses caused by a relationship that the partner has with another person, lack of support from families, friends and communities, as well as disputes with family and community members.

### **6.2.3 Treatment Options**

This case study found several aspects of treatment practices that were worth highlighting. First, all of the women from the suburbs had visited clinics and hospitals for ANC and had had supervised births. Second, the majority of the women used natural therapies and home remedies for treating most of their illnesses. This was evident in the number of women using herbs and buying health products from multi-level marketing distributors, which was slightly higher than the number of women who visited biomedical health facilities. Third, a number of the women had never visited a health facility and relied solely on herbs and other therapies for treatment, despite having a good education, money and vehicles and living within easy access to health facilities. Fourth, the use of biomedicine and other therapies varied among the women. Sometimes their chosen treatment pathway was ineffective, so they pursue several.

The illness histories of the following five women illustrates these findings. Badi said:

My foot drop began in 2009 when I went to pick ‘*aibika*’ (local spinach) at the back of my house in June Valley. I stood on a stone by mistake and it left a continuous pain. After two days, my leg was swollen and my left foot dropped. I went to Hohola St Therese’s clinic and was given a two-week supply of Amoxicillin but the swelling got worse. I then went to PMGH for an X-ray and tests, which did not reveal anything but I was given Indocid and told to return for a review. After one month, I went for review as advised, but further tests revealed nothing. I then asked for a referral to Alotau Hospital and went to my village in Milne Bay Province. My six sisters sat with me to discuss my illness and what needed to be done. I was given herbs and told to boil *sour sop* leaves and drink its water. However, I did not strictly follow the instructions. One of my sisters, who works at the village aid post, arranged with the Sister-in-Charge there to write a supporting letter which could be used with my referral letter from PMGH. I went to Alotau Hospital and had another X-ray, which showed that my ankle was sprained, so I was treated. I then stayed one year in the village.

Because there was no further improvement in my foot, I saw a *glas man* (diviner) in my village and he removed some kind of a tooth of a dog or human, I am not sure which, from the sore on my ankle. When the tooth was removed, the sore immediately healed but the problem was still there. The *glas man* never told me what caused the problem with my ankle or who was responsible. He never came back with proper answers, but disappeared after I paid him a PGK200 fee.

Upon return to Port Moresby from Alotau in 2014, I went to Dr XX at PMGH and he sent me for a third X-ray. I was also booked for surgery but without Dr XX’s recommendation, it could not go ahead. Because I was still not satisfied with my condition, I went to PMGH Consultation Clinic for Orthopaedics (bones) and argued with the clerk there. I was one of the five patients listed for surgery by visiting Australian doctors in 2014. However, I was locked out of the theatre because there was no proper documentation and diagnosis on the condition of my leg. Without this, I cannot have surgery or be given medication. My last visit to PMGH was in October 2014 and doctors advised me that I will live with the problem until I die. I visit the hospital every week in desperation for cure, but can tell that doctors do not want to see me. I now see the HEO at Tokarara Clinic and he treats me when I have pains on my foot. My own relatives and *tambu meri* (husband’s sister) did *puripuri* (sorcery) on me. I confronted her after I saw her in my dream but nothing can be done about it.

A similar experience was observed in the case of Tracey, who also used biomedicine and traditional healing because her condition was not cured. She said:

I suffered from terrible headaches, due to a sinus-related illness. I took herbs prepared by my mother and also had my forehead cut to release bad blood. The pain, however, did not stop and for eight months, I would be in pain every day. I went to clinic at Tokarara but did not get well. So I went to see a traditional healer, a Koiari man, at Dabunari Village. He discovered the cause of my illness and instructed me on what I should do. I followed his instructions and was healed.

These two cases reflected the experiences of some women who attributed their illness to sorcery, when there were mysterious circumstances surrounding the illness or when it was difficult to treat. Natural objects, including such things as stones and leaves, or things from the human body, such as hair, fingernails or bones of humans, were reputed to be used by sorcerers to cause illness.

The case of Waburi differed. She decided to change her lifestyle and turn to prayer for healing when biomedicine was perceived to be ineffective. She said:

My illness started between 1989 and 1990 from a high fever. I felt itchy and started to scratch, which led to red lumps that became sores when they burst. Between 1989 and 2004, I visited skin specialists at the PMGH but the tests did not show anything so there was no diagnosis nor treatment. I was, however, treated for elephantiasis (filariasis) even though I was not suffering from this disease. From 1989 to 2014, my condition was still not treated. Following a newspaper article on rare diseases, I visited PMGH and asked for a test but it turned out negative. With no results from tests, I became anxious and exhausted. I turned away traditional healers. In 2010, I decided to help myself and have willpower to stay healthy so I committed myself to God for treatment of my illness, changed my lifestyle and resorted to prayer. My faith in God for healing has increased. From 2014 to 2015, the swelling in my body has reduced.

Ruta relied on biomedicine from both the public and private health systems for treatment and went through the referral process in PNG's national health system. Her case showed the pathway that many women take when they are determined to get well and have the financial resources to use for this. She said:

My illness started in 2013 when I fell backwards while trying to protect my grandchild from falling down the stairs. I became very ill, could not walk and was only crawling. I was taken to Gerehu Clinic (now Hospital) and given Indocid for five days. However,



that did not help. After five days without medication, I decided to go elsewhere. My family brought me to see a private doctor and I was given injection and medicine for another five days. But still there was no improvement. My neighbour noticed I was ill and encouraged me to go and see their family doctor at PMGH and get an X-ray. With my neighbour's assistance, I went to PMGH and the doctor informed [me] that I had '*famili sik*' and asked me to see him at his home. When I visited the doctor, he informed me that I had TB in my spinal cord and asked me to confirm certain symptoms. He told me that the fall was a blessing in disguise because it led me to take an X-ray, which revealed my condition to be treated. In November 2013, I was referred to a TB specialist at PMGH and then referred to the closest clinic at Tokarara to be placed under TB treatment for nine months. I took TB medicine (265 tablets) strictly and prayed over each tablet I took and finished it in August 2014. I went for review and X-ray at St Mary's Clinic and brought the report to Tokarara Clinic for [the] HEO to check and confirm my recovery. The overall experience has been mixed. The side effects of the TB drugs were bad but I was quick to get medicine to get treated because I was afraid of becoming paralysed.

These four cases were exemplars of the differences in women's understandings of the causes of illness and the treatment practices to pursue when ill. While some of the pathways they took for full recovery were similar, others varied according to what they perceived to be the cause of illness. For the majority of the women in this case study, their first step was usually a visit to a formal public health facility for tests and a diagnosis. However, before visiting health facilities, some of the women used alternative therapies, such as steaming the face, steam bathing, drinking herbal concoctions, cutting the skin on the head to drain 'bad blood' or other traditional rituals.

When biomedicine was either unable to confirm the type of illness or effect a cure, some women turned to *glas man* or *marasin man* (diviners and traditional healers). These four cases illustrated some of frustrations women experienced when either biomedicine or other therapies were unable to cure their condition. For some, their condition improved when the illness was treated by a traditional healer. Conversely, other women, such as Boio in the following story, illustrated a hopeless case, with financial constraints intersecting with biomedical treatment practices. Boio said:

After delivering my third child in 2013, I was bleeding beyond normal menstruation. I reported this to the nurse when I took my baby for immunisation at the PMGH and was referred to the wrong section. Without listening to me explain my situation, the nurse referred me to another section where a male trainee doctor examined [me] and told me

to return in two weeks. I was examined by a senior doctor when I returned and recommended a scan and that I return again in two weeks. The scan showed I had a growth in my bladder so was referred to surgical ward, where I stayed for almost two months to get a sample of tissue. By then my baby was three months old. Twice I was included in the schedule for surgery, but nothing eventuated after waiting the whole morning. For the second surgery attempt, I was put on local anaesthetic and a sample of tissue was taken for testing. But I was discharged without any results or treatment and told to return when my baby was older. I am still bleeding and my condition is not improving. If I have to go to hospital for surgery, my eldest daughter has to leave school to take care of her smaller brother. I also do not have money for treatment. My sisters have their own families and commitments so cannot help me.

These cases illustrated the use of biomedicine and informal practices by women in the Moresby North-West suburbs. Some women combined biomedical treatment with one or two informal practices, such as herbs or prayer. Some women simply gave up and lived with the illness, particularly in cases in which biomedicine was unable to detect the problem and treat the condition.

#### **6.2.4 Determinants Influencing Women's Health-Seeking Behaviour**

Four major factors were found to be encouraging the women to seek health care when ill. The severity of pain forced women to seek health care because they wanted immediate relief from pain. The desire for good health and to stop the illness getting worse were other factors that encouraged the women to seek treatment. Another factor was the fear of death. Many of the women also wanted to know the cause of their illness and visited health facilities for tests and diagnosis.

When women were asked what discouraged them from seeking health care, they offered various reasons. The following three examples illustrate some of the factors that discouraged the women from visiting health facilities for treatment.

No money to pay for medicine at hospital and bad attitudes of nurses and their reaction to patients. The fear of being screamed at makes me not want to go to hospital. (LM)

Same old Panadol and Amoxicillin, you get number and stand in the queue for three different services the whole day and it is tiring. There is no sense of urgency in smaller clinics. (BK)

I experience pains but I am not going to the hospital and [I am] treating myself with herbal remedies. Hearing experiences from friends and family members about queues and costs for tests and medicine discourages me from going to the hospital. (NTW)

Thus, some of the factors discouraging women were financial hardship, the bad attitude of health workers, long queues, inefficient services and ineffective medicine. It was observed that the factors discouraging urban women from using the health services were more on the provider side and less on the user side (see Table 6.5).

**Table 6.5: Determinants Discouraging Port Moresby North-West Suburbs Women from Utilising Health Care Services**

<b>User (Demand)-side Factors</b>	<b>Provider (Supply)-side Factors</b>
a) Financial constraints	a) Long queues and waiting times
b) Work commitment – pay cut for taking time off	b) Poor health worker attitudes
	c) Same ineffective medicine
	d) No diagnosis for illness
	e) No proper facilities
	f) Slow and inefficient services
	g) Poor working environment

### **6.2.5 Health Care Providers in Moresby North-West Suburbs**

The study aimed to focus on formal health care workers in both public and private facilities, including those that were government- and church-run, as well as informal practitioners. As there were no private and church-run facilities in the suburbs, the focus was on the staff in two formal public facilities. This focus considered the fact that the majority of women visited only the public health facilities. One was an urban clinic in Tokarara, which served several large urban suburbs in the electorate, including Tokarara, June Valley, Waigani, Ensisi Valley and Morata. However, the health workers informed me that patients came from other suburbs in the other electorates. The other site was a recently upgraded Level 5 Gerehu hospital.

### **6.2.6 Sociodemographic Description of the Health Care Workers**

Seven providers in the suburbs participated in the study, including formal and informal providers. Five health care workers in the formal health system volunteered to participate. The details of the health providers are provided in Table 6.6.

**Table 6.6: Socio-Demographic Details of Port Moresby North-West Suburbs  
Health Care Workers**

Sex/Age Category	Region of Origin	Education Level/Training	Type	Position	Years of Work	Years in District
F/3	Southern	Grade 10	Informal		3	3
F/4	Southern	Grade 6	Informal		4	4
F/3	Southern	Grade 12 – HEO Diploma	Biomedical	HEO	7	1 yr 10 mths
F/2	Highlands	Grade 10 – Diploma General Nursing; Nursing degree, P. Grad. Cert. – Midwifery	Biomedical	NO	7	7
M/2	MAMOSE	Grade 12 – HEO Diploma	Biomedical	HEO	n/a	5
F/4	Highlands	Grade 10, Certificate General Nursing; Bachelor’s Nursing (Midwifery)	Biomedical	NO	25	4
M/3	Southern	Grade 12, MBBS	Biomedical	Medical Officer	10	3

**Note:** Age categories: 1: 18–25 years; 2: 26–35 years; 3: 36–45 years; 4: 46 years+; n/a: not available

This table shows that there were two informal practitioners and five biomedical health workers. Three of the HCWs were females and two were males. The ages of the sample were mixed, with one health worker over 46 years of age, while the other four were in the 26 to 35 years range and 36 to 45 years range. All of the workers in the health system had completed high school before undergoing health worker training. Two female NOs had similar qualifications, specialising in midwifery. While one had undertaken her nursing degree in Australia, the other one had undertaken hers in PNG. The two HEOs, one male and one female, had similar qualifications from the paramedical college, which was affiliated to Divine Word University.<sup>20</sup> The male medical officer had a Bachelor’s degree in medicine and surgery. All of the HCWs were married and were from different ethnic and language groups: two from different highlands provinces, two from Central and Oro Provinces and one from Morobe Province. The number of years they had worked in their various professions varied. While the NO, who was over 46 years of age, had worked for 25 years, the rest had worked from seven to 10 years.

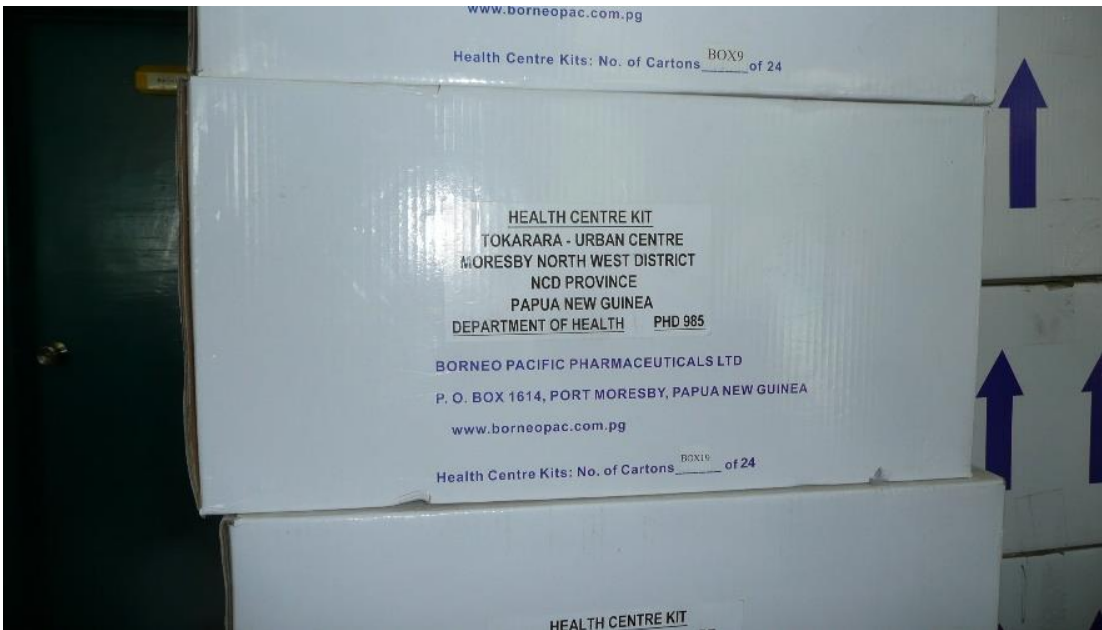
The next section provides the cases of two of the health workers who were involved directly with patients in the two facilities in the electorate. These cases include discussion of the hospital and facility contexts in which they worked, as well as their beliefs and work practices.

