UNDERSTANDING HEALTH WORKERS' VIEWS ON ADDRESSING THE UNMET NEED FOR FAMILY PLANNING IN GUADALCANAL, SOLOMON ISLANDS

Sahra Kress

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Declaration

Declaration Concerning Thesis Presented for
the Degree of Master of Midwifery

I, Sahra Kress, solemnly and sincerely declare, in relation to the thesis entitled:

Understanding health workers' views on addressing the unmet need for family planning in Guadalcanal, Solomon Islands

(a) That work was done by me, personally
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Date: 18th December 2020

ABSTRACT

Rationale: This study supports access to family planning based on evidence that impacts of contraceptive use range from improved health to socioeconomic benefits and sustainable development. This study hears from health workers providing essential family planning care to women and their families in Guadalcanal, Solomon Islands. This region was chosen for this study as it has a subnational disparity of highest unmet need for family planning in the Solomon Islands. The aim was to understand health workers' perspectives on barriers to contraception in this region, and to hear their proposed solutions.

Design: This study was based on an exploratory descriptive research approach using a survey method. In particular, the survey was designed to explore health workers' perspectives on Long-Acting Reversible Contraception (LARC) in their communities. Fifty-six surveys comprised of 32 open-ended and closed-ended questions were completed and analysed.

Results: Health workers identified multiple structural, social, and service-driven barriers to meeting the contraceptive needs of women in their communities. Structural barriers include gender inequity and religious influence. Barriers that may be more amenable to influence include misinformation and fear about contraceptive side effects; contraceptive stigma; and access to contraceptive training and education for health workers. Health workers expressed eagerness to address the unmet need for contraception in their communities and are a resource that should be prioritised in programmes seeking to expand access to contraception in the Pacific region. Health workers are embedded in their communities and insightful about health service complexities in their settings. They identified solutions including increased access to education and LARC training; increased efforts in raising community awareness and ways of encouraging contraceptive acceptance; and a continued investment in enabling environments- for health workers, and for women.

Conclusions: This study affirms health workers as a key resource in addressing the unmet need for contraception in Guadalcanal, Solomon Islands, and calls for programme and policy solutions informed by their perspectives. The two main priorities they emphasised to help tackle the persistent problem of unmet need for contraception are an increase in their capacity

to provide contraceptive implants, and an increase in community education to boost acceptance of family planning care from women and their families.

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Having an idea and turning it into a successful project, and finally a completed research study, was even more challenging than I expected. The memories of my data collection trip will forever remain with me as true highlights in my life. The world is a better place thanks to people who want to develop and form connection with others. What makes it even better are

people who share the gift of their time, their passion, their inspiration, and creativity. This project is an expression of the vision for a more connected world.

GLOSSARY

Contraception: modern contraceptive methods are defined as "a product or medical procedure that interferes with reproduction from acts of sexual intercourse" (Hubacher & Trussell, 2015, p. 420).

CPR- Contraceptive Prevalence Rate: is measured as the percentage of women who report themselves or their partners as using at least one contraceptive method of any type, modern or traditional (World Health Organisation, 2020).

Demand Satisfied: is defined as the percentage of women of reproductive age (15−49 years) who are sexually active and who have their need for family planning satisfied with reliable methods: CPR + Unmet Need (UNFPA, 2019). Global consensus suggests 75% demand satisfied is necessary to meet Sustainable Development Goals (WHO, 2020).

Family Planning: allows individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. It is achieved through use of contraceptive methods and the treatment of involuntary infertility. A woman's ability to space and limit her pregnancies has a direct impact on her health and well-being as well as on the outcome of each pregnancy (WHO, 2020).

High Impact Practices (HIPs): for family planning are a set of evidence-based strategies to help programmes prioritise resources for greatest impact They include a focus on enabling environments, service delivery, and social and behavior change (John Hopkins University, 2020).

LARC- Long-Acting Reversible Contraceptives: are methods of contraception which provide effective birth control for an extended period of time without requiring user action and include intrauterine devices (IUDs) and contraceptive implants, as well as the shorter-acting (3 month) depo injection (Sobel, 2019).

Reproductive Justice: is the human right to maintain personal bodily autonomy, have children, not have children, and parent children in safe and sustainable communities (Ross & Solinger, 2017).

Total Demand for Family Planning: is defined as the sum of the number of women of reproductive age (15-49 years) who are married or in a union who are currently using contraception and want to delay or limit childbearing, and those with unmet need (seeking to stop or delay childbearing but not using contraception) (UNFPA, 2019).

Unmet Need: for family planning is defined as the percentage of women of reproductive age, either married or in a union who want to stop or delay childbearing but who are not using any method of contraception to prevent pregnancy. The concept of unmet need points to the gap between women's reproductive intentions and their contraceptive behaviour (UNFPA, 2020).

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CHAPTER ONE: INTRODUCTION TO THE RESEARCH STUDY

1. Significance of family planning

Family planning is recognised globally as both a health and a human rights issue. Every aspect of well-being, from women's health and secure infant bonding, to strengthening outcomes in education, gender equality, employment, economic independence, and sustainable development is linked to family planning (United Nations Fund for Population Activities, 2020). Family Planning has been affirmed as fundamentally concerned with the empowerment of women (Family Planning, 2020). Evidence clearly shows that access to contraception leads to both mothers and babies being healthier by ensuring births are well spaced, family size is limited, and that women do not give birth at the extremes of age (World Health Organisation, 2020). Contraceptives prevent unintended pregnancies, reduce the number of abortions, and lower the incidence of maternal death and disability related to complications of pregnancy and childbirth (UNFPA, 2020). In addition, planned pregnancies allow greater chances for children to survive and thrive (Dyer & Etue, 2015; O'Connor, 2018). For example, when women give birth separated by less than two years, the infant mortality rate is 45% higher than it is when births are 2-3 years apart and 60% higher than it is when births are four or more years apart (WHO, 2020).

At the initial International Conference on Population and Development (ICPD) in 1994 diverse views on human rights, population, sexual and reproductive health, gender equality and sustainable development merged into a global consensus that placed individual dignity and human rights, including the right to plan one's family, at the very heart of development (UNFPAa). Since then, it is globally recognised that fulfilling the rights of women and girls is central to development. A quarter of a century later, the world has seen remarkable progress, but progress has still been slow and uneven. Hundreds of millions of women around the world are still not using contraceptives to prevent unwanted pregnancies, and global targets on reducing maternal deaths have not been met (UNFPA, 2020a).

In November 2019 more than 8,000 delegates, representing governments, advocates, health organisations, women's and youth activists and others, from more than 170 countries gathered for the ICPD Summit in Nairobi and again emphasised that reproductive rights and gender

equality are cornerstones of successful population and development programmes (UNFPA, 2020a). A variety of population issues were discussed, including contraception, family planning, the education of women, immigration, protection for women from unsafe abortion services, and infant mortality. The ICPD's Programme of Action is a steering document for the United Nations Population Fund (UNFPA) (Latu & Nusair, 2017; UNFPA, 2020a). Similarly, the World Health Organisation (WHO) emphasises the role of family planning in advancing several human rights including the right to life and liberty, freedom of opinion and expression, the right to work and education, as well as bringing significant health benefits (WHO, 2020).

2. Understanding 'unmet need' for family planning

Family planning is a key factor in reducing poverty. Yet in developing regions[1], an estimated 217 million women who want to avoid pregnancy are not using safe and effective family planning methods for reasons ranging from lack of access to information and services to lack of support from their partners or communities (UNFPA, 2020). This threatens a woman's ability to build a better future for herself, her family, and her community. In the Pacific region access to and use of contraception[2] lags behind other developing regions (Tiebere, 2019). Concerningly, there are reports that in some countries the prevalence of contraceptive use is actually reducing (Latu & Nusaire, 2017; Tiebere, 2019).

Need for contraception globally is especially high among certain groups including unmarried adolescents, urban slum dwellers, refugees, women in the postpartum period, and married young girls (FP2020, 2019). Use of contraception also varies dependent on economic inequities within a population (Tiebere, 2019). The differences in maternity mortality and morbidity outcomes between the rich and the poor, both within and between countries are greater than for any other area of healthcare (Mola, 2017).

Family planning care has been described as a health promotion service in that the focus is on prevention of harm. Dr Glen Mola, obstetrician/gynaecologist in Port Moresby, Papua New

[1] 'Developing' is a term used by international organisations such as the UN and WHO, and although I am aware that there are complexities around the concept of 'developing regions', I have chosen to use this term to align with international organisations.

[2] Including pills, implants, depo injections, intrauterine devices, surgical procedures, and barrier methods such as condoms (UNFPA,2020)

Guinea, sums up the evidence well when he states that "Time spent on family planning counselling can be as effective in preventing maternal death as is antenatal, intrapartum, and postnatal care" (Mola, 2017, p.324).

Family planning services therefore must address the 'unmet need' for contraception. 'Unmet need' is defined by UNFPA as the proportion of women of reproductive age who desire to delay childbearing or wish to stop having further children but are not using an effective method of contraception. Therefore, an unmet need is the gap between a woman's childbearing intention, and her contraceptive use (UNFPA, 2020).

Internationally it is recognised that the United Nation's Sustainable Development Goals (UN, 2015) cannot be achieved with a continuing unmet need for contraception. The Sustainable Development Goals (SDGs) were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030. The goals are integrated; that is, they recognize that action in one area will affect outcomes in others, and that development must balance social, economic, and environmental sustainability (UN, 2015).

Family planning can be linked to most SDG goals. Latu and Nusair (2017) highlight that it will be impossible to end poverty and hunger, ensure quality education for all, promote sustainable economic growth, enhance good health and well-being, achieve gender equality, invest in environmental protection, and promote equality for all without ensuring that every woman has access to effective contraceptive services.

3. Context of this research

To date, a lack of equitable access to family planning services remains a challenge for the Solomon Islands as for much of the Pacific (UNFPA, 2019). The Solomon Islands are made up of over 900 islands and atolls, with 80% of the population living dispersed throughout the islands. According to the Solomon Islands Health System Review (Hodge et al., 2015).

Estimates of contraceptive coverage for the Solomon Islands range widely, from 19% Contraceptive Prevalence Rate (CPR) reported by the global organisation Family Planning 2020 (FP2020, 2020) to UNFPA data that estimates a 32% CPR (UNFPA, 2019). In 2019 it was estimated that for the Solomon Islands there were 12,000 unintended pregnancies (FP2020, 2019). Family planning in the Solomon Islands is discussed further in Chapter Two.

In the UNFPA report 'Consultation on ending unmet need for family planning' (2019), it is noted that in Solomon Islands there is substantial disparity in unmet need by region. Guadalcanal has been identified as the region with a "disparity of highest unmet need" (UNFPA, 2019, p. 4). Region specific research to understand the complex reality for health workers tasked with providing family planning services is minimal. Current knowledge about access to contraception is limited, with the most recent investigation being a UNFPA survey assessing availability of 'commodities'- the supply chain of contraceptive products (UNFPA, 2019a).

Through consultation with UNFPA staff in the region, a research gap became evident. This study was designed to hear from health workers in Guadalcanal, the region of highest unmet need for family planning in the Solomon Islands, and understand their views on barriers to contraception, along with their proposed solutions. Health workers' views on access to long-acting reversible contraceptives[3] (LARC), particularly contraceptive implants, were a focus for the study given the emphasis placed on these methods in UNFPA programmes. UNFPA implemented training for contraceptive implants in Guadalcanal in 2015, so this research sought to explore why a greater uptake of effective contraception has not been seen since then. This study was designed to help contribute to addressing the unmet need for contraception and increasing the contraceptive prevalence rate in Guadalcanal by understanding health workers' views. This study's aim is to support access to family planning, by improving support for health workers as they provide essential family planning care.

[3] LARCs are methods of contraception which provide effective birth control for an extended period of time without requiring user action and include intrauterine devices (IUDs) and contraceptive implants (Roberts, 2020), as well as the shorter acting (3 month) depo injection (Sobel, 2019).

4. The big picture: reproductive justice, human rights, and the environment

Reproductive justice advocates for women to make decisions about their own reproduction and emphasises the right of reproductive decision-making as a benefit afforded to all women regardless of their circumstances (Ross & Solinger, 2017). In undertaking this study, I acknowledge the challenges declared by reproductive justice advocates who were originally women of colour and indigenous women critical of the way that white Western feminists framed reproductive politics in ways that ignored social justice issues and over-emphasized the desire to prevent pregnancies. Reproductive justice says that action to address reproductive rights must attend to the social, environmental, and political circumstances in which people live, must preserve the dignity and autonomy of people, and focus on the right to have a baby, not have a baby, and to parent children in safe and healthy communities (de Onis, 2012; Ross & Solinger, 2017). I see this research as part of a much bigger matrix of intersecting concerns about reproductive, social, and environmental justice that are about ensuring people have the resources to not have children, to have children, and to parent those children in healthy, safety, and thriving communities.

Many human rights struggles have been about fighting discrimination. However, human rights go beyond countering discrimination and are also about improving the lives of everyone. Human rights are about fairness and respect. They dignify individuals and empower communities. The United Nations have promised to advance civil, political, social, and cultural rights, the right to a safe environment, and the rights of indigenous peoples (UN, 2017). This broad understanding of human rights reflects what humans' value. The focus of human rights must be on improving the lives of everyone (Hunt, 2020). In 1968 the International Conference on Human Rights affirmed family planning globally to be a human right (UNFPA, 2020).

Communities in Small Island nations are on the frontlines of the climate emergency and often have little resilience to disasters (UN, 2019b). The world faces pandemics, recession, deepening poverty, widening inequality, foreign interference in democracies, under-regulated social-media that openly incites violence, and climate change with potential flow-on effects of migration crises and conflict (Hunt, 2020; Renwick, 2019). This accumulation of challenges threatens the wellbeing of billions of people, especially the disadvantaged, and blights the future particularly for young people (Stephenson, 2020). This is a time when human rights need

to be upheld and strengthened in pursuing solutions to immensely complex problems. As Paul Hunt, New Zealand's Human Rights Commissioner states, "we need to clarify our values and build on the evidence of what works" (2020, p.20).

Given the global regions that are experiencing population growth, tackling the issue of climate catastrophe involves addressing and working through complex issues. It is acknowledged that the issue of contraception is connected to broader global challenges to secure human rights. Addressing climate change is a complex task that requires multifactorial solutions at all levels and one of these will need to include regionally specific strategies to address population growth. Scientists from around the world have warned of untold suffering resulting from the climate emergency and called for urgent action (Ripple et al., 2019). They stated that "Populations must be stabilized. Strengthening human rights, including making education a global norm for all, especially girls, are ways to stem population growth" (Stephenson, 2020, p.32).

5. Meeting the challenge: high impact practices and prioritising family planning

Family planning programmes aim to support individuals and couples in exercising their rights to choose the timing and spacing of their pregnancies, to have the information and services to act on that right, and to be treated respectfully, equally, and without discrimination (UNFPA, 2020). High impact practices are a set of evidence-based family planning practices vetted by global family planning experts to boost contraceptive use (Johns Hopkins University, 2020). The recommendations focus on resources for greatest impact. Evidence of replicability, scalability, sustainability, and cost-effectiveness of family planning services are also considered in addition to practical effectiveness.

Community health workers are identified as a key asset for the implementation of high impact practices. They are there to support community empowerment (Johns Hopkins University, 2020). Bhutta et al. from the World Health Organisation sum up the essential role of health workers by noting that health workers provide the critical link between their communities and the health and social services system (cited in Johns Hopkins University, 2020a).

In 2012 Solomon Islands joined a United Nations based global initiative of multilateral partnerships called Family Planning 2020 (FP2020). This is a global community of leaders, experts, advocates, and implementers who are working together to address the most challenging barriers to expanding access to contraceptives, with a country-specific focus. FP2020 aims to mobilise the international community to invest in family planning based on evidence that impacts of contraceptive use lead to improved health, socioeconomic, and environmental outcomes (Latu & Nusair, 2017). The Solomon Islands government is committed to making family planning a priority as part of improving service quality and coverage and strengthening partnerships (Solomon Islands Ministry of Health and Medical Services, 2015).

Despite Solomon Islands government's efforts to prioritise family planning since the 2012 commitment, the latest data from UNFPA (2019) suggests that a high unmet need for family planning in the Solomon Islands continues. Although figures vary, FP2020 similarly report a high unmet need (30.9%) for Solomon Islands (FP2020, 2019). Regional disparity shows highest unmet need of 39% in Guadalcanal Province, and lowest unmet need of 32% in Western Province (UNFPA, 2019). In order to address these challenges, it is the premise of this study that community health workers, as a proven asset for implementing high impact family planning services, play a vital role in developing, reviewing, disseminating, and implementing family planning care to meet the high need in their region.

6. Aim, scope, and significance of this research project

The aim of this study was to help address the unmet need for contraception in Guadalcanal, Solomon Islands, by hearing from those who provide family planning care. This study sought to understand health workers' views of the barriers to family planning and their proposed solutions to increasing access to contraception. The scope of this research was limited to the region of highest unmet need in the Solomon Islands. Using a questionnaire, this exploratory study investigated health workers' views of the role long-acting reversible contraceptives (LARC) may play in responding to the unmet need for contraception. This research focused on contraceptive implants as they are the focus of UNFPA efforts, and due to their effectiveness, reliability, and reversibility, which are especially beneficial for rural communities (see Chapter Two).

Health workers are a significant piece of the puzzle that is currently missing in making sense of the unmet need for contraception in Guadalcanal Solomon Islands and this research intended to add that missing perspective. