Qualitative descriptive study of decision-making factors that influence women's and men's choices towards place of birth in rural Western Highlands of Papua New Guinea

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ABSTRACT

Despite the availability of health facilities in the rural Western Highlands Province of Papua New Guinea (PNG), women seek out health facilities during pregnancy, but not to give birth. Studies have found that in the Western Highlands, only 23% of women were assisted by skilled birth attendants at a health facility, in comparison to the already low national figure of 43% (National Department of Health, 2013). Molar and Kirby (2013) identified in their study that the remaining births took place in remote or rural homes or in the villages assisted by an untrained person or relatives (Mola & Kirby, 2013). PNG has one of the highest maternal mortality rates in the world and the highest among other Pacific nations, with an estimated rate of 500 deaths per 100,000 live births (Mola & Kirby, 2013). Despite reports of the low number of supervised births, there is only limited research that has focused on maternity care in PNG. The few studies conducted primarily focused on antenatal care, rather than intrapartum and postnatal care, which are significant components of maternal health, as most obstetric complications and maternal deaths occur during and immediately after birth (Mola & Kirby, 2013). In addition, these studies have focused on the factors that create barriers to accessing health facilities. However, there are no existing published studies that have explored the decision-making factors involved in choosing place for intrapartum care.

To bridge this gap in the literature, this study aimed to explore the experiences of women and men in their decision-making regarding place of birth in the rural Western Highlands of PNG. The objectives of this research project are to investigate the factors that influence women's and men's decisions in choosing place of birth, and to examine the needs and expectations of women and men in relation to the birthing context. A qualitative descriptive approach was used. Semi-structured in-depth interviews were conducted with 20 participants (16 women and 4 men) living in the rural Western Highlands of PNG who had recent birthing experiences or were currently pregnant, or who had partners who were currently pregnant. A thematic

analysis of the data was undertaken, from which three themes emerged, accessibility and availability, socio-cultural influences, and maternity care experiences.

The study revealed that the majority of the participants wanted a health facility birth; however, due to accessibility and availability factors, they reluctantly decided not to, or circumstances required them to give birth in their village. Previous birth experiences in both health facilities and the village environment were a significant factor influencing the participant's decision for place of birth. Accessibility factors identified included finance, transport, partner or family support, geographical challenges, socio-cultural influences, and birth preparedness. Availability factors included medical resources and health services. Previous maternity experiences related to quality of care, and perceptions of medical intervention, care providers' attitudes, and the birthing environment. These findings were discussed using a revised primary healthcare conceptual framework by Levesque, Harris and Russell (2013).

The findings provide an understanding that despite women's initial decisions to give birth in a health facility, factors relating to accessibility, availability, and previous maternity experiences had a negative impact on their decisions, thus resulting in village births that were not of their choice. Therefore, this study recommends a collaborative approach by clinicians, health managers, policymakers and service providers to address these identified factors and to implement change to increase health facility births in rural Western Highlands of PNG. Further research from the perspective of health workers is recommended, in addition to research on antenatal care in this study setting, and patriarchal decision-making control.

DECLARATION OF AUTHORSHIP

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Paula Zebedee Aines

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CHAPTER ONE: INTRODUCTION

Introduction

Far too many women continue to suffer and die from serious health issues related to pregnancy and childbirth (World Health Organization, 2018a). The preventable death of a woman in pregnancy and childbirth is globally considered as a tragedy and a human rights violation (Miller & Belizen, 2015). In 2015, an estimated 303,000 women worldwide died during, and following, pregnancy and childbirth (WHO, 2018b). Almost all these deaths (99%) occurred in low and middle-income countries (WHO, 2018b). The WHO (2018a) reported that the maternal mortality ratio (MMR) in developing countries was 239 per 100,000 live births in 2015, compared with 12 deaths per 100,000 births in developed countries. Maternal mortality rate is defined as 'the number of maternal deaths during a given time period per 100,000 live births during the same time period' (United Nations Children's Fund (UNICEF), 2019a). Furthermore, maternal death is 'the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes' (WHO, 2019). Maternal mortality has serious impacts and consequences on children, the effects of which may continue into adulthood (Miller & Belizen, 2015). It has also been found that infants whose mothers died are more likely to die or face nutritional deficit (Miller & Belizen, 2015). Furthermore, a place of birth, in this case at home or in the village, if assisted by untrained traditional birth attendants, carries a high potential risk of maternal death that contributes to the MMR (Dhakal, Mangala, Baral & Patha, 2018). Therefore, a decision about choosing a place of birth is serious and significant.

This thesis presents research undertaken with rural women and men in Rawi (a pseudonym) area of Wae (a pseudonym) district of Western Highlands Province (WHP) in PNG. The research explores the experiences of women and men that impact decision making regarding the place of birth in rural Western Highlands of PNG. This chapter begins by outlining the

researcher's experience, then the background information that describes the presenting problem and justifies the need for this study. The aim and objectives are clearly stated, and the thesis structure is presented.

Author's Experiences

Having worked for more than five years as a midwife in both urban and rural settings in PNG, the poor outcomes of maternal health care on women and newborns in rural and remote areas has always been a great concern for me. One of the strategies to improve this poor outcome is to provide accessible, affordable, acceptable, and equitable health services that are friendly and woman-centred, both in urban and rural areas (McGready, Mola, Rijken, Hosten & Mutabingwa, 2013). I have assisted many births in both urban and rural facilities and observed that most women who attend rural health facilities were assisted by untrained traditional birth attendants or relatives in one of their previous birth experiences. When I asked these women about this issue at various times, they anecdotally indicated several contributing factors that related to their decisions in choosing a village birth assisted by untrained women. These women described a range of barriers such as family issues, lack of health information, and limited finances. However, there is no empirical research evidence that specifically focuses on the factors that influences the decisions of rural Western Highlands women in choosing their place of birth. Therefore, this motivated my interest to explore the experiences of women and men that impact decision-making regarding the place of birth in rural Western Highlands of PNG.

Research Background

Traditionally, PNG women chose place of birth based on their cultural beliefs and passed-on stories. Studies conducted in two rural areas of PNG identified that caves, huge trees, river banks, and small huts were places that were chosen to give birth (Ally, 2011; Vallely, Homiehombo, Hanku, Vallely, Homer & Whittaker, 2015). Giving birth in particular places was considered important due to the belief that the spirit of protection in these places would enable

the woman to undergo safe birthing, connect the baby physically, socially, and spiritually to the land (Ally, 2011; Vallely et al., 2015). Births in these places were assisted by female relatives, or sometimes women would give birth alone, as childbirth is deemed to be secretive; hence, some women did not want to be exposed to others (Vallely, Homiehombo, Hanku, Vallely, Homer, Whittaker, 2013; Vallely et al., 2015).

The modern place of birth (health facilities) was introduced to PNG around 1939 by missionaries and expatriates together with Papua New Guineans who were trained as hospital or Aid Post Orderlies (APOs), in health centres and small hospitals in the main provinces

(Pilang, Gray & Oprescu, 2017). The APOs were males only who delivered basic health care (curative, preventative, administrative, and spiritual) until there were health problems that were considered inappropriate for men to deal with, especially issues relating to the care of mothers and children (Pilang et al., 2017). Then, Community Health Workers (CHW) and general nursing training was introduced inclusive of both female and male workers, with females providing maternal and child health care with the assistance of expatriate Medical Officers in health centres and small hospitals (Pilang et al., 2017). However, the need to formally introduce midwifery education was only recently recognised and introduced into five tertiary institutions as a midwifery course in 2010 as a pilot project and then in 2012 as continual program and currently ongoing (Moores, Puawe, Buasi, West, Samor, Joseph, Rumsey, Dawson & Homer, 2016). According to Dawson et al (2016), the country has approximately 723 midwives who provide maternal health services at various health sector. This is approximately 1 midwife per 1,000 women, well below the international benchmark of 6:1000 women (Dawson et al., 2016). This indicates a critical shortage of a skilled midwifery workforce for a country with a high maternal mortality rate.

The MMR in PNG was among the highest in the world at 733 deaths per 100,000 live births reported in 2006 but dropping to 545 per 100,000 live births reported in 2010 (National

Department of Health, 2009; Dawson et al., 2016). Although partners like the United Nations Population Fund (UNFPA) stated that the current (at the time of the report) PNG MMR was 216 per 100,000 live births (UNFPA, 2017), a more recent study using data directly from district health services and the national information system indicated that maternal mortality ratios can be very high in remote places where there is poor general health, high fertility rates, no reporting system, and no maternity services (Mola & Kirby, 2013). Hence, the most recent national MMR for PNG is estimated at 500 deaths per 100,000 live births (Mola & Kirby, 2013). In comparison, the MMR for high income countries in the Asia Pacific region such as Australia, Japan, and China ranged from 6 per 100,000 live births in Australia, to 27 per 100,000 live births in China (WHO, 2015a). For other developing Pacific countries such as Fiji, the Solomon Islands, and Kiribati, the MMR ranged from 30 per 100,000 live births for Fiji, to 90 per 100,000 live births for Kiribati (WHO, 2014). These statistics indicated that PNG's MMR of an estimate of 500 deaths per 100,000 live births (Mola & Kirby, 2013) ranks the highest in the West Pacific region.

The major complications that account for 80% of all maternal deaths in PNG as with other developing countries are: postpartum haemorrhage (PPH) due to child birth and abortion, high blood pressure during pregnancy (pre-eclampsia and eclampsia) and sepsis or infection after birth (WHO West Pacific Region, 2019). The remainder are caused by or associated with diseases such as malaria, during pregnancy (WHO West Pacific Region, 2019). The key factors associated with PNG's high MMR are the inability to access care, the low uptake of supervised births during childbirth, and the fact that up to 70% of these deaths occur in rural and remote areas (Mola & Kirby, 2013). In addition, the most recent national demographic health survey indicated that only 43% of women have a supervised birth in a health facility (National Department of Health (NDOH), 2013). The rest of the female population are believed to give birth in the rural and remote villages assisted by an untrained person or relative (Mola & Kirby, 2013).

Due to the high rates of MMR and low rates of supervised births, the PNG Health Department has strongly encouraged women to give birth in health facilities, assisted by skilled birth attendants (NDOH, 2010). This advice is based on the policy of 'improving access to maternal health care', developed under the Department of National Health Plan (NHP) 2010-2030, which is linked to the global Sustainable Development Goal (SDG) target of reducing maternal mortality to less than 70 per 100,000 live births by 2030 (Department of National Planning and Monitoring, 2010). Out of eight Key Result Areas (KRAs) outlined under the PNG NHP, the need to improve maternal health was endorsed through two government documents. First, the 2010 PNG Development Strategic Plan (2010-2030) highlighted maternal health in key result area five, which aims to reduce the MMR to below 100 per 100,000 live births by 2030 through improvements to maternal health care services in rural and urban areas (National

Planning and Monitoring, 2010). Second, the development of the National Health and HIV

Research Agenda in 2013 recognised maternal health as a priority research area (National Department of Health and National AIDs Council, 2013). Third, the development of national sexual reproductive health policies in 2016 focused on safe motherhood. The specific reproductive health policies include; prenatal care, safe delivery, essential and emergency obstetric care, perinatal and neonatal care, postnatal care and breastfeeding (NDOH, 2016). These policies also incorporate family planning services, prevention and management of infertility and sexual dysfunction in both men and women and the prevention and management of complications of abortion, and provision of safe abortion services where the law permits (NDOH, 2016). The World Health Organization further assists the National Department of Health by improving the monitoring and evaluation of safe motherhood and newborn care programs and services, development and implementation of maternal and perinatal death surveillance and response, and strengthening the capacity of healthcare providers and managers to plan, implement and monitor safe motherhood programmes (WHO, 2019b). The implementation of the PNG National Strategic Plan and national sexual and reproductive

health policies with the assistance of WHO in the aforementioned areas have resulted in improvements to infrastructure, construction of new health facilities (community health posts) in rural areas, enhanced midwifery education, and the allocation of funds for research topics (NDOH, 2013). However, despite these improvements, PNG's current critical health workforce shortage (Dawson et al., 2016) and low rates of supervised births (NDOH, 2013) may not reach MMR target of less than 100 deaths per 100,000 live births by 2030. If this target is not reached, PNG may not achieve the SDG global target to reduce their national MMR by 70% by 2030 (Department of National Planning and Monitoring, 2010). The lag is due to a range of factors including lack of access to maternity care, low supervised birth rates, lack of emergency care, family planning, emergency medicines, and trained health professionals (Moores et al., 2016). In addition,, PNG's slow progress on maternal health is partly due to a critical shortage of skilled midwives and nurses, lack of birthing facilities, insufficient medical supplies, remoteness, and geographical difficulties (Dawson et al., 2015; NDOH, 2015; UNFPA, 2017). Furthermore, as with other countries, the high maternal mortality rates in PNG is reflective not only of a lack of access to health services, medical resources and skilled health workers but also the deeper issue of gender inequalities (UNFPA, 2012). This leaves women with limited control over decision-making, restricting their access to social support, education, economic or employment opportunities, health care, all which can contribute to maternal mortality (UNFPA, 2012). Others have also suggested that health literacy, violence, and limited government funding for health maintenance contributes to the slow progress in the reduction of the MMR (Bhutta, Cabral, Chan & Keenan, (2012). Although there have been many suggestions on how to further reduce the MMR, the evidence for these suggestions stem from reports from within the PNG health system. Therefore, getting information directly from women and men from the rural areas on the challenges and factors that influence their decisions to not access health facility births will provide strong evidence to support (or reject) the above suggestions. Hence, this study intends to explore the experiences of women and men that impact decision making regarding the place of birth in rural Western Highlands of PNG.

Decision-Making in Western Highlands Province, PNG

Papua New Guinea is a low- to middle-income country which is rich in geographical, social, cultural, and linguistic diversity (Department of Foreign Affairs and Trade, 2018). The country has many rural and remote communities and is inhabited by approximately 8.1 million people living in 22 provinces (UNDP, 2014a; Department of Foreign Affairs and Trade, 2018). Some coastal and island provinces have a matrilineal society in which the women make decisions about the use of the land, while six highland provinces have patrilineal societies in which men make decisions about the use of their lands, for their families and communities (Bourke & Harwood, 2013; Kuten, 2013). About 88% of the population live in rural areas, while 12% live in urban areas (UNDP, 2014b; Bourke & Harwood, 2013)

Western Highlands Province is one of the highlands provinces that has a patriarchal society, in which more than 80% of the population live in rural communities in their tribes and clans, assist with clan and community affairs such as bride-price payment, compensation for killing, and other community issues (Bourke & Harwood, 2013; Gascoigne, 2018). The bride price ceremony signifies that the woman is to live with the man in his community, and that part of their responsibilities, if they are unemployed, involve gardening, childcare, and tending to domestic animals. (Gascoigne & Schumacher, 2018). Generally, both men and women cooperate in the farming of their local land, harvesting, and selling of cash crops (coffee and/or vegetables) which are usually sold at local markets, mostly by women to earn income for their families (Gascoigne, 2018). In WHP, men are the dominant decision-makers for the use of the land, and for their families and communities (Bourke & Harwood, 2013; Kuten, 2013). Hence, men make most of the decisions about the use of the family income despite the women's interest (Gascoigne & Schumacher, 2018; Kuten, 2013). Sometimes, women may live without money which can create a financial barrier for them to access health care. It is therefore important to include men in this study to explore the factors that influence their decisions in supporting women to choose the place of birth.

It has been noted that despite reports of the low number of supervised births and the high MMR in PNG, there is only limited literature that focuses on maternal health in PNG. The few studies conducted in other provinces of PNG primarily focus on antenatal care and have overlooked intrapartum and postnatal care, which are significant components of maternal health, as most obstetric complications and maternal deaths occur during birthing and immediately after birth (Mola & Kirby, 2013). In addition, these studies have focused on the factors that create barriers to accessing health facilities. However, no published studies that have explored the decision-making factors involved in choices for intrapartum care and birthing could be found. Addressing this deficit would enable positive long-term outcomes in maternal health services in WHP and PNG.

Problem Statement

A recent study by King et al. (2013) identified that women in the rural areas of PNG are less likely to access available professional healthcare facilities compared to those in the metropolitan areas. According to the most recent report, in 2013 only 43% of births were assisted by skilled birth attendants in PNG (NDOH, 2013). Specifically, in WHP, only 23% of women were assisted by skilled birth attendants at a health facility, while the remaining births were believed to have taken place in remote or rural homes or in the villages assisted by an untrained person or by relatives (Mola & Kirby, 2013). Based on the most recent evidence available, the advice given to women on the importance of health facility births, assisted by midwives and other health workers, through health promotion messages has not improved the uptake of women choosing to birth at the facilities in the rural highlands (Valley et al., 2013). Furthermore, the researcher's experience of women seeking care during their pregnancy, but not for births, at health facilities, triggered an interest in understanding their reasons for not choosing health facilities to give birth.

Aim and Objectives

The primary aim of this research is to explore the experiences of women and men that impact decision-making regarding the place of birth in rural Western Highlands of PNG. The aim will be achieved through two research objectives:

1. To investigate factors that influence women and men's decisions in choosing the place of birth.
2. To examine the needs and expectations of women and men in relation to the birthing context

Significance of the Study

The findings of the study will provide local insights and information about the factors that influence the decisions of women and men towards choosing a place of birth in the rural areas of the Western Highlands of PNG. This information might help clinical midwives and maternal health care providers tailor their care and resources appropriately, thus improving maternal health services. The information might also inform policy-makers and health managers to create policies that directly address the needed areas in maternal health that meet women's expectations of care. The information that the research participants will provide will help shape the future health services of the province and of the entire country to the benefit of women and their families. Knowledge and new information arising from this study may also assist in developing approaches and strategies that are female focused in other developing countries with similar issues of high maternal mortality rates.

Conclusion

The high MMR, the low number of supervised births, a shortage of skilled workers, and inadequate maternity services indicate that more effort is needed to address the causes and contributing factors to prevent maternal mortality and its consequences for children and families. Choosing a place of birth is a serious and significant issue, and hence, requires

thoughtful decisions to be made. Although, previous studies conducted in other provinces have indicated the challenges that limit women's access to health facilities, there is no empirical evidence on the factors that influence the decisions of women and men in choosing place of birth in rural WHP. Therefore, this study aims to address this gap.

Thesis Structure

This thesis consists of six chapters. This initial chapter introduces the research background, problem statement, aim, objectives, and significance of the study, and concludes with the structure of the thesis. The second chapter presents an integrated literature review of research articles both from PNG and other developing countries on the factors that create barriers for rural women in accessing maternity care in the respective countries. This literature review chapter is organized according to the themes that emerged from the reviewed studies. Chapter Three of this thesis outlined the research methodology, the methods, and the processes taken in conducting the study. The fourth chapter presents in detail the findings of the analysis of the data collected during the fieldwork. This chapter also discusses the demographic details of the participants and presents the themes developed through a thematic data analysis. The fifth chapter discusses the findings in relation to the literature in chapter two and other literatures relevant to this study. The final chapter presents the conclusion of the thesis, the contributions of the study, the strengths and limitations, the recommendations and suggestions for future studies. Additional information for this thesis, such as search terms, a Prisma table, a critical appraisal checklist table, a table of themes, a research site map, and other relevant information, are attached as appendices.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This chapter presents an integrative review of articles from PNG and other developing countries related to women's experiences and perceptions associated with the use of maternal health services in developing countries. A review of this part of the research has been purposely conducted to further explore the research question, assemble and evaluate the themes that evolve from the study, and identify any gaps in knowledge. Furthermore, the review provides an opportunity for the researcher to understand the significance of the topic and to be able to provide a rationale for, and a position on, the research.

The chapter begins by outlining the search strategies used to identify the relevant articles, followed by a critique of the articles, a thematic synthesis, and lastly, identification of the gaps in knowledge that will inform the current research. The chapter will also discuss the limitations of the review before concluding.

Search strategy and selection process

A systematic search was conducted to identify relevant research literature from PNG and other developing countries relating to the experiences of women and men that impact decision making regarding the place of birth in rural Western Highlands of PNG. A comprehensive search was conducted using the following databases: the Cumulative Index to Nursing and Allied Health Literatures (CINAHL), Medline, Scopus, and PsychInfo. The key words used as identifiers for the search were: "maternity care", "childbirth", "pregnancy", "place of birth", "choices", "maternal health", "PNG/Papua New Guinea", and "Asia Pacific". An initial search using these key words yielded eight articles. These eight articles were analysed for appropriate content relating to the research question, and six were found to be relevant.

Therefore, the search was expanded by using the following terms: "childbearing women", "skilled birth provider", "traditional birth attendant", "birthing experiences", "birthing

environment", and "developing country/countries". These keywords were searched by combining them with the initial key words using the Boolean operators "OR" and "AND" (Polit & Beck, 2017). To further expand the landscape of the search, which was initially restricted to PNG and the Asia Pacific, a 'whole world' focus was then initiated due to the lack of literature from the initial search. From this expanded process, the search resulted in 364 related articles. These articles were also analysed for appropriate content relating to the research question, which resulted in a total of 52 relevant articles. A list of search terms and search term combinations can be found in Appendix 1. A total of 58 (52 plus 6 from the initial search) were reviewed using inclusion and exclusion criteria (Critical Appraisal Skills Program, 2018). The inclusion and exclusion criteria are outlined in a PRISMA table and attached as Appendix 2.

Inclusion and exclusion criteria were used to include the articles for the review and to exclude the articles that were not relevant. The articles included were based on recent year of publication (in this case within the last six years), in the English language, peer-reviewed, primary research, articles from PNG, articles from other developing countries with similar contexts to PNG, articles exploring similar health issues and similar geographical issues as those of PNG, and findings that related to the research question for this study. On the other hand, articles were excluded if more than six years since publication, grey literature, non-peer reviewed, and secondary research (Schneider & Whitehead, 2016). After applying the inclusion and exclusion criteria, 18 articles appeared to be relevant. However, after a preliminary reading of the titles and abstracts, and a skim reading of the contents, four articles were identified as irrelevant and excluded because the contents were not related to the core topic. Therefore, in total, 12 relevant articles were included in the review, with ten qualitative studies and two quantitative studies. A total of five articles were from African countries, three from South East Asian countries, and four from PNG. None of the four studies from PNG were conducted in WHP, as they were conducted in other provinces. These 12 studies were included in this literature review, analysed critically, and the recurring findings were developed into themes and are presented in the PRISMA table (Appendix 2).

Critical appraisal of the studies

The 12 articles identified as being relevant to the review were assessed using the appropriate relevant tool to evaluate rigour and quality (Critical Appraisal Skills Program, 2018) so that they could be included in the review. The Critical Appraisal Skills Program (CASP) qualitative checklist was used to assess the 10 qualitative studies using the 10 appraisal questions (Critical Appraisal Skills Program, 2018). The CASP quantitative case control checklist was used to assess the two quantitative case control studies using the 11 appraisal questions (Critical Appraisal Skills Program, 2018). Appraising the 12 articles using these tools assisted the researcher to assess the research process and the strengths and weaknesses of the identified articles, and to evaluate the value and trustworthiness of the research (Lo Biondo Wood & Haber, 2014). Generally, all the articles were identified as being of good quality and provided appropriate background for the current study. The 10 qualitative articles, despite all having limitations, used appropriate methods and methodologies to address the research question. A critical appraisal checklist table shows the completed appraisal of the 10 qualitative studies and is attached as Appendix 3. These studies explored the experiences and perceptions of care providers and women in relation to the use of health care services. The findings generally focused on the factors that create barriers for women in accessing health facilities for maternity care. Although there were limitations in the data analysis, the content was relevant and applicable. On the other hand, the two quantitative studies used large numbers of participants and gathered information in numerical form (Polit & Beck, 2017). The quantitative research articles employed surveys and focused on the antenatal components of maternity care. Their quality and rigour were identified to be of sound quality. Appendix 4 shows the completed appraisal for the two quantitative studies.

Framework used to structure the review

An integrative review process was used to review the peer-reviewed articles that identified barriers to women's access to health care in PNG, and other developing countries. An integrative review was used as it is a methodology that facilitates a synthesis of knowledge

and applicability of results of significant studies to health practice (Tavares de Souzal, Dias da Silva & Carvalho, 2005). The first step involved summarizing each article in a table. Appendix 5 contains the summary of the 12 articles included in the review. This was followed by the process of synthesizing and evaluating the contents of the articles, whereby the recurring findings were categorised into themes based on their similarity in ideas, descriptions, and findings (Schneider & Whitehead, 2016). Strengths and weaknesses were also identified during the process that indicated the gaps for the current study (Tavares de Souza et al., 2005). Three main themes that emerged were access to health care, barriers within health facilities, and cultural beliefs and traditional practices. Appendix 5 shows the studies that were grouped into these themes and Appendix 6 presents the summary of the articles included in this study.

Themes

During the analyses process of the selected literature, three themes emerged. Each theme is discussed in relation to the twelve identified research articles.

Theme 1. Barriers within women's' environment

The first theme from the literature refers to the factors that challenge women and families in accessing health care. These challenges that create barriers for women from PNG and other developing countries are: financial constraints, long distance travel, lack of transport, poor roads, the fear of having a roadside birth, safety and security, lack of decision-making power, and language barriers (Andrew, Pell, Angwin, Auwun, Daniels, Mueller, Phuanukoonnon & Pool, 2014; Vallely, et al, 2013; Crissman, Engmann, Adanu, Nimako, Crespo & Moyer, 2013; Titaley, Hunter, Dibley & Heywood, 2013; Ith, Dawson & Homer, 2013; Essendi, Amoako, Madise, Falkingham, Bahaj, James & Blunden, 2015; Sychareum, Somphet, Chaleunvong, Hansana, Phengsavanh, Xayavong & Popenoe, 2016; Mugo, Dibley, Damundu & Alam, 2018). While most women understood and mentioned the importance of using health facility care, inadequate finances to meet the transport and medical costs was a major challenge

mentioned in five studies (Vallely et al., 2013; Andrew et al., 2014; Fisseha, Berhane, Worku & Terefe, 2017; Titaley et al., 2013; Sychareum et al., 2016). Three studies mentioned that although maternity care was known to be free, there were costs such as midwife's costs and the cost for the use of bed that challenged them financially (Vallely et al., 2013; Andrew et al., 2014; Titaley et al., 2013). These studies further mentioned that living in the rural areas, being unemployed, and having only low income opportunities were the main cause of their financial limitations (Andrew et al., 2014; Vallely et al., 2013; Crissman et al., 2013; Andrew et al., 2014; Titaley et al., 2013; Ith et al., 2013; Essendi et al., 2015; Sychareum et al., 2016; Mugo et al., 2018). Three articles (Ith et al., 2013; Crissman et al., 2013; Vallely et al., 2013) mentioned that the location of the facilities was challenging as some communities were geographically isolated and access would involve long-distance travel, which sometimes resulted in them missing their antenatal appointments. Lack of public transport due to poor road conditions was another barrier (Vallely et al., 2013; Crissman, 2013; Andrew et al., 2014; Essendi et al., 2015; King et al., 2013). Fear of having a roadside birth because of the long distances travelled on poor roads had an impact on women's personal and familial decisions to not seek facility-based care, and instead, to be attended by untrained birth attendants or family members in their community (Crissman, 2013; Mugo et al., 2018). Two studies (Crissman, 2013; Mugo et al., 2018) further mentioned the fear of safety and security issues during night hours due to the fear of dangerous men attacking them also had an impact on their decisions to not seek facility-based birthing.

In addition, the lack of decision-making power for women was a negative factor that had an impact on their willingness to seek supervised health facility births (Crissman, 2013; Vallely et al., 2013). Their partners and families made their decisions about whether to access health facilities for birth or not, as the families were involved in meeting the transport and medical costs (Crissman, 2013; Vallely et al., 2013). Furthermore, two studies indicated that women with language barriers also have difficulty accessing health information due to low levels of literacy (Crissman, 2013; Vallely et al., 2013). These findings partly explain the reasons

behind the slow progress towards PNG's target of having less than 100 MMR (per 100,000 live births) by 2030 (Department of National Planning and Monitoring, 2010). The World Health Organization recommends further attention be provided to improving access to maternal health care in rural areas as well as providing woman centred midwifery care (WHO, 2015b). Therefore, using approaches such as verbal forms of health education, pamphlet distribution, home visits and other effective approaches may assist in increased use of health facility maternity care.

Theme 2. Barriers within health facilities

The second theme refers to the factors that exist within the health facilities that create barriers for women in receiving care after arriving at the facilities. Numerous studies identified barriers within the public health system, which included disrespectful and negative attitudes of staff, lack of essential drugs, absence of skilled care providers, medical user fees, and long waiting times and closure of health facilities (King et al., 2013; Crissman, 2013; Andrew et al., 2014; Ith et al., 2013; Machira & Palamuleni, 2018; Fisseha et al., 2015; Titaley et al., 2013; Essendi 2015; Mugo et al., 2018).

Negative staff attitudes and lack of essential drugs were major barriers for women in PNG, Cambodia, and Malawi (King et al., 2013; Andrew et al., 2014; Ith et al., 2013; Machira & Palamuleni, 2018). According to Andrew et al. (2014), staff attitudes can have a negative or positive influence on women's attitudes towards seeking health care. One study (Ith, Dawson & Homer, 2013) reported that as a result of negative experiences in the public system, some women chose to birth in a private facility, even though it would be expensive.

The absence of midwifery-skilled care providers that women only realised after arriving at the health facility was another challenge that prevented them from receiving maternity care (Essendi et al., 2015; Mugo et al., 2018). As a result, two studies mentioned that women often return home to be assisted by the village birth attendants (Essendi et al., 2015; Mugo et al., 2018). These findings might partly be the reason why few studies indicated that women

understood the importance of seeking health care, but refrained from using it (Vallely et al., 2013; King et al., 2013). Medical user fees were another factor that challenged rural women with low income opportunities from PNG and other developing countries that prevented them from receiving maternity care (Crissman et al., 2013). Andrew et al. (2014) reported that past experiences of long waiting hours was another issue that reduced the interest of women in seeking health care in PNG. Furthermore, two articles (Essendi et al., 2015; Mugo et al., 2018) reported that the lack of water supply and electricity were factors that led to the closure of facilities, which resulted in women not being attended to by the care providers even if they were already at the health facility.

Theme 3. Traditional beliefs and cultural Practices

The final theme that emerged from the review was the cultural beliefs and traditional practices that conflicted with women's understandings of safe maternity care and which had an impact on their health-seeking behaviours during pregnancy and childbirth. Most of the selected studies identified cultural beliefs and traditional practices as barriers to accessing health facility care, both in PNG and in other developing countries (Vallely et al., 2013; Sychareum et al., 2016; Vallely et al., 2015; Mugo et al., 2018). Although two studies reported on women being aware of the importance of seeking health facility care for birthing (Vallely et al., 2014; King et al., 2013), many women were still being assisted by traditional birth attendants. Sychareum, et al. (2016) and Vallely et al. (2015) revealed that pregnancy-related complications were associated with spiritual beliefs and witchcraft. In effect, this means that women would seek traditional assistance provided through witchcraft for complications rather than seeking medical assistance, as they believed that medical assistance would not help them (Sychareun et al., 2016). In addition, Vallely et al. (2015) reported on a traditional belief of a rural PNG highlands community that genital blood seen by other people, in this case the health workers, would have a negative effect on the newborn; therefore, the women refuse to use the health facilities, instead birthing alone in their community. The evidence outlined above partially explains the reason for skilled birth attendance in PNG being low at less than approximately

43% (National Department of Health – National Health Information Systems, 2013). On the same note, Sychareum, et al. (2016) reported on Lao women not accessing health facilities due to a belief that the colostrum is unclean for babies, and the health workers enforcing its use. Such conflicting ideas affected the use of available health services. Sychareum et al. (2016) further identified that women believed that they needed warm steaming of their genital area to reduce infection; however, such practices were discouraged in the health facilities.

These findings support the perception that women's decision to seek maternity care is influenced by their cultural beliefs. These findings and the community's beliefs conflict with the National Department of Health, PNG 2011 to 2020 goal, and the WHO global goal that all women should be attended to by a skilled birth attendant and give birth in a recognised health facility (Department of National Planning and Monitoring, 2010).

Discussion

The 12 articles reviewed originated from both PNG and other international countries. The studies provided insights into the factors that created barriers for women in accessing maternity care within their communities. These factors were access to health care, barriers within health facilities, and cultural beliefs and traditional practices. The factors that challenged access to health care were financial constraints, long distance travel, lack of transport, poor roads, the fear of having a roadside birth, safety and security, lack of decision-making power, and language barriers were identified in the articles (King et al., 2013; Vallely et al., 2013; Crissman et al., 2013; Andrew et al., 2014; Titaley et al., 2013; Ith et al., 2013; Essendi et al., 2015; Sychareum et al., 2016; Mugo et al., 2018). A similar study conducted in Timor Leste on the factors that limit access to health care by Wallace, McDonald, Belton, Miranda, Da Costa, Matos, Henderson and Taft (2018) identified that infrastructural limitations, geographical location, hospital policies, minimal birth preparedness, and negative staff attitudes were factors that delayed women's access to timely maternity care. These findings indicate that health facilities in rural areas are not being effectively used by pregnant women,

which highlights a need to address and improve these factors to enable an increase in facility birthing. Due to these barriers, most births are attended by traditional birth attendants in rural communities. It is known that births assisted by untrained birth attendants lead to increased maternal mortality and neonatal morbidity globally (Mola & Kirby, 2013). Therefore, these findings from the literature highlight the need to explore the factors that influence women's and men's decision-making processes towards choosing the place of birth. The barriers within health facilities that challenged women in receiving care that were reported in the review include disrespectful negative attitudes by staff, lack of essential drugs, absence of skilled care providers, medical user fees, past experience of long waiting hours, and unexpected closure of health facilities (King et al., 2013; Crissman, 2013; Andrew et al., 2014; Ith et al., 2013; Machira & Palamuleni, 2018; Fisseha et al., 2015; Titaley et al., 2013; Essendi et al., 2015; Mugo et al., 2018).

These are preventable barriers which cause more challenges and frustration for women and their families, especially when having reached the facilities after overcoming the external barriers, only to realise that the care they were expecting was not available. These findings are important as they indicate a need to review and reassess current clinical practices in the rural areas. Primary health care in rural areas is a first point of contact for rural populations, hence, creating a female-centered environment that is affordable and equitable will increase health facility births. Ayalew, Eyassu, Seyoum, Van, Bazant , Kim, Tekleberhan, Gibson, Daniel & Stekelenburg, (2017) strongly emphasised that the maternal, newborn, and child health care continuum requires that mother and child pairs should receive the full package of antenatal, intrapartum, and postnatal care to derive maximum quality benefits. Furthermore, the negative attitudes of health care providers can have a negative impact on health-seeking behaviours. According to a study conducted in Kenya on respectful maternity care, Molina, Patel, Scott, Schantz-Dunn., & Nour, (2016) reported that disrespect and abuse by maternal health providers discouraged women from seeking childbirth at a health facility, which ultimately leads to poor maternal and neonatal outcomes. This means that a friendly

environment with caring and supportive staff might motivate and encourage women to willingly access health facilities. Therefore, these findings indicate that the need to explore the experiences of women and men in relation to the factors that influence their decisions in choosing the birthing environment is of significant value.

The cultural beliefs and traditional practices identified in this review consist of the belief that pregnancy-related complications are associated with spirits and witchcraft, colostrum being unclean for babies, genital blood having a bad impact on newborns if anyone sees it, the cutting of the umbilical cord with a pair of scissors being unsafe for a newborn, and a need for genital steaming during the postnatal period (Vallely et al., 2015; King et al., 2013; Sychareum et al., 2016). The review reported that women were aware of the importance of seeking facility-based care, but that their culturally informed knowledge strongly influenced them to continue with birthing practices that are medically unsafe for women and their newborns (Vallely et al., 2013; Andrew et al., 2014). A similar study reported that women in Ghana preferred traditional herbal medicine over modern medicine, which later made them feel dizzy and lethargic, and also that they refused to seek health care during night hours as spirits may kill the fetus while on the journey, if the pregnancy is from a second or third marriage (Dako-Gyeke, Aikins, Aryeetey, Mccough., & Adongo, (2013). These findings indicate that low levels of literacy and the lack of health education among this rural population, together with the influence of spiritual beliefs, highlights a need for effective health promotion and health education in the rural areas in PNG and other developing countries. The findings present a gap that indicates a need for current research on the factors that influence their choices in choosing the place of birth in the rural Western Highlands of PNG.

Although, this review provides relevant information on access to health care, the studies were undertaken in different provinces of PNG and in different countries. Particularly for PNG, which is a developing country with a great diversity of culture, language, beliefs, and practices, the reviewed studies provide a broad perspective on the factors that influence women's

decisions in PNG. However, none of the studies specifically explored the decision-making factors that influence women's, and their partner's, decisions in their choice of place of birth in the WHP of PNG. Hence, the findings from the review are of significant value and will be used as a guide and as support to focus specifically on the various factors that influence women and their partners in their decisions in choosing place of birth in the rural Western Highlands of PNG.

Limitations

The process involved in undertaking this review has several limitations. The major limitation was the challenge of finding relevant articles from PNG relating to the research question. Secondly, most of the studies in this review are qualitative studies with small sample sizes, and therefore, are not representative of the entire PNG population, and hence, cannot be transferred to the WHP or the PNG context. Thirdly, all the selected articles were published within the last six years purposely to obtain recent information that will provide an appropriate and contemporary background for the current study. Limiting the year of publication might have excluded valuable articles for inclusion. Finally, only two quantitative studies were included, which could have excluded a greater number of quantitative articles with valuable information. Hence, there is an established need for the proposed research project to investigate the factors that influence the decisions of women and men on the birthing environment in the rural Western Highlands of PNG.

Conclusion

This chapter has presented the research evidence in relation to the factors that influence access to maternity care in PNG and other developing countries. The search process used to select the literature and the critical appraisal of the studies was discussed. Evidence from the 12 reviewed studies suggested that factors within the women's environment, barriers within health facilities and cultural beliefs and traditional practices were barriers that hinder women's access to the health facility maternity care. This review has identified that choice of birthplace

in PNG has not been adequately explored, as many of the reviewed studies explored different issues; hence, there is a gap in the literature which requires further research. The findings of the review focused on the factors that hinder access to health facilities, whereas the factors that influence the decisions of women and their partners in choosing a birthing context need to be further explored. Therefore, the proposed study aims to explore the experiences of women and men that impact decision-making regarding the place of birth in rural PNG, a population that has not previously been studied. The following chapter describes and presents the methodology and methods used to conduct the research for this study.

CHAPTER THREE: METHODOLOGY

Introduction

This chapter presents the research methodology and the steps taken to address the research question. The chapter covers the research paradigm, the methodological approach, ethical considerations, and the research method in which it describes the setting, the recruitment of the participants, data collection, and the analysis. The study aims to explore the experiences of women and men that impact decision-making regarding the place of birth in rural Western Highlands of PNG. In order to obtain varied and rich information to achieve the aim of the study, a qualitative descriptive approach was used to collect and analyse the data. The rationale, strengths, limitations, and rigour of the study are also included in this chapter.

Research Paradigm

A research paradigm is a 'set of beliefs or worldview that guides a research action or an investigation that informs meaning or interpretation of the research data arising from a subject or phenomenon of interest' (Schneider & Whitehead, 2017p.74). This means that the paradigm influences what should be studied, the process in which the study should be conducted, and how the results of the study should be interpreted (Kivunja & Kuyini, 2017). The qualitative and quantitative paradigms represent two broad frameworks for research (Polit & Beck, 2017). From these two paradigms, the qualitative paradigm was chosen for this study as it appropriately addresses the research question by being best able to obtain a richness of information from people's experiences, and about their roles, awareness, perceptions, beliefs, values, and understandings with the main aim of developing rich descriptions and insights into experiences to generate understanding and meaning (Schneider & Whitehead, 2016, Parahoo & Kader, 2014). Therefore, this research is a qualitative descriptive study of the decision-making factors that influence women's and men's choices of place of birth in the rural Western Highlands of PNG. Using the qualitative paradigm, in-depth and rich information (Kivunja & Kuyini, 2017) will be obtained by uncovering the participants' personal experiences, thoughts,

and understandings about the factors that influence their decisions in choosing a place for birth.

People's experiences are unique and different from each other. Their way of living is different and the decisions they make are influenced by different situations, therefore, findings and results in a qualitative study cannot be generalised. Qualitative research acknowledges that there are many truths, unlike quantitative research which aims to discover a single truth (Erlingsson & Brysiewicz, 2013). The women's and men's experiences cannot be a single truth, as the interpretation of their experiences will likely be different from each other. In using a qualitative approach, the researcher is able to explore women's and men's experiences regarding their decisions towards place of birth in a holistic way (Schneider & Whitehead, 2016). Parahoo and Kader (2014) mentioned that participants can describe their experiences relating to the phenomenon under study in totality based on their own experiences and understandings, rather than from the researcher's influence through using guided interview questionnaires and allowing participants to talk freely without disturbance. As this study aims to explore and obtain an in-depth understanding of the women's and men's experiences in choosing place of birth, this will be appropriately explored using a qualitative approach.

Methodological Approach

A qualitative descriptive design (Schneider & Whitehead, 2016) was employed in this study to explore the experiences of women and men on the factors that influences their decisions in choosing place of birth. Qualitative descriptive methodology is an approach that adopts common aspects of all qualitative approaches (Schneider & Whitehead, 2016). Qualitative descriptive methodology was deemed appropriate and used in this study because it is about rich description of a phenomenon and was considered suitable for a study that involves a small sample population (Thorn, Kirkham, & O'Flynn-Magee, 2004; Schneider & Whitehead, 2016). Qualitative descriptive design is particularly relevant where information is required directly from those experiencing the phenomenon under investigation and where time and resources

are limited (Bradshaw, Atkinson & Doody, 2017; Thorn, 2004). Furthermore, a qualitative descriptive approach offers the opportunity to gather rich description about a phenomenon which may be little known. Within the process, the researcher strives to stay close to the "surface of the data" (Sandelowski, 2000), which means during the interview, the researcher listens attentively, records the original data and frequently reflects back on the original data during analysis, to ensure that the participants experiences and perspectives are accurately understood (Bradshaw et al., 2017). Application of these descriptions of the qualitative descriptive methodology to this study aligns well for two reasons; first, the participants who took part were small in number, but large in the amount of rich primary data that was obtained from those who met the selection criteria (Parahoo & Kader, 2014). Secondly, given the time constraints of the duration of the course (18 months), data collection took only 6 weeks, which aligns with the description of qualitative descriptive methodology in which data collection has to be undertaken in a limited space of time (Bradshaw et al., 2017). The focus on producing rich description about the phenomenon from the participants' viewpoint offers a unique opportunity to gain insight, or emic knowledge, and to learn how the participants see their own world (Bradshaw et al., 2017).

Other qualitative methodologies such as ethnography, phenomenology, and grounded theory were deemed inappropriate for this research. Although ethnography explores a phenomenon in a cultural context, it takes significant field work time in order to really observe the cultural behaviour; this is not achievable in the context of an 18-month master's degree.

Phenomenology focuses purely on participants' lived experiences (Polit & Beck, 2017, p. 465). Grounded theory involves an ongoing process of data collection over an extended period with the aim of developing a new theory (Schneider & Whitehead, 2016, p. 95) and was also not applicable for this study as the duration of the study program is short. Therefore, a qualitative descriptive methodology was deemed appropriate and so was used in this research.

Ethical Considerations

Ethical considerations are about the protection of the participants and their confidentiality (Holloway & Wheeler, 2010, p. 54). According to Holloway and Wheeler (2010, p. 54), the key ethical concepts in human research refer to respect for autonomy, ensuring that there is nonmaleficence so that benefits outweigh any risks, and to ensure that the research is conducted in a fair and just manner. Ethics approval to conduct the study was obtained from the Flinders University Social and Behavioural Human Research Ethics Committee (approved project number: 8133, attached as Appendix 7), prior to the commencement of this study.

To avoid any conflict of interest, only those women and men who have not received any form of health care assistance from the primary researcher were recruited by the community leaders who provided their names and contact numbers to the researcher. The potential participants were then provided with an information pack that explained the process of the research so that they could make an informed decision about whether to take part in the study or not. The information pack contained a letter of introduction (Appendix 8), an information sheet (Appendix 9), and a consent form (Appendix 10). These forms were written in PNG Pidgin (the national language of PNG), translated from English by the primary researcher who is fluent in both languages, making it easier for the participants to read and understand. Prior to the commencement of the interview, the researcher explained the information verbally to each participant, including that participating in the study was voluntary, that they were free to withdraw at any time without penalty, and that pastoral support was available if they found the interview upsetting. Before the commencement of the interview, each participant was advised to ask questions so that any uncertainties could be clarified. All the participants understood and communicated well in PNG Pidgin. A fingerprint and verbal consent were then obtained and recorded for the 20 participants as a form of informed consent as the majority of the participants had low literacy levels and could not sign the consent form. An interview guide (Appendix 11) was used as a guide to conduct the interview.

The interviews were conducted in a community house located in the centre of the community which is free and available for any community member or group to use for meetings. The interviews took place in one of the rooms at a convenient time of day, chosen by the participants. Pseudonyms were used on the written transcriptions and in the thesis to maintain their confidentiality. Finally, the collected data has been stored on the researcher's password protected laptop for the duration of the study and will be kept for five years on the university's digital storage facilities.

Method

Setting

The field work of six weeks duration commenced at the research site, Rawi (pseudonym) area in Wae (pseudonym), a sub-district in the rural Western Highlands Province of PNG. A total of 7 villages from the 13 catchment villages in this area were selected for recruitment of potential participants. The selection of the 7 was based on the equal distance that they were located from the main road towards the inland of the country. The selected villages are indicated on a map attached as Appendix 12.

Sampling

A purposive sampling method was used to recruit 20 eligible participants. A purposive sampling method was seen as appropriate, as it allowed the researcher to decide what needs to be known and set out to find people who have information about the topic at hand based on their experiences and knowledge relating to the research question (Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2016). Aligning with this description, community leaders recruited the potential participants who were willing to take part and provided their contact details to the researcher, who then contacted them by phone and arranged an interview time. Each participant was checked against the inclusion and exclusion criteria. In order to obtain more information, a pre-selection criterion was used in this study to include participants who

had the required status, and had experience or knowledge relating to the research question (Schneider & Whitehead, 2016, p. 112). Pre-selection criteria were used to set the inclusion criteria as this is an effective way of identifying eligible participants who can provide in-depth information about their recent experiences (Schneider & Whitehead, 2016, p. 114). Therefore, a purposive sampling technique was used in this study as the research aims to obtain recent and rich in-depth information about the factors that influenced the decisions of women and men in choosing their place of birth in the last 12 months, or their plans of a place of birth if the participant was currently pregnant at the time of recruitment. Table 1 presents the inclusion criteria.

Table 1: Inclusion Criteria

Participant Type	Basis for Recruitment	Component of Research Involved in.
Childbearing-aged women	Women who are pregnant, or have given birth in the last twelve months, and can communicate in PNG Pidgin (PNG national language)	Interview
Men	Men whose partners are currently pregnant, or have given birth in the last twelve months and can communicate in PNG Pidgin (PNG national language)	Interview

Quota Sampling

There are several types of purposive sampling, with quota sampling and maximum variation sampling being two examples (Schneider & Whitehead, 2016). Although the maximum variation sampling technique involves pre-selection criteria, the criteria involves all aspects of the participants, whereas in quota sampling, the researcher decides on both the number of participants and the characteristics of interest which match the inclusion criteria for the study (Schneider & Whitehead, 2016). Therefore, the quota sampling method was the specific purposive sampling method used in this study. The quota in this study was made up of women

who had their babies in the last 12 months or who were currently pregnant (at the time of recruitment), and men who met the inclusion criteria outlined in Table 1.

Sample size

In qualitative research, the richness of the data collected is more significant than the number of participants, in comparison to quantitative research, and there is no absolute rule to suggest when a sample size is small or large enough for a particular study (Schneider & Whitehead, 2016, p. 114). However, various researchers have recommended a range of different sample sizes for each methodology for different reasons. Guest, Bunce and Johnson (2006) recommended between 5 and 25 participants for a qualitative study. They further suggested 10 to 12 participants is adequate to reach data saturation. Therefore, this study initially aimed to approach up to 40 women and 40 men who met the above inclusion criteria, to recruit 10 to 12 participants form each gender group. Data saturation for the female participant group was achieved with 16 interviews of interested and eligible women. Although, there were some men who showed interest, only four men were eligible and recruited to the study, therefore data saturation was not achieved for this participant group. In total of 20 participants participated in the study.

Data Collection

In-depth face-to-face interviews using a semi-structured interview guide of questions was used to collect the data. In line with the philosophical approach for the study, interviews allowed the researcher not only to explore and understand the participants' experiences, but also helped to understand the story behind the participants' experiences, thus enabling the researcher to pursue in-depth information around the research topic (Minichiello, Aroni & Hays, 2008; Sutton & Austin, 2015). This approach using semi-structured interviews is supported by Polit and Beck (2017), who argued that when a set of questions is used to guide an interview, this tends to thoroughly address the research questions of a study. In addition, semi-structured interviews provide guidance for the participants on what to talk about, which

encourages the free flow of expression, allows for clarifications and the elaboration of previous information, enhances the standardisation of the data collection process, and enables the areas of research interest to be thoroughly covered (Schneider & Whitehead, 2016). The semi-structured questions for the interviews were not rigidly structured and were open-ended. This enabled a free flow of information in which the participants freely expressed their thoughts and experiences, while remaining focused on the research question (Minichiello et al., 2008). Prior to the commencement of the data collection, the researcher conducted a practice interview with her supervisors to evaluate the question set and the researcher's interview skills. The interview guide is attached as Appendix 13.

During the fieldwork, the participants were interviewed individually using the interview guide. In order to maintain the interest and flow of the discussion, the sequence of the questions was not followed rigidly. Additional questions were asked for clarification and further information depending on the participants' responses. Following the first two interviews, the transcripts were given to the supervisors and further discussions were had on how to enhance the quality of the interview technique and data collection. As a result of the feedback from one of the supervisors, the interview process was adjusted. Close to the conclusion of each interview, the researcher checked the guide to ensure that each question had been covered.

A total of 20 interviews (16 women and 4 men) were conducted. Of the 16 women, 9 were postnatal, and provided information on their birthing experiences in the last 12 months. The other 7 women were currently pregnant and provided information on their plans for place of birth. The 4 male participants were partners of 4 of the female participants who shared their experiences in providing financial, physical, and decision-making support to their partners in relation to the birthing context. All the interviews were conducted individually to enhance the openness of the conversation. No further recruitment of participants was conducted due to reaching data saturation after 20 interviews. Polit and Beck (2012, p. 521) and Creswell (2013) stated that data saturation is reached when information that the researcher wants is achieved

in abundance, and there is no new information arising from the data. Therefore, 20 interviews were obtained and deemed sufficient to answer the research question.

All interviews were conducted at a place which was appropriate for an interview, chosen by the participant, and at a site that was confidential. The interviews were conducted in a room in the community house located in the participant's community during morning hours and the early hours of the afternoon when most people were still in their gardens, at the market, or in town, and when the surroundings were quiet. According to Jamshed (2014) and Sutton and Austin (2015), semi-structured in-depth interviews with an individual generally cover a duration of about 30 minutes to more than one hour depending on the research topic, the participants, and the researcher. Therefore, the duration of the interviews in this study was between 60 and 70 minutes, depending on the participants' willingness to continue the communication and share their experiences.

All 20 interviews were conducted in PNG Pidgin and were audio-recorded using an audio recorder and a research phone to capture the entire data. One participant shared an emotionally sad experience that related to a neonatal death. The participant was so emotional that the interview was paused. The participant was reminded of the pastor available for psychological support but decided to pause the interview, and then requested to re-commence the interview after three hours, which was respected. Audio-recording enabled the researcher to allow the participants to freely discuss the issues without being distracted or disturbed (Sutton & Austin, 2015). Also, the complete capture of the interview through audio-recording facilitated an accurate transcription of the data. During the interview process, the researcher also took notes on areas of interest mentioned by the participants while the participant was talking, which was used to ask follow-up questions for further clarification. This enabled the participants to share their experiences in detail and to completely address the research question. The audio-recoded data was transcribed verbatim in Pidgin and then translated into English by the researcher who is bi-lingual. The transcripts were then analysed according to

the principles described by Braun and Clarke (2006). These principles are further explained under the data analyses section below. The data were managed manually using tables by creating columns for codes, notes, and categories in a Word document, and were kept in hard copy as well as electronically so that it could be rechecked for confirmation if necessary.

Data Analysis

Thematic data analysis was used to analyse the data in this study. This is a method for identifying, analysing, organising, describing, and reporting themes found within a data set (Braun & Clark, 2006). In this method, the following process was used to analyse the data.

Firstly, the recorded interviews were translated and transcribed verbatim by the researcher using pseudonyms for participants and places. The transcriptions were analysed by way of reading and re-reading to become familiar with the data (Braun & Clark, 2006). Secondly, the transcriptions were interpreted, and the data organised into initial meaningful codes (Braun & Clark, 2006). The supervisors independently analysed a couple of transcriptions to crosscheck and confirm the researcher's interpretation. The interpretation and coding were completed using a descriptive coding technique, as described in Saldana (2009). Thirdly, the initial codes were then clustered into categories based on their similarities in meaning (Braun & Clark, 2006, cited in Nowell, Morris, White, & Moules, 2017). The categories were discussed with the supervisors for evaluation and confirmation. Finally, the themes were identified and confirmed with the supervisors. The identified themes were the findings of this study representing 'the essence of the experience' (Holloway & Wheeler, 2010). After this, the writing of the findings and discussion chapter began (Polit & Beck, 2017; Nowell et al., 2017).

Strengths and limitations of the study design

Strengths

This study design has a number of strengths which indicate the quality of the study. Firstly, a qualitative descriptive methodology aims to obtain richness of information on the phenomenon of interest; hence, the advantage of using this methodology resulted in addressing the

research question appropriately, thus, achieving the aim and objectives of the study (Thorn, Kirkham, & O'Flynn-Magee, 2004; Schneider & Whitehead, 2016). Secondly, the strength of the purposive sampling method was apparent as the participants who took part in the research had experience and knowledge about the phenomenon of interest; hence, recent, in-depth, and rich information was obtained (Palinkas et al., 2016). Thirdly, a thematic analysis was useful as the data from the 20 participants was structured in a way that helped to produce a clear, logical, and organised report of the findings (Nowell et al., 2017). Given the strengths of the design, the research question was effectively and comprehensively addressed, resulting in a quality outcome as the data produced rich information.

Limitations

Nevertheless, there are also limitations to this research design. Firstly, qualitative descriptive studies cannot determine cause and effect relationships (Greg et al., 2006). Secondly, the exclusion of women and men who cannot speak Pidgin or English may have excluded participants who may have vital and useful information. However, this limitation was required to enable the researcher to adequately and accurately collect, translate, transcribe, and analyse the data. Thirdly, the participants' data was strictly limited to what they said in the interviews, as their experiences and behaviours were not observed. It is possible that responses may not always truly reflect a person's behaviours around choosing place of birth. Finally, the data collection was limited as the study was conducted in rural communities in the WHP of PNG where some communities were not able to be accessed due to unsealed and rough roads, proving difficult to navigate during the wet season. In addition, two or three participants who were interested and willing were interviewed from each of the seven accessible communities, although many others who were willing were left out. Leaving out interested participants from the other six communities in the sub-district might also have left out participants with quality new data.

Trustworthiness

Establishing rigour and maintaining validity in any research study is significant as it ensures that the research is truthful and based on merit (Roberts & Tailor 2002). A standard or common framework used to evaluate rigour in qualitative research is based on trustworthiness (Polit & Beck, 2017). Polit and Beck (2017) debated the use of the terms 'rigour' and 'validity' and concluded that the concept of 'trustworthiness' is parallel to the standards of rigour and validity in quantitative research. Lincoln and Guba (cited in Polit & Beck, 2017) described the trustworthiness of qualitative research being associated with four main criteria: credibility, dependability, confirmability, and transferability.

Credibility of findings

'Credibility refers to confidence in the truth of the data and interpretation of them '(Polit & Beck, 2017). The credibility of this study was achieved by firstly audio-recording all the interviews to ensure that the original information of the participants was captured (Nowell et al., 2017). Secondly, the findings and every step involved during data analyses was repeatedly checked against the audio-recordings and transcriptions to ensure that there was consistency between the audio-recordings, the codes and the themes (Nowell et al., 2017). The findings and the process of consistency check was also discussed with and reviewed by the researcher's supervisors. Finally, the findings and interpretations were checked against the initial interview data for each research theme (Nowell et al., 2017).

Dependability

This criterion 'refers to the stability (reliability) of data over time and conditions' (Polit & Beck, 2017). This study achieved dependability through the researcher's careful and consistent approach. The researcher clearly stated the research question, thoroughly described and interpreted the findings, justified each step in the process of establishing and outlining the methodology and methods, which demonstrated a logical and traceable process for the reader (Polit & Beck, 2017).

Confirmability

This criterion 'refers to objectivity that is the potential for congruence between two or more independent people about the data's accuracy, relevance or meaning' (Polit & Beck, 2017, p. 559-560). This was achieved through supervision. The supervisors closely observed and reviewed the interpretations of the data and the process followed by the researcher.

Transferability

This criterion 'refers to the potential for extrapolation, that is, the extent to which findings can be transferred to or have applicability in other settings or groups' (Polit & Beck, 2017 pp. 559-560). To ensure the transferability of this study, the researcher provided adequate and in-depth descriptive data so that those who seek in the future to transfer the findings can judge its transferability.

Conclusion

This chapter has discussed the research paradigm, methodology, methods, ethical aspects and trustworthiness of this study. The study has been undertaken according to sound ethical principles of conducting research, including obtaining participants' consent while maintaining their confidentiality and anonymity. A qualitative descriptive methodology was adopted, and data were obtained from 20 eligible participants who were purposively selected using strict inclusion criteria. The data were then transcribed verbatim into text form, interpreted, and coded, and then turned into themes using the thematic data analysis process. The findings resulted in new knowledge and meaning that will inform improvements in health care practice in the research setting. Although there are limitations in the study design, the quality and trustworthiness of the study was established by ensuring credibility, dependability, confirmability, and transferability which satisfied the evaluative framework for rigour in qualitative research. Therefore, the outcome of this research process successfully addressed the research question, and thus, achieved the aim and objectives of the study. The findings from the analysis will be discussed in the next chapter.

CHAPTER FOUR: FINDINGS

Introduction

This chapter presents the findings relating to the experiences of women and men that impact decision-making regarding the place of birth in rural Western Highlands of PNG. Using the process of thematic analysis, three themes emerged from the data: accessibility and availability; socio-cultural influences; and maternity care experiences. The chapter begins by presenting the demographic background of the participants, followed by a description of the findings under each of the three themes, which are backed up by quotations from the interview scripts to provide evidence for the findings.

Participants' Demographic Background

A total of 20 people participated in an in-depth interview for the study. Of the 20, there were 4 male partners of women who had given birth in the last 12 months or who were currently pregnant; 5 pregnant women who were still deciding where to give birth; and 11 women who had given birth within the last 12 months. The inclusion of three groups of participants was a deliberate decision designed to obtain diverse and rich data from their experiences and perceptions about the factors that have an impact on their decisions regarding place of birth. All the participants were women and men from Wae sub-district (pseudonym) in the rural Western Highlands of PNG. The age of the female participants ranged from 22 to 39, while the males ranged from 33 to 55. A further 5 participants were not sure of their age. Most had a minimum of primary school education, with a few having gone onto high school. One participant had a vocational certificate, while another had a college diploma. All the participants resided in either rural or remote villages, and some were subsistence farmers, while others earned family income through informal markets. Most had experiences of birthing their children in both the villages and in health facilities. The marriage in this setting is customarily formalized. This means the men and his people give money, animals (pigs, goats, cows) and vegetables to the bride's people, in what is called called a bride price ceremony.

This ceremony than allows the bride to live with the men and his people and abide by their culture. In the event that the bride decides to divorce her husband due to polygamy, domestic violence or other issues, the bride's people and the man's tribe will make the final decision as to whether the woman will divorce or live with the man again. Detailed background information about the participants is presented in Table 2.

Table 2: Background information of the participants

Pseudonyms Participants 1-20	Gender	Age	Place of residence	Education level achieved	Sources of family income	Financial control within family	Marital status	Number of children	Age of youngest child	Place of each birth
Fiona	Female	Did not know	Lives in rural village	Primary school (Year 1)	Informal market sales	Patriarchal control	Polygamy relationship (is 2nd wife)	Five live children	3 months	1st, 2nd, & 4th village 3rd (twins) hospital
Joyce	Female	29 years	Lives in rural village	No education	Subsistence farming lifestyle, trade store	Patriarchal control	Polygamy relationship (is 2nd wife)	Three live children, currently 6 months pregnant	3 years	1st hospital 2nd village 3rd inside car (roadside)
Sandra	Female	38 years	Lives in rural village	Primary school (Year 3)	Subsistence farming lifestyle	Patriarchal control	Monogamy	Five live children, currently 8 months pregnant	3 years	1st - 4th village 5th community health post
Josephine	Female	26 years	Lives in rural village	Primary school (Year 3)	Subsistence farming lifestyle	Self-control	Monogamy	Two children, 1 died, 1 alive	3 years	1st hospital (died) 2nd health centre
Joshua	Male	Did not know	Lives in remote village	Primary school (Year 1)	Subsistence farming lifestyle	Patriarchal control	Monogamy	Three live children, wife currently 6 months pregnant	6 years	1st – 3rd hospital
Janet	Female	Did not know	Lives in rural village	No education	Subsistence farming lifestyle	Self-control	Monogamy	Two live children	4 months	1st – 2nd hospital
Betty	Female	23 years	Lives in rural village	College Diploma	Subsistence farming lifestyle & salary as primary school teacher	Self-control	Monogamy	One live child	1 month	1st hospital
Susan	Female	34 years	Lives in rural village	Secondary school (Year 10)	Subsistence farming lifestyle, trade store, partner employed as a driver for a local business	Patriarchal, but has own income also	Monogamy	Three live children, currently 9 months pregnant	5 years	1st – 3rd hospital
Jessica	Female	Did not know	Lives in remote village	Primary school (Year 3)	Subsistence farming lifestyle	Patriarchal control	Monogamy	Two live children	1 month	1st village (roadside) 2nd hospital
Jerry	Male	Did not know	Lives in rural village	Secondary school (Year 10)	Subsistence farming lifestyle and casual job with local timber company	Patriarchal control	Polygamy Has two wives	Five live children	3 months	1st, 2nd & 4th village 3rd (twins) hospital

John	Male	55 years	Lives in rural village	Primary school (Year 1)	Subsistence farming lifestyle and coffee farming	Patriarchal control	Polygamy Has two wives 1st – died 2nd – alive	Twelve live children; Ten with first wife and two with second wife		First wife: 1st, 2nd, 5th- 9th, hospital, 3rd, 4th & 10th village. Second wife: 1st village, 2nd hospital
Jesinta	Female	39 years	Lives in remote village	Completed vocational training	Subsistence farming lifestyle and coffee farming	Patriarchal control	Monogamy	Three live children, currently 6 months pregnant	6 years	1st – 3rd hospital
Cecilia	Female	26 years	Lives in rural village	Primary school (Year 5)	Subsistence farming lifestyle	Self-control	Monogamy	Four live children	4 months	1st – 4th hospital
Jenny	Female	22 years	Lives in rural village	Secondary school (Year 9)	Subsistence farming lifestyle, partner of a university student	Self-control	Monogamy	Two live children	5 months	1st hospital , 2nd village
Sarah	Female	18 years	Lives in rural village	No education	Subsistence farming lifestyle	Self-control	Monogamy	No children, currently 8 months pregnant	Not applicable	Plan for community health post
Vivian	Female	22 years	Lives in rural village	Secondary school (Year 10)	Subsistence farming lifestyle	Self-control	Monogamy	Two live children	7 months	1st hospital 2nd: village (roadside)
Roselyn	Female	29 years	Lives in rural village	College commenced (incomplete due to pregnancy)	Subsistence farming lifestyle, informal market sales, partner permanent employee as provincial manager of local business	Self-control	Monogamy	Two live children, currently 4 months pregnant	3 years	1st hospital 2nd health centre
Tressa	Female	25 years	Lives in rural village	Primary school (Year 1)	Subsistence farming lifestyle	Self-control	Monogamy 1st wife died, remarried after death	Two live children	5 months	1st village 2nd hospital
Joan	Female	26 years	Lives in remote village	Secondary school (Year 10)	Subsistence farming lifestyle and coffee farming	Patriarchal control	Monogamy	Three live children	2 months	1st home 2nd H/centre & 3rd hospital
Luke	Male	33 years	Lives in rural village	Secondary school (Year 9)	Subsistence farming lifestyle, informal store	Equal control within family	Monogamy	Two live children, wife 5 months pregnant	3 years	1st health centre 2nd hospital

For the purposes of this study, a rural village is one that has road links with less than a three hour walk to the main road and an approximately one-hour drive to the local town. A remote village refers to a village with no road links, or a more than three hour walk to the main road, and then reaching the nearest local town with an approximately one-hour drive. There are two villages in this study that were identified as remote and five as rural from a total of seven that the participants were recruited from. To maintain confidentiality, pseudonyms have been used in this chapter for both the participants and the villages.

Themes

The themes were identified and structured using a thematic analysis and were guided by the research question. The main themes were identified from the emerging sub-themes as the primary factors that influenced the decisions of women and men in choosing the place of birth. The three main themes identified were accessibility and availability, socio-cultural influences, and maternity care experiences. The main themes and sub-themes are displayed in Figure 1.

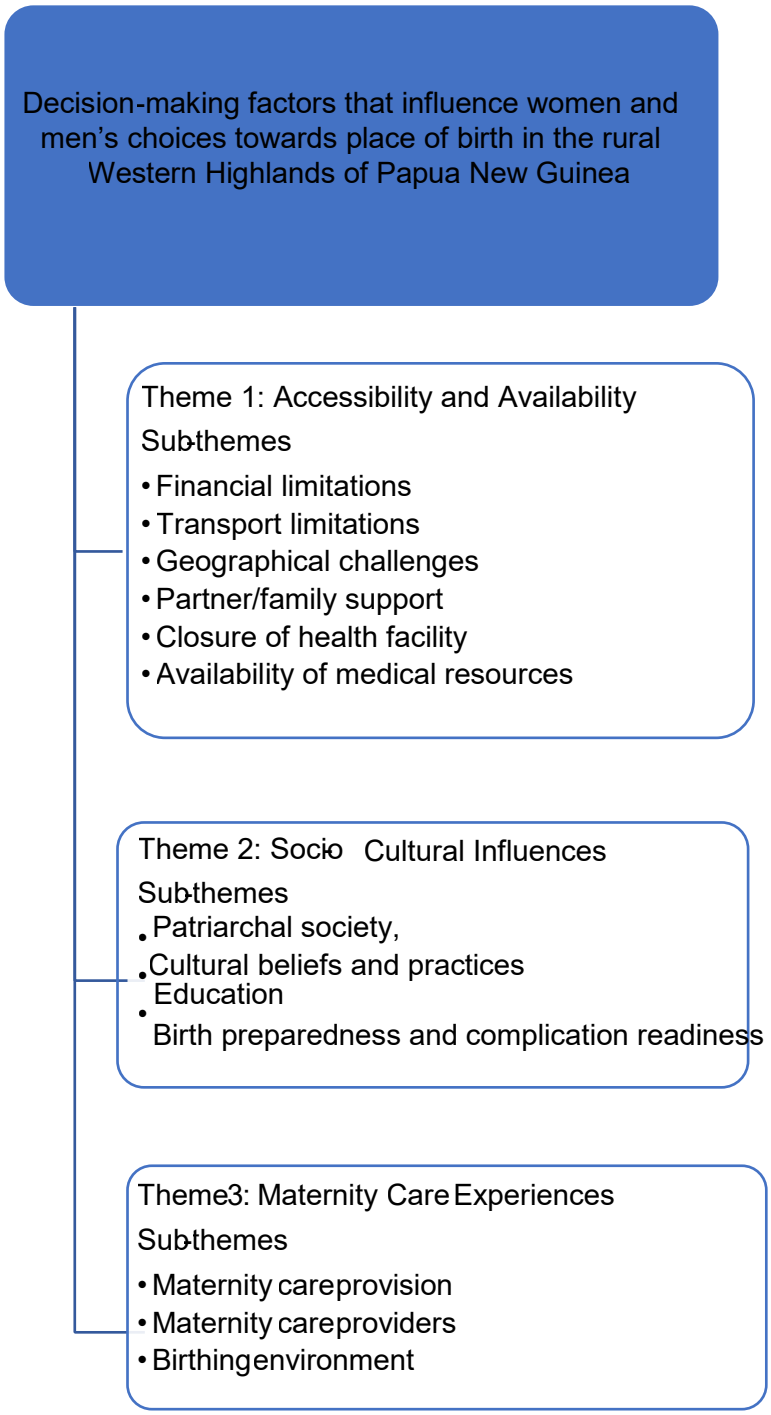

Figure 1: Themes of decision-making factors

Theme 1. Accessibility and Availability

The first theme consists of six sub-themes; the first five relate to accessibility to maternity services, while the final sub-theme refers to the availability of medical resources. The study revealed that there were many accessibility issues that had a negative impact on the participants' decision-making for accessing a health facility. These issues were related to the participants' individual circumstances such as finances and partner or family support, as well as external circumstances such as transport, geographical situation, and the functioning of the health facility. However, the decision of the participants was often over-ridden by factors such as inadequate finances, lack of public transport and community ambulance services, lack of partner or family support, and the closure of the health facility due to the unavailability of medical resources, and infrastructure and community issues. The unavailability of these factors denied the participants access to their preferred choice of birthing place; consequently, many resorted to giving birth in the villages, at the roadside, or in a vehicle.

Accessibility factors

Financial limitations

Most of the participants expressed concern about their limited access to a good health facility due to a lack of finances. They relied heavily on small-scale farming activities without any formal regulated markets through which to sell their produce. This resulted in many being unable to earn enough money to support their basic health needs. None of the participants owned a vehicle, and therefore had to rely on public transport or to be driven in other people's cars. Some participants mentioned that despite some people, including family members, having a car, they would charge money for it to be used. Therefore, if a woman, a partner, or a family could not meet the cost, it would sometimes be difficult to access their preferred place of birth, which would then often result in a village birth. Among other participants with similar experiences, Fiona spoke about giving birth in the village despite her and her partner's initial plans for a hospital birth, due to financial constraints in meeting the transport costs.

> *... going to the hospital was our initial plan, but we did not have money at that time to give it to Jeffery to use his public transport. I gave birth to my first and second children in the village (Fiona).*

A similar concern was raised by Jenny about the cost of private transport.

> *... yeah, sometimes when we ask a private car to help us, we pay the same amount we should pay for the public bus (Jenny).*

Financial constraints were not only related to the cost of transport, but also included the cost of medical care, food, and other needs while in the hospital. Sandra shared a similar experience about her financial constraints and its impact on her decision in choosing the place of birth.

> *It's like my main problem for giving birth to my four children in the village is money. I worked hard in the garden and sell crops that I plant, but my husband keeps all the money. Transport is not a problem because my village is along the main road, but money is my biggest problem, because I will need money to pay the bus, buy food, and other things while in the hospital (Sandra).*

Transport limitations

Although, the cost of transport was problematic for most of the participants, the lack of availability of transport (public or private) in the villages was also challenging and was raised by most participants as a hindrance to accessing a facility of their choice. Some participants explained that public transport from local towns and communities was unable to access their villages due to poor road conditions. Hence, they had to walk to the main road to get public transport to the local town or health centre. Joyce expressed that she gave birth in the village due to the lack of availability of transport.

> *Our road is stony, bumpy, and a bit hilly. Most public buses from town hesitate to come into our village ... yeah and, no-one from our village has public bus ... like, for my second son, I felt pain at midnight till morning. A neighbour woman asks a man for his car to help me, but his car had a problem. There was no other car apart from his. I stayed in the house, felt pain until when it was almost daybreak, the pain came strong and I went to my backyard coffee garden, and I gave birth to my son. God helped me, I did not have big problem (Joyce).*

Luke raised concerns about the health centre providing ambulance services at an affordable cost. This issue was raised after assisting his relative on a stretcher to the health centre who was experiencing a maternity complication.

> *The road to our village is bad and people from our village who have car live in town. We did not know what to do when she fainted after giving birth in the village. Two women who assisted her birth said the baby's bag (placenta) did not come out. We quickly made a stretcher and put her on the stretcher. Three men and I, four of us, carry her to the nearby health centre. The ambulance is there but the cost is big, and also the road is bad (Luke).*

The experience of having a night labour in villages that have transport issues and no access to a 24-hour ambulance service was also very challenging. From the three participants from rural and remote communities with similar experiences in relation to challenges with night labour, John spoke about the unfortunate experience of his wife's death related to birthing at night, and not having access to transport.

> *She gave birth in the night, but then she lost a lot of blood and she died. There was no ambulance at that time. Transport was the main problem. If there was a car in our village at that time, I should have helped her and take her to the hospital. There was no transport to help her, so she died. If it was during the day, we should have looked for a public transport and save her life (John).*

Due to living in remote villages with limited or no transport options, two women relocated themselves with relatives in villages along the main road late in their pregnancies, while others who were unable to relocate, gave birth in the village. Joshua shared his experience of relocating his wife closer to the hospital.

> *… yeah, see, our village is a bit remote, but I used to try my best to help my wife to reach the hospital for her to give birth in the hospital. I used to go leave her in her village which is located at the main road and is closer to town, easy for her to get public bus to hospital. She stays with her relatives 2 or 3 weeks early before her delivery date (Joshua).*

Night labour is therefore risky, and participants spoke of witnessing night labour-related complications which lead to terrifying experiences for women and their families. Relocation was a better option for the remote participants.

Geographical challenges

High mountains, deep valleys, rugged terrain, and rivers without bridges were geographical barriers limiting access to the nearest health centre that had a negative impact on the participants' decisions in choosing place of birth. From the five participants with similar concerns regarding geographical challenges, Jessica shared her experience of taking a difficult route to reach the nearest health centre.

> *This means we walk on a bush track through a village, climb the hill and that mountain there, then we reach the health centre. It's easier for us to take this route as it takes lesser time when we take this short cut route, but it's hard when we are pregnant and try to climb mountain or walk down the hill (Jessica).*

In relation to geographical challenges, three participants shared their experiences of giving birth on the roadside because of the long-distance walk, assisted by untrained village women using local resources such as used razor blades and wool rope. Jesinta spoke of her experience of giving birth at the roadside, as she could not reach the nearest health centre on time due to a long-distance walk.

> *I felt labour pain and we walked for 3 to 4 hours to get to the nearest health centre. Just before we passed the other village, I felt strong pain. I told my aunty in-law that I can't walk anymore. She told me to go into a bush near the road, near a small creek. She made a bed with my jacket and she helped me gave birth there. She tied the umbilical cord with a cotton rope and cut the cord with a used razor blade. Then two other women helped me, and we walked to the nearest health centre for the nurse to check me (Jesinta).*

Partner and family support

In this study, the participants' experiences indicated that partner and family support was significant in providing the possibility of a health facility birth; hence, having a positive impact. The support provided included transport arrangements, financial support, care of older siblings, and being the support person before, during, and after the birth. The lack of partner and family support affected the women's initial decision for a health facility birth, resulting in a village birth. From the six participants who shared similar experiences, Fiona spoke about her negative experience.

> *My husband doesn't do good to me. I like going to the hospital and health centre, but he does not support me. Even when his sisters or friends gave him money, he doesn't share it to me and my children. His families too, they don't cook food and give it to me after I gave birth to all my children ... yeah, that's why three children, I gave birth in the village (Fiona).*

However, the participants who had positive partner and family support were able to access the hospital for a health facility birth. Josephine spoke about her supportive partner.

> *My husband is so supportive. He gave some money, buy food, clothes for baby, and even come with me to the hospital for my last child. He likes children, so he used to wait for me outside the birthing ward when I'm in labour. Transport won't be a problem because he works as a driver, so for my current baby, he will take me to the hospital to give birth (Josephine).*

Family support is not just about food and transport, but also includes the care of older siblings and doing the home chores. John spoke about family support regarding his experience when his wife was admitted to hospital.

> *... no, my sister came with us, so she stayed back to support her, and I came back to the village because of the children. I gave her some money and some food and call her phone to check her (John).*

Furthermore, most participants raised concerns about the need for a support person during labour and birth to provide physical and social support. The study indicates that the support person was often advised to remain outside because of the nurse's restrictions due to a lack of confidentiality because the beds were in open space. Cecilia spoke about her painful birth experience with her second child and needing support from relatives who were not allowed inside.

> *... I had hard time with my second born. It was so painful. My back was hot and like fire. I sweated a lot ... yeah, I ate, but pain was greater than the first child. I wanted my sister to come inside and rub my back, but the nurse said no ... I ask nurse for water and help me rub my back, but the nurse did not do that ... only two nurses, and they were so busy. In the village is okay because all the family are there to help us ... yeah, sometimes I don't feel like to go to hospital, but my life is important, so I just go to hospital (Cecilia).*

Closure of health facilities

The closure of health facilities in this study was due to a lack of medical supplies, infrastructure issues such as water and electricity, or community issues, and often occurred without notice. The participants raised concerns that it was common to overcome the external access challenges and reach a health facility only to find that it was closed. The decision to have a health centre birth was thus thwarted, requiring them to make alternate birthing arrangements at the last minute. Those participants faced with financial limitations and who were having strong labour pains returned to their villages and were assisted by village birth attendants, while others reached the nearest hospital. Among five participants sharing such stories, Janet spoke about her successful access to a hospital as the health centre was closed, while experiencing a maternity complication.

> *The baby was still inside me, but I lost a lot of blood. I lost plenty blood while in the church, so James Kila took me in his car to the nearest health centre. When we reached the health centre, the nurse said the sugar water (IV Fluids) and strong medicine were finish, so they close the health centre. They advised us to go to the town hospital. The nurses and a doctor at the hospital said I lost a lot of blood, so they take me quickly into the theatre and cut me and remove the baby (Janet).*

Joyce shared her experience of giving birth in a vehicle while on her way to the hospital due to an electricity issue that led to the closure of the closer health centre.

> *I felt pain in the night, and we arrived at the health centre. There was blackout, no power. The nurse said, she can't help me because no extra lamp or torch. We continue to the hospital and we were halfway between our village and the local town, and I felt big pain and gave birth onto the floor of the moving car (Joyce).*

Similarly, Jesinta spoke about health facility closure due to a community issue.

> *… yeah, the boys around this place, they don't listen … now health centre is closed because they stole the rear mirror of the ambulance. I am going to that other health centre for my antenatal visits, but it's far and took me a lot of time to walk (Jesinta).*

The closure of health facilities, most often unexpectedly, was a huge concern raised by the participants, as it diverted them towards unpredictable outcomes and unsafe situations for both

the woman and her baby. The reality of closure also had an impact on their decisions and choices for their future birthing place. Janet spoke further about her decision to have a hospital birth rather than in the health centre.

> *… yeah, if James Kila's car was not there, I should have died because the nearby health centre was closed. I thank James Kila because he quickly drove me to the hospital, and they save my life. Even for small problem, they always close the health centre ... yeah, so for my next baby, I will go to hospital, I don't trust the health centre (Janet).*

Availability factors

Availability of medical resources

The last part of theme one is the availability of medical resources at the health facilities. The medical resources in this study included medical supplies, skilled care providers, and essential services. The availability or unavailability of these resources had an impact on the participants' decisions to choose whether to birth in a rural health centre or a hospital. From the majority of the participants who shared similar experiences and decisions to choose a health facility, Sandra spoke about the 24-hour availability of skilled care providers at the hospital, which influenced her choice for a hospital birth.

> *… yeah, I gave birth in the hospital because all the nurses and doctors who are trained and know how to help us are all there all the time. You won't miss them. Sometimes in the rural health centre, the nurses go to town and they are not there (Sandra).*

Jesinta talked about the availability of medical equipment having an influence on her choices.

> *I gave birth to all my three children in the hospital, despite my village being in remote area. I see that giving birth in the hospital is good, safe, and I trust the workers. It's good because all the machines and some important things that they will use to work on us are all there (Jesinta).*

Furthermore, other participants chose the hospital to give birth because of the resources and services available to manage the risks and any possible complications. Janet expressed her gratitude that clinical interventions provided by the nurses and doctors in the hospital saved her life.

> *I should have died already, if hospital is not available. I thought back of the problem that I experienced. Normally, the blood flows after the baby is born, but how did I lose a lot of blood while the baby was still inside me? … Yeah, but when the nurses and doctors saved my life, I was so happy, and was in tears. I will still go to the hospital and give birth (Janet).*

However, in the context of this study, the availability of skilled care providers did not mean that maternity care would be consistently provided. The participants encountered situations where, due to overload of work because of a lack of staffing, they were turned away or not efficiently attended to during the birthing process. Joan spoke about the health centre nurses advising her to go to the hospital after arriving at the centre because of tiredness from overwork.

> *I felt labour pain and we went to the health centre in my brother in-law's car. The male nurse told us to go straight to the hospital because the female nurse (midwifery upskilled community health worker), who could help us, worked all night. He said, she helped two women in labour at night and did the antenatal clinic today. She is tired and sleeping, she won't work (Joan).*

On the same note, Susan described a negative experience where she was left alone to give birth in the hospital due to a small number of midwives working on the ward.

> *... I gave birth on to the bed and after like two or three minutes, one of the three nurses came and cleaned my baby. The nurses were so busy. The ward was full of women. Some women were sitting on the chairs waiting to be admitted (Susan).*

The findings from the first theme have indicated that birthing at a health facility was the preferred choice for the majority of the participants. However, access factors associated with the participants' internal circumstances as well as their external environment such as financial constraints, lack of transport, partner and family support, and the availability or unavailability of medical resources, challenged their decisions which resulted in a health facility or a village birthing experience.

Theme 2: Socio-Cultural Influences

The second theme from the participant's experiences relates to the social system and the cultural beliefs and practices that influenced their decisions about place of birth. These factors

are categorised into three sub-themes: patriarchal society, cultural beliefs and practices, and a lack of birth preparedness and complication readiness.

Patriarchal society

The society in which this study was conducted is considered to be 'patriarchal', in which most decisions are dominated by men. This means that in this study population, men make most of the decisions in community affairs and for their families, and they also control the use of the family income. In relation to their community responsibilities, men participated in communal obligations such as bride price payment, compensation, or settling of community disputes. In an attempt to assist with community issues, men often spent much of their family income on their 'community responsibility'. This led to some families having inadequate funds, which challenged the women financially for the cost of a hospital birth. Joyce shared her experience of working hard to save money for maternity costs and family care, as her partner had community responsibilities.

> *The money from the movie house is for my husband. He uses to support the community with community issues like bride price payment ... they contribute to the community to show that they are men. I worked hard in the garden, save money, and pay transport to the hospital or buy children's food or clothes (Joyce).*

Decisions about the use of money by the participants in this study have demonstrated that men are mostly in control given their socially structured decision-making control. Sandra spoke about giving birth to her four children in the village, due to her partner's control of the money, despite her contribution to the family income.

> *I worked hard in the garden and sell crops that I plant. I sell them and the money, my husband keeps all the money. When I ask him to buy bus to hospital, he says, there's no money. I gave birth to four children in the village. Am not always happy with my husband (Sandra).*

The influence of patriarchal decisions disempowers women to make decisions for themselves in relation to their own wellbeing. Tressa spoke about how her partner's decision forced her to give birth in the village despite her desire for a hospital birth.

> *I first thought to go to the hospital, but my partner decides for me to stay in the village because he said I'll be okay. He brought two women to my house and they helped me give birth at my backyard ... yeah, my husband made the decision (Tressa).*

Education

The level of education that the women had increased the possibility of them having control over their reproductive health decisions and choices in relation to place of birth. Interestingly, four female participants with secondary and post-secondary school education indicated that they had made decisions on their own without the influence of their partners or family. Susan spoke about her experience of deciding on her place of birth without her partner's influence.

> *For our family affair, we both make the decision. For maternity, I make my own decision and my husband understands and assists me with my last three children. I told him to leave me with relatives in town, so he assisted me with the transport cost and so I stay with some relatives and gave birth at the hospital. For this baby, we will do the same (Susan).*

Similarly, Betty spoke about her decision for a hospital birth.

> *... No, I make the decision myself. The health centre is functioning, but in case of the emergency, I said, we have to go to the hospital, so we went (Betty).*

These findings indicate that most decisions were made by the men and their families, while the female participants had little control over their finances; thus, reducing their decision-making power in terms of place of birth. Education is one factor that may increase understanding and awareness of both partners in making positive decisions towards the women's reproductive health needs.

Cultural beliefs and practices

In the context of the Western Highlands of PNG, birthing and everything associated with it, is a culturally sensitive activity which has traditionally been restricted to women. This means that men refrain, or are restricted by their families, from observing the birthing or to assist with actual village births. This is because they believe that birthing blood is contaminated and can cause sickness to males (boys or men). Hence, men's full participation in ensuring and deciding for their wife to seek appropriate maternity care is sometimes reduced due to culturally

underpinned beliefs. Among five participants with similar experiences, Fiona shared her concerns about her partner not being around when she gave birth.

> *... yeah ... I sent message to my husband to come and see me at the birthplace (coffee garden), just before I give birth but he did not come. He went ahead into the bush to cut timbers. I was worried, I thought to myself, I am your wife and am in pain to have your baby but despite my message, you went ahead. This thought made me delay in birthing my baby, I stayed till I gave birth at 3pm the next day (Fiona).*

Similarly, Roselyn shared her experiences of her husband being sent away by the two women who assisted her at the roadside birth.

> *He was with us, he buys food and pay the public bus and we were on our way to the hospital. The strong pain came, and we got off the bus and walked into a bush, at the side of the main road ... but when I want to give birth, he was not there. My mother and aunty told him to go away and come back after one hour because it's custom. If he sees the blood, they say he will grow weak or sick (Roselyn).*

Cultural birthing practices also extended to treatments for women. Tressa shared her experience of a traditional postnatal treatment for perineal trauma that did not help and led her to decide to have a hospital birth for her second child.

> *... In the bucket of warm water, they put some leaves of lemon, avocado, lemon grass, ginger, and some other leaves that I don't know. Then they told me to sit on the warm bucket with open legs and the warm steam will dry the tear of my birth canal. I did that for three weeks, but it did not get better. I felt shiver and fever from time to time, so I went to the health centre and got treatment and got better. From that time on, I told myself that I will not give birth in the village (Tressa).*

Polygamy is a cultural factor that influences men's decisions, especially towards their second (or subsequent) partner (wife). Three female participants shared their experiences in relation to polygamy. Joyce spoke about her relationship in which her partner paid more attention to his first family in terms of financial and physical support than he did to her. This had a subsequent negative impact on Joyce in accessing maternity care.

> *I worked hard and buy food and clothes for my children. Even for antenatal clinic and to go to the hospital, I pay for the transport myself. When I have not enough money, I don't go to antenatal clinic or hospital to give birth. I*

> *marry a married man and it's my fault. My husband uses his money with his first family. I am his second wife. He has first wife with four children. I have three children. I used to regret, but I have children and he pay bride price, so I just stay (Joyce).*

Cultural beliefs and practices, including the role of men in birthing, birthing treatments, and polygamy played a significant role in influencing decisions about place of birth.

Birth preparedness and complication readiness

In this study, birth preparedness and complication readiness refer to prior transport arrangements, active communication and negotiation between the women and the public transport owners and saving money. In addition, these factors are about early decision-making in regard to place of birth, a support person being in place, and being able to recognise and respond to danger signs of birth complications. It was evident in this study that some of the participants lacked health literacy on birth preparedness and complication readiness. The absence of this vital information resulted in the participants delaying their active preparation and decision-making in relation to timely access and use of the health facilities. Jerry described a lack of preparation in terms of communication and planning transport that resulted in his partner giving birth in the village.

> *She just stayed in the house until the time for her to give birth and she gave birth in the village ... like, I had bus fare, but I don't have the bus driver's phone number and did not arrange transport (Jerry).*

Luke shared about a story about his wife's delay in informing him of the labour, which resulted in her giving birth in the village.

> *The pain must have started early in the morning, but she did not tell me. I went to the garden. When they call for me, in the afternoon, she was already having big pain. I called my sister and they started walking towards the health centre, but she was not feeling good. They came back and she gave birth in my sister's house (Luke).*

Similarly, Joan spoke about missing antenatal visits which resulted in her being unprepared for what to expect when birthing her first child.

> *... like, I did not attend the antenatal clinic for my first baby. I did not know what kind of pain I will have, how to give birth etc. when I feel pain, my sister in-law quickly arranged transport and take me to the hospital ... the nurse was so angry because I did not attend antenatal visit ... but later, she helped me (Joan).*

The participants who had prepared for, and actively decided upon, a health facility birth, were those who attended the antenatal visit, were educated or had educated partners, and also had a supportive partner and family members. Josephine spoke about having a supportive partner.

> *... yeah, he is a bit educated, grade 10 so he understands. He always supports me with money, and he works as a driver, so he drives me to the hospital to give birth. He used to say, give birth in village is not good (Josephine).*

Similarly, Sarah mentioned the importance of attending the antenatal clinic, which helped her with information that influenced her birth preparation and choice for a health facility birth.

> *No, I did not go to school. I go to antenatal clinic in town because my health centre is close. It's my first baby and I think a lot, but the nurses there are good. They told us what we will do to prepare to give birth and I prepare all the things that I need (Sarah).*

From the participants' stories, it is evident that patriarchal decision-making power, cultural beliefs and practices that are kept secret and restricted to men's involvement, and birth preparedness or the lack thereof, were factors that affected a participant's decision in choosing a place of birth.

Theme 3: Maternity Care Experiences

The theme of maternity care experiences refers to the participants' and/or other women's' past birthing experiences that positively or negatively influenced their decisions in choosing place of birth. These experiences are categorised into three sub-themes: maternity care provision, maternity care providers, and the birthing environment.

Maternity care provision

The participants who had a positive maternity care experience expressed not only their appreciation for the care, but also stated that they developed a confidence in that place of birth

which had influenced them in their choice of the same place for their future births. Jessica spoke of a respectful and satisfying birthing experience at the provincial hospital birthing ward.

> *… yeah, when I entered the birthing ward of the hospital, nurses gave me bed and took my story and checked me. There were only five of us and three nurses were working, so they checked us frequently. One of them was just there with me when I had strong pain. She was close to my bed when I gave birth and assisted me well. That's why I will go to the hospital to give birth to my current baby (Jessica).*

Joshua shared his gratitude for the provincial hospital staff providing lifesaving medical interventions for his partner during her complicated birthing experience that had a positive impact on his decision-making for the future place of birth

> *… like I thought, my wife will die. I was so scared. After they gave her sugar water (IV Fluids), a bag of blood, injections, and some medicine for her to drink, I already know that her condition was dangerous. The doctor also told us that she lost a lot of blood after giving birth which was dangerous. The hospital nurses and doctors saved her life. I see that hospital is a better place for women to give birth (Joshua).*

The provision of health education on the birthing process and procedures, maternity complications, and other necessary information during antenatal visits, had a positive impact on the participants' decision to have a health facility birth. Among the eight participants with similar experiences of being positively influenced in their decision-making by the provision of health education, Sarah shared how the information had a positive impact on her decision to choose a local community health post (CHP) for giving birth.

> *I went for antenatal visit and the nurses talked about problems that women face while giving birth. They said it's better for us to give birth at health centre or hospital so that the nurses and doctors will help us if we face problem. If we give birth at the village, it's not safe. That's why I will go to community health post to give birth (Sarah).*

Conversely, other participants clearly expressed their dissatisfaction with the maternal care provided in the local rural health centres which had a negative impact on their future decisions. Joan expressed her concern about the intrapartum care that she felt was incompetently provided, resulting in a negative perception of the health centre, and influencing her to decide to give birth in a hospital for her last birth experience.

> *… I felt labour pain for my second baby and went to the nearest health centre. The nurse (upskilled CHW Midwife) admitted me and told me to wait in the birthing room and she went to her house. The pain gets stronger and I gave birth on to the bed … My sister-in-law called the nurse and she quickly came and helped me and my newborn. The nurse said I had big tear and she sutured me, but I felt big pain. After 3 days, I still felt the pain from the sutured site, and it was swollen. I went to the main hospital and the midwives there put me on treatment, and I got better. I don't trust the work of the health centre nurse … Therefore, I went to the hospital and gave birth to this baby (Joan).*

Some of the participants described experiences in which inadequate information on the birthing process and procedures, and inadequate explanations prior to clinical interventions, resulted in misunderstandings between the women and their care providers which lead to poor outcomes. Josephine described her negative experiences in communicating with the health care workers during labour and the unfortunate death of her newborn at the provincial hospital.

> *The nurses asked a doctor to come and checked me, and he told me that if I cannot push the baby out within next 30 minutes, they will pull the baby with the power machine. Like, I don't know what the doctor and the nurses were talking about because I was so weak and I had no strength. Then the doctor and nurses cut on my birth canal and pull the baby with the power machine … Oh, it was so painful … but the baby couldn't breathe. Then I heard them saying 'sick baby, sick baby'. Later, one nurse came and told me that my baby got admitted to Neonatal unit, so I went and saw him. He was a baby boy. They put oxygen and sugar water (IV fluid) on him … but the next day was not good. He died in the morning. I ask them to take me into the theatre and cut me but they did not (Josephine).*

Similarly, Cecilia spoke about feeling unaccepted due to having care provided by a male care provider.

> *… yeah, it's a shame thing … like after they helped us to give birth and we see them outside … I feel shame … like in the village, only women help us to give birth, in here, the men too, they help us. I think men should work on male patients and female nurses and doctors attending to us is good (Cecilia).*

It is evident that the care provided ultimately resulted in either positive or negative outcomes that impacted the participants' decisions in choosing their future place of birth.

Maternity care providers

The stories of the participants indicate that the attitude and approach of the care providers also had an impact on their decision-making about future place of birth. Some of the participants were very vocal about how the approach of the care providers positively or negatively influenced their future decisions. In her first pregnancy, Jenny shared a positive approach that she experienced at the hospital birthing ward.

> *Although, I heard from other ladies that care providers said bad things and were hard on them, they did not do that to me. The nurse who helped me was so kind. It was my first baby. I was scared, but she talked nice to me. She explained that if I feel like push … then the baby is coming … she explained what I will do to give birth. That's why I will go to the hospital and give birth (Jenny).*

Similarly, Vivian shared her experience of the positive care she received from the care providers at the local health centre which had a positive impact on her decision to have another health centre birth.

> *The care I got from the health centre for my second daughter was good and I liked it. The two nurses at the local health centre gave all their time, attention, and checked me like every 10 minutes. They allow my family and husband to come into the birthing room, gave me what I wanted like water or food. The nurses explained why big pain was coming and encouraged me to breathe in and out. They helped me well and I like it. I might give birth at the health centre to my current baby (Vivian).*

The majority of the participants, however, described having negative experiences with care providers, who they described as unprofessional and disrespectful. Cecilia described some of the disrespectful comments that she was confronted with during her birthing experience at the provincial hospital.

> *Yeah, for that, the nurses used to get on us and talked strong at us. They even say something like 'why are you screaming and yelling of pain? Your husbands will not come and help you give birth. We are doing the hard work here, close your mouth and stay quiet. They talked hard like this at us so how can we talk back? If we do that, they will not pay attention at us (Cecilia).*

Jesinta spoke about a number of unfriendly and impolite approaches that she encountered during her three provincial hospital birth experiences that resulted in her negative reactions.

> *… yeah ,giving birth in the hospital is good, but it's hard too … if we scream of pain, or did mistakes like … did not bring our modes (pad) ... they will talk hard at us in front of others … they won't even smile or talk in a good way … yeah … like I gave birth to my three children in the hospital, but I did not experience a nice approach (Jesinta).*

Similarly, Vivian shared her experiences of her care providers being inconsiderate of her preferred birthing position in her first birthing experience at the provincial hospital, which had an impact on her decision to choose a rural health centre birth for her second child.

> *It was my first time, so I felt comforting to give birth while on my leg on the floor (squatting). The nurse talked hard at me and said, baby will fall on the floor and die ... go on bed ... so I got onto the bed. I felt hard but gave birth. This made me to give birth to the second child at the health centre (Vivian).*

Some of the men who had supported their partners by assisting them to the local health centre were also confronted by the care providers' unwelcoming words. Jerry shared his experience about a health worker's impolite comments that had an impact on his partner's decision for future place of birth.

> *I went with her for our first child to the nearby health centre, and the nurse at the health centre talked hard at her. She said, time for antenatal clinic, you stay in the house and when you feel pain to give birth, you come here. This is one of the reasons why she gave birth to our current baby in the village (Jerry).*

Furthermore, some of the participants expected to be treated with empathy at the provincial hospital but received the opposite. Jessica shared her experience about care providers at the provincial hospital being more concerned about the condition of the birthing ward floor than the wellbeing of the women.

> *The nurses, they don't feel sorry for us. After they assisted me to give birth to my baby, I walked to the toilet and my pad was full and blood fall on the floor of the ward. One of the nurses saw the blood on the floor and talked hard at me and told me not to walk around. Yeah, it's hard thing to go to the birthing ward, but I have no choice, my life is big thing, so I just went (Jessica).*

It is therefore evident that the participant's expectations and experiences of the care providers attitudes and approaches influenced their decision-making in choosing the future place of birth.

Birthing environment

The birthing environment in this study refers to the actual place where the participants gave birth, resulting in either a positive or negative birth experience. The participants who had given birth in the villages had mostly negative experiences due to the fear of infection or complications from being exposed to an unconducive environment such as a coffee garden, a backyard, or on the roadside. On the other hand, the participants who had given birth at the local health facilities had both positive and negative experiences about the birthing environment which influenced their future birthing choices. Tressa shared her experience of a village birth that influenced her to give birth to her current newborn at the provincial hospital.

> *It was my first time and I thought giving birth in the village was okay and just accept what my husband arranged. I gave birth to a baby girl inside the goat's house onto a plastic mat ... It had bad smell, but no place to give birth. Two women who assisted my birth did not clean me properly. Unclean place should make my baby sick, or I should face problem, but God helped us. This made me to give birth to this baby in the hospital (Tressa).*

Conversely, when the participants with negative experiences of the village birthing environment accessed the provincial hospital, their experience at the hospital was different to what they had expected. Some of the participants explained that the overcrowded hospital environment was not conducive for them to stay in after giving birth due to the insufficient number of beds.

Susan shared her experiences of early discharge to return to her village due to overcrowding.

> *There were not enough beds in the postnatal ward for me to stay overnight. They kept us at the birthing ward for short time and advised us that we have no problem so we can go home. I was so happy because there were so many women in the birthing room, and it was like overcrowded (Susan).*

Similarly, six other participants reported infrastructure and resource issues in the provincial hospital. Joan spoke about early discharge due to issues with the water supply.

> *Also, like they made announcement that the water supply was not coming through and so the nurses, they were strict with the reserved water in the birthing ward. We got hard time to wash and like very hard, so they discharged us in the afternoon, after I gave birth in the morning (Joan).*

Furthermore, a majority of the participants mentioned the lack of privacy in the birthing ward at the provincial hospital. Betty expressed her concern about maintaining privacy.

> *The other thing that I noticed was that the beds were in between partition wall. They put curtain between the walls and created as a room, but most times, curtain is not closed properly. It's like you can sit on your bed and look at the opposite bed and see how she is feeling labour pain, lying to give birth, or screaming out for pain, you can see (Betty).*

On the same note, Roselyn shared an experience of giving birth while the curtain was open, also raising concerns about the bad odour on the ward.

> *... like the curtain was half open ... I was about to give birth ... I heard voice as well in the birthing room ... I was so ashamed. I think if we have room will be good. Also, postnatal ward most times has bad odour. It's not good for us and the babies (Roselyn).*

It can be seen from the findings of the final theme that the participants' positive or negative birthing experiences were influenced by the way the maternity care was provided and by the approaches and attitudes of the care providers, which had an impact on their future decision-making regarding place of birth. The participants raised strong concerns about the birthing environment and voiced their expectations of being in a conducive environment that would maintain confidentiality.

Conclusion

This chapter has presented the findings of the study. The first section documented the background information of the participants, while the second identified the three core themes: accessibility and availability, socio-cultural influences, and maternity care experiences. The findings indicate a range of factors that had an impact on the decisions of women and men in choosing the place of birth in the rural western highlands of PNG. Chapter Five presents a discussion of these findings in relation to the research question and the relevant literatures.

CHAPTER FIVE: DISCUSSION

Introduction

This chapter discusses the findings of this study in relation to the previously reviewed literature in Chapter Two and other additional literature relevant to the outcomes. The aim of the study was to explore the experiences of women and men in their decision-making about place of birth in the rural Western Highlands of PNG. This chapter discusses the findings within a primary healthcare context using Levesque, Harris, and Russell's (2013) revised 'access to care' conceptual framework. The findings are discussed in relation to the six elements of the framework which represent an ideal pathway to reaching a desired outcome, including five access dimensions from the health system perspective and the five corresponding abilities from the health-seeker's perspective. This discussion begins with an overview of maternity care as a form of primary healthcare; a description of the conceptual framework; and a discussion of the findings, commencing with socio-cultural influences, maternity care providers, availability of medical resources, the birthing environment, accessibility, and maternity care provision, in relation to the six elements of the framework. The chapter then concludes by summarising the discussion and introducing the final chapter of the thesis.

Maternity care as primary healthcare with a focus on accessibility

The findings of this study have arisen from a rural population, who accessed maternity care using primary health services as well as an urban hospital. This section discusses the participants' experiences in relation to primary healthcare principles, focusing on access to healthcare. The WHO (2003) identifies the most important primary health care principles as:

- universal access to care and coverage on the basis of need;
- commitment to health equity as part of development oriented social justice,
- community participation in defining and implementing health agendas;
- intersectoral approaches to health (WHO, 2003, p.107).

The role of the midwife in relation to primary healthcare principles in maternity care is outlined in the Nursing and Midwifery Board of Australia's (NMBA) Midwife standards for practice,

which states that:

> *Primary health care in midwifery involves a woman-centred and holistic approach to care that is made accessible by being provided as close as possible to where the woman lives and supports the woman's full participation in care (NMBA, 2018, p. 8).*

Relating to these descriptions of primary healthcare, Levesque, Harris, and Russell (2013) conceptualised five dimensions in the development of a framework for accessibility, which can be applied to the maternity care context. Within the framework, there are five corresponding abilities that relate to the population (health-seekers) that interact with the dimension of accessibility to reach a health outcome. The findings in this study align well with the five dimensions and the five abilities of the framework; hence, the conceptual framework will be used to structure the discussion of the findings. The five dimensions and the five corresponding abilities are further described in the conceptual framework section. The conceptual framework of access to care is presented in Figure 2.

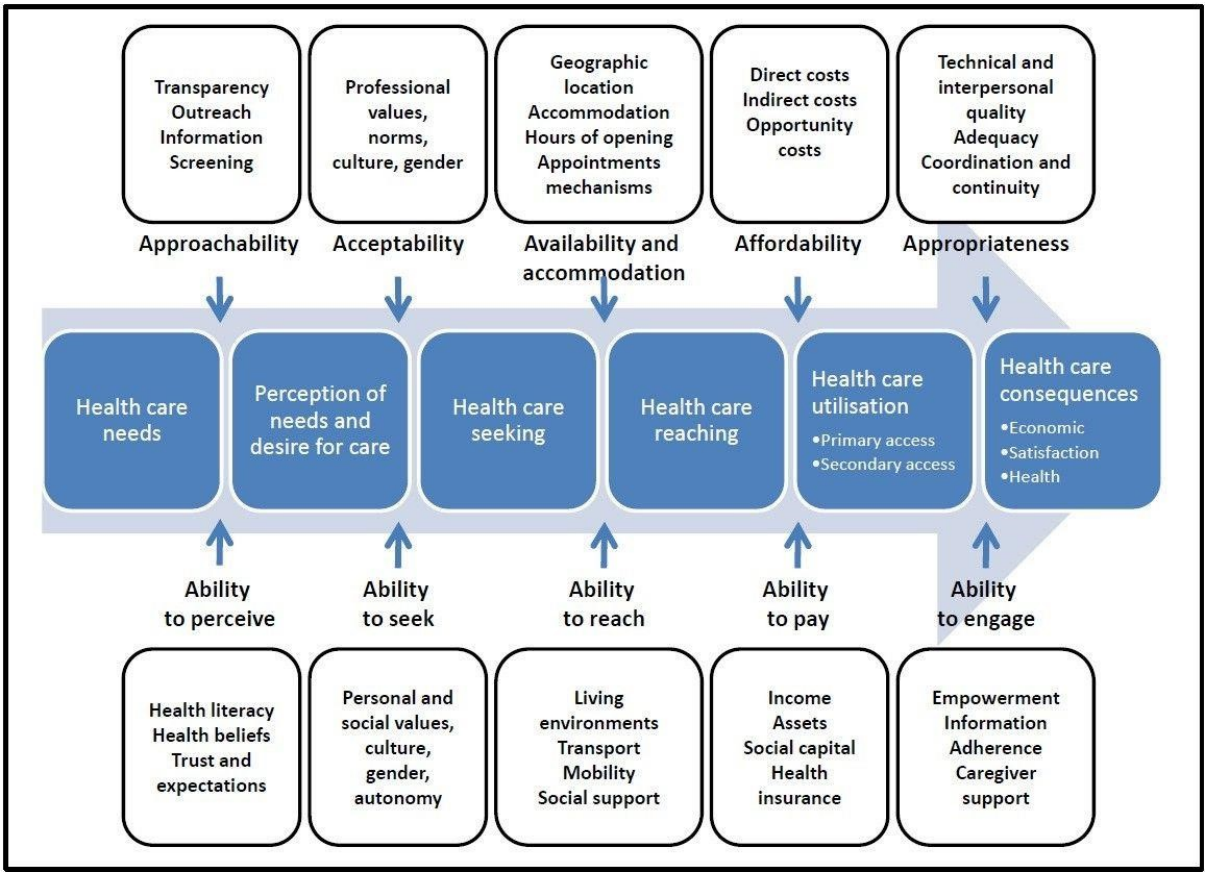

Figure 2: The conceptual framework of access to care

Source: Levesque, Harris & Russell (2013).

Description of the conceptual framework

The conceptual framework describes the healthcare services from the health system perspective using five dimensions and five corresponding abilities from the health-seeker's perspective that interconnect and result in a continuum of woman-centred care. The five dimensions from the health service perspective include approachability, acceptability, availability and accommodation, affordability, and appropriateness (Levesque et al., 2013). The five corresponding abilities from the health-seekers' perspective include the abilities to perceive, seek, reach, pay, and engage (Levesque et al., 2013). Levesque et al. (2013) view the health services or system and population as two parallel domains that interact at different points on the continuum of care pathway.

Approachability refers to health facilities making known the types of health services that are provided, such as outreach programs that people with health needs should be aware of, and be able to access (Levesque et al., 2013). The ability to perceive health needs from the population perspective are determined by health literacy, knowledge about health, and beliefs related to health and sickness (Levesque et al., 2013). Acceptability refers to health services provided in a way that is culturally and socially acceptable for health-seekers (Levesque et al., 2013). Ability to seek care refers to the concept of health-seekers' personal autonomy and capacity to choose to seek care, knowledge about healthcare options, and individual rights that would determine expressing the intention to obtain health care (Levesque et al., 2013). Availability and accommodation refer to the availability of health services, medical supplies, health workers, regular opening hours of health facilities, health services provided in a timely manner, and the availability of local accommodation for health-seekers (Levesque et al., 2013). The ability to reach healthcare relates to the notion of personal mobility and the availability of transport and social support that would enable health-seekers to physically reach health services (Levesque et al., 2013). Affordability considers the direct or indirect costs of services within the health system (Levesque et al., 2013). Ability to pay refers to the capability of health-seekers to pay the costs related to accessing healthcare (Levesque et al., 2013). Appropriateness refers to the fit between health services and health-seekers' needs, its timeliness, and the amount of care spent in assessing health problems and determining the correct treatment and quality of the services provided (Levesque et al., 2013). Finally, the ability to engage relates to the participation and involvement of health-seekers in making decisions relating to clinical procedures and treatment (Levesque et al., 2013).

Pathway to desired health

The framework has six elements which are fundamental to beginning the continuum of care pathway to reach the desired outcome. The six elements include healthcare needs, perception of needs and desire for care, healthcare seeking, healthcare utilisation, and the consequences of healthcare (Levesque et al., 2013). This is how the five access dimensions and the five

corresponding abilities relate to the continuum of care (Levesque et al., 2013). Therefore, the findings of this study are discussed in relation to these six elements and discussed by linking to the five access dimensions and five corresponding abilities in order to demonstrate the various stages that health-seekers have to go through to receive the needed care.

Adapted conceptual framework

Access to maternity care in this study is determined by access and availability, as well as previous maternity care experiences that influenced the participants' decisions to seek healthcare. Most of the findings in this study relate accurately to this conceptual framework. Some of the findings that were different, but important, have also been highlighted and adapted to the framework. The adapted conceptual framework is shown in Figure 3.

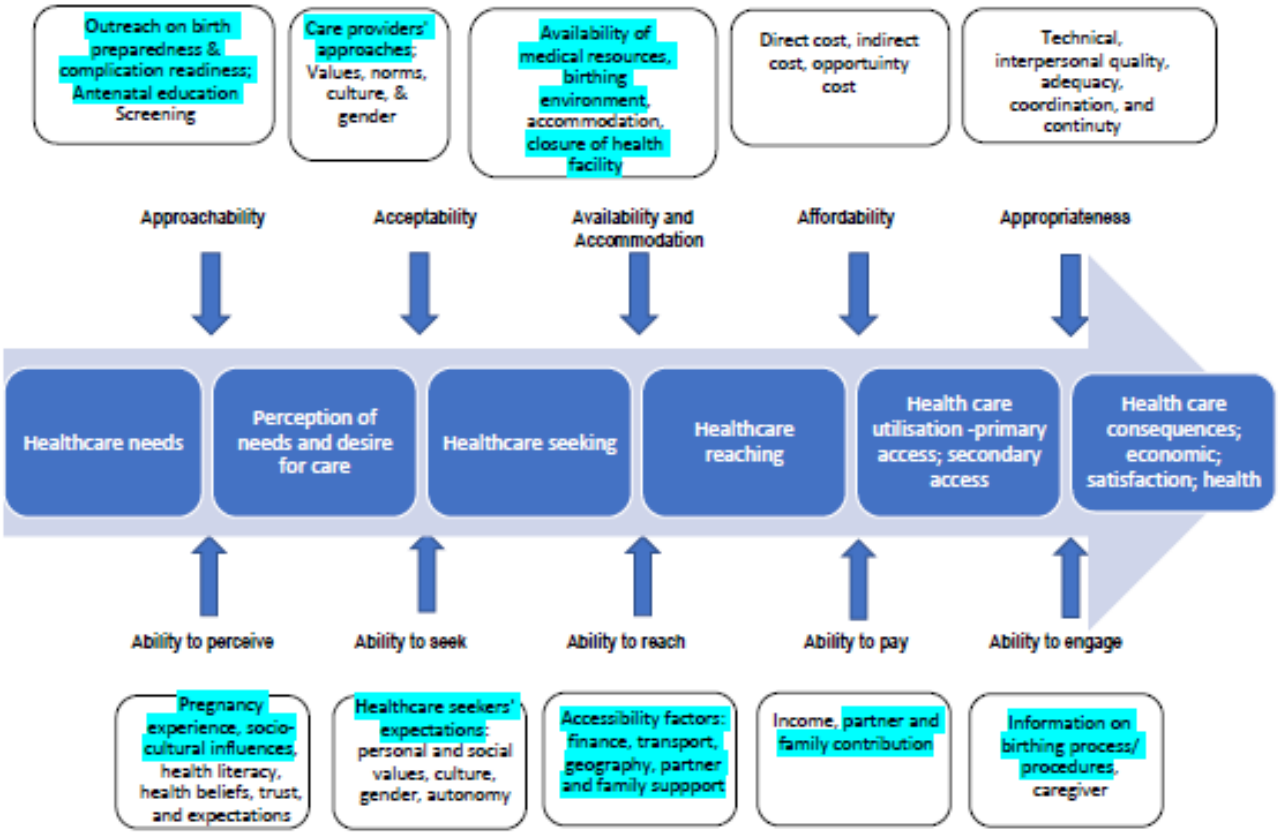

Figure 3: Adapted Conceptual Framework

(Adapted Source: Levesque, Harris & Russell 2013)

Discussion of the findings based on the adapted conceptual framework

The study provides interesting findings and understandings about the experiences of women's and men's decision-making regarding place of birth. The majority of the women in this study had experienced giving birth in the villages. This was because they faced barriers relating to health service access and availability as well as issues from their previous maternity experiences that had negatively influenced the initial decision of most women, who would have preferred to have a health facility birth. These identified factors will be discussed in relation to the six elements of the 'access to care' framework. The findings, which will be the focus of the discussion, and the related elements of the framework are presented in Table 3.

Table 3: Research findings in relation to six elements of the framework

Number	Research Findings	Six elements - pathway to desired healthcare
1	Socio-cultural influences • Patriarchal society • Cultural beliefs and practices • Birth preparedness and complication readiness	Healthcare needs
2	Maternity care providers	Perception of needs and desire for care
3	Availability of medical resources • Availability of medical resources • Closure of health facility • Birthing environment	Healthcare seeking
4	Accessibility factors • Lack of finance • Lack of transport • Geographical challenges • Partner and family support	Healthcare reaching
5 & 6	Maternity care provision	Healthcare utilisation and consequences of health care

Socio-cultural influences in relation to healthcare needs

Patriarchal society

Based on the framework, health care needs are met through the factors that influenced the health seekers to have that ability to perceive a health care (Levesque et al., 2013). In this study, the primary factor that influenced the participants' decisions to perceive a need for healthcare was their previous experiences of pregnancy, as seen in the adapted framework. Participants with past experiences of high-risk pregnancy perceived a great need for healthcare. As pointed out by Mohale, Sweet and Graham (2016), this need for healthcare can be met through maternity care services including antenatal, labour, birth, and postnatal care provided in health facilities. Although, the women in this study wished to access health facilities for maternity care, socio-cultural influences in relation to men having control over decision-making affected their ability to decide upon a health facility birth. This study was conducted in a patriarchal society and the findings demonstrate that the socially structured

status of men influenced their power and control to make decisions relating to their community and family affairs. This meant that the men had control over deciding how the family money was used, despite the women's efforts to earn money. Hence, women's healthcare needs were sometimes denied due to such financial barriers. This led to women giving birth in the villages. Three women reported that their partner decided for them to give birth in the village, which resulted in prolonged postnatal infections. This highlights how men make decisions about having a village birth, based mostly on the cost involved and the control they had over the money. This is similar to a study from South Sudan which found that men also perceived home delivery to be safe in rural communities, and that women were convinced to deliver at home as the men made the decisions (Mugo et al, 2018). If the women in the current study had decision-making power over their family finances, they would have been more likely to have accessed a health facility for giving birth. The findings from this study, as well as from another setting in PNG (Vallely et al, 2015), Kenya (Karanja, Gichuki, Igunza… Ojakaa et al, 2018) and Timor Leste (Wallace et al, 2018), indicated that women are frequently not the decision-makers, and that instead, their husbands made the decisions in seeking care, which often resulted in delays in seeking maternity care. These studies highlight that social and cultural factors dis-empower women and reduce their ability to access their preferred place of birth. However, interestingly, the findings of this study also demonstrated that some women made the decision to have a health facility birth without being influenced by their partner. The decision and ability to access health facility care was influenced by these women being educated or having an educated partner, putting extra money aside for themselves, and their trust in, and expectations of, having a positive birth outcome. This finding aligns with those from a study conducted in Eritrea in North Africa (Kifle, Kesete, Gaim, Angosom, & Araya, 2018), in which it was found that women with less health information and whose husbands had no formal education were less likely to deliver in a health facility. This means that health literacy and education increased their health beliefs and their trust in healthcare. Therefore, health literacy and education are vital elements that empower and increase understanding for women

and men in their decision-making processes in relation to having the ability to perceive the need for healthcare, which is the first process in the framework.

Cultural beliefs and practices

Cultural practices described in this study include the restriction of men being around women during the birthing process in the villages. Many of the participants believed that the birthing blood is contaminated and can cause males (boys or men) to grow weak or get sick. This finding concurs with that in another setting in PNG (Vallely et al., 2015). One participant in this study reported being disappointed when her partner refused her request to be present during her village birth experience because of this culturally influenced belief. These findings are similar to a study from South Sudan undertaken by Mugo et al. (2018), who found that a lack of physical support in labour due to their partner's cultural beliefs about labour and birth being restricted to women, were perceived as barriers to accessing medical care. Cultural beliefs and practices in these studies negatively affected health seekers' beliefs and trust in healthcare. The findings in this study indicate that potential negative cultural beliefs and practices might be addressed through a series of effective community outreach workshops involving men in the Western Highlands of PNG.

Lack of birth preparedness and complication readiness

The study highlighted issues of approachability within the PNG healthcare system. This refers to the need for adequate health information through community outreach programmes and during antenatal clinics. In this study, a lack of birth preparedness and complication readiness (BPCR) was identified as another factor that had a negative impact on participants' decisions to have a health facility birth. Although birthing in a health facility was the preferred choice for the majority of the participants, a number of them experienced delays in accessing and using timely maternity care due to their lack of birth preparedness. The lack of birth preparedness and complication readiness in this study included a lack of prior transport arrangements, a lack of active communication and negotiation between the women and the public transport owners, and not being able to recognise and respond to danger signs of birth complications due to a

lack of health information and understanding. Some participants experienced roadside births, giving birth in vehicles, and village births due to not being able to follow through with their plans about place of birth. These findings concur with Wallace et al. (2018), Karanja et al. (2018), and Kifle et al. (2018), who found that minimal birth preparedness had a negative influence on, and potentially delayed, the decision and ability to seek care in Timor-Leste, Kenya, and Eritrea in North Africa. The findings in this study indicate that health-seekers had insufficient BPCR and related health information; hence, it is necessary for the PNG health system to disseminate information in ways that can reach rural and remote populations.

The participants in this study further reported a lack of regular outreach activities into communities which reduced the opportunity to acquire information regarding birth preparedness and the maternity services available at the health facilities. This was perceived by the participants to be due to a lack of funding and transportation to conduct the outreach programs. In addition, the closure of health facilities due to the lack of medical supplies affected the participants' decisions to attend antenatal care, further reducing their access to health information. The WHO recommends that BPCR interventions be included as an essential element of the antenatal care package and be delivered to all pregnant woman by healthcare providers (WHO, 2015c). A study on the beneficiaries of BPCR interventions (Akshaya & Shivalli, 2017) reported increased BPCR practices and increased access to, and better utilisation of, health facilities. This means that sufficient health information about BPCR would enable women and men to make positive decisions relating to their maternity needs. In addition, BPCR interventions also include improved training and monitoring of healthcare providers themselves, and greater family participation in antenatal care visits (Magoma, Requejo, Campbell, Cousens, & Filippi , 2010). This means that it is vital for rural health workers to have adequate knowledge and skills in relation to BPCR, as well as the facilities being equipped with BPCR equipment and providing 24-hour acute care services in addition to community outreach programs. Providing an approachable health system in PNG would increase women's ability to perceive the need for healthcare to meet their maternity care

needs, as presented in the first step of the continuum of care pathway of the 'access to care' framework.

Maternity care providers in relation to perception of needs and desire for care

According to the framework, the perception of needs and desire for care, which is the second phase in the continuum of care, is influenced by the approachability of health service providers and health services as perceived by health seekers (Levesque et al., 2013). Health professionals that provide respectful maternity care provide approachable health services that positively influences health seekers desire to utilise health care (The White Ribbon Alliance, 2011). In this study, the factors that informed the participants' decisions in relation to their needs and desire for care was influenced by their beliefs and trust in the actual treatment, the type of maternity services available, as well as the confidence they had in the skills and approaches of the health workers. These factors enabled the participants to understand and be aware of their health needs and to develop the ability to seek healthcare. The findings in this study highlighted the issue of acceptability in relation to the care providers' attitudes and approaches within the health facilities. In this study, 80% of the participants highlighted issues relating to health workers' unprofessional conduct, including disrespectful approaches and abusive care that had a negative impact on their decisions and choices for place of birth. The participants in this study reported disrespectful and abusive care which manifested in unfriendliness, verbal abuse, harsh words, yelling, physical abuse, undesirable or inappropriate care or procedures, not accommodating woman's requests on choice of birthing position, and denial of care. The findings in this study indicate that although women finally reached the health facility of their choice after overcoming access factors, they were then challenged with health workers' approaches within the health facilities which had a negative impact on their decisions for their future birthing needs. Disrespectful care was also reported in studies from different settings in PNG (King, Passey, & Dickson, 2013), Cambodia (Ith, Dawson, & Homer, 2013) Ethiopia (Shifraw, Berhane, Gulema, Kendall and Austin, 2016) and Brazil (Mesenburg, Victora, Jacob-Serruya, Ponce de León, Damaso, Domingues, & Da

Silveira, 2018). The findings in the current study, as well as studies in other settings, demonstrate that disrespectful care is a common issue in many countries and needs to be addressed effectively to ensure a positive birthing experience for women. In addition, international human rights bodies have raised concerns about gender discrimination, because giving birth impinges exclusively upon the health and rights of women and limits their enjoyment of equality in access to health care (Maya, Adu-Bonsaffoh, Dako-Gyeke, Badzi, Vogel, Bohren., & Adanu, 2018).

In Ethiopia, the government expanded access to affordable and acceptable facility birthing for all women and the provision of free maternal services in public facilities (Shifraw et al., 2016). However, in PNG, although government maternity services are free (NDOH, 2012), this study has demonstrated a need for improved women-centred and respectful care which is accessible to all women. When maternity services are approachable, acceptable, affordable, and appropriately provided, as evidenced in the Ethiopian study, access to and utilisation of the facilities will be less problematic. While there are constraints within the PNG health system, such as lack of medical supplies and skilled healthcare workers, which may be causal factors for mistreatment in some settings, they cannot be used to justify these actions (Maya et al., 2018). Respectful maternity care is a right of all women, and care should be provided to all women in a manner that maintains their dignity, privacy, and confidentiality, ensures freedom from harm and mistreatment, and enables informed choice and continuous support during labour and childbirth (WHO 2018c, p. 81). These are the elements for a continuum of care to achieve positive health outcomes, as presented in the framework.

Maputle (2018) identified that understanding, friendly, reassuring, respectful midwives, who were culturally safe, and who encouraged free choice and full participation of the women, were perceived positively and resulted in a satisfying birthing experience in South Africa. The findings of the present study highlight the importance of providing women-centred and respectful maternity care to provide positive outcomes and satisfactory birthing experiences.

Therefore, there is a distinct need for the PNG government and health department to recruit adequate health workers, and reform and redirect policies that promote a culture of respect for human integrity and dignity. This may promote acceptability within the healthcare system that may lead to more health seekers desiring to seek health care as described in the second process of the 'access to care' framework.

Availability of medical resources in relation to healthcare seeking

Availability of medical resources

Based on the framework, health care seeking which is the third phase on the continuum of care is influenced by the availability of the medical resources and whether the health facilities can accommodate the needs of health seekers and also the factors that influenced the health seekers ability to seek care (Levesque et al., 2013). The findings in this study have highlighted the importance of the availability of medical resources, as this has an impact on participants' decisions for health facility care, which relates closely to the availability and accommodation dimension of the framework. After identifying their healthcare needs, the participants' decisions in seeking healthcare at a health facility were underpinned by their perceptions of the availability of medical resources as well as the type of health services available. The availability of medical supplies, medical services to manage normal and complicated births, neonatal care, the presence of skilled health workers, flexible opening hours, and the availability of ambulance services were all factors that positively influenced their decision to seek health facility care. Studies from other contexts noted similar findings, including research conducted in India (Bhattacharyya, Srivastava, Roy, & Avan, 2016), other parts of PNG (King et al., 2013), and Kenya (Karanja et al., 2018). These studies highlighted that the availability of medical resources is a major predictor in choosing health facilities as a place for birth. Furthermore, Kruk, Galea, Prescott, and Freeman (2016), in a study from Iran, found that greater government participation in health financing and equipping of health facilities are associated with the increased utilisation of maternity services assisted by skilled health workers, which may have a positive influence on reductions in the maternal mortality rate. This

means that when health facilities are equipped with adequate medical supplies and staffing, more women access them for health facility births. In addition, one of the main factors that influenced the participants' ability to seek healthcare relied on the women's personal and social values of understanding themselves as human beings who need healthcare for their pregnancy and childbirth, as this concerns their, and their newborn's, wellbeing. Also, the participants' decisions and ability to seek care were influenced by their expectations of a positive birthing outcome because of their confidence in the medical treatment and skilled health workers. Therefore, in this study, some women would consistently choose to give birth in a health facility, despite their past negative birthing experiences. This is because of the value in regarding their and their newborn's lives and wellbeing as important.

Closure of health facility

This study has also noted that after the participants arrived at their nearest health facility, they were sometimes not able to access the healthcare. Some were turned away due to closure of the rural health facility because of the unavailability of medical supplies and infrastructure issues such as electricity or water. These closures resulted in changes to their decisions about place of birth for their current pregnancy. It also negatively affected their future decisions to seek out a rural health facility, because the lack of consistency of the opening hours reduced their interest and desire to attend a health facility. Similar responses were also found in other contexts, particularly in studies from Timor-Leste (Wallace et al., 2018) and Kenya (Essendi et al., 2015), which highlighted that infrastructure and lack of medical resources adversely impacted the provision of, and access to, life-saving maternal and newborn services. These findings show that equipped and functional rural health facilities with adequate medical supplies and skilled health workers would effectively increase births in health facilities.

The lack of availability of medical supplies in rural facilities that resulted in the closure of health facilities greatly affected access to healthcare for rural women in comparison to urban women. Although some of the participants reported infrastructure issues experienced during their hospital births, there was always reserved water and standby electricity, which was in contrast

to the rural health facilities. This shows the inequity of health services for rural women compared to urban women. The vision for PNG's *National Health Plan (NHP), 2011 to 2020* is to provide affordable, accessible, equitable, and quality health services for all citizens (NDOH, 2010). The goal to strengthen primary healthcare for all, and to improve service delivery for the rural majority (NDOH, 2010), needs to be implemented in a way that effectively sustains service delivery in rural and remote areas. Currently, there is a lack of birthing facilities, insufficient medical supplies, and a critical shortage of skilled midwives and nurses (Dawson et al., 2015). This means that the rural and remote areas of PNG need improvements to maternity services and infrastructure to meet the objectives and goals of the NHP. In addition, despite the availability of skilled health workers, some participants were either turned away or the health workers delayed the provision of care due to the limited capacity of the workforce. This thwarted the participants' decisions, which resulted in some finally reaching other health facilities if they were in the active or earlier stages of labour or returning to their communities for a village birth.

In PNG, the health workers who provide maternity care include Registered Nurses, community health workers (CHW), and doctors, due to a critical shortage of trained midwives (Moores, Puawe, Buasi, West, Samor, Joseph, Rumsy, Dawson, & Homer, 2016). As a result, most maternity services in the rural and remote areas were provided by Registered Nurses and CHWs (NDOH, 2012), who were sometimes unprepared to manage maternity care and the associated complications, as they are not specifically trained for this. WHO (2016a) recommends midwife-led continuity of maternity care throughout the antenatal, intrapartum and postnatal continuum as it promotes women-centred care to labour and childbirth. WHO (2018d) further elaborates on the above recommendation that midwife-led maternity care highlights every woman's right to a "positive childbirth experience," or one that "fulfils or exceeds a woman's prior personal and sociocultural beliefs and expectations, including giving birth to a healthy baby in a clinically and psychologically safe environment with continuity of practical and emotional support from a technically competent qualified midwife. In addition,

WHO (2018e) recommendations on antenatal care contact schedules to a minimum of eight contacts purposely to reduce perinatal mortality and improve women's experience of care. This is so purposely to reduces maternal and perinatal morbidity and mortality both directly, through detection and treatment of pregnancy-related complications, and indirectly, through the identification of women at increased risk of developing complications during labour and delivery, thus ensuring referral to an appropriate level of care (WHO, 2016b). Implementation of these recommendations in maternity care services are essential as they promote positive childbirth experiences and positive birth outcomes. Therefore, it is of great need to fully equip rural health facilities with medical resources, skilled health workers, and improvements to infrastructure to enable an 'available' primary healthcare system. Provision of midwife-led maternity care with adequate antenatal contact would assist women and men with their healthcare seeking, which is the third process of the 'access to care' framework.

Birthing environment

The study further highlighted the issue of accommodation within the PNG healthcare system. The findings indicated that issues with, and the circumstances of, the birthing environment from their previous maternity experiences had an impact on their decisions and future health-seeking behaviours after attending health facilities. These issues included water supply, overcrowding or insufficient beds, bad odours, space, and privacy. These findings are similar to those from a study in Iran (Iravani, Zarean, Janghorbani, & Bahrami, 2015), which revealed the participants raising concerns about lack of privacy with birthing beds in an open ward, which were separated only by a partition wall and curtain which sometimes meant that confidentiality was not maintained, which for some women, had a negative impact on their decision-making processes. This is because, in the current study, birthing is regarded as a private activity according to cultural norms, and hence, birthing in an environment with a lack of confidentiality and privacy for rural women resulted in a shameful experience that prevented some women from seeking a future health facility birth.

The WHO (2018c) recommends respectful maternity care that involves the need for privacy and confidentiality. This highlights the importance of maintaining women's dignity and confidentiality in birthing spaces, as this contributes to a positive birthing experience which may have a positive impact on future birthing decisions and choices. Therefore, it is significant for service providers to improve the standard of health facilities in a way that accommodates the needs and expectations of women during labour and birth. This may have a positive impact on their ability to seek care, which is presented as the third process of the 'access to care' framework.

Accessibility relating to reaching healthcare

Accessibility factors

According to the framework, health care reaching which is the fourth phase on the continuum of care is possible when the resources within the health seekers environment are available for the health seeker to access the health service (Levesque et al., 2013). Health care reaching is possible if the health services within the health care system are affordable for the health seekers (Levesque et al., 2013). Once decisions are made to seek healthcare, women attempt to reach their chosen facility through a variety of means. In this study, lack of finances, lack of transport, geographical challenges, and lack of partner or family support were access factors that affected the participants in reaching the health facilities. Issues of affordability due to lack of finances was one of the main findings, as most of the participants worked as farmers in small-scale farming activities but without any formal regulated markets for their produce, and so had low incomes and were therefore unable to pay the cost of transport, medical, and other basic needs while at a health facility. Although financial constraints were also found in an Indonesian study (Titaley et al., 2010), this situation provides a wider explanation of a deprived financial situation being related to low levels of education, which affects one's ability to seek the most appropriate care. This explanation indicates that the health-seekers with better education or employment in this study, and the study in Indonesia, had a greater possibility of

accessing a health facility. This means that education and employment have a positive impact on health-seekers' decision-making processes.

Lack of transport due to poor road conditions was identified as another deterrent to attending a health facility in this study, which was similar to other studies from PNG (Vallely et al., 2013), Indonesia (Titaley et al., 2010), and Kenya (Essendi et al., 2015). In this study, participants who had adequate finances were often not able to reach a health facility because of the lack of availability of private or public transport. None of the participants owned a car, and the ambulance at the nearest health centre did not provide a 24-hour service. Hence, they had to rely on public transport, although some villages did not have any public transport. Furthermore, public transport from local towns was sometimes not able to get into some communities due to poor road conditions. These factors greatly challenged the participants in this study to access a health facility.

Fear of a roadside birth from walking long distances in geographically challenging conditions was an additional barrier that had a negative impact on their decisions not to attend a health facility. Similar findings were also identified in studies from Indonesia (Essendi et al., 2015), Kenya (Titaley et al., 2010), and other parts of PNG (Vallely 2013), although these were conducted in different settings. Nevertheless, in this kind of situation, reaching the health facility was often a daunting challenge. This resulted in women giving birth in the villages assisted by untrained women or relatives. It is known that births assisted by an untrained person, including traditional birth attendants, can neither predict nor appropriately manage serious complications such as haemorrhage or sepsis, which are the leading causes of maternal deaths during and after childbirth in many developing countries, including PNG (UNICEF, 2019b). This means that improvements to access in the rural and remote areas of PNG would enable women and men to increase their chances of reaching a health facility.

The lack of availability of partner and family support was another factor that had a negative impact on the women's decisions for a health facility birth. This refers to physical and social

support which includes financial assistance, transport arrangements, and care of older siblings. Some of the women in this study were able to reach the health facilities because of support from their partner, family, or community, particularly in relation to finances and transport arrangements. In support of these findings, a study conducted in Timor-Leste found that women chose not to access health facilities due to a lack of childcare for older siblings (Wallace et al., 2018). Reaching a health facility is possible when there is physical or social support from the partner and the family. Therefore, improvements to access factors and physical and social partner and family support enables women and men in rural and remote PNG to reach healthcare services, which is the fourth process of the 'access to care' framework.

Maternity care provision relating to utilisation of care and consequences of health care

Based on the framework, health care utilization and consequences of health care which are the fifth and sixth phase on the continuum of care, relate to health seekers satisfaction of the care depending on the appropriateness of the health care provided (Levesque et al., 2013). In this study, once the women reached the health facility of their choice, they received care for their maternity needs. This study indicated that care provision had a significant impact on the participants' decisions in choosing a place of birth for health care utilisation. The women in this study experienced satisfaction or dis-satisfaction depending on the appropriateness of the maternity care provided. They described care as providing consistent monitoring during labour, birth, and after the birth, while the presence of a midwife in the birthing room gave them reassurance and a sense of safety. Also, the participants expected positive outcomes, and their trust in, and expectations of, a positive birth outcome enabled them to engage with the maternity care which, for some women in this study, resulted in greater birth satisfaction. As pointed out by Fair and Morrison, (2011), the provision of adequate information on the birthing process as well as including the woman in decision-making during labour and birth increases women's confidence and engages them well for going through the birthing process.

The current study highlighted that the consistent monitoring of labour and birth, the presence of skilled health workers, and the provision of sufficient information about the birthing process and procedures enabled the participants to cope and engage with the labour and birth. Therefore, the appropriate provision of maternity care in a way that meets the needs and expectation of the rural and remote PNG population increases healthcare utilisation, which is the fifth step of the continuum of care process of the framework.

However, receiving care does not mean that healthcare needs were met. The findings also indicated that the maternity care provided was regarded as dissatisfactory. Dissatisfaction in this study was associated with the provision of incompetent care, interventions without adequate information, and unconsented care. In fact, one participant reported that a previous traumatic birth experience, resulting in neonatal death, had a negative impact on her decision for a village birth in her current pregnancy. Others who had negative experiences, such as receiving care they had not consented to, deterred them from seeking hospital births, and instead, deciding to give birth in a health centre or a private health facility. Although this was similar to the findings in a study from Pakistan (Hameed, & Aven, 2018) and Cambodia (Ith, Dawson, & Homer, 2013), these study contexts were quite different. Such mistreatment can have immediate and long-term consequences, such as distorted body perceptions and a fear of giving birth and may deter women from seeking maternity care from health facilities (Hameed, & Aven, 2018).

The WHO (2012, p. 12) recommended that every woman has the right to the highest attainable standard of health, which includes the right to dignified, respectful healthcare. In this study, the negatively perceived care that some participants reported could have been related to associated factors such as the lack of essential resources, and inadequate skilled health workers, which could result in insufficient time to provide women with adequate explanations and appropriate support. It could also be related to the women misunderstanding the rationale for the care provided. Therefore, care that is provided with adequate health information and

that is women-centred would enhance understanding and engagement during childbirth that may result in a more positive birth experience. Positive birthing experiences promote a sense of achievement, enhance feelings of self-worth, and facilitate confidence, which are important for healthy adaptation to motherhood and psychological growth (Hildingsson, Ingeger, Johansson, Margaret, Karlström, & Fenwick, 2013). Brink, Walt, and Rensburg (2006) asserted that quality maternity care has the potential to improve pregnant women's perceptions and health after the birth and indicates a quality health system which has a positive impact on women's future decisions and choices of place of birth. The provision of maternity care is identified as a significant factor in this study as the participants perceived, sought out, reached, and paid to receive this care. Therefore, maternity care that is woman-centred and appropriately provided for this study population may result in positive healthcare consequences, which is the final stage in the continuum of care process of the framework.

Conclusion

This chapter has presented a discussion of the findings on the experiences of women and men towards decision-making on place of birth in the rural Western Highlands of PNG, in relation to the literature relevant to the findings of this study. The findings highlighted that socio-cultural influences, the approaches and attitudes of maternal care providers, the availability of medical resources and skilled health workers, access factors, and the ways in which actual maternity care is provided were factors that influenced the women's and men's decisions. The discussion of the findings drew on the work of Levesque et al. (2013) revised 'access to care' framework, and the five accessibility dimensions and the five corresponding abilities relating to decision-making in order to reach a higher interval on the continuum of women-centred care. The outcomes of women's maternity care depend on the approachability, acceptability, availability and accommodation, affordability, and appropriateness of maternity care within the health system. Therefore, the findings have highlighted the need for improvements in the clinical maternal health service, the health system, infrastructure, policy adjustment, and redirection and strengthening of the health system to provide care that meets the needs and

expectations of the rural and remote population of PNG. The final chapter presents a summary of the key findings, discusses the limitations of the findings, outlines the implications of the study, and provides recommendations and suggestions for future research.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

Introduction

This study has explored the experiences of women's and men's decision-making regarding place of birth in the rural Western Highlands of PNG. The first chapter presented background information to inform the introduction to the study. The second chapter presented an integrative review of the literature relevant to this study from PNG and other developing countries, while the third chapter presented the methodological approach and steps taken to conduct the study. The findings were presented in chapter four and discussed in the fifth chapter. This concluding chapter provides a summary of the findings, and outlines the strengths, limitations, and contributions of the study. The chapter further discusses the implications for clinical midwifery practice, recommendations to improve maternal health services in PNG, and recommendations for future research.

Summary of the findings

The aim of the study has been to explore the experiences of women's and men's decision-making regarding place of birth in the rural Western Highlands of PNG. The two objectives were: 1) to investigate the factors that influence women's and men's decisions in choosing place of birth; and 2) to examine their needs and expectations in relation to the birthing context. The study found that a majority of the participants preferred a health facility birth but were not able to realise this choice due to access and availability factors as well as issues associated with their past birth experiences that had a negative impact on their decisions, resulting in a reluctant birth in the villages. Socio-cultural influences and a lack of birth preparedness and complication readiness (BPCR) had a major influence on their decision-making. Lack of finance, transport, partner or family support, and the long distances to walk due to geographical barriers and poor roads largely challenged their access to health facilities. Their expectations of a positive birth outcome and the value of theirs and their newborn's lives being important were perceptions that had a positive impact on their decisions, which were then further

influenced by the availability of medical resources that influenced their decision to access a health facility of their choice. However, the lack of availability of medical resources often thwarted their decision to access another facility if the initial one they accessed was closed or had poor facilities, so many returned to their villages to have a village birth. The other factor involved was their previous birth experiences. Positive experiences were related to care that was competent; consistently monitored during labour, birth, and after the birth; provision of adequate information on the birthing process; and being treated with respect and dignity in a birthing environment that ensured privacy. Negative experiences were related to incompetent care, sometimes without due consent that resulted in negative outcomes; the negative attitudes of care providers; and a birthing environment that had infrastructure issues or which lacked privacy. These availability and access factors, as well as issues experienced during their previous birth, had an impact on the participants' decisions whether to return to the same facility, access another facility, or to reluctantly resort to a village birth in their subsequent pregnancies. This study has revealed that a maternity service that is approachable, acceptable, available and accommodating, affordable, and appropriate, and in which women would have the ability to perceive, seek, reach, pay, and engage in care, would have their maternity care needs satisfactorily met. Therefore, these factors are being put forward as recommendations for improvement to the PNG health system.

Strength and Limitations of the study

Strengths

One of the strengths of this study has been the methodological approach of constant rechecking with the recorded information based on feedback from experienced thesis supervisors during the data analysis process to ensure that the codes used as part of the NVivo analysis, remained as close as possible to the participants' recorded information. This enabled the researcher to identify the specific factors that influenced the decisions of the women and men in relation to the chosen place of birth. The other strength was the use of purposive sampling, as it was apparent that the participants who took part in the research had experience

and knowledge about the phenomenon of interest; hence, recent, in-depth, and rich information was obtained. Also, the use of a qualitative descriptive methodology was a strength for this type of study as this approach enabled the researcher to obtain rich information on the phenomenon of interest; hence, the advantage of using this methodology resulted in addressing the research question appropriately, and thus, achieving the aim and objectives of the study.

Limitations

There were several limitations of the study. Firstly, of the thirteen catchment villages in the area, participants from only seven villages took part, meaning that women and men with similar experiences from six villages in the district were not included. Additionally, the exclusion of participants not fluent in PNG Pidgin (the national language), participants with more than 12 months since their last birth experiences, and participants who had previously received healthcare from the researcher (due to possible conflicts of interest) may have resulted in relevant and informative findings not being included. In addition, due to the researcher's first experience with the interview process, she felt that some valid prompting questions were not asked which might have led to additional data. Finally, the study cannot be generalised to other women in other districts and provinces due to PNG's diverse sociocultural system and the qualitative nature of the research.

Contribution of the study

Despite the reports of the low number of supervised births and the high MMR in PNG, there has been only limited research that has focused on maternal health. The few studies conducted in other provinces have primarily focused on antenatal care and have overlooked intrapartum and postnatal care, which are significant components of maternal health, as most obstetric complications and maternal deaths occur during this period (Mola & Kirby, 2013). In addition, these studies from PNG have focused on the factors that have created barriers to accessing health facilities. However, no evidence could be found of existing published studies

that have explored the factors that influence the decisions involved in choosing place of birth for labor and intrapartum care. Understanding and addressing this deficit will enable positive long-term outcomes in midwifery and maternal health services in the Western Highlands and across PNG.

Implication for midwifery practice and education

The findings of the study provide maternal health workers in the rural Western Highlands with an overview of the maternity care needs and expectations of women and how maternity care can be provided to meet their needs. It is evident that incompetent and unconsented interventions without adequate explanation had a negative impact on the women's decisions in choosing place of birth. The study provides evidence that clinical midwives can use to tailor care that meets the expectations and needs of women. It also provides evidence for midwives to advocate on behalf of women to higher authorities to improve access and availability factors, as well as infrastructure issues within the birthing environment. Furthermore, it provides evidence for midwives to reassess their practice to the standards of care.

The participants reported on maternal health workers providing an inadequate amount of BPCR information and lacking the skills to provide competent maternity care and to manage complications. This study therefore suggests that upskilling workshops and in-service training related to BPCR should be provided, as well as identification and timely management or referral of women with complications. The study has also explored patriarchal control in decision-making, and cultural beliefs and practices that, due to the lack of health information and education, had a negative impact on the women's decision-making processes. Therefore, this study also suggests that effective health education through community outreach, as well as partner education on the importance of labour and childbirth would be effective.

Recommendations

The findings from the study can be used as supporting evidence to improve maternal health services in PNG. The recommendations below are in relation to midwifery practices, the health system, and the political system based on the findings of the study.

Recommendations for clinical practice

- Improve midwives and health workers' knowledge and skills in professional and ethical clinical conduct, and in policies relating to care-seekers' and care-providers' rights and responsibilities through in-service and upskilling workshops.
- Increasing the size of the maternity health workforce through an increased intake at nursing and midwifery institutions.
- Increasing the number of community health education programs relating to labour and birth, increasing male involvement in antenatal education, and improving and increasing information about BPCR.
- Midwives to advocate on behalf of women to health managers, service providers, and policymakers to address access and availability factors, as well as on issues associated with their previous maternity care experiences.
- Midwives and clinical managers to review models of midwifery care in the district and make recommendations for improvement.

Recommendations for provincial and national health departments

- Increase intake numbers in nursing and midwifery colleges and universities.
- Improve the communication and referral systems between rural or remote and urban health facilities.
- Health department to equip health facilities and redirect policies in relation to 24hour healthcare.
- Provide a 24-hour ambulance service for all communities at an affordable cost.
- Improve birthing rooms to ensure that privacy is maintained.

- Strengthen policies and guidelines on clinical procedures and protocols.

Recommendation for service providers/government

- Improve infrastructure such as roads, bridges, and electricity.

Recommendations for future research

This study has highlighted several significant factors that influence the decisions of women and men in the rural Western Highlands in choosing place of birth. While this study has focused on the experiences of health seekers' (women's and men's) perspectives, further research from the health workers' perspective is recommended. While few studies conducted in other provinces have focused on antenatal care, there has been no research on antenatal care in this study setting; hence, a study is recommended to explore antenatal care in the Western Highlands of PNG. Furthermore, this study has identified that socio-cultural factors had a strong influence on the participants' decisions on their choice of place of birth; hence, further research is recommended to explore patriarchal control in maternity care decision making. Also, further research is recommended for midwives' practice in provincial and rural health facilities.

Conclusion

This study has explored the experiences of women and men from the rural Western Highlands of PNG that impact their decision-making in relation to place of birth. The study has identified that despite most of the participants preferring a health facility birth, numerous factors relating to access and availability, as well as issues identified during their previous maternity experiences, had a negative impact on their decisions; hence, many reluctantly gave birth in the villages. These factors can be addressed effectively using a collaborative approach by clinicians, health managers, and policymakers by implementing change to improve maternal health services in rural PNG. This study has further highlighted that the participants' needs and expectations of a positive birth outcome would be made possible through the provision of an approachable, acceptable, available and accommodating, affordable, and appropriate

health system which can be accessed based on women's ability to perceive, seek, reach, pay, and engage with the care that should result in a satisfying birth experience. Despite the limitations discussed in this chapter, the aim and objectives of the study have been achieved, and hence, the implications and recommendations for midwifery practice, education, and future research have been presented.

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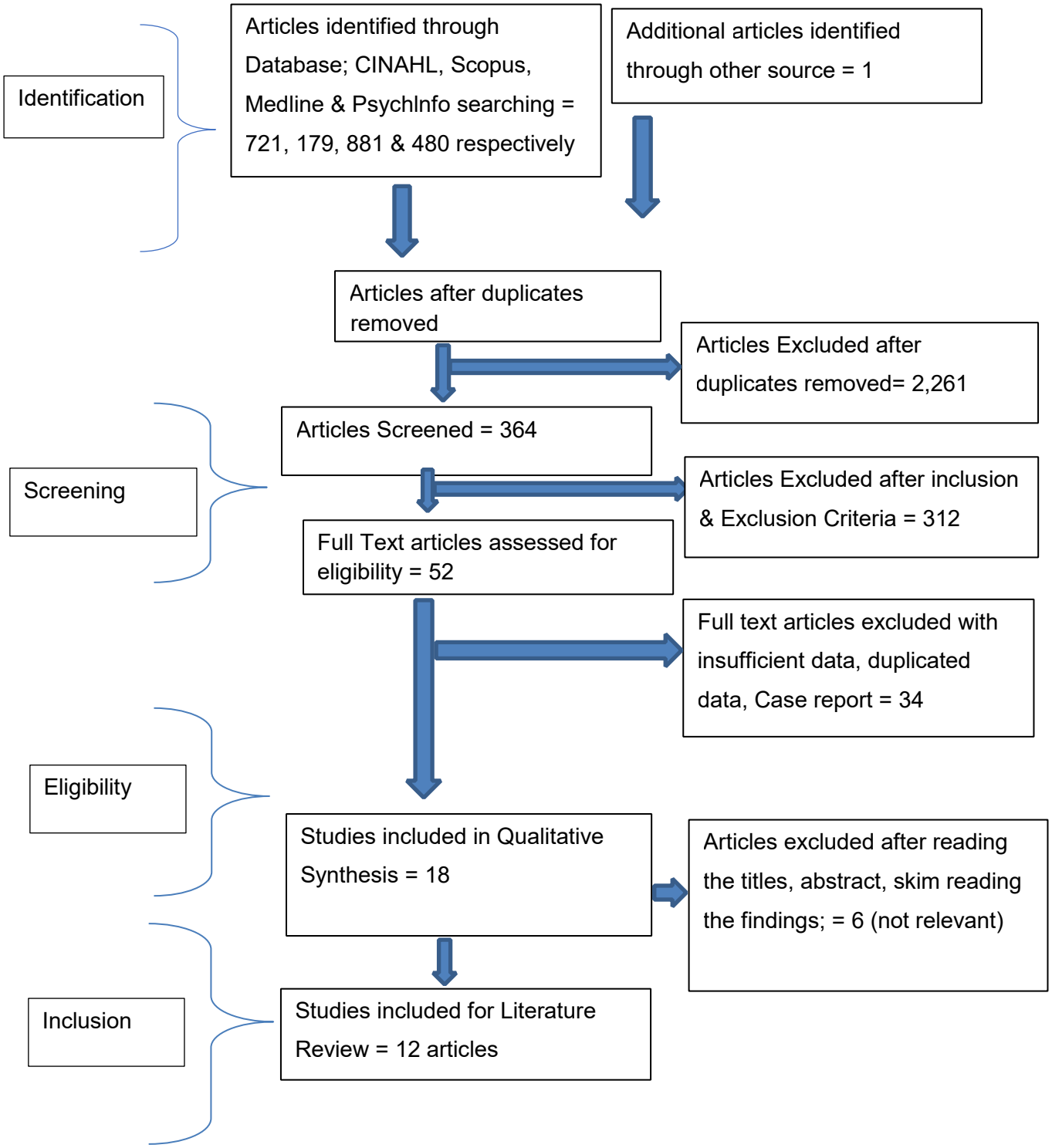
Appendix 1: List of Search terms

DATA BASE	SEARCH TERMS	RESULTS	# of relevant articles
MEDLINE	S1 Maternity Care (OR) S2 Maternal health care S3 Maternity health care service S4 = S1 or S2 or S3 S4 - barriers/challenges S5 - women/men S6 = S3 + S4 + S5 S7 – Papua New Guinea/Asia Pacific/Developing Countries	2,008 1,980 3,897 2,003 1472 323 179 80 Exclusion and Inclusion Publishing Yr – last 5 years (2013 – 2018) Language – English Journal article peer reviewed **10 related articles further reviewed**	3 articles
CINAHL	S1 Maternity care OR Obstetrics Care S2=Barriers OR challenges OR limitations OR In-accessibility or influencing factors S3 = S1 AND S2 S4 = perceptions S5 = Beliefs S6 = S4 OR S5 S7 = women/men S8 = Papua New Guinea S9 = Developing Countries S9 = S3 + S6 + S7 + S8 *Exclusion and Inclusion* English Linked full text Publication Date: last 5 years (2013 – 2018) Academic Journal Nursing Care Obstetrics Care	3,200 2,890 4,331 7,435 4,413 15,051 2,550 304 4,302 67,418 66,131 51,919 1,857 881 18 10 **7 related articles further reviewed**	6 articles

SCOPUS	S1 Maternity Care S2 Obstetrics Care S3 = S1 OR S2 S4 = Facility Birthing OR Skilled birthing S5 = Limiting factors S6 = Barriers OR Challenges S7 = S3 + S4 + S5 OR S6 S8 = Developing Countries S9 = Asia Pacific S10 = S7 + S8 OR S9 Exclusion & Inclusion Years of publ: Last 5 years (2013 -2018) Language: English Subject Area: Nursing Journal Article S10 – Midwifery Articles	13,997 19,647 18,786 351 981 786 2, 887 824 621 124 29 **10 related articles further reviewed**	6 articles
PsychInfo	S1 = Maternal care Or Maternity Care OR Maternal Health Care OR Maternal Health Service S2 = Facility Birthing OR Skilled birthing S3 = Challenges OR Barriers OR Influencing factors S4 = S1 OR S2 AND S3 S5 = Asia Pacific OR Developing Countries S6 = S4 + S5 Exclusion & Inclusion Years of publication: Last 5 years (2013 -2018) Language: English Subject Area: Nursing Journal Article	11, 089 6, 432 1, 720 8, 503 1, 219 480 119 **8 related articles further reviewed**	3 articles **Final relevant articles = <u>18</u>** **Final # articles included for review = <u>12</u>**

Appendix 2: PRISMA Table



Appendix 3: Critical appraisal checklist for Qualitative studies

Author & Date (1 – 10 articles)	**Q1**. Clear research aim	**Q2**. Qual methodology appropriate	**Q3**. Research design appropriate	**Q4.** Recruitment strategy appropriate	**Q5.** Data collection method appropriate	**Q6.** Researcher bias recognised	**Q7**. Ethical issue considered	**Q8.** Data analysis rigorous	**Q9**. Findings clearly stated	**Q10.** Research is valuable
1. Vallely, et al. (2013)	Yes	Yes	Yes	Not clear	Yes	Yes	Yes	Yes	Yes	Yes
2.Crissman, et al. (2013)	Yes	Yes	Yes	Yes	Yes	Not clear	Yes	Yes	Yes	Yes
3.Andrew, et al (2014)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4.Titaley, et al (2010)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5.Ith, et al. (2013)	Yes	Yes	Yes	Yes	Yes	Not clear	Yes	Yes	Yes	Yes
6.Mogo, et al. (2018)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7.Essendi, et al. (2015)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8.Machira, et al. (2018)	Yes	Yes	Yes	Yes	Yes	Not clear	Yes	Yes	Yes	Yes
9.Karkee, et al. (2014)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10.Vallely, et al. (2015)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Appendix 4: Critical Appraisal Checklist for Quantitative: Case Control Studies

Autor & Date	**Q1.** Are the results of the trial valid?	**Q2**. Quant approach appropriate	**Q3.** Were the cases recruited in acceptable way?	**Q4**. Were the control selected in an acceptable way?	**Q5**. Was the exposure accurately measured to minimise bias?	Q6A. Aside from experimental, were the groups treated equally?	**Q6B.** Have the authors taken acct of potential confounding factors in the design?	**Q7**. How large was the treatment effect?	**Q8**. How precise was the estimate of the treatment?	**Q9**. Do you believe the results?	Q10. Can the results be applied to the local population?	**Q11**. Research is valuable? Do the results of this study fit with other available evidence?
King, et al. (2013)	Yes	Yes	Not clear	Yes	Yes	Yes	Not Clear	Yes	Medium	Yes	Yes	Yes
Fisseha, H., et al (2015)	Yes	Yes	Yes	Not clear	Yes	Not Clear	Yes	Yea	High	Yes	Yes	Yes

Appendix 5: Themes from the Literature

Theme	Sub- Themes	Studies
External Factors (Factors that exist within The women's external environment)	1. Financial Constrain	Vallely, L., et al (2013), Crissman, H., (2013), Andrew, E.V.W., et al (2014), Titaley, C.R., et al (2010), Ith, P., et. al (2013), Essendi, H., (2015); Sychareum, V., et al (2016), .Valleley et al., 2015; Machira, K., & Palamuleni, M., (2018),
	2. Distance or isolation	Vallely, L., et al (2013), Andrew, E.V.W., et al (2014), Titaley et al (2010), Ith, ., et. al (2013); Andrew et al., (2014)
	3. Inadequate transport	Mugo, NS., et at (2018), Essendi, et al., (2015); Sychareum et al (2016), Machira, K., & Palamuleni, M., (2018), Mugo, NS., et at (2018)
	4. Poor road condition	Essendi, (2015); King, et al., (2013)
	5. Fear of precipitate labor	Crissman et al., (2013); Mugo, et at., (2018)
	6. Safety and security	Mugo, et at., (2018)
	7. Lack of decision-making power	Crissman et al., (2013); Vallely et al., (2013)
Internal Factors (Factors that exist within health facilities)	1. Staff negative attitudes	King et.al, (2013), Crissman, H., (2013), Andrew et al., (2014), Ith et. al., (2013), Machira, & Palamuleni, (2018)
	2. Lack of essential drugs	King et.al, (2013), Crissman, H., (2013), Andrew et al., (2014), Ith, et. al., (2013), Machira, & Palamuleni, (2018
	3. Lack of skilled care provider	Essendi, (2015), Mugo, et al., (2018)
	4. Medical costs	Crissman, (2013)
	5. Previous experience of waiting time	Andrew et al., (2014)
	6. Need of support person	King et al., (2014); Crissman, (2013)
	7. Infrastructural Issues (Water & electricity)	Mugo et al., (2018); Essendi, et al., (2015)
Cultural beliefs and traditional practice		Sychareum, V., et al (2016), Vallely et. al (2015), Mugo, NS., et at 2018
Majority aware of the importance of facility-based maternity care		Vallely et al (2013), King, S. et.al, (2013)

Appendix 6: Summary of the articles included in the review

No	Author & Date	Aim/Objective	Sample & Setting	Methodology & Methods	Major Findings	Strengths & Limitation	Significance to the Issue
1	Valley et.al (2013) Exploring Women's Perspectives of access to care during pregnancy and childbirth: A qualitative study from rural Papua New Guinea	Identify women's experiences relating to health seeking behaviours and problem faced during pregnancy and childbirth in rural PNG	51 women with previous birth experiences 21 recruited at antenatal clinic Rural, Eastern Highlands Province, PNG	Qualitative Descriptive: Focus Group; unstructured questions to generate discussion, In-depth interview; semi structured question **Analyses** Content Analyses	Majority aware of importance of facility care. However; Barrier; Geographical, financial, transport, language, customary beliefs, lack of decisionmaking power	Participants restricted to women	Provide knowledge on; - Safe motherhood education and birthing preparedness. - Need of Increase birthing services, - Further research as it was the first communitybased study
2	King, S. et.al, 2013 Perceptions and use of Maternal Health services by women in coastal Madang Province	Investigate maternal risk factors, identify factors that limit utilization of maternal health services	Stratified cluster sampling method: used to recruit 550 women, rural Madang Province, PNG	Quantitative: Crosssectional communitybased survey using structured questionnaire.	Positive; participants show awareness on importance of facility birthing. Negative; lack of physical comfort, staff attitude, insufficient knowledge on quality maternity care	Cross-sectional approach; has most bias, Possibility that women could provide unreal information due to forgetfulness.	Provide knowledge on; - health providers attitude - awareness on safe motherhood practices - further research
3	Crissman, H., 2013 Shifting Norms: Pregnant women's perspectives on skilled birth attendance and facilitybased delivery in rural Ghana	The study intends to identify challenges that pregnant women encounter when seeking for antenatal care so that skilled birth attendance and health care facilities can be improved	Convenience sampling method: recruited 85, Interview and FGD, Akwatia clinic, rural Eastern Ghana	Qualitative; Grounded theory; using semi structured open ended questions; Used thematic analyses, ENVIVO 9 software	Barriers; midwife's miss treatment, maternity care fees charged despite Government waiver of fees, need for support person for HCF birthing, transportation difficulty, precipitous labour	Transcribing of language into English for audiotaping, possibility that some subtleties in language could be lost	Provide knowledge on staff attitude, knowledge on need of skilled care providers, make aware of cost-free care
4	Andrew, E.V.W., et al 2014 Factors affecting attendance at and timing of formal antenatal care: Results	This study aims to identify the factors that influences attendance of antenatal women and the timing of their first visit to	94 participants; Recruited through random and purposive sampling identify women not attended	Qualitative: grounded theory; FGD, In-dept interview, Direct observation, case study; snowballing also used to software	Factors influencing attendance at ANC: accessibility; distance & costs, interpersonal issues, staff attitude,	Multiple interviews with case study women and family members aided in uncovering the multidimensional reasons. Most	Applicable for local context: Provide knowledge on staff attitude, knowledge, and knowledge on women centred care, knowledge on increase of vital service like family

	from a qualitative study in Madang, Papua New Guinea	facilities in Madang, Papua New Guinea	ANC. Unstructured questions, semi structured & direct observation at clinic, use health records Content Analyses, Alasti.ti		previous experiences of waiting time, lack of knowledge on importance of ANC.	participants were women living along main roads; including women from areas with no road's links should gain fair responds.	planning, knowledge on family support
5	Fisseha, H., et. al 2015) Distance from Health Facilities and mothers' perception of quality related to skilled delivery services utilization in Northern Ethiopia	Assess the factors associated with skilled delivery utilization in rural part of Northern Ethiopia	Women with birth experience in last 12 months 1796 women, 67 from each cluster (12 months	Quantitative (Exploratory); Community Based Survey; interview guided structured questionnaire Pre-test	Predictors of skilled birthing services; distance to health facilities, women's perception of adequate equipment in delivery services, experiencing complications during childbirth, accessing antenatal care, lower birth order, & having educated partner	Restricted to women Validity; Data translate into Lang & re-test back to English. Pre-test & modification of test	Community based intervention program; improving quality maternity services; revising admission protocol, waiting room, ambulance.
6	Titaley, C.R., et al 2010 Why do some women still prefer traditional birth attendants and home delivery? a qualitative study on delivery care services in West Java Province, Indonesia	This study aims to identify the factors that influences women's preference of traditional births and home delivery	Purposive sampling: 295 participants Content Analyses: transcribed, read and cross checked – themes, NVIVO 8	Qualitative: Focus group discussion (FGD) and Indepth interview in a structured and semistructured questions; Data analyse through content analyses	Factors: Physical distance & geography, financial limitations, personal responsibilities eg; care of older children, inadequate delivery equipment's, No differentiation of traditional birth attendance,	Translation process might eliminate vital data.	Locally applicable; Provide knowledge for service providers to improve maternal & childcare services, safe motherhood care, peer education and stuff in-service, Recommend further research.
7	Ith, P., et. al (2013) Women's perspective of maternity care in Cambodia	This study intends to investigate women's choices of facilities influenced by	A convenient sampling used to select 30 women With birthing experiences.	Qualitative Descriptive: In-depth interview using semi structured question; Analyses:	Factors: Staff attitude, health care cost, support person	First; Study setting was next to maternity section and researcher was identified by participants as	Provide knowledge for improve health care services, staff attitude

		their perception of safety in Cambodia.	Setting: One place in Cambodia	Thematic Analyses		care providers (Dr) hence could be level of power shift – result in bias results. Secondly; Comment on maternity care as quality could not be real as most women with low education and level of misinterpretation of type of care provided Participants restricted to women.	
8	Essendi, H., (2015) Infrastructural challenges to better health in maternity facilities in rural Kenya: Community and health worker Perceptions	This study aims to investigate factors that challenges care seekers accessing facility and challenges care providers while providing the maternity care	Community: Women, men, church leaders, stakeholders 18 – 59-year women, 18 – 60-year men, In Kiton yoni and Mania in Eastern Kenya	Qualitative; Key informant interview and focus group. Data Analyses: Thematic Analyses	Challenges; infrastructural; lack of electricity, water, poor road, personal; poverty- lack of finance, as result; no around a clock care, inadequate skilled personnel.	Limitation Focus group interview not audiotaped. Manual data analyses could result in loss of data	Provide knowledge for infrastructure improvement, knowledge for rural health care improvement, knowledge on importance of having skilled staff in rural areas
9	Machira, K., & Palamuleni, M., 2018. Women's perspectives on quality of maternity health care services in Malawi	This study intends to investigate women's understanding of maternity care service in Malawi	Purposive selected: 58 women	Qualitative Descriptive: FGD using semi structured questions	Factor: Distance, Staff attitude, lack of medical resources	Level of Conflict of interest; interview at facility, Power relation: interviewer were government officials, Interviewer men; no detail information mentioned	Provide knowledge: equipped health facility, information on staff attitude, Information for need of further research
10	Sychareum, V., et al 2016. Perceptions and understanding of pregnancy, antenatal care and postpartum care among rural Lao	This study intends to identify cultural beliefs and practices surrounding pregnancy and birthing practices to encourage facility birthing	Purposive selection: 43 women with past pregnancy experience;	Qualitative Descriptive: FGD, unstructured question, Indepth interview; semi structured questions	Factors: Time – care of older children, financial constrain, cultural influences perception of healthy facility practices to be bad practices eg. Belief that	Finding is ungeneralizable even though has high number of participants. Male researcher on female participants could have level of social desirability bias	Provide knowledge that enable awareness of harmful practices hence improve health care services, provide knowledge for family support to encourage safe birthing,

	women and their families				colostrum is unclean for newborn.		knowledge for further research
11	Vallely et. al (2015) Childbirth in a rural highland's community in Papua New Guinea: A descriptive study	Describes women's experiences of child birthing in community setting and cultural beliefs and practices that influence the birthing	51 women 26 men In FGD 21 women & 5 men (Key informant) Eastern Highlands Province, rural PNG	Qualitative: Focus group discussion and In-depth Interview Analyses: Content Analyses	Participants show awareness of safe birthing at facilities. However, more community birthing in isolation which are influenced by cultural beliefs & practice. Traditional and spiritual beliefs for complicated birthing, involve unsafe practices.	Restricted to men and women (Should involve villager leaders and elders/ church leaders/ stake holder who can have impact changing bad cultural).	Provide knowledge for strengthening health promotion services and improving health services, knowledge for need of further research
12	Mugo, NS., et at 2018 The system here isn't on patient's side – perspectives of women and men on the barriers to accessing and utilizing maternal healthcare services in South Sudan	This study aims to identify barriers that women encounter when trying to use maternal health services	Purposive sampling: 30 women with 3 months old neonates 15 men	Qualitative; Descriptive; FGD and indepth interview using unstructured and semi structured questions	Factors: Financial, security purposes, cultural beliefs, transport barrier, lack of infrastructure, lack of medical supplied & equipment's, distance, precipitate labour	Impossible to explore perceptions of all women in all facilities due to limited study budget and security reasons	Provide knowledge; strengthening of law & order enabling safety, Provide knowledge to improve health care services, knowledge on harmful home birthing, recommend further research

Appendix 7: Ethics Approval Notice

Dear Paula Zebedee

The Chairperson of the Social and Behavioral Research Ethics Committee (SBREC) at Flinders University has reviewed and approved the modification request that was submitted for project 8133. A modification ethics approval notice can be found below.

MODIFICATION (No.1) APPROVAL NOTICE

Project No.:	**8133**
Project Title:	Qualitative descriptive study of decision-making factors that influence women and men's choices towards place of birth in rural Western Highlands of Papua New Guinea
Principal Researcher:	Ms Paula Zebedee Aines
Email:	zebe0002@flinders.edu.au

Modification Approval Date: 3 December 2018 Ethics Approval Expiry Date: **31 December 2020**

Appendix 8: Letter of Introduction

Ms Kristen Graham
Lecturer in Nursing and Midwifery
College of Nursing and Health Sciences Flinders University

GPO Box 2100
Adelaide SA 5001

Tel: 08 8201 3918 kristen.graham@flinders.edu.au

CRICOS Provider No. 00114A

LETTER OF INTRODUCTION

Dear Sir/Madam

This letter is to introduce Paula Zebedee Aines who is a Master of Midwifery (Coursework & Research) student at Flinders University. She will produce her student card, which carries a photograph, as proof of identity. She is undertaking research leading to the production of a thesis and journal publication which will explore the decision-making factors that influence women's and men's choices towards place of birth in rural Western Highlands of Papua New Guinea. She would like to invite women who are currently pregnant or have given birth in the last 12 months and men who are partners of women who are pregnant or have given birth in the last 12 months to be involved by agreeing to participate in an individual interview. This will require 45-60-minutes of your time on one occasion.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Since Paula intends to make an audio recording of the interview, she will seek your consent to record the interview, and to use the recording or transcription in preparing the report and publication, on condition that your name or identity is not revealed.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on +61 8 8391 2861, or e-mail kristen.graham@flinders.edu.au Thank you for your attention and assistance. Yours sincerely

Ms Kristen Graham

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number 8133). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au

Appendix 9: Information Sheet

Paula Zebedee Aines College of Nursing and Health Sciences
GPO Box 2100
Adelaide SA 5001
Phone: +614 05045341Email: zebe0002@flinders.edu.au

INFORMATION SHEET

Research Project Title
Qualitative descriptive study on decision-making factors that influence women and men's choices towards place of birth in rural Western Highlands of Papua New Guinea

Researcher
Paula Zebedee Aines
College of Nursing and Health Sciences

Supervisors: Ms Kristen Graham
Associate Professor Dr Linda Sweet College of Nursing and Health Sciences
Flinders University, GPO Box 2100 Adelaide, South Australia, 5001 Australia

Description of the study:
This research is a qualitative descriptive study on decision-making factors that influence women and men's choices towards place of birth in rural Western Highlands of Papua New Guinea. The study is being conducted by Paula Zebedee Aines, for her Masters' Degree in the College of Nursing and Health Sciences at Flinders University, South Australia.

Purpose of the Study
The purpose of this study is to explore the experiences of women and men who are currently expecting a baby or have had a baby in the past 12 months towards decision making regarding the place of birth in rural Western Highlands of PNG.

The two objectives are:
To investigate factors that influence women and men's decisions towards choosing the place of birth.
To examine the needs and expectations of women and men in relation to the birthing environment.
The purpose of this study is to understand consumer perspectives to inform policy makers and health service providers to identify better ways to encourage safe birthing, improve maternal health care and reduce maternal mortality rate in Western Highlands Province, PNG.

What will I be asked to do?

You are invited to attend a one-on-one face-to-face interview with the researcher who will ask you some questions in PNG Pidgin. These questions will relate to your birthing experience or future plans, and decision-making factors that may have influenced your place of birth. The interview will take up to 60 minutes and will be recorded using an audio recorder. The recorded information will be transcribed (written in words in English) by the researcher, and kept on a password protected computer, accessed only by the researchers. Participation is voluntarily, and you are free to cease from taking part at any time you wish to during the interview.

What benefit will I gain from being involved in this study?
You may not directly benefit. However, the result of this study will develop knowledge that will be used by service providers, and policy makers to improve health service delivery, and strengthen policy in rural Western Highlands as well as PNG.

Will I be identifiable by being involved in this study?
Your name and other personal information will not be included, which means codes will be used to represent your information. Any identifying information will be removed, and codes used to link your information to maintain confidentiality. All information and results from this study will be securely stored, with strict restriction for anyone or other researchers to access.

Are there any risks or discomfort if I am involved?
Apart from donating your time, there are no anticipated serious risks or burdens, as this study aims to explore your experiences about your births. However, if you become upset due to negative past birth experience, you can stop the interview. If you will need a support person, Pastor Jeffery Landu, a Seventh-day Adventist (SDA) Pastor of Kumdi SDA Church is available to provide support to you. He can be contacted on phone: 761699354

How do I agree to participate?
Participation in this study is voluntarily. If you are willing and want to voluntarily participate, please read thoroughly and understand this information sheet, and sign the consent form that accompanies this information sheet. After you sign the consent form, give the signed consent form to the researcher by yourself and keep the information sheet.

Recognition of contribution/time/travel costs?
To reimburse your time and travel cost to participate in this study, a contribution of K50 will be given to you at the commencement of the interview.

How will I receive feedback?
You will not receive direct written feedback. However, you may request a copy of your audio record or a copy of the final publication which can be emailed to you at the conclusion of the study if you provide an email address.

Thank you for your time in reading through this information sheet, and we are looking forward for your decision to accept the invitation and take part in this research.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number: 8133).

For more information regarding ethical approval of the project only, the Executive Officer of the Committee can be contacted by telephone on (08) 8201 3116, by fax on (08) 8201 2035, or by email to human.researchethics@flinders.edu.au

inspiring achievement

Appendix 10: Consent form

CONSENT FORM FOR PARTICIPATION IN RESEARCH (By Interview)

Exploring women and men's experiences on decision-making factors that influenced their choices towards place of birth in rural Western Highlands of Papua New Guinea

I ….....
being over the age of 18 years hereby consent to participate as requested in the semi-structured interview for the research project title: **Exploring women and men's experiences on decision-making factors that influenced their choices towards place of birth in rural Western Highlands of Papua New Guinea.**

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my information and participation.
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
5. I understand that: • I may not directly benefit from taking part in this research.

- Participation is entirely voluntary, and I am free to withdraw from the project at any time; and can decline to answer particular questions.
- The information gained in this study will be published as explained, and my participation will be anonymous and confidential.
- Whether I participate or not, or withdraw after participating, will have no effect on any treatment or service that is being provided to me.
- I may ask that the audio recording be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.

Participant's signature…… Date……...

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Researcher's name: Paula Zebedee Aines

Researcher's signature……....Date…….

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number 8133). For more information regarding ethical approval of the project please contact the Executive Officer on (08) 8201-3116 or human.researchethics@flinders.edu.au

Appendix 11: Interview Guide

College of Nursing and Health Sciences
GPO Box 2100
Adelaide SA 5001

Project title

Qualitative descriptive study on decision-making factors that influence women and men's choice towards place of birth in rural Western Highlands of Papua New Guinea.

Introductory Information Check

Check and ensure that participants have read or understand from researcher's explanation the information on the information sheet.
Ensure that consent form has been signed or indicated with a fingerprint (participants unable to sign), or record verbal consent. Ensure additional questions are answered.

Part: 1. Demographic data

Gender and age
Current role (Employed or farmers)
Source of income
Educational background
Distance from community to nearest health facility

For participants who are already parents Obstetric History

Number of children
Age of the last child
Birth place of the children

Open questions

1. Please tell me about your most recent birth? (Prompt: Was there any complications? what where they? What about your other births? What happened with them?)

2. Where did you birth your last baby? (Prompt: Why did you choose that? Did you choose place yourself or did someone encourage you to choose the place of birth? What was experience like for you?)

3. Who were your support people at the time of birth? (Prompt: What role did your pa have? What about your family or friends – where they supporting you too?)

4. What traditions did you follow in your birth?

5. If you will have another baby in future, where would you birth the next time? (Prompt: would you choose that? Would you consider birthing in a health centre? Why/Why not

For participants who are not yet parents (but pregnant/expecting)

1. Please tell me about your plans for your birth? (Prompt: What are your expectations and desires for birth? What has influenced your decision fort this? Have your decisions influenced by the experience of others?)

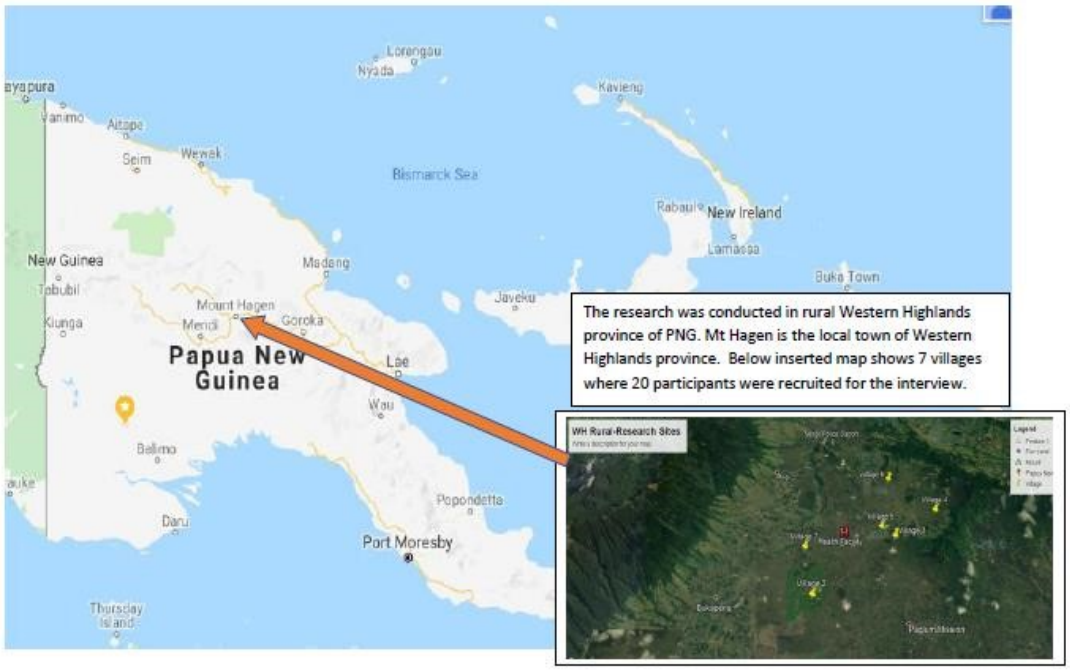
2. Where will you (or your partner) birth your baby? (Prompt: Why did you choose location? Did you choose that place yourself or did someone encourage you to choose place of birth? Would you consider birthing in a health centre? Why/Why not?)

3. Who do you want to be with you and your partner at the time of giving birth? (Prompt: role would your partner have at the time of your birth? What about your family or friends - will they be supporting you or your partner too?)

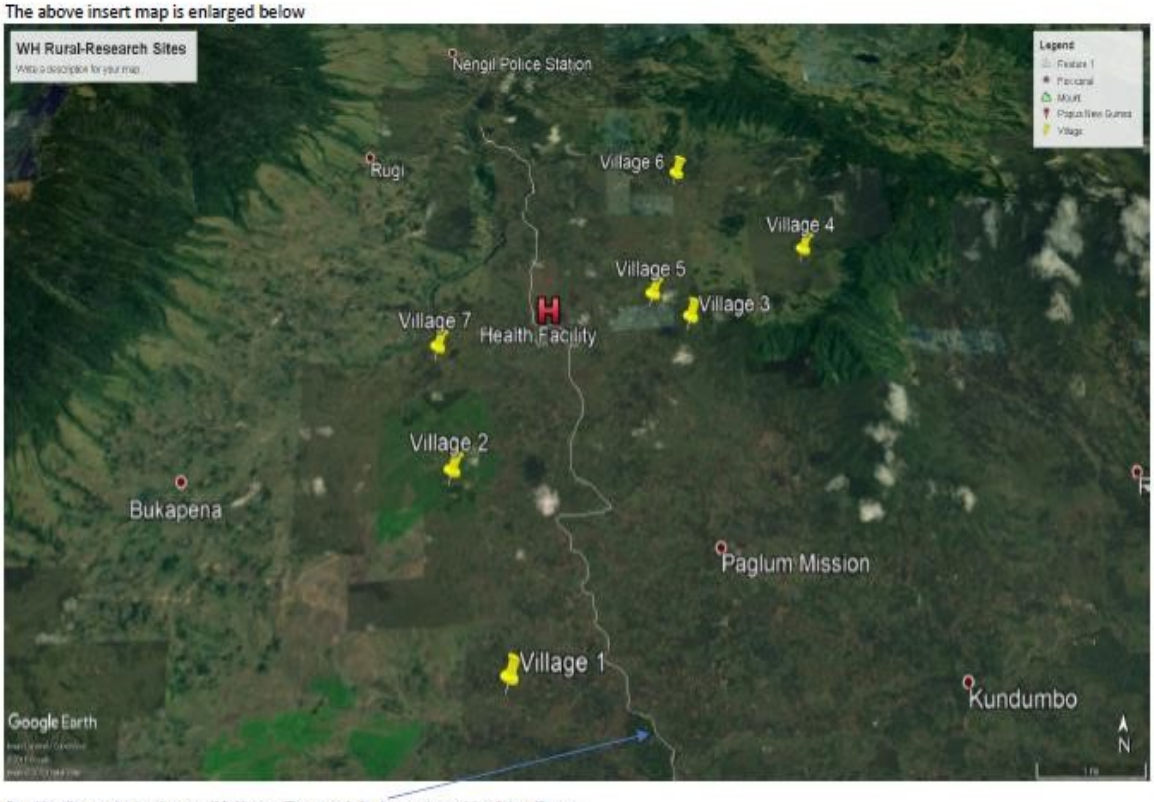
4. What traditions will you follow in your birth?

Appendix 12: Map indicating research site (7 villages)

Map showing research site – Rural Western Highlands of PNG



The above insert map is enlarged below



Road leading to the local town – Mt Hagen. The town is in the southern side of the villages.