### *Jenny – Nursing Officer - ANC*

Jenny, an NO from the Highlands Region with 25 years of experience, was a trained midwife and oversaw the ANC programme. She worked in an urban clinic, which was located in one of the large suburbs. The clinic was housed in a large brick building, which was divided into different sections: the general waiting area for patients (always overcrowded), a consultation office for the specialist services provided by the HEO, the children's clinic and several examination rooms. The clinic did not have air conditioning but it was cooled by ceiling fans in certain parts of the building. When I first walked into the clinic, a large number of boxes containing medical supplies that were stacked in a corner of the general waiting area caught my attention (see Figure 6.4). Jenny saw more than 100 patients a day. As they came from all parts of PNG, she communicated with them in English and Tok Pisin.

The clinic had been reopened more than five years ago, after it had been closed for a number of years owing to thefts and attacks on the staff. As noted previously, at the time of this research, the clinic was under a public–private partnership arrangement between the government (through the NCDC) and the SDA Church. While the Church provided management and oversight of the clinic (and the staff), the government provided funding for staff salaries and drugs. Although the facility was run by the SDA Church, none of the staff were members of that Church.

As a trained midwife, Jenny was specifically assigned to MCH services, but because of a shortage of staff at the clinic, she had been given responsibility for treating asthma, pneumonia, coughs, STIs, PIDs, HIV<sup>21</sup> and tuberculosis. The most common illnesses for which women visited the clinic were PIDs and STIs.



**Figure 6.4: Boxes of Medical Kits in the Waiting Area**

The boxes in the small waiting space made it especially overcrowded and blocked the patients' view to the outside. There were 12 long benches, but as it was overcrowded, most times patients had to stand or sit on the floor (see Figure 6.5).



**Figure 6.5: Tokarara Clinic Waiting Area**

Jenny's day at the clinic began with a devotion and prayer and she provided health education before treating patients. Patients were given numbers by the clerk upon payment of outpatient fees and were weighed before they were sent to the NOs for examination, diagnosis and treatment. Twenty patients were examined in a day, during five blocks of time. Jenny reported to the SIC of the clinic, who provided overall

management. At the time of this study, the SIC was not at work, with Jenny commenting that the SIC was 'hardly at work' and she was left with all the responsibilities.

Many aspects of Jenny's underlying philosophy about care for patients and the delivery services were consistent with her professional training and Christian values. She believed that if patients were examined and treated quickly, they could return home early. She thought that such an approach would attract women to the clinic for treatment. However, she perceived that the triage system of treating emergency cases was misunderstood by some patients. She thought making the system clearer to patients would prevent them from accusing health workers of favouritism and prevent arguments from erupting in the clinic. She said:

Sometimes patients do not understand when we identify and treat the very sick patients and attend to them before others. This results in patients accusing us of *wantok* system and we argue.

Jenny understood the importance of having a better health worker–patient ratio in health service delivery and remarked:

The workload and not enough staff to attend to all the patients puts pressure on the staff, who are sometimes mean to patients. Because nurses are overworked, they become rude and mean.

She believed that the staff's poor attitude to patients prevented women from seeking health care. She said:

Women are ashamed but they open up and talk when female nurses are available. ... Nurses' good relations, good communication skills and assuring women of privacy and confidentiality encourages.

She knew that greeting mothers on one-to-one basis and chatting with them during examinations helped them to be open about their illness. She noted that the long queues were a barrier that discouraged many women from seeking treatment, indicating her awareness of the need to provide an efficient health service.

Jenny's approach and work practices reflected the influence of her nursing training and her personal values. She believed religion had a significant influence on the general attitudes of the nurses and the way they worked, saying:

The Sister-In-Charge of the clinic is from XX church and I am from XXX church. She is hardly at work while I am here. Her attitude and interaction with patients are different from mine.

Jenny's statement shows several aspects which are evidence of how religion influences her work ethics and culture. Her attendance at work despite the challenging environment reflects the values of loyalty, integrity, commitment and dedication promoted by many churches. Churches promote productivity and reward for hard work than idleness in society. Jenny's attitude of working hard reflects these values. Her good relations with patients also shows religion's values on treating other people with respect.

### ***Wapun – Nursing Officer – MCH Services***

Wapun was an NO and came from the Highlands Region. She had been supervisor of the MCH clinic at Gerehu Hospital for seven years. Wapun had a Diploma in General Nursing from Divine Word University, a Bachelor's degree in General Nursing from Flinders University in South Australia and a Post-graduate Certificate in Midwifery from Divine Word University.

In 2014, the Gerehu Public Hospital (see Figure 6.7) had been upgraded to a Level 5 public hospital to serve the urban population.



**Figure 6.7: Gerehu Public Hospital**

The hospital had been through several phases under different management arrangements. It was originally a government-run urban clinic, but was upgraded to a district health centre and run by St Johns under a public-private partnership from the mid-2000s to 2013.



The government took over the management again in 2014 when it was upgraded to a public hospital. The hospital also served people from villages in the neighbouring provinces of Central and Gulf. The majority of the hospital patients came from a very low socio-economic background.

The hospital was a large modern building with appropriate entrances that catered for everyone, including those with disabilities. The general environment inside and outside the hospital could be described as fair. When I visited the hospital, it was hot inside, despite the Bank of South Pacific installing air conditioning around June 2015. I could see fans working only in selected places and the air conditioning did not seem to be working. The hospital provided clinical, laboratory, pharmaceutical and specialist medical services, as well as MCH services, including ANC. The ambulance service was provided through St John Ambulance Services. The hospital had two outpatient and inpatient departments, one of each for adults and children. Separate clinics for HIV and TB were supported by Médecins Sans Frontières (Doctors Without Borders). Before patients entered the hospital, they had to pass security guards stationed at the entrance. Once inside they had to queue at the cashier's counter and pay the fees before going to the different sections in the hospital. The waiting areas for adults and children were in two different areas, with each section capable of seating 50 people at a time.

Wapun worked under the guidance of the HEO. She focused on the health of mothers who were pregnant and women's general health issues, including STIs and cervical cancer. She worked in a team of five, comprising three midwives and two CHWs. Women from all parts of PNG, in urban suburbs, settlements and villages in the Central and Gulf Provinces, visited the clinic. Most of the women were illiterate and Wapun communicated with them in English and Tok Pisin. There was a daily limit of 30 for the registration of women to be seen; those whose registration numbers were above 30 were advised to come back the next day. The main health problems for which women sought help were urinary tract infections, STIs, high blood pressure and breast cancer.

The free ANC service for *bel mama* (pregnant mothers) operated only on Tuesdays and Thursdays. The process of admission in this clinic involved the women receiving a number upon arrival and having their blood pressure checked, as well as taking a blood test if this was their first visit. The pregnant woman was given a medical check, iron and folate supplements and the status of the foetus was assessed. In addition, they were tested for HIV to determine the level of care they needed and any potential risks involved in

their pregnancy. The worker: patient ratio in the ANC was 1:50. Wapun gave a *helt tok* (health talk) to the pregnant women on safe delivery, family planning, hygiene and other basic health information. She believed that education ‘would eliminate any barriers in interacting with patients’. She did not seem to be under undue pressure in her work.

With regard to factors that discouraged women from seeking health care, Wapun believed that health facilities would be patient friendly if all of the staff worked together, including the non-clinical staff. She remarked:

People in the front, such as the security guards, are first point of contact for patients. They must know where to direct the people to. If no proper directions are given at the reception, the person will not come back again. ... The way nurses interact with women (patients) is partly influenced by the individual’s personality and culture.

In addition, Wapun thought that some of the factors that discouraged women from using the health care services were lack of money for transport and fees, unsupportive husbands and familial responsibilities. She focused on making personal connections with the women, to gain their confidence, before asking questions about their health. She was aware that the scarcity of resources prevented implementation of health promotion activities, saying, ‘Health awareness needs to be conducted in communities and hospitals, but this depends on resources’.

Wapun’s work practices and approaches, including her ideas on improving maternal health services, women’s use of health care and public relations skills reflected her level of training. She referred to midwifery embracing a holistic approach and referred to nursing ethics on a number of occasions. When discussing the question of whether the sex of the health worker influenced interactions with female patients, she explained that nursing ethics required a female staff to be present when a male staff examined a female patient and said that it was ethically wrong for male staff to do the examinations alone. She gave the example of a case that had happened in the hospital few years back, when a male CHW examined a female patient’s stomach alone during a night shift and he was accused of sexual assault by the woman. The staff member was charged with sexual assault and locked in police cells.

Another indicator of the influence of Wapun’s training related to the patients’ right to privacy during physical examinations and the legal duty of health workers to protect

patients from the inappropriate disclosure of personal health information. Wapun explained:

The current set-up of Gerehu Hospital is not conducive for women to discuss their problems. The seating arrangements do not match the level of hospital. There are no separate rooms in MCH clinic. Instead of nurses talking to individual women in a private room, they discuss openly. The current arrangement is for a clinic where all the women are seated in the same space and hear the conversation between the worker and patient (see Figure 6.8).



**Figure 6.8: Gerehu ANC Clinic**

Wapun's work practices and attitudes did not reflect any particular religious or cultural views but echoed the skills and practices that she learned through her training in Australia.

### ***Girisi – Informal Practitioner***

Girisi, from Oro Province, lived in Tokarara and was in her mid-40s. Girisi was married to a policeman and the relationship was characterised by violence and infidelity. Almost every week she was involved in an argument or fight with women who had affairs with her husband. She was not happy. She had received her calling to heal in a dream, along with instructions regarding certain flowers and herbs to use for her herbal mixtures and for making special soap.

Girisi treated all kinds of illnesses using this soap and water, which had been 'prayed over'. She did not pray in front of her clients because she was only taught to pray in her

own language. Although she said she was a Christian belonging to a Pentecostal church, her response reflected Eves' remarks about magical practices being repackaged to give them a 'Christian colouration' when magical incantations accompanying herbal cures were replaced with Christian prayer and then used to treat various ailments (Eves 2010, p. 501). Girisi's patients included those suffering from asthma, skin diseases and chronic conditions that had not been cured by biomedicine. She referred patients to biomedical facilities for tests after she had given them her herbal water to drink and her special soap to bathe with. She believed that some illnesses that could not be discovered easily by biomedical workers could be detected by X-rays and scans only after the patient had drunk her herbal water and bathed using her soap. However, she emphasised that for a patient to be healed, they must have faith in her healing power and the herbs. In her view, the healing was instant, but only if the patient had faith. Without faith, healing would not occur. In Girisi's view, illnesses resulted from individual behaviour and supernatural causes. She claimed to have deep insight into issues that others were unable to see.

Girisi began by asking her patients to explain their situation and their illness history. Following this, she took a devotion and explained the need for faith in healing. The patient was then given a shower and herbs to drink. If the patient was male, the wife was asked to help in bathing the husband. In addition, Girisi laid her hands on the body of the patient.

### ***Ranu – Multi-level Marketing Distributor of Herbal Products***

Ranu was from Rigo in Central Province and was in her 50s. She lived in Rainbow suburb and was a distributor of health, hygiene and nutritional products for JM Ocean Avenue. Previously, she had been a distributor for another multi-level marketing product. Ranu was a devout Christian and was involved in church-related activities in Port Moresby.

Ranu's customers included women and men with high blood pressure and other internal health problems. She believed that illnesses were due to individual behaviour and a result of poor nutrition, body posture and lifestyle choices. Ranu encouraged her patients to take a holistic approach in their life and did not have set procedures for healing. However, before she sold the products to her customers, she demonstrated them, based on the training she had received at the distributor workshops and seminars organised by the company in PNG and Indonesia. Her demonstrations involved information on how the products were made and how they could be used.

These four examples of health workers illustrated the coexistence of formal and informal treatment practices in the urban suburbs. The examples of the two health workers in the health system showed some of the institutional and structural challenges that affected their work performance: poor working conditions, lack of proper equipment and resources, staff shortages and lack of supervision. Although these workers were professionally trained and had the capacity to perform, the working environment was not conducive to providing an appropriate level of care. These two workers had similar training and qualifications and were in charge of ANC, but one of them worked in a team in the large hospital and did not seem to be under great pressure, while the other worked alone in a clinic because of staff absenteeism and was overworked and frustrated.

These two cases illustrated that the external and internal factors that influenced the health workers in their relations with patients, particularly women. In Jenny's case, internal factors were preventing her from providing appropriate services: she was overworked because of staff shortages and absenteeism and because she was a qualified nurse, there was an asymmetry in power between her and the patients, which created animosity and poor working relations in the health facility. Her authority in the health facility was not to be questioned by patients and she did not need to offer any explanation to them regarding what she considered professionally appropriate. For instance, the use of triage system was not explained to patients and this created misunderstandings, with them accusing her of showing favouritism (*wantok system*). Although it was evident that Jenny's attitude to work was influenced by religion, this was only reflected in her work attendance, not in her relations with women. Her commitment and devotion to work despite the challenges she faced reflected her Church's principles in comparison to the other staff members.

In Wapun's case, the factor encouraging her to interact well with patients was her training. Because she understood her job, she spoke to women during health talks and ANC sessions. In addition, Wapun worked in an enabling environment with a team in her section, which helped in dealing with patients. However, an obstacle to interacting effectively with most of the women attending ANC was that they were illiterate and unable to communicate well in Tok Pisin or English.

The informal practitioners cannot be compared because they were operating under entirely different circumstances, both in terms of the services they provided and the context in which they provided their services. They did not have problems in their

interactions with patients because they were dependent on their patients patronising their services. Both of the informal practitioners had two things in common. First, a patient's faith in the products and their ability to heal was important. In the case of the traditional healer, her therapy was of no use to patients who did not have faith and trust in her ability to treat them. Eves made similar remarks about a therapy called the 'water of life', which was dependent on faith to be efficacious for the Lelet of New Ireland (2010:509). Healing required absolute faith in God and so failure to heal indicated a lack of faith (Eves 2003:259). Second, the fees for the informal therapies were relatively high, compared to the biomedicine of the public health system. Only clients who could afford it could use the informal therapies. The traditional healer was often the last resort for people whose experience with biomedicine had been ineffective. In a situation in which their options were limited, they had no choice but to pay if they wished to recover from their illness.

### **6.3 Discussion of the Port Moresby North-West Suburbs Findings**

This case study showed the way health services were being delivered and used by urban women in Port Moresby city. The findings showed that there was an association between women's health and illness with their roles, social relations and economic status in the society. Some of the illnesses to which the women succumbed resulted from the intersection of their social and economic circumstances, health beliefs and practices (Australian Women's Health Network 2013:12). Poor hygiene, lifestyle choices, emotional issues, social relations and physical environment were highlighted by the women as potential causes of ill health, illustrating the social model of health's definition of health. However, the health services provided in clinics and hospitals focused only on physical health and curing diseases, with the resources being for biomedical health care. While specialist medical care was provided in the hospitals, general services, including MCH services for childbearing women and children under five years of age, were provided by the clinics. The social, economic and psychological determinants of health were beyond the attention of the health sector and biomedicine. However, there were no agencies providing social, economic and psychological services within the suburbs, apart from churches providing spiritual development. These dimensions of health were left to the individuals to address.

The women's knowledge of health was shaped by informal sources, such as churches, family members and the communities in which the women lived, rather than by formal sources such as schools (even though many of them had not been to school). In addition,

the interplay of a multitude of sociocultural, religious, economic and institutional factors influenced the women's decision-making processes and attitudes with regard to seeking treatment. Consequently, these factors determined the type of health care providers to visit and treatment practices to adopt. Some of the women who adhered to religious beliefs that prevented them from using traditional healers used biomedical services or natural therapies and home remedies. Other women resorted to the use of alternative remedies and prayer, instead of biomedicine. Education, access to facilities and money were not found to have a positive association with the use of biomedical health care services.

One interesting finding was that institutional factors were influencing the HSB of women in the urban suburbs more than in the rural sites. Although institutional factors influencing HSB were not included in Andersen and Mechanic's HSB model discussed in Chapter 2, barriers such as poor interpersonal skills and long treatment procedures were some of the factors that prevented many women from patronising the health facilities. Those who did seek health care were assessed by the health workers in terms of their ability to read, write and speak English. Although Wapun's remark that most of the mothers were illiterate could have been merely stating a fact, it may have been an example of scorn for, and devaluation of, women who did not have the same level of education as herself. There was an imbalance in the power relations between the female workers and patients because the nurses had authority because of their training and ability to treat with biomedicine.

These findings concur with previous studies undertaken in PNG. Andrew et al. (2014:10) found a 'multitude of sociocultural factors to be affecting ANC attendance' in Madang. Although this finding was specifically related to maternal health, it could be applied more generally to women's HSB. Similar observations were made by Whittaker et al. in their study on perspectives on health and illness, prevention and cure, HSB and the responsiveness and acceptability of the health services provided in nine PNG provinces (2009:97, 111). Their findings demonstrated that 'multiple factors and contexts' influenced treatment-seeking behaviour, which made it complex and diverse. In addition, the findings of this urban case study concurred with a large number of empirical studies conducted on HSB in sub-Saharan Africa, Southern Asia and Latin America (Babalola & Fatusi 2009; Chakraborty et al. 2003; Lubbock & Stephenson 2008; Muriithi 2013; Schooley et al. 2009; Siddiqui et al. 2011; Tomison 2013; van der Hoeven et al. 2012). While some of these studies specifically focused on HSB for maternal health service utilisation, others focused on general HSB. The findings of all of these studies highlighted

the fact that health was intersectoral and was not confined to one discipline or sector. The HSB of patients was influenced by a host of factors, which could vary across different geographical areas.

The findings of this urban case study showed that many women were sought help from formal health facilities because they had confidence and trust in the ability of the health workers to relieve them of pain and help them recover. The desire to live encouraged women to use health facilities, which not only had equipment to test them and help diagnose illness but had medication for its treatment. However, the women were discouraged from using health facilities if the staff were abusive, uncaring and unfriendly and the procedures used were not woman friendly. For many women, visiting a clinic was generally an unpleasant experience because the internal operating procedures could be cumbersome and frustrating. The attitudes of the health workers and their interactions with patients was shown to reflect their frustrations and was influenced by internal factors, such as staff shortages and excessive workloads, which made it hard for their working environment deliver patient-friendly health care. Some of the issues, such as staff shortages, were beyond the control of the health workers and reflected the macro-level structural and political processes (Berman 1999:4; Farmer 2004:317).

The health workforce supply crisis in PNG was highlighted in a study by the World Bank (2011:10). As explained earlier, the health workforce training and recruitment was dependent on policies of several government institutions, which were beyond the control of the NDoH. With regard to the recruitment of health workers, the government's Department of Personnel Management had set a ceiling on staff numbers for all government departments, based on the government budget, which was controlled by the Department of Finance and the Department of Treasury. Thus, the frustration that health workers directed at patients had its roots in the inability of the state to fund the health system adequately. The failure of the state to adequately fund the health system meant that a health system that was intended to help women was pushing them further away and resulting in some women choosing to live with their illness because they could not afford the treatment costs and find suitable treatment option for them.

The findings regarding the popularity of informal therapies in urban areas clearly demonstrated the coexistence of formal and informal systems. This contradicted the popular view that traditional healing was predominantly being used in rural areas, rather than in urban areas (Ahmed et al. 2000; Chakraborty et al. 2003; Abdullahi 2011; van der



Hoeven et al. 2012; Muriithi 2013). This case study's findings showed that the majority of women in urban suburbs preferred to use natural therapies, along with other health and wellness products. One reason for this was that many women could not afford the costs associated with getting treatment from the health system and they were discouraged by other institutional factors, as explained above. In addition, PNG women in urban and rural areas were becoming more aware of their health through education, HIV awareness, family and church, as well as the increasing commercial distribution of various health products, which encouraged them to use new products that were expensive and had limited research on their efficacy.

Recourse to alternative therapies indicated that the women desired good health. Alternative therapies were being used by women of all socio-economic backgrounds in urban areas. One mother said:

I don't like going to clinics and use herbal treatment for myself and children. I use hot water to steam my face and body. For malaria, I use *nim* leaves. For diarrhoea and abdominal pains, I use guava leaves and warm water. I came to the clinic today because my 15-year-old son has chicken pox and he refused to wash in water with tea leaves (LL, mother at clinic).

This finding concurred with Whittaker and colleagues (2009:105), who found that the use of home treatments, including herbal remedies and water therapies, were popular and that 'three times as many respondents' in the nine provinces of PNG 'said that they would use home treatment first before seeking treatment at the clinic'. Similarly, Tomison's study (2013:37) in Sierra Leone found the existence of a pluralistic health system because many people used TM or faith healing, believed it to be more effective than biomedicine. However, this urban case study showed that many women still preferred formal biomedicine because they trusted the trained health workers.

The other noteworthy finding from this urban case study was that health outcomes were not indicators of biomedical health service utilisation. As mentioned in Chapter 2, health outcomes reflect the changes in the health status of individuals that are attributed to planned or unplanned interventions of government policies in sectors other than health. Health service use is only one aspect of this and occurs at a time when the individual is ill. Although health outcomes are assessed using indicators such as life expectancy, these indicators reflect the social and economic conditions and physical environment of the people. Thus, achieving improved health outcomes is complex. Approaches to improving

health outcomes need not be confined to the health service delivery side in the health sector alone.

This urban case study showed that for health service delivery to have optimal results on the users of health services, interventions must be targeted at the determinants of health that were identified in the findings. Even factors influencing the behaviours and attitudes of health workers (e.g., religion and culture), which subsequently affect the HSB of women, operated at various levels, both internal and external to the health institution. Hence, factors influencing the use of health services by women operated at different levels, on both the user side and the provider side of health service delivery, and generally varied in magnitude and level of significance.

## **6.4 Conclusion and Recommendations**

This urban case study has shown the usefulness of adopting a multidisciplinary approach in health research, such as the qualitative data collection methods for an in-depth understanding of issues such as women's health. Although this case study focused on women in Moresby North-West suburbs, the results highlighted some of the contextual factors influencing the delivery of health services and their use by urban women in other suburbs. The health of women, factors influencing their HSB, the sources of their health knowledge and the treatment options they pursued could be similar to those of women in other suburbs in Port Moresby. The findings revealed the need for some health policy and practice recommendations.

Improving health outcomes require the adoption of multisectoral and multidisciplinary approaches. For example, agencies in sectors whose functions impact health and wellbeing of individuals, such as education, agriculture, fisheries and others could combine with the health sector in implementing selected interventions. Biomedicine and science could combine with social science disciplines in research activities promoting wellbeing and health. The public-private partnership framework could enable partnerships in the suburbs between private companies, schools, churches and other informal groups. For example, companies in the suburbs could assist in sponsoring Nurse of the Year awards to improve the work performance of nurses. A multisectoral committee, comprising community leaders and agencies in the suburbs, could work to encourage improved performance of health workers and assist with additional resources.

Regular monitoring of health worker performance and evaluation of health services provided and used is suggested. Health workers who are closely supervised will be conscious in their relations with patients and provide health care at the required level. At the same time, managers will understand the working conditions and environments of the health workers and take actions to improve these. The findings suggested that some of the treatment procedures of urban health facilities should be reviewed and efficient systems that encourage better coverage and usage should be introduced. Feedback on the health service provided and used at the health facilities was absent in PNG and could lead to improvements.

The case studies identified a need for conducting HSB studies in the NCD with regard to general health service use and specific diseases that cause high morbidity and mortality, such as TB. Such studies would facilitate understanding of the experiences of people who are affected by TB both directly and indirectly, to provide evidence for developing appropriate measures. Studies similar to this study could be conducted with a larger sample size to examine the delivery and use of health services in the general population. Further study of the different health care providers in the city and the users of their services in the three electorates, which this study did not cover, could be conducted.



## Chapter 7: Discussion of Key Findings

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This chapter has five main sections, beginning with a summary of the key findings and a comparison of them in the various case study areas. This is followed by a section on their implications for service delivery and the attainment of health outcomes, based on the conceptual frameworks discussed in Chapter 2. Some of the limitations of the study are discussed in Section 7.4 and the chapter concludes with a discussion of future research possibilities in this area.

### 7.1 Key Findings

The desire to know the determinants that influenced people's health outcomes led me to take a different approach in this study from the normal path in health service delivery studies, by examining the various concepts of health and the approaches for delivering health services that were evident in various locations in PNG. Some of the findings of the study are discussed in detail in the subsequent sections, but in summary, this study found the following:

- Health and health outcomes were confined to biomedicine and health departments, with the focus of the health system on curing diseases through a selective approach. The determinants of health were not being addressed adequately.
- Health service delivery interventions were provider focused and overlooked user issues.
- There were determinants influencing HSB on both the provider side and the user side.
- Factors influencing health worker attitudes were determined by public policies, organisational structures and resources, and the workers' sociocultural values and training.

### 7.2 Comparison of Results

This section compares the findings in the various case study areas in terms of three major themes: (i) the women's health beliefs and their sources of health knowledge; (ii) women's health experiences and HSB, including determinants influencing their health service usage and the treatment options they pursued; and (iii) the health workers

providing the health services. The approaches adopted in health service delivery, factors influencing the health workers and the facility contexts are included in the discussion.

### **7.2.1 Women's Perceptions with Regard to Health**

Health knowledge refers to the meanings, rules and practices that individuals in communities have regarding preventing illness and death and the things they do when they experience symptoms of illness. The question of what health meant to the individuals was posed in terms of their understandings of how to tell whether a person was sick or healthy.

Although the women differed in their backgrounds and responses, their general understandings of health and illness were very similar. The respondents in all three locations associated health and illness with physical appearance, such as the condition of the skin, eyes, body and even hair. It was common for them to describe a healthy person as having a 'shiny body' and a sick person as having *dust kirap* (dry) skin, or looking thin, with yellow (pale) skin and sunken eyes. Sometimes their descriptions extended to include emotional well-being, describing a sick person as being unhappy or *pes nogut nogut* (bad face). Good nutrition and hygiene were considered essential for good health, with poor nutrition and hygiene seen as causes of illness. The idea that illness was physical, psychological and social was common across all three sites and supernatural factors were not identified as a cause of illness.

The study participants had more than two sources of health knowledge, both formal and informal. For the majority of women in all three locations, family members, churches and schools were their common sources of health knowledge. The Moka Gomo women gained health knowledge from health workers, when visiting health facilities as patients or when taking care of an ill family member, in addition to church, school and family members. Although the urban women had similar sources of health knowledge, their family members were their major sources. In addition, the urban women learned from books, magazines, friends, hospital, health workers and workplace. While some of the health knowledge of the women from all three sites was derived from the participants' own experiences, some was handed down orally from older women.

These findings indicated that there was not a single source of health knowledge but rather, an intersection of several sources. The informal sources were found to have a significant

influence on the women, particularly for those who were illiterate or did not have easy access to printed material.

There were some differences with regard to perceptions of health, the factors promoting good health and the causes of illness, which were all unique to the sociocultural and economic situation of the women. For example, poverty or having husbands with many sexual partners were identified as causes of illness by a number of women in Moresby North-West and Imbonggu but not in Rigo, reflecting the sociocultural and economic contexts of these locations and the illness experiences of the women. The differences demonstrated that the women's understandings about health were often based on their individual lived experiences and the problems that they observed in the community.

These perceptions reflected aspects of the medical and SDOH conceptual frameworks of health. Some women's understandings of illness being caused by having multiple sexual partners because of poverty illustrated the influence of the social and economic conditions of society, echoing the SDOH definition of health. In contrast, the Tok Pisin perception of some of the women, that a healthy person *em stap gut nogat sik* (lives well without getting sick), fits the biomedical model's 'freedom from disease' definition of health.

#### ***7.2.1.1 Women and Health***

As highlighted earlier, there was limited information available on the health of PNG women, despite several studies being conducted on health in PNG, with the focus on obstetric care and maternal mortality (PNG DoH 2009). As a result, there is a paucity of research on women's other health problems, which are commonly referred to as *sik bilong mama* (disease of mothers) or *sik bilong meri* (women's illness). In recent years, cervical and breast cancers have been responsible for the increasing incidence of illness and death among PNG women that is not pregnancy-related.

This finding concurred with Joy Gillett's study of women's health in PNG, which argued that 'the health needs of women was poorly understood' (1991:9) and needed to be documented. Gillett used statistical information, with the aim of increasing awareness of the magnitude of PNG women's health problems. However, since Gillett's study, very few studies on women's general health have been conducted in PNG, apart from Rachael Hinton's (2009) PhD study on the links between women's health and women's lives, which used the rights-based framework.

In this research, I found there were significant knowledge gaps that severely limited the understanding of rural and urban PNG women's health and the illnesses affecting them, their socio-economic status and age, and the provinces worst or least affected. The following subsections discuss the findings of this study in terms of the health experiences of the women, their HSB and the treatment pathways that they chose.

### ***7.2.1.2 Health Experiences of Women***

Each phase of the women's lives was challenged by various health issues due to changes in their bodies, status, roles and place of living. In addition to their maternal and reproductive functions, the women were active in roles such as food production, domestic chores and the management of the household, as well as in formal and informal employment. These roles affected their lives. However, these issues are unknown.

This research found that the women faced various health problems that were not related to their maternal and reproductive roles, with unmarried women and those who had not experienced pregnancy and childbirth having unique health needs that were not being met by the MCH services provided by the health facilities. While the health of the women could not be generalised because it varied across the country, there were some similarities and differences among the women depending on where they lived. This finding echoed the SDOH's understanding of health, which recognises that health and illness are influenced by the socio-economic, cultural and geographical contexts within which women live. As Chapter 4 showed, the majority of Tubulamo women in Rigo suffered from severe backaches and respiratory chest infections. The common ailments suffered by the majority of Moka Gomo women in Imbonggu and Moresby North-West suburbs were PIDs and backaches.

The reason for the women in all three locations experiencing severe backaches was the traditional expectation that women are responsible for the bulk of garden labour, which involves bending for long periods and carrying heavy loads as they walked between their villages and gardens. One reason for PIDs affecting the majority of women in the rural highlands and urban suburbs, but not the rural coastal women, is that polygamy is not practised in most rural coastal villages but it is a culturally accepted norm and widely practised in the highlands. All of the Tubulamo women were in monogamous marriages while there was a mixture of monogamous and polygamous marriages in Imbonggu and Port Moresby North-West, with the number of polygamous marriages being higher in Imbonggu. There were no divorces and remarriages observed in Rigo but for the women



in Imbonggu and Port Moresby North-West, there was a lot of remarriage following a separation or the death of a spouse.

Another reason was the high labour migration among the men in Imbonggu, who migrated to other urban centres in search of employment, which was less common in Rigo. The length of the period away from their Imbonggu varied, as did their distance from home, depending on the nature of their employment. This finding concurred with Wormsley's (1978:274) earlier work in the Southern Highlands, which noted that due to limited economic opportunities, such as lack of plantation economy, more men were leaving the villages. In this current study, the husbands of many of the women who suffered from PIDs were working in Mount Hagen, Port Moresby, Lae, Madang and other parts of PNG, as illustrated by the cases of Manda, Apagi and Alice in Chapter 5. The study found that about three out of every five Moka Gomo women shared similar experiences. An explanation for the high level of labour migration among Imbonggu men, but not among Rigo men, was the differences in their sociocultural systems, such as the idea of 'big men': Imbonggu men participated in ceremonial exchange to increase their prestige and status, but this was not the case for Rigo men. Thus, Imbonggu men were under pressure to find opportunities to increase their wealth, which could then be invested in ceremonial exchange. Given the limited development opportunities in the villages, many Imbonggu men sought this wealth through labour migration.

Most of the Moka Gomo women who were experiencing illnesses had limited or no education, were economically disadvantaged and were disempowered with regard to exerting their rights. They had limited or no knowledge about STIs and were unable to protect themselves, thus suffering the consequences of their husband's infidelities. Similarly, PIDs were common in the urban suburbs among women at the bottom of the socio-economic ladder, who engaged in sexual relations that put them at high risk of STIs.

These findings supported some of Gillett's findings, which found that poor health among women was 'deeply rooted in social, cultural, political and economic environments of societies' (Isaacs & Financioglou 1987:3 cited in Gillett 1991:31). Some of these beliefs and practices had negative effects on women's health. However, these, and the situation of women, varied between societies. Although many of the health issues affecting women that were observed by Gillett differed from those in this study, one was consistent with my findings. Gillett found that STIs and diseases of the genital tract were the second leading cause of hospital admission among women aged 15 to 44 years (1991:23, 69, 75).

The other major illnesses that this current study found affecting women's health were malaria and anaemia, with malaria being the third leading cause of death. Many of the women living in lowland areas suffered moderate to severe protein malnutrition and anaemia. In urban areas, an increasing number of women were developing obesity and diabetes, as their lifestyles and roles change.

Similar factors are known to affect women's health in other developing countries, although the disease patterns may differ. Paul, Murshed and Akther (2014) found that many interrelated factors contributed to the disease patterns of rural Bangladeshi women. Because most women were illiterate, they were not fully aware of how to maintain health. They paid little attention to the symptoms of illnesses and seldom sought treatment. Their health problems were compounded by extreme poverty; since the Bangladeshi women could not afford the costs of treatment, they simply ignored their illnesses and learned to live with them. The use of unsafe water and unhygienic sanitation practices were common among these women. Ige's findings in Nigeria were similar, with the intersection of various factors (including lack of education, inadequate nutrition, culture, lack of government action, economic hardship and limited income opportunities ) being responsible for women's ill health (2012:185; see Adejare 2001; Odeleye 2015:53–54; Oyebola 1980 for Nigerian women's health; Yu & Sarri 1997:1890–1892 for Chinese women's health).

### ***7.2.1.3 Women's Health-Seeking Behaviour***

The findings of most studies of HSB in PNG and elsewhere have identified certain determinants influencing women's use of health services. However, a distinction has not been made between the different determinants and it can be difficult to distinguish between the factors encouraging or discouraging the use of health facilities. In this study, the determinants were differentiated, as shown in case study chapters.

The determinants encouraging the use of health services have not been documented in most HSB studies. In this study, the three common factors encouraging women to seek health care were fear of death (desire to live), relief from pain and desire to become well. This finding was consistent with other studies that have argued that severe pain prompted patients to seek care and treatment quickly. When the illness was not severe, treatment was delayed until the situation worsened (van der Hoeven et al. 2012:5).

The cultural belief in PNG, that a woman's role is caring for her children and household, drove many of the women in the two rural locations to seek care. This factor was not as strong for the urban women. For many women, the priority was seeking health care for their children and other members of their household, rather than for themselves. In the urban suburbs, the women trusted the ability of health workers to heal them and prevent their illness from getting worse. The decision regarding the type of health provider to approach was made well before the patient took the first step in seeking health care, based on their trust in the provider's ability to heal. The women in Imbonggu and Port Moresby North-West visited health facilities to find the cause of their pain and illness, but this was not as common in Rigo.

The four common factors discouraging women from seeking health care in the three locations were the costs associated with treatment, poor behaviour of health workers, long queues and long waiting times. Financial constraints were a major demand-side barrier for most women, with almost half of the total number of participants deterred by the costs incurred in getting treatment at health facilities, as well as for transport if the facility was distant, the tests required and the medicine. Other indirect costs were incurred for the time spent at the health facility, as the women were away from the activities that were vital for their livelihoods (Andrew et al. 2014:5; Lubbock & Stephenson 2008:77–78). The participants' responses indicated that the low socio-economic status of women had a negative influence on their use of health care. Although some studies (Akin et al. 1986) have found that costs were an insignificant factor influencing health service users, other studies (Babalola & Fatusi 2009; Chakraborty et al. 2003; Lubbock & Stephenson 2008; Muriithi 2013; Siddiqui et al. 2011; Tomison 2013; van den Hoeven et al. 2012) have shown that the cost of health care was a key determinant for whether individuals sought care. Previous studies in PNG have shown similar findings (Andrew et al. 2014; Garner et al. 1994; Hinton & Earnest 2010; Whittaker et al. 2009).

Few studies have been conducted on health worker attitudes and behaviours and the way these influence the use of health services. The findings from this study showed that the unfriendly attitude of health workers was a common barrier for the women in all three sites. As responses in the case studies showed, many women mentioned the unfriendly and abusive health workers as their reason for not seeking treatment, ANC and help with their deliveries. As health workers were said to be especially unfriendly towards mothers with high parity and poor spacing of children, poor family planning had a negative relationship with the use of maternal health services.

These experiences were similar to the observations made by d'Oliveira et al. in SSA and Latin America, which noted that the types of behaviour that affected women's use of health services included neglect, verbal abuse, physical and sexual abuse, lack of sympathy and anger (2002:1681–1682). Other studies in PNG have reported similar findings. Avue and Freeman (1991) reported poor attitudes and behaviour of health workers in providing family planning services in Manus Island. Garner et al. (1994) found that staff attitudes were barriers blocking women from facility-based births. Despite obstetric complications, most women chose to deliver their babies at home.

The location of the health facility and the distance to it was an issue for the women in the two rural sites but not for the women in the urban suburbs. As some of the narratives in Chapters 4 and 5 showed, distance discouraged the women from seeking treatment. This finding concurred with past studies conducted in PNG (Andrew et al. 2014; Hinton & Earnest 2010; Whittaker et al. 2009). In addition, studies in other countries have identified distance as a barrier to the use of health care (Fiedler 1981; Fosu 1994; Ahmed et al. 2000; Chakraborty et al. 2003:333; Lubbock & Stephenson 2008:77–78; Schooley et al. 2009; Muriithi 2013:156; Siddiqui et al. 2011:629; Tomison 2013:29; Uchendu et al. 2013:92; van der Hoeven et al. 2012).

However, the findings from other studies as well as this one showed that having a facility close by was no guarantee that it would be used and that some women did not visit health facilities despite having easy access to them. Several of the women in Imbonggu and Moresby North-West said they did not visit the nearby health facility for treatment. Indeed, one health worker mentioned that women who lived much further from the health facility were very keen to seek treatment there. This was consistent with the findings of Andrew et al. who attested that women who lived close to health facilities did not necessarily attend ANCs (2014:10).

The time spent waiting for service deterred patients from attending biomedical health facilities and could lead them to seek health care from other providers. This supply-side barrier reflected the internal treatment procedures of the facilities, which was found to affect urban women more than those in the rural sites. Andrew et al. who examined the timing of formal ANC in Madang, found that women's use of health services was influenced by previous experiences of ANC, including long waiting times (2014:5). Similar observations were made by Muriithi for Kenya, where long waiting times

increased the patient's preference for self-treatment or for seeking care at another facility (2013:158).

When examining the determinants encouraging and discouraging women's HSB, the cases in this study showed that some aspects of Andersen's conceptual framework were not applicable. There were overlaps with other determinants and they did not follow the sequence and order indicated by Andersen and Newman (1973, 2005). For example, some determinants encouraging health care seeking, such as the fear of death (wanting to live) were categorised along with health beliefs under predisposing characteristics; relief from pain and trust in biomedicine and health workers were categorised under need characteristics; and financial constraints were categorised under enabling resources characteristics. In addition, the framework did not include determinants *discouraging* the use of health care, overlooking institutional factors such as unfriendly behaviour of health workers, long queues, waiting times and distance to the health facility. This demonstrated the limitations of the framework, as stated earlier in Chapter 2, that the factors influencing the HSB of women from the provider side were not included in the Anderson model, which focused on the individuals, rather than the institutions, providing health care. In this study, the provider-side factors were found to be major factors influencing women's HSB and needed to be included in the model.

Ensor and Cooper asserted that knowledge of what the provider offers, education about using self and practitioner-provided services, and the health-related beliefs and practices of the patients are as important as the physical and financial accessibility of health services (2004:69). Table 7.1 illustrates that barriers preventing women from seeking treatment are influenced by both demand-side and supply-side factors (Ensor & Cooper 2004:69).

**Table 7.1: Reasons for Not Seeking Health Care**

<b>Reason<sup>i</sup></b>	<b>Supply/Demand</b>
Financial constraints and costs associated with receiving treatment	DEMAND
Bad attitude of health workers	SUPPLY
Long queues and waiting time; slow inefficient service	SUPPLY
Long distance to health facility	DEMAND/SUPPLY
Others <sup>ii</sup>	DEMAND/SUPPLY

**Source:** Adapted from Piet-Pelon (1999) cited in Ensor and Cooper (2004).

Notes: (i) Each participant identified more than three factors. (ii) Responses from fewer than five respondents or in one site only (e.g., did not have accommodation in city; ashamed to ask husband for money to get treatment for women's illness).

#### 7.2.1.4 Treatment Pathways

In several respects, the women's responses to health challenges were similar across all three locations. The findings showed that the formal public health provider was the most popular for the majority of the women in all three locations, although this was higher in the two rural sites than in the urban site. The use of for-profit private health care was not popular across all three sites.

Self-treatment using natural therapies and home remedies was very common in both urban and rural areas: highest in the urban site and involving more of the Tubulamo women in the rural sites. However, some of the women were cautious about using herbal treatments. Further, self-treatment using natural therapies and home remedies was the first step in treatment for the majority of women prior to visiting the formal public health facilities. This involved using the leaves, bark, roots, fruits and flowers of certain trees and plants, which could be boiled and drunk, used in steaming and bathing, or mixed with coconut oil and rubbed on the skin for pains and sores. This option was not accompanied by the recitation of spells, as would be the case with traditional healers. Natural therapies were not the same in the three locations because they depended on the plants grown in each area and on local knowledge about how the materials should be used. For example, certain ferns and tree barks were used in Imbonggu but not in Rigo, where the use of the coconut was common, usually accompanied by leaves, roots and vines. While there was some incorporation of knowledge of natural therapies from other places, the urban locations provided many more opportunities for this because of the greater numbers of people living near each other. Although this study found that the women in the rural settings for this study were usually limited to using their own traditional treatment practices, other rural communities in PNG have incorporated new forms of knowledge from other parts of the country.

Women were self-treating by purchasing over-the-counter medicine. Some purchase painkillers, paracetamol and antibiotics for pain relief instead of attending health facilities because 'It is quicker to buy Panadol and Amoxicillin from pharmacies and stores than waiting in a long queue to get it at clinic. *Em seim marasin tasol* (it is same medicine anyway)' (Urban woman). The women also bought products from herbal health and nutritional distributors, such as 99 and JM Ocean.

Prayer was a common option with many of the women who were members of Christian churches. This study found that women used prayer as a therapy, either on its own or

accompanying biomedicine and home remedies. Kala's case in Chapter 4 provided an example of the use of prayer to complement herbal treatment for an ulcer on her arm. Faith healing was a treatment option used mainly by members of Pentecostal churches and was not popular. Fewer than five participants in the urban and rural highlands sites used this option and none in Tubulamo.

This study found that the number of women visiting traditional healers in the areas that were researched was very small, fewer than five over all three locations. Traditional healers were consulted when biomedicine was perceived to be ineffective and for those who used this type of therapy, it was often the last resort after trying other treatment options (e.g., Badi's case in Chapter 6). For the delivery of their babies, the women chose to have either supervised or unsupervised births in their villages, on their own or assisted by another woman.

The choice of more than one treatment option, as described above, showed that medical pluralism was common in PNG (see also Barker 1989; Carrier 1989; Counts & Counts 1989; Eves 2003, 2010; Frankel 1986; Frankel & Lewis 1989; Herdt 1989; Lipuma 1989; Strathern 1989).

## **7.2.2 Health Service Delivery and Health Workers**

This section begins with a discussion of the services provided in the areas being researched and the various approaches for delivery of health care, before discussing the health workers. As mentioned in Chapter 2, Berman's conceptual framework was applied in this study to analyse the health workers' internal and external environment, while the relationship between staff and patients was examined through Holmes and Goldstein's conceptual framework. The factors motivating and demotivating the health workers were analysed using the conceptual framework of Thu and colleagues. Although the two latter frameworks were developed specifically for analysing MHCPs, they were applicable in this study because the subjects under study were women and there were similarities to MHCPs in certain aspects.

### ***7.2.2.1 Health Services Provided and Approaches***

There were similarities in the health services provided for women in all three locations, although there were slight differences in the urban suburbs. All the health facilities in the three sites provided MCH services. However, while family planning and immunisation were provided at almost all facilities, ANC was limited to only district facilities and urban

clinics for women who are pregnant, but not in the village aid posts. The ANC services were limited to childbearing women and did not include women and girls who had not experienced childbirth. Specialist services were only available in specialist clinics in Level 6 and 7 hospitals, such as Port Moresby and some provincial hospitals. While the selective and targeted approaches for delivering health care remained unchanged, the treatment processes and procedures varied for each facility because of the different geographical location and facility level. The number of patients treated also varied: the CHW in a village aid post might treat fewer than 10 patients per day; nurses at a district health centre might treat 50 to 100 patients per day; and NOs in the urban clinics might treat between 100 and 150 patients per day.<sup>22</sup>

In general, unlike developed countries with robust health systems that address women's health issues, women's health services in most developing countries are usually restricted to maternal and reproductive health care. In recent years, a Women's Wellness Clinic has been established by a retrenched NO in her Waigani home, to assist women in the early detection of cancers. The clinic is assisted by PMGH and services include pap smears, medical checks and treatment for illness. The formal health facilities in PNG provide MCH services for childbearing women, but no services for other health issues affecting women. Indeed, as noted earlier, Gillett noted that a low priority was given even to women in the delivery of MCH services, with the focus mainly being on the children's health (1991:9).

#### **7.2.2.2 Formal Health Workers**

As noted in the sociodemographic details of the health workers in each case study, the majority of research participants were aged over 36 years, with very few aged 25 to 35 years. The number of workers aged over 46 years was higher in Imbonggu than in Rigo and Moresby North-West. Although this study did not involve all of the health workers at the three sites, there was clearly a gender imbalance, with more males than females in Rigo facilities and more females than males in the facilities at the other two sites.

One of the questions I asked was why women were not using the health services. The women gave many responses to this question, as illustrated in some of the accounts in the case study chapters. Some of the health workers expressed similar views to those of the patients. This section focuses on three interrelated issues concerning the health workers: their interpersonal skills, long queues and waiting times, and the traditional beliefs of the patients. While the unfriendly behaviour of the health workers was an issue across all



three locations, the issue of long queues and waiting times was relevant for the urban facilities.

The case studies showed that overall, there were more female nurses and CHWs than male workers in the health facilities. The male CHWs were found mainly in village aid posts and in specialist sections of the facilities. According to the World Bank, this situation is common in PNG and many other developing countries, where the majority of formal health workers are nurses and the largest proportion of nurses are women. In many remote and rural areas of PNG, nurses are the main health care providers and in some cases, the only health personnel in the health facilities (2011:59). The nursing profession consists of NOs and nurse assistants or CHWs, based on the training they have done, with the differences indicated by the colour of their uniforms.<sup>23</sup>

The studies on HSB and health service utilisation in most countries have centred on users and the determinants influencing their use of services. Most of the studies conducted in PNG on health service delivery have addressed provider-side barriers related to organisational arrangements. Although health human resources are considered crucial (World Bank 2011), the focus has been on the quality and quantity of service delivery. The health worker–patient relationship has been a neglected area of empirical studies, even though this has a direct impact on HSB and health outcomes.

The accounts from both the women and the health workers in this study revealed that the unfriendly and rude behaviour of health workers was one of the major factors determining the women's use of the health services. The problem of rude and sometimes abusive behaviour by staff in health facilities is not unique to PNG. Indeed, women in other developing countries in SSA, Asia, and Latin America face similar problems (see Afsana & Rashid 2001; Aldana et al. 2001; Amoota-Kaguna & Nuwaha 2000; Duong et al. 2004; Kiwanuka et al. 2008; Kyomuhendo 2003; Mrisho et al. 2007). Mathole et al. found in Zimbabwe that unhelpful nurses could refuse to refer women to hospitals' (2004). Similarly, a Human Rights Watch (2011) study in South Africa described the situation of women in labour being turned away from clinics without examination, or being ignored by nurses when they needed help. Asuquo et al. in Nigeria reported that the majority of women abhorred the attitudes of health workers towards patients (2000).

### ***7.2.2.3 Factors Influencing Health Worker–Patient Relations***

To investigate the factors influencing health worker–patient relations, one of the themes of the in-depth interview questionnaire was patient–health worker interaction. The questions asked what influenced health workers in their relations with patients. When the health workers were asked what factors encouraged or discouraged them in their work, many were quick to say that their nurse or CHW training influenced their work. Others highlighted their customary beliefs and the patient’s customary beliefs and recourse to traditional practices as a hindrance to their work. The responses received from the majority of the workers fell under three main themes: nursing training, sociocultural beliefs and religious beliefs.

This section examines the factors of health worker training and sociocultural beliefs, to understand the way they influenced the behaviour of the health workers, especially when patient-centred care and the lack of human relations skills are becoming concerns in the delivery of health care. Very few empirical studies have examined the influence of training on patient–worker relations in health care settings.

#### ***(i) Training of Health Workers***

Because of the influence of training on health workers, it is important to examine the training provided, who is providing it, how the training is delivered and what is taught. Of the 20 biomedical health workers who participated in this study, only one had a university degree, six had education above Grade 10 (with either nursing or HEO training), six had Grade 10 education (and nursing training) and seven had education levels below Grade 10 (with CHW training). Three of the health workers in Imbonggu had only primary school education, with some basic nursing. Eleven of the 20 health workers had been trained in church-run training institutions and nine had been trained in institutions that were owned and run by the government. The low educational background of health workers across the three sites is of concern as this impacts on the quality of care provided, client relations and ultimately compromises the acceptability and satisfaction of service delivery.

Globally, there are concerns about the lack of good role models for trainee nurses and assistant nurses in health facilities. Studies have found that the ethic of caring is not emphasised in training and a low priority is given to teaching communication skills and medical ethics in the curriculum (d’Oliveira et al. 2002:1683). The concerns with regard

to nursing training echoed those of Virginia Hendersen who described her training in the United States in the 1940s as ‘mechanistic’ and procedural, with little or no attention on patient-centred care, comprehensive care or rehabilitation (1964:64). Sixty years after independence from Britain, similar issues were noted in Bangladesh, where basic nursing care of patients was supposed to be the primary activity (Hadley & Roques 2007:1153) but patient care and patient contact was questionable in practice (Hadley & Roques 2007). Bangladeshi’s three-year general nursing course and two-year CHW course had been adopted from Britain’s learn-as-you-work approach to training. This curriculum had a strong community focus and emphasis on preventive care.<sup>24</sup>

Nursing (including medical services) has evolved over time in many developing countries, including in PNG. Like other modern practices, nursing was introduced by the colonial administrations mainly for treating the ‘white settlers and administrators’ and a ‘few black men’ who worked for colonial administrations, and the arrangement of providing medical services in PNG created division in the territories during the period before independence (Denoon 1989:478).

PNG adopted the British and Australian style of nursing education, as Australia administered the Territory of Papua and New Guinea after World War II.<sup>25</sup> As mentioned in the introduction to this thesis, nursing and CHW training schools in PNG are owned and run by churches (World Bank 2011:24, 60). The training in some of the church-run nursing schools is provided either by only female staff or by more female than male staff (World Bank 2011:59, 77). English is the official language of nursing schools and used in health facilities and hospitals.

The teachers in the nursing schools have mixed qualifications, ranging from certificate-level education to diploma-level qualifications. Few of the teaching staff in the church-run CHW training institutions have a Bachelor’s degree-level of qualification, though some have a Master’s degree. A small number of CHW schools are staffed by people with a diploma-level qualification (World Bank 2011:81). Many of the nursing schools in PNG are located away from the provincial capitals. In recent years, some of the nursing schools have been affiliated to universities. There has also been some investment into CHW training schools in the 2000s but this has not included maintenance or replacement of infrastructure. CHW training schools are located in remote areas and are in poor condition for teaching and training health workers (World Bank 2011:59). Because of their location, these schools lack access to learning resources such as libraries and the internet. The

church-run CHW training institutions were primarily established to meet the needs of the church health services, but with the closure of government-run schools, the role of church-run CHW schools has broadened (World Bank 2011:60). Church-run nursing and CHW schools are established within the church grounds and are closely affiliated to the churches. Some of them have strict requirements for students entering their institutions and impose the church's values on the students.

Barbara Andersen provided an insight into nursing training in PNG (2014). She found that cultural concerns with order and obedience shaped the way nursing was being taught, learned and practised. These challenged nurses in their work and limited their ability to provide equitable care. Andersen (2014:vii–viii, 126, 327) noted that nursing education includes techniques for communication with patients. Nurses are trained to adjust their personae and practices, speech, emotional reactions and comportment to be ethical and respectful, depending on the context and different cultural worlds of their patients. In addition, they are taught to have firm values, an awareness of self and to remain dedicated to their vocation.

Andersen's description of nurses as 'middle figures' (Andersen 2014:4–5) explains one of the reasons for the behaviour of nurses. She found that the ideals of ethics clashed with the subjective experiences of nursing students who viewed higher education as a way of superseding village life and becoming modern. The nursing behaviour reflected the transformative nature of education in PNG, positioning the students to behave and think somewhere in between the collectivist PNG mentality and the 'white man's' individualistic culture (LiPuma 1998; Andersen 2014:329). However, she distinguished between the behaviour of nurses and the behaviour of doctors. She noted that doctors and other high-ranking medical staff were expected to behave more individualistically, to act detached and uncaring in the face of a suffering patient, and to avoid intimate or uncomfortable interactions with patients' families (Andersen 2014:329). Alice Street (2014:159) observed that many doctors in PNG public hospitals avoid making eye contact or talking too much with patients because any slightest gesture like this could be taken as evidence of having a relationship with them.

## *(ii) Customary Beliefs*

In their accounts of their work, some of the responses provided by the health workers related to their customary beliefs. Of the total 2 health care providers in the study, nine were from the same ethnic group as the people they were serving. This was more common

in the two rural sites than in the urban site, where the health workers came from different parts of the country.

Most HSB studies single out customary beliefs from the perspective of the patients. However, a limited number of studies have examined customary beliefs as a factor discouraging health workers in their work, including their interactions with patients. This study found that the customary beliefs of the health workers about illness and childbirth could make them reluctant to help their female patients and consequently, the relationship between them was poor. This finding concurred with the findings of similar studies elsewhere. Holmes and Goldstein found that there was tension between MHCPs and women because of differences in knowledge about pregnancy and childbirth, especially when traditional expectations clashed with the practices required for modern maternal health care (2012:6). A similar situation was observed in rural Uganda, where traditional birthing practices considered to have dangerous consequences were discouraged in health facilities, to prevent women from blaming the midwife if the delivery went badly. This adversely affected the relationship between the health workers and the women (Kyomuhendo 2012:31). A similar situation was found in rural Nigeria, which found that modern midwives have little tolerance for traditional beliefs about childbirth, such as delivering in a squatting position and not crying out during the delivery (Gazali et al. 2012).

As noted earlier, most of the nurses and CHWs in PNG are trained in church-owned and -run training schools. When missionary societies first came to PNG, they condemned many traditional practices and in some cases, destroyed ritual houses and paraphernalia. In some cases, some of the practices that were condemned related to healing rituals and the treatment of illness. Today, many of the churches that grew out of the missionary societies own the nursing and CHW training schools and impart their religious beliefs along with nursing training. These religious beliefs shape the outlook of the nurses and CHWs and have a significant impact on the way they work. The training they receive promotes the use of biomedicine rather than other informal forms of therapy. Rather than tolerate informal therapies, those going through the church system do not help women who use these other forms of care.

Because nursing is a Western concept, the values and ways of giving care have been shaped by missionaries and colonial authorities. Because of this history, when nurses are trained they often develop a sense of superiority, looking down on other women who are

in need of their help. The power they have over their patients makes them become authoritarian and sometimes even abusive. There is prejudice against women who are ill, or whose children are ill, based on the belief that such women do not know how to look after themselves or their children. The experiences of many women in this study attest that many nurses in PNG still maintain a sense of superiority over their patients, something that has been noted in other developing countries (Holmes & Goldstein 2012).

When applying the four determinants of health highlighted by Tarlov in the SDOH framework for analysis of health services, this study found that only medical care was being provided by the facilities in the three locations. The other three determinants of health, related to genetic and biological factors, behaviours and sociocultural environmental factors of the individual, were not included.

Some aspects of Holmes and Goldstein's (2012) conceptual framework on the relationship between the MHCPs and the women were found to be relevant to this study. Factors such as workload and conditions, training and culture were found to be influencing the relationships between the health workers and the women. Further, the cultural practices of patients that discouraged health workers in their relationships with women were relevant, particularly the experiences of Aia and Gabriel in Chapter 4, Jatapu in Chapter 5 and Wapun in Chapter 6.

Several aspects of Thu and colleagues' framework for health worker motivation and demotivation were relevant to this study. Ethnicity as a contextual factor influencing worker motivation was observed in the experience of several workers: Aia in Alepa village aid post remarked that because he was part of the community, he had no issues working with the people. However, ethnicity can also be a demotivating factor and this is not dealt with adequately in the framework, although it was clear in the cases of Gabriel in Rigo and Jatapu and Byako in Imbonggu. Ethnicity, for these health workers, demotivated them and discouraged interaction with patients, especially when language barriers, cultural beliefs and practices clashed with biomedical values and treatment practices. This finding concurred with Razee et al. who found sociocultural factors demotivating the performance of health workers in rural PNG. They noted, 'beliefs relating to the cause of illness and patient attitudes sometimes made it difficult for health workers to provide the care and treatment required. ... Belief in sorcery seems to negatively influence health worker performance' (2012:832).

Working environment, as an organisational factor, may motivate or demotivate workers (Berman 1999). The narratives of Jenny in Tokarara Clinic and other workers in the two rural facilities reflected the frustrations they experienced in not being able to provide appropriate care because of poor working conditions and lack of proper facilities. For example, the staff at the Imbonggu Health sub-centre were unable to deliver babies because the delivery room did not meet the minimum standards and there was no electricity or running water. The framework emphasises two other factors as motivating workers: respect of the communities and good interpersonal relations as a result of the client's perception of service quality. These aspects could be seen in the experiences of Linus, the volunteer health worker in Imbonggu (see Chapter 6), who commented on the community's trust in his capacity, which kept him working despite the remoteness and difficulties of accessing services.

### **7.3 Health Service Delivery and Health Outcomes**

As explained earlier, health outcomes, indicators and status are closely interrelated. Health outcomes are the results of a series of interventions targeted at changing health status, which, in turn, are assessed by health indicators (Nutbeam 1998:356–358).

#### **7.3.1 Improving Health Outcomes**

The question of how health outcomes in developing countries can be improved is asked by international organisations and those involved with improving health (Berman et al. 2011). This section discusses two approaches to improving health outcomes: improving organisational performance and improving the health system.

The idea of organisational performance was advocated by Berman et al. who argued that improving the performance of organisations delivering health services was essential for improving health outcomes. Their argument was based on research and empirical observation of underperforming health organisations in low- and middle-income countries. They argued that improving the performance of service delivery is a key strategy for transforming money and technology into health-improving interventions, sustaining progress and gains in health outcomes (Berman et al. 2011:1–3). Their strategies for improving the performance of health service delivery organisations were standards and guidelines; organisational design; education and training; process improvement and technology development; incentives; organisational culture; and leadership and management (Berman et al. 2011:32–38).

The adoption of a systematic focus on the basics for improving health outcomes was promoted by Whittaker and Thomason. They argued that there was no quick fix to PNG's challenges and suggested a systematic focus on getting the basics into place, including the following five elements: (i) effective interventions for the main causes of morbidity and mortality where and when required; (ii) skilled health workers at the point of service who are able to provide those interventions; (iii) essential logistical elements to enable the health workers to provide the effective interventions; (iv) information, education and communication, and other health promotion initiatives and efforts directed at communities for cooperation and acceptance of the interventions, and to support and empower their engagement in healthy behaviours; and (v) population coverage. Further, they noted that some of the solutions to addressing the problems were outside the health sector and suggested building partnerships between the traditional and non-traditional arenas and undertaking a range of logistical, financing, service delivery and training requirements (Whittaker & Thomason 2009:185–186).

There are similarities and differences in the two approaches. Both are focused on the provider-side dimension of health service delivery and are organisationally focused. While one of them is at a broad level, the other is pitched at a micro level within the health field and this is reflected in the suggestions outlined. However, based on the findings of this study, I argue that the above approaches will not improve health outcomes.

### **7.3.2 Suggestions for Improving Health Outcomes**

This section discusses five issues that support my argument that health outcomes in PNG cannot be improved if the current approaches and focus of health service delivery remain unchanged. First, health outcomes are indicated by life expectancy and are not necessarily a reflection of the delivery of health services, although health services are vehicles for improving certain aspects of health. This suggests that interventions that are not directed at promoting a healthy long life will not influence changes and improve health outcomes. When aligning PNG's health service delivery approaches within the health outcomes framework, it was seen that most of the government resources are allocated at the output and input level for implementing selected interventions. The most important aspects, such as the determinants of health that have an effect on health outcomes, are not resourced adequately. This study showed that supply-driven policy reforms have not improved PNG's human development indicators, nor its ranking in the HDI. Most of the policies have focused on structures and systems for delivering services but have overlooked the



human capital involved in providing and receiving the services. This makes improving human development indicators challenging, since the structural and performance indicators of the organisations focus on structures. When supply-focused interventions continue to address the supply-side issues in service delivery and overlook the demand-side issues, poor health outcomes are not likely to improve. The approaches adopted and the levels at which the interventions and studies are conducted provide limited knowledge on access, acceptability, affordability and utilisation of services by the users. This research has shown the importance of moving away from focusing on supply-driven interventions and the need to include the demand side in all interventions.

Second, health is seen as the preserve of only biomedical practitioners in the health sector. However, this study argues that the determinants of health are not necessarily addressed if health is seen only as the prerogative of biomedicine and the health sector. Therefore, interventions to improve health and health outcomes should not be confined to the health sector; there is a need for interventions across a range of other sectors. For example, health workers in villages, districts and urban areas should work with other sectors whose mandate addresses other dimensions and determinants of health. This extends to health research, where disciplines such as anthropology and other social sciences should be involved in discussions and interventions dealing with human and social development.

In addition, all care providers whose practices promote health should be encouraged to provide services. As highlighted in Chapter 2, PNG has a tolerant health care system with regard to collaboration between formal biomedicine and informal practitioners of alternative medicine. Only biomedicine is officially recognised, with the health system primarily based on it, but certain TM and informal practices are tolerated and/or regulated by law (Jilek 1985:21; Roux-Kemp 2010:276). However, the case studies showed that the women had more than one option for the treatment of illnesses. This study has highlighted the experiences of countries with an inclusive health care system that officially recognises TM and alternative medicine to exist as a parallel system for PHC, including developed countries that have better health outcomes. This suggests that PNG should follow the examples of other developing countries in SSA and Asia, as well as in developed countries, to recognise CAM in the health care system.

Third, SDOH are not adequately addressed to improve health outcomes. Health, as stated earlier in Chapter 2, is not merely the absence of disease but a state of complete physical, mental and social well-being (French 1974:1; WHO 1948). This definition is captured in

the health outcomes framework's dimensions of population health. Even the idea of health perceived by the majority of women in this study reflected this definition. However, the findings of this study showed that health care focused only on physical ailments. The social, emotional and mental problems affecting well-being were not being addressed by health facilities at Levels 1 to 4. For example, mental health services were not readily available at Levels 5 and 6 for a number of organisational issues. Unless all of the determinants of health are addressed, people's health is not likely to improve.

Fourth, the current health service delivery approaches are selective and targeted at certain segments of the population. The targeted interventions benefit only a small component of the population but fail to address the health of the entire population. A comprehensive health care service delivery approach covering all of the population and addressing the health of individuals throughout the lifespan, as well as all determinants of health, will improve the health outcomes of the country.

Fifth, the current biomedical and curative approach is disease focused. As stated earlier, this approach of treating only one illness at one time overlooks other dimensions of health. Consequently, people may succumb to other health conditions that affect their health status and thus, health indicators. Adopting preventive measures through PHC and a multisectoral approach would help to prevent illness and promote well-being.

Finally, PNG could draw key lessons from Cuba's health system, which aligns closely with the findings from this research. Although this study does not advocate that PNG should adopt the Cuban socialist political system, their health system contains aspects that are superior to PNG's curative, diseased-focused, targeted and selective health system. The Cuban health system is founded on strong PHC that integrates preventive public health care into clinical biomedicine, as well as the use of community-based health approaches for providing neighbourhood health diagnosis (Keck & Reed 2012:13).

## **7.4 Implications of this Study**

This study's findings have implications for the training of health workers, public policies on service delivery and health care, health care research and the methods used, and government institutions that are mandated to provide health care, along with international development agencies and other stakeholders in the health sector. These are outlined in the following sections.

### **7.4.1 Training of Health Workers**

The research findings have implications for policy changes in delivering health care and the training of health workers. In culturally diverse countries, the trainers of health workers have a significant influence on the students' work practices. Training human resources who will be directly involved in the lives of other human beings requires consideration and awareness of ethics in human relations. The findings have suggested that health workers need to develop an awareness and knowledge of the determinants of health, as well as PNG's cultural, traditional and religious beliefs and practices with regard to health and childbirth. In addition, health workers should be taught about broad development issues and the relationship between service delivery and health outcomes.

### **7.4.2 Public Policies on Service Delivery**

The strong association between women's beliefs and their HSB should inform health workers about the intersection of different sources of health beliefs on health and treatment practices. This study showed that having education, vehicles, money and easy access to health facilities was not a guarantee for utilisation of health services. A range of other factors influenced women with regard to the utilisation of health care services.

The study revealed that individuals often delayed seeking treatment and used natural therapies and other alternative treatment practices prior to seeking biomedical treatment. Some individuals continued to use natural therapies and home remedies even when they were using biomedicine. In areas where access to formal health care facilities was difficult and/or medical supplies and drugs were not available, individuals resorted to other informal treatment practices. An awareness of the coexistence of formal biomedicine and informal treatment practices would help health workers to be more responsive. Further, an awareness of the influence of informal sources of health beliefs in determining the use of biomedical health services would help stakeholders to include the informal agencies in the community in consultations and feedback on improving service delivery and usage.

This study has highlighted changes that are needed with regard to women and health policy. The findings implied that health services to women should be made readily available, accessible, affordable, responsive, and culturally appropriate. A women's health section needs to be established within rural and urban health facilities, to bring health services closer to the women in their locations through regular health extension and outreach programmes, as well as through drop-in centres in districts, villages or

suburbs for women to visit for chats, counselling and help with problems that may affect their health. PNG could learn from China's experience of maternal mortality rates dropping significantly after 1949, when the Chinese Government established maternity care organisations and facilities, in addition to including specific provisions related to the protection of mothers and children in the Constitution, laws and other legal documents (Chen & Zhu 1984; Yu & Sarri 1997:1889). Access to family planning is also a major determinant in many countries (including China) in reducing the Maternal Mortality Ratio but in PNG family planning uptake is very low.

The PNG health system needs to consider the significant demographic changes that are occurring within the country, as well as the changing roles of women and the impact of these on their health and well-being. The changing trends of diseases and death patterns among women in PNG require appropriate interventions. Unaddressed health issues are likely to result in more women dying from preventable diseases.

Although the issues of non-utilisation, inaccessibility and unacceptability of biomedical health services and products have been documented in other studies, this study is probably one of the first studies in PNG to consider both the user side and provider side of health service delivery.

### **7.4.3 Research Methods**

Any studies in the health sector need to consider culturally sensitive and appropriate data collection techniques for both the users and providers of health services. The application of qualitative methods and anthropological data collection techniques is a significant move to generate data on women and health that is robust. This study showed that having appropriate methods for data collection for various categories of participants is crucial and that users of health services in PNG, particularly women, want to be heard. This study makes a significant contribution to understanding women and health, as well as the determinants that influence their demand for health services and barriers that prevent them from using health services.

### **7.4.4 Institutions in the Health Sector**

The findings of this study have implications for the PNG Government and other stakeholders involved in health service delivery.

This study has suggested an improved approach to investigating issues affecting service delivery, to understand the factors that influence access, acceptability and usage. This study has found, probably for the first time, that barriers are preventing women from accessing and using formal health care services on both the provider side and the user side of service delivery. Increased knowledge about the barriers that prevent women from using health services may assist policy makers in government and international development agencies to develop policies and approaches to remove those barriers and improve access and usage.

## **7.5 Limitations of the Study and Critical Reflection**

A number of limitations were observed for this study. I was unable to compare the differences in the following areas: (i) factors encouraging and discouraging health workers in church-run and government-run health facilities; and (ii) health services in public and private health facilities. This was because (i) the fieldwork was conducted in locations that did not have health facilities run exclusively by churches; and (ii) the for-profit private health care providers and practitioners operated mainly in large cities and provincial towns, but not in rural districts and villages. The Government and churches were the only providers of health services in many parts of PNG. The results of this study may have been different if the study had extended to include the different types of institutions.

Another limitation of this study was that the boundaries of the case studies did not allow me to go beyond the women in the study and investigate other family members. In many developing countries, including PNG, family members often have a significant influence on a person's beliefs with regard to health and illness, as well as their use of health services.

A third limitation was that the study did not include the satisfaction rating of health services provided by the different health facilities, such as church-run versus government-run health facilities, public versus private health facilities, and biomedical health care providers versus informal practitioners. It must be noted that traditional birth attendants, or village birth attendants, were not present in the two rural sites for this study's fieldwork.

## 7.6 Agenda for Future Research

This study found that there has been relatively little research in PNG on the HSB of men and women to understand the reasons for delayed health care seeking; patient–worker relationships; and health service delivery considering both dimensions. To fill the knowledge gaps, the following areas are suggested for future research.

- (i) A large sample should be used in urban and rural areas to compare the prevalent HSB of the population. A comparative study of the HSB of women in different regions and provinces in PNG in which maternal mortality rates are relatively high would facilitate understanding of their treatment-seeking attitudes and the personal and structural barriers to this. In addition, it would be useful to conduct similar comparative HSB studies of other segments of the population for major diseases causing morbidity and mortality in PNG, including both non-communicable diseases and communicable diseases. Such studies would be useful in assisting in the development of specific interventions and resource allocation, among other benefits for policy and planning purposes.
- (ii) Research is required on the way the changing socio-economic roles and status of women and sociodemographic trends in PNG affect women and their health. Evidence based health interventions will be employed to address maternal health problems and recommendations of the Maternal Health Taskforce (NDoH 2009:xvii-xx). Such a study would be useful to identify the illnesses common to certain groups or classes of women and their location, to enable the provision of health care resources and services for them.
- (iii) The scarcity of knowledge with regard to health worker–patient relations in PNG suggests a need for studies on health worker–patient relations within the different types of health facilities at different levels, to understand the health workers’ interactions with the health service users. Health workers in different agencies and facility contexts could be studied, to examine the determinants influencing their behaviour, including their relations with patients. The findings of such studies (similar to the 2012 study conducted by Razee and colleagues which examined the social factors that influence health workers) would be useful for understanding and improving the performance of health workers at the facility level. In addition, research on the levels of utilisation

of various health services would help to identify the way differences in the facility set-up can affect health outcomes.

- (iv) Research that explores the use and value of the AM options and practices that are prevalent in PNG is needed. Women's health challenges are providing opportunities for informal and alternative medicine providers to step in and provide remedies and many women in both rural and urban locations rely heavily on one or more informal health care methods, such as home remedies and herbal treatments, faith healing and traditional healing. However, the use of alternative medicine is not recognised by the PNG DOH. In addition, several multi-level marketing networks, involving women at various levels of socio-economic status, distribute health and nutritional products produced by companies outside the country, such as Pro-Ma or JM Ocean Avenue. An understanding of the efficacy of the services and products distributed by the different multi-level marketing networks in PNG is needed.
- (v) Research on PNG's Village Courts System and the way it was accepted into the legal system is required, to find ways for TM and AM practices to exist alongside PNG's health system. This study and previous studies have highlighted the existence of medical pluralism in PNG and that use of these practices is becoming more popular.





## Chapter 8: Conclusion and Recommendations

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This chapter summarises all of the discussions in this study. It begins by recapping the focus and aims stated in Chapters 1 and 8, followed by noting some of the significant contributions that this study has made to knowledge with regard to health service delivery and health outcomes. The chapter concludes with several recommendations based on the major findings of the study.

As highlighted in Chapters 1 and 8, the two main aims of this study were to (i) explore the underlying reasons behind PNG's poor health outcomes despite its strong economic growth in the last decade and political reforms aimed at improving service delivery; and (ii) highlight the significance of (a) using anthropological approaches and methods of data collection in health research; (b) including human aspects in health service delivery interventions; and (iii) linking the concept of health to approaches adopted in health service delivery and health outcomes. The focus of the investigation was on two aspects of service delivery: the users of health services and the health workers providing health care.

### 8.1 Contributions to Knowledge

Many studies conducted on HSB and the determinants influencing people's use of health services in several countries, including PNG, have made no distinction between determinants that encourage the use of health services and those that discourage it (see Andrew et al. 2014; Johansson et al. 2000; Lubbock & Stephenson 2008; Muriithi 2013; Siddiqui et al. 2011; Tomison 2013; Uchendu et al. 2013; Valley et al. 2014; van der Hoeven et al. 2013; Whittaker et al. 2009). One of the significant contributions of this study has been in highlighting the differences between determinants that encourage or discourage health service usage.

In previous studies, distinction has not been made with regard to whether the determinants of usage are on the supply side of service delivery or on the provider side. As highlighted in Chapter 1, much of the health service research conducted in PNG has been provider driven and has focused on political and economic aspects, highlighting the institutional barriers in service delivery. This study marked a departure from solely focusing on the provider side and emphasised the importance of considering the health service users in any interventions. Although this study's coverage was limited, it expanded the work of

Ensor and Cooper (2004) and built on the few studies in PNG that have recognised the importance of human capital, which is integral to any services that are delivered and utilised. Service delivery is not an end in itself because it is measured by outcomes reflected in the human development indicators of the country.

Another important contribution of this study has been the focus on the SDOH framework's aim to improve life expectancy at birth, as well as the rates of maternal and infant survival. Many institutions and studies have promoted the use of biomedicine to improve health outcomes. This study showed that improvements to health outcomes cannot be achieved by the use of biomedicine alone but require the adoption of multisectoral approaches, because the determinants of health cannot be addressed purely by biomedicine and the health sector. The study has expanded on the findings of other studies that have emphasised the importance of integrating public health with biomedical approaches for improving life expectancy. The risk factors for chronic diseases (e.g., poor diet, lack of exercise, substance abuse and tobacco use) that are influenced by society cannot be captured in the medical purview and clinical settings (Bunker et al. 1994; Johnson 2008; Keck & Reed 2012:13; Marmot & Bell 2011).

## **8.2 Recommendations**

The preceding analysis of the cases in this study strongly suggests the need for a different approach to health care in PNG. Several recommendations are described in the following sections.

### **8.2.1 Health Service Delivery and Health Outcomes**

Health outcomes in PNG have not improved over the decades, despite the reforms, policies and approaches adopted for delivering health services. The findings showed that health outcomes are not the result of use of biomedical health services alone; they are also the result of economic policies, political systems, educational programmes and agricultural patterns, as well as social and cultural beliefs and practices. Thus, health outcomes should not be confined to health department and biomedical disciplines; rather, they should be a multidisciplinary and multisectoral responsibility, involving all of the formal and informal institutions whose activities affect all determinants and dimensions of people's health and health status.

In recognition of this, multisectoral approaches and intersectoral collaboration between the relevant disciplines, sectors and agencies at various levels are suggested. Many factors discussed in the study are likely to be amenable to interventions that are beyond the scope of the health domain, because the PNG Government's Department of Health may have relatively little influence over many of the issues affecting human capital on both the supply side and provider side of health service delivery. While policies and medical standards may be within its scope, training and financing health workers, improving rural roads, influencing women's health beliefs and increasing access to health services often require assistance from other agencies.

### 8.2.2 Women and Health Services

Several significant knowledge gaps with regard to the general health of women in PNG since the last study by Gillet (1991) were observed. Many health issues affecting women in recent years have been overlooked because the priority and focus has been on maternal health. There is limited knowledge about women from regions, provinces and districts that experience a higher (or lower) maternal mortality rate and no evidence to point to certain age, cultural, ethnic or socio-economic groups that are at risk of having a lower life expectancy. The current health reports do not reflect detailed differences. Before developing appropriate interventions, health care policies and programmes designed to improve women's health need to gather knowledge about the totality of the different phases of a woman's life. The focus on MCH services needs to be expanded to include other services for all women. An application of a 'life course approach' (Box 8.1) is recommended for investigating the health of women.

**Box 8.1: Life Course approach for assessing the health of women:**

Girls 0–11 years: Transition from childhood to puberty and adolescence

Young women 12–24 years: Transition from adolescence to adulthood

Mid-life Women 25–54 years: Relationships and family; Work and life; Transition to older years

Older Women 55–74 years: Ongoing changes in health and social identity (Australian Women's Health Network 2013).

### 8.2.3 Health Care Providers

Health worker–patient relations were found to be a barrier that prevented many women from using health services. As training was found to be one of the factors influencing the health workers in their relations with women, there is need to evaluate the current basic training curricula for nurses and CHWs. Communication skills and patient-centred care

are suggested for inclusion. A second recommendation is for the institutions to develop a continuing training programme for upgrading the skills and knowledge of health workers, or targeted short courses for those who are managing health facilities (Nyamwaya et al. 1998:35). Lack of supervision was shown to contribute to the poor performance and low motivation of staff in their work. Regular supervision of health workers would help to improve their poor work attitudes. Health facilities in communities and villages should have Boards of Management for better governance, in the same way the schools do (Howes et al. 2014:166–167). To meet quality standards the National Health Service Standards for PNG 2011-2020 emphasize the establishment of governing bodies at provincial, district and community levels for Level 1-3 health facilities (NDoH 2010).

For a responsive health system, more social science-trained professionals and multidisciplinary health management positions should be created at different levels (Nyamwaya et al. 1998:35). In addition, the concept of a village or community health volunteer is recommended for addressing the problem of staff shortages in rural and urban health facilities. PNG already has the Village Health Volunteer Policy 2000 and training programme. Although the policy is not fully implemented, village health volunteers, including village birth attendants and other village health workers assist in delivering MCH services in remote communities in many districts (NDoH 2008). This could be further expanded to include a large number of young people who are unemployed to be engaged as village or community health volunteers in rural and urban areas to assist in providing health care. Another approach would be through volunteerism, with students attending universities and tertiary institutions in professions that are linked to the determinants of health being encouraged to work in health facilities during their vacations or as part of their assessments.

#### **8.2.4 Medical Pluralism**

The findings showed an increased use of informal treatment practices. The existence of medical pluralism in developing countries has been acknowledged by the international community for five decades. It began in 1976 during the 29th World Health Assembly, which recommended that formally trained health workers should engage TM practitioners in PHC where necessary. The adoption of a resolution during the 30th World Health Assembly included research in TM and TM as an activity for the WHO. TM was made more significant with the adoption of the PHC approach in 1978 (WHO/UNICEF 1987 cited in Knaub 1985:3, 5). Several studies have shown the existence of a dualistic or

pluralistic medical system in PNG (Carrier 1989; Frankel 1986; Lewis & Frankel 1989; Strathern 1989). Recent studies (Byford 1999; Keck 2005; Whittaker et al. 2009) have expanded the discussion of the existence of TM and informal treatment practices and some have suggested the integration of TM with biomedicine (Macfarlane 2005).

Based on this study's findings, an AM model is suggested for the PNG health system, similar to the Village Courts model that operates alongside PNG's Legal System.<sup>26</sup> Villages and communities in PNG have benefitted from the role of the Village Courts system in settling disputes and ensuring peace through mediation. Adopting an AM system would be a recognition that informal treatment practices and modern health networks and products that promote health exist outside the health system. The creation of an AM system alongside the biomedical health system may help to make the health system responsive to local needs. However, changes would be required in the formal health system, such as the development of health information systems, new data collection methods for obtaining sociocultural data, and orientation of providers, to complement the existing methods. This process would enhance the participation of both users and providers of health services in the generation of information for health service planning (Nyamwaya et al. 1998:35).

### **8.2.5 Multisectoral Approaches**

This study has demonstrated the usefulness of multidisciplinary approaches in health research. Although my background was in political economy and public policy, I adopted qualitative research methods for data collection and analysis used by anthropologists to uncover the lived experiences of people, who are reduced a measurement of life outcomes in the HDI. This led to gaining a richer and deeper insight into the people involved in delivering and using the health services. Health, as a human phenomenon, is socially, economically, culturally and environmentally constructed, as shown through the SDOH framework and the case studies.

## **8.3 Conclusion**

In this study, I have drawn on the experiences of many women to argue that there is a need for major changes to the idea of health, and the organisation and delivery of health services, if PNG is to have improved health outcomes that are commensurate with economic growth. Through the narratives, women in rural and urban areas have revealed their challenges in accessing health services and remaining healthy. Their stories have

demonstrated the desire to live good, long, healthy lives and have provided new inspiration for change towards a multisectoral and responsive health care system. The findings of this study have suggested ways for attaining better health outcomes if PNG can think differently about health and step out of the current arrangements into new ways of delivering health care.

## Epilogue

At the time of writing this thesis, towards the end of November 2016, PNG Prime Minister Peter O'Neill made an announcement on the Australian Broadcasting Corporation of his plans for reducing maternal mortality in PNG. He aimed to introduce legislation in early 2017 to make it mandatory for women to deliver their babies in a health facility or hospital. They would be paid for doing this.

Although this announcement had the appearance of being a hasty political statement without much thought about the realities on the ground, it reflected political will at the highest level and the fact that the problem of maternal mortality was being acknowledged openly was a positive step. In a country in which less than half of childbearing women deliver their babies with the assistance of a trained midwife or doctor (WHO 2012), Prime Minister O'Neill's plan is modest, lauded and timely.

However, the announcement is an example of another supply-driven agenda that does not include consultation with the providers of health services or the voices of the women using the health facilities. This one-sided approach in health service delivery has not resulted in positive health outcomes in developing countries. Sociocultural, economic and geographical factors on the women's side and other factors on the provider side must be investigated and addressed before introducing legislation.





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## Appendices

### Appendix 1: Participants' Sociodemographic Characteristics

No.	Age (yrs)	Education Level	Church	Church Attendance	Marital Status	No. of Children	Occupation
R1	18–25	University	United	Weekly	Married	2	Formal sector
R2	46+	Grade 6	SDA	Daily	Widow	6	SG <sup>i</sup>
R3	36–45	Grade 6	SDA	Weekly	Married	7	SG
R4	36–45	Grade 6	SDA	Daily	Married	4	SG; leader
R5	26–35	Grade 5	SDA	Weekly	Married	4	SG
R6	46+	Grade 10	SDA	Daily	Married	7	Housewife
R7	46+	Grade 9; Tertiary	SDA	Weekly	Married	5	Leader
R8	36–45	Nil	SDA	Daily	Married	4	SG
R9	36–45	Grade 10	SDA	Daily	Married	0	Self-employed
R10	46+	Grade 4	SDA	Weekly	Married	5	SG
R11	26–35	Grade 7	SDA	Weekly	Married	2	SG
R12	46+	Grade 6	SDA	Weekly	Married	1	Informal sector
R13	36–45	Grade 10	SDA	Daily	Married	5	Formal sector
R14	46+	Grade 6	SDA	Daily	Widow	5	Formal sector
R15	26–35	Grade 10	SDA	Daily	Married	1	Self-employed
R16	36–45	Grade 10	SDA	Daily	Married	5	Housewife
R17	36–45	Grade 5	SDA	Daily	Never married	0	SG
R18	18–25	Grade 11	SDA	Daily	Married	2	SG
R19	18–25	Grade 2	SDA	Sometimes	Single	N/A	SG
R20	46+	Grade 6	SDA	Daily	Married	3	SG
R21	36–45	Grade 5	SDA	Weekly	Married	1	SG
R22	36–45	Grade 6	SDA	Not indicated	Never married	N/A	SG
R23	26–35	Grade 7	CLC	Weekly	M/1 <sup>ii</sup>	4	SG
R24	26–35	Grade 3	CLC	Weekly	M/1	4	SG
R25	Cat 0 <sup>iii</sup>	0	Catholic	Sometimes	M/1	2	SG
R26	18–25	Grade 6	CLC	3 days/wk	M/1	3	SG

No.	Age (yrs)	Education Level	Church	Church Attendance	Marital Status	No. of Children	Occupation
R27	46+	0	Catholic	Weekly	M/1	3	SG
R28	46+	Grade 2	Catholic	Weekly	M/3	3	SG
R29	26–35	Grade 6	Catholic	Weekly	M/2	7	Self-employed
R30	36–45	Grade 6	Catholic	Weekly	M/1	2	Self-employed
R31	46+	0	CLC	Weekly	M/2	4	Self-employed
R32	46+	Grade 5	CLC	Weekly	M/2	2	SG
R33	26–35	Grade 10	Catholic	Weekly	M/1	4	SG
R34	26–35	Grade 10	Catholic	Weekly	M/2/???	4	Unemployed
R35	36–45	Grade 6	Catholic	Sometimes	M/2	0	SG
R36	46+	0	Catholic	Weekly	Widow	6	SG
R37	26–35	Grade 8	Catholic	Weekly	Separated	1	SG
R38	46+	0	Catholic	Weekly	M/??	0	SG
R39	26–35	Grade 8	Baptist	Sometimes	M/1	6	SG
R40	Cat 0	0	Catholic	Weekly	M/1	12	SG
R41	36–45	Grade 6	Catholic	Weekly	M/1	8	SG
R42	36–45	Grade 4	Baptist	Weekly	M/1	0	SG
R44	36–45	Grade 10	COC	Weekly	M/1	4	SG
R45	26–35	Grade 8	Revival	Weekly	M/2	1	SG
R46	36–45	Grade 10	COC	Weekly	M/1	5	Formal sector
U47	36–45	Grade 8	Baptist	Never	M/4	6	Self-employed
U48	46+	Grade 10; Tertiary	Independent Baptist	Never	Separated	1	Unemployed
U49	26–35	Grade 4	Christian Revival	Never	Never married	5	Unemployed
U50	36–45	Grade 9	United	Never	M/2	2	Unemployed
U51	26–35	Grade 5	United	Weekly	Married	3	Housewife
U52	46+	Grade 10; Tertiary	Anglican	Weekly	Remarried	4	Unemployed
U53	46+	Grade 9; Tertiary	SDA	Weekly	Married	4	Self-employed
U54	46+	Grade 10; Tertiary	SDA	Weekly	Married	5	Housewife/ self-employed
U55	46+	Grade 6	SDA	Weekly	Married	3	Self-employed
U56	36–45	Grade 8	Pentecostal	Not regular	Married	5	Housewife
U57	46+	0	Catholic	Not regular	Never married	N/A	Informal sector



<b>No.</b>	<b>Age (yrs)</b>	<b>Education Level</b>	<b>Church</b>	<b>Church Attendance</b>	<b>Marital Status</b>	<b>No. of Children</b>	<b>Occupation</b>
U58	36–45	Grade 10	Lutheran	Sometimes	Married	5	Informal sector
U59	46+	Grade 6	Lutheran	Sometimes	Married	5	Unemployed
U60	36–45	Grade 6	United	Sometimes	Married	4	Informal sector
U61	36–45	Grade 8	United	Sometimes	Married	4	Housewife
U62	36–45	Grade 10	SDA	Sometimes	Married	3	Housewife
U63	26–35	Grade 10	Catholic	Weekly	Separated/ Remarried	2	Informal sector
U64	36–45	Grade 6	SDA	Sometimes	Married	4	Unemployed
U65	46+	Grade 9	United	Weekly	Separated/ Remarried	10	Informal sector
U66	26–35	Grade 9	Catholic	Sometimes	Widow/ Remarried	2	Unemployed
U67	46+	Grade 9	SDA	Weekly	Married	4	Formal sector
U68	46+	University Post-Graduate	Catholic	Special events only	Separated	1	Formal sector
U69	46+	Grade 6	SDA	Weekly	Married	3	Housewife

Notes: (i) Subsistence gardener (ii) (iii)



## Appendix 2: Sociodemographic Characteristics of Health Workers

No.	Age	Education Level	Years of Work	Years in District
R1	4	Grade 9 – Theology Certificate & Aid Post Orderly Certificate	> 20	15
R2	4	Grade 6 – CHW Certificate	> 40	??
R3	4	Grade 8 – CHW Certificate; Advance CHW Certificate; Bridging Course for Nursing Officer	32	15
R4	4	Grade 10 – CHW	> 30	7
R5	4	Grade 8 – CHW Certificate		26
R6	3	Grade 8 – Nurse Aid Certificate; CHW Certificate	28	15
R7	3	Grade 12 – Diploma HEO	> 20	12
R8	4	Grade 6 – NO	> 35	26
R9	4	Grade 6 – NO	> 35	
R10	4	Grade 10 – CHW Certificate	35	31
R11	3	Grade 12 – Diploma – HEO	9	1 yr 10 mths
R12	3	Grade 9 – CHW Certificate	> 30	13
R13	3	Grade 8 – CHW Certificate		3
R14	4	Grade 9 – CHW Certificate		21
R15	3	Grade 10 – CHW Certificate		20
R16	3	Grade 10 – CHW Certificate	19	7 yrs 1 mth
R17	3	Grade 10 – CHW Certificate	21	9
U18	3	Grade 10	3	3
U19	4	Grade 6	4	4
U20	3	Grade 12 – HEO Diploma	7	1 yr 10 mths
U21	2	Grade 10 – Diploma General Nursing	7	7
U22	2	Grade 12 – MBBS		5
U23	4	Grade 10, Certificate General Nursing; Bachelors Nursing (midwifery)	25	4
U24	3	Grade 12, MBBS	10	3



### Appendix 3: Questionnaire – Users - Rural Participants

#### Determinants Influencing Demand and Delivery of Health Care Services for Women

#### In-Depth Interview: Respondent Details (Rural Participants)

**File No.:**

**Respondent ID:**

**Interviewer:**

**Place of Interview:**

**Date:**

**Start Time:**

I would like to ask some questions about where and how you live and about your health.

Please answer them as honestly as you can.

#### Section I: General Demographic and Socio-economic Information

1. Village \_\_\_\_\_ Location \_\_\_\_\_  
District \_\_\_\_\_ Province \_\_\_\_\_

2. Sex:

Sex	Please Tick <input type="checkbox"/>
Female	
Male	
Other	

3. How old are you?

Age	Please tick <input type="checkbox"/>
18-25 years	1
26-35 years	2
36-45 years	3
46 + years	4

4. Have you been to school?

<b>Answer</b>	<b>Please</b>
	<b>tick</b> ✓
Yes	1
No	2

If Yes, what grade did you complete? \_\_\_\_\_

Where did you go to school? \_\_\_\_\_

5. If none, can you read or write a simple line?

<b>Answer</b>	<b>Please</b>
	<b>tick</b> ✓
Yes	1
No	2

6. What church do you belong to? \_\_\_\_\_  
Do you attend church?

<b>Answer</b>	<b>Please</b>
	<b>Tick</b> ✓
Yes	1
No	2

How often do you attend church? \_\_\_\_\_

7. What is your marital status?

<b>Status</b>	<b>Please</b>
	<b>tick</b> ✓
Single	
Never Married	
Married (monogamous)	
Married (polygamous - more than 1 wife)	
Widowed	
Separated	
Divorced	

8. Do you have any children?

<b>Answer</b>	<b>Please</b>
	<b>Tick</b> ✓
Yes	1
No	2

9. How many? \_\_\_\_\_

Are they all alive? \_\_\_\_\_

If No, can you explain how the child died? \_\_\_\_\_

---

**Section II: Health Information – statements regarding your knowledge and beliefs about health and illness, and their causes.**

10. How do you recognise if someone is ill or healthy?

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---

What things can a person do to stay healthy? How does a person restore their health if they are not healthy?

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---

What things can affect a person's health? \_\_\_\_\_

---

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11. Can you describe the types of illnesses that people experience in this place? Can you explain how they treat this illnesses or deal with them?

---

---

12. Where did you learn about health and staying healthy?

<b>Sources</b>	<b>Please tick</b>
	✓
School/education	
Church/religion	
Culture, Tradition or Custom of area	
Family member or relative	
Community member	
Friend	
Other: specify	

**Section III: Statements relating to your health and how you access and utilise health facilities for care and treatment and care.**

13. Please tell me about the last time you were ill. How many other times were you ill? Can you please explain in detail the steps you took to become healthy again?

---

---

14. Where did you seek treatment? \_\_\_\_\_

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15. For what kinds of illness do you visit the hospital or other healers? \_\_\_\_\_

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---

16. Why do you visit this facility rather than use something else? \_\_\_\_\_

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17. What things influenced your decision about treatment from different practitioners?

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18. Can you tell me your experience with the various practitioners? Why did you choose to go to them as opposed to someone or somewhere else?

---

---

19. When you were ill, what prevented you from going to a health centre, aid post or hospital? Please explain: when you have attended a health facility and been given medicine, have there been times when you didn't take the medicine or not finished taking it?

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20. Can I get you to tell me about a few cases? \_\_\_\_\_

Where do you think is the best place to get medicine? \_\_\_\_\_

Where do you think is the worst place to get medicine? \_\_\_\_\_

What kind of health care provider/facility is the nearest to your house?

\_\_\_\_\_

How do you normally get to this health care provider/facility?

\_\_\_\_\_

How long does it take to get to this health care provider/facility through the mode you use to get there?

\_\_\_\_\_

21. Are there any other comments you would like to make?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Thank you for your time.

End time: \_\_\_\_\_



## Appendix 4: Questionnaire – User- Urban Participants

### Determinants Influencing Delivery of Health Care Services for Women

#### In-depth Interview: Respondent Details (Urban Participants)

**File No.:**

**Respondent ID:**

**Interviewer:**

**Place of Interview:**

**Date:**

**Start Time:**

I would like to ask some questions about where and how you live and about your health. Please answer them as honestly as you can.

#### **Section I: General Demographic and Socio-economic Information**

1. Village \_\_\_\_\_ Location \_\_\_\_\_  
District \_\_\_\_\_ Province \_\_\_\_\_

2. Sex:

<b>Sex</b>	<b>Please Tick (√)</b>
Female	
Male	
Other	

3. How old are you?

<b>Age</b>	<b>Please tick (√)</b>
18-25 years	
26-35 years	
36-45 years	
46 + years	

4. Have you been to school?

<b>Answer</b>	<b>Please tick (√)</b>
---------------	----------------------------

Yes

No

If yes, what grade did you complete? \_\_\_\_\_

Where did you go to school? \_\_\_\_\_

5. What church do you belong to? \_\_\_\_\_

Do you attend church?

<b>Answer</b>	<b>Please Tick (√)</b>
---------------	----------------------------

Yes

No

How often do you attend church? \_\_\_\_\_

6. What do you do for a living?

<b>Occupation</b>	<b>Please Tick (√)</b>
-------------------	----------------------------

Employed

Unemployed

Self-Employed

Housewife

Student

Volunteer

7. What is your marital status?

<b>Status</b>	<b>Please tick (√)</b>
---------------	----------------------------

Single

Never Married

Married (monogamous)

Married (polygamous -  
more than 1 wife)

Widowed

Separated

Divorced

8. Do you have any children?

**Answer**

**Please**

**Tick (✓)**

Yes

No

**Section II: Health Information – statements regarding your knowledge and beliefs about health and illness, and their causes.**

9. How do you recognise if someone is ill or healthy?

---

---

How can someone stay healthy?

---

---

What things can affect a person's health? \_\_\_\_\_

---

10. How can illness be treated?

---

---

11. Where did you learn about health and staying healthy?

**Sources**

**Please tick**

✓

School/education

Church/religion

Culture, tradition or custom of area

Family member or relative

Community member

Friend

Other: specify

**Section III: Statements relating to your health and how you access and utilise health facilities for care and treatment and care.**

12. Please tell me about the last time you were ill. What was your experience and the steps you took in seeking care and treatment for the health care provider? \_\_\_\_\_

---

---

13. Where did you seek treatment? \_\_\_\_\_

---

---

14. For what kinds of illness do you visit the hospital or other healers?

---

---

15. Why do you visit this facility rather than use something else? \_\_\_\_\_

---

---

16. What do you consider when making the choice?

---

17. Can you tell me your experience with the various practitioners? Which made you feel most comfortable? Why?

---

---

18. When you were ill, what prevented you from going to a health centre, aid post or hospital? Please explain: when you have attended a health facility and been given medicine, have there been times when you didn't take the medicine or not finished taking it?

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19. Can I get you to tell me about a few cases?

Where do you think is the best place to get medicine? \_\_\_\_\_

Where do you think is the worst place to get medicine? \_\_\_\_\_

What kind of health care provider/facility is the nearest to your house? \_\_\_\_\_

\_\_\_\_\_

How do you normally get to this health care provider/facility? \_\_\_\_\_

\_\_\_\_\_

How long does it take to get to this health care provider/facility through the mode you use to get there?

\_\_\_\_\_

20. Are there any other comments you would like to make?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Thank you for your time.

End time: \_\_\_\_\_





## Appendix 5: Questionnaire – Health Care Providers

### Determinants Influencing Demand and Delivery of Health Care Services for Women

#### In-depth Interview: Respondent Details (Health Care Providers)

File No.:

Respondent ID:

Type of Health Care Provider:	Formal/Biomedical	Traditional Healer	Faith Healer	Herbal Healer
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Provider:

Please Tick (✓)

Interviewer:

Place of

Interview:

Date:

Start Time:

I would like to ask some questions about where and how you live and about your health.

Please answer them as honestly as you can.

#### Section I: General Demographic and Socio-economic Information

1. Village \_\_\_\_\_ Location \_\_\_\_\_  
District \_\_\_\_\_ Province \_\_\_\_\_

2. Sex:

<b>Sex</b>	<b>Please Tick (√)</b>
Female	
Male	
Other	

3. How old are you?

<b>Age</b>	<b>Please tick (√)</b>
18-25 years	
26-35 years	
36-45 years	
46 + years	

4. Have you been to school?

<b>Answer</b>	<b>Please tick (√)</b>
Yes	
No	

If Yes, what grade did you complete? \_\_\_\_\_

Where did you go to school? \_\_\_\_\_

5. What do you do for a living?

<b>Occupation</b>	<b>Please Tick (√)</b>
Subsistence Farmer	
Formal Employment	
Casual Labourer	
Self-Employed	
Unemployed	

6. If employed, what is your position?

---

7. Where did you receive training for this job?

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8. How long have you been working in this district?

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**Section II: Information regarding the services you provide, access and utilisation of services by people**

9. What type of health services do you provide?

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10. What are the main illnesses which people come to you for?

---

11. How many patients do you see daily and weekly? \_\_\_\_\_

12. How much do you charge for your services?

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13. Where do most of your patients live?

---

14. At what stage of illness do people visit your health facility for care and treatment?

---

15. What do you think attracts people (women) to visit your facility for treatment and care?

---

16. What are the issues that prevent women from visiting and utilising your services?

---

17. Please explain some of the procedures and processes that you follow for treating and healing your patients. Can you recount how you treated some of your patients?

---

**Section III: Information regarding health beliefs and sociocultural factors influencing women’s decision to seek health care and utilise services you provide.**

18. Please explain if cultural, religious and political values and views influence the way you interact with patients (women) in the district and provide health care.

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19. What illnesses do people (women) seek health care and treatment?

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20. What factors influence the steps taken by patients (women) in the area/community to utilise your health facilities?

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21. How do you encourage the use of health services when women are not seeking health care and utilising your services in the community/district?

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**Section IV: Information relating to patient–care provider interaction and relations.**

22. What do you do to make patients (women) speak openly about their illness? What are the factors influencing them?

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23. Can you explain from your experience, if sex of the health care provider influences interaction between female patients? Are you able to provide me examples of these cases?

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24. Do women patients prefer to be treated by male or female health care provider? Do male patients prefer to be treated by male or female health care provider? If yes, why do you think that is the case?

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25. Are there any other comments you would like to make?

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Thank you for your time.

End time: \_\_\_\_\_



## Endnotes

<sup>1</sup>. Health outcomes are normally measured using health indicators (Nutbeam 1998, p. 357), such as deaths or disability-adjusted life years (Peabody et al. 2006). See Chapter 2 for additional details on health outcomes and indicators.

<sup>2</sup>. Alma-Ata (Kazakhstan), former Kazak Soviet Republic was venue of the conference in September 1978.

<sup>3</sup>. Illness is perceived to be caused by several things. These include (a) lifestyles of individuals, such as their attitudes, behaviours and choices regarding diet, drink and social activities; (b) emotional or mental issues that impact on an individual's ability to cope with life, such as unemployment, work pressure, family problems, stress and lack of income; (c) poor personal and household hygiene, increasing the risk of spreading disease or infections; (d) effects of environmental factors that are harmful to human health, such as contaminated air, water and sanitation; (e) social relations and conditions in which the individual lives and problems such as extra-marital affairs; lack of financial and moral support from families and friends; disputes with family and community members; (f) supernatural factors, caused by the intervention of a supernatural being, dead ancestor or another person with special powers.

<sup>4</sup>. Disfellowship is the most severe form of disciplinary action taken against members of the SDA Church, involving removal of their name from the Church membership roll.

<sup>5</sup>. *Tambu* or in-law relationships are not just between people of the same biological family because marriage relationships include the entire tribe, clan or village. Because of strong extended-family ties, in-law relationships include people from a similar culture, language or province, or even friends.

<sup>6</sup>. Access is considered easy if it takes less than four hours to reach a service centre (ADB 2013).

<sup>7</sup>. Strickland-Purari patrol in 1935 by Hides and O'Malley; Bamu-Purari patrol in 1937 by Champion and Adamson; Lake Kutubu-Mt Hagen patrol in 1950 by Smith and Clancy (Wormsley 1978).

<sup>8</sup>. Coffee is grown only in the Kaupena area because it shares a border with the Nebilyer Valley in Western Highlands Province and has similar climatic conditions.

<sup>9</sup>. Traditional healers use communication with the spirit world and divination to determine the causes and cures of illnesses. They also use herbs and rituals.

<sup>10</sup>. There are schools in many Imbonggu villages. With difficulties in obtaining data in most districts in PNG, the profile of Imbonggu District compiled in 2010 has been used to give an idea of the number of schools there. The data is valid, as changes within the education system are not common, as with the health facilities.

<sup>11</sup>. Stone man is commonly used in Imbonggu and Ialibu areas to describe men who practice magic and witchcraft. They are similar to 'glass man' (diviners) in other parts of PNG. The 'stone man' is said to derive his power from a stone purchased from Okapa in Eastern Highlands Province.

<sup>12</sup>. 99 products are vitamins and supplements produced by Swisse Wellness Australia and distributed in PNG. They are popular in PNG for assisting with general wellbeing and treating variety of illnesses.

<sup>13</sup>. National Health Plan Key Result Area 1 – Improve Service Delivery; Objective 1.1 – Increase access to quality health services for the rural majority and the urban disadvantaged; Strategy 1.1.5 – Establish community health posts.

<sup>14</sup>. They came from villages outside the Moka Gomo tribal alliance, such as Ambupulu, Kiopala and others.

<sup>15</sup>. Temporary shelters are housing that has not been built using proper building materials. This type of housing is commonly seen around the Baruni Dump, to which the city's solid waste is removed.

<sup>16</sup>. The Joint District Planning and Budget Priorities Committee comprised selected members of the district whose composition is outlined in the 1994 Organic Law on Provincial and LLG. The Open member chairs this committee to decide on the allocation of funds under the DSIP. However, the Joint District Planning and Budget Priorities Committee has now been replaced by the District Development Authority.

<sup>17</sup>. The two major forms of transport in Port Moresby are PMV buses and taxis. The buses are 25- or 30-seaters and many of them are in poor running conditions. Taxis are becoming a popular form of transport and are found around major shopping centres, markets and urban streets. They are unmetered but have fixed amounts depending on distance, agreed to by the driver and the passenger. Port Moresby's transport system is publicly regulated but privately owned and operated. The NCDC provides some buses with over 50 seats, but these are restricted to certain suburbs at certain times of the day.

<sup>18</sup>. Tokarara clinic was closed for a number of years because of numerous break-ins and stealing by youths in the Tokarara and June Valley suburbs. It was reopened under the Government's public-private partnership arrangement in 2010 and run by the SDA Church. Hohola, Waigani and Ensisi Valley suburbs are in its catchment. While the operational costs are subsidised by the Government through NCDC, management and human resources are under the SDA Church. The Gerehu Hospital is government run and was recently upgraded from a district hospital to a Level 5 public hospital (the same level as a provincial hospital). It is located on Gerehu Drive and is within easy access for many people and serves people in all urban suburbs, settlements and informal housing in the NCD, as well as people from Central and Gulf provinces. The services it provides include outpatient services for adults and children; HIV/AIDS clinic; TB clinic; specialist services; ambulance services; pharmacy; MCH services including ANC, family planning and children's health. The hospital also has two inpatient wards for adults and children but these are only for emergency cases. The main illnesses of children that the hospital treats are malaria, pneumonia and diarrhoea. For adults, the main illnesses are pneumonia, bacterial chest infections, malaria and TB. More than 150 patients are seen daily, which means that more than 1,000 patients are seen every week. Patients pay an outpatient fee of PGK2.00 as well as fees for other services, such as medicine and specialist services.

<sup>19</sup>. Venereal Disease Research Laboratory is a screening test for syphilis, which measures substances (proteins) known as antibodies that the body may produce if the person has come in contact with the bacteria causing syphilis.

<sup>20</sup>. See details of the paramedical college in Chapter 5.

<sup>21</sup>. One HIV case is reported at the clinic every month.

<sup>22</sup>. There are few NGOs operating in urban areas. Their services are not specifically focused on health. Lifeline provides crisis counselling and supports both men and women



in person and over the telephone. *Haus Ruth*, which is part of the City Mission, provides shelter and protection for women and children affected by domestic violence. The organisation Susu Mamas has an integrated family and youth health services programme and operates in four urban areas in PNG, but its main focus is on supporting and promoting best feeding practices for infants and young children.

<sup>23</sup>. Female NOs wear white dresses or skirts and tops, while female CHWs wear blue dresses.

<sup>24</sup>. Bangladesh has a tertiary-level hospital providing national specialist services and district hospitals with primary-level facilities.

25. Patrick Twumasi (1979, 1981) talked about Ghana's nursing education adopting British-style nursing. In Bangladesh, Mary Hadley and Angie Roques (2006) explained a similar arrangement, with Bangladesh inheriting its nursing style from Britain and in India, Reema Gill (2011) asserted the same, with India adopting British-style nursing.

<sup>26</sup>. Village Courts have become very important legal institutions in PNG since they began operating in 1974 despite early resistance to the concept. The number of Village Courts has grown and they have become an important feature of the PNG legal system. The main idea behind the establishment of Village Courts was to make the legal system more relevant to the people of PNG. As a result, Village Courts are observed to fit well into the life of local communities. The Village Courts Act 1973 established the Village Courts to operate beside the existing local and district courts and spells out its functions, jurisdictions, procedures and practices (Australian Law Reform Commission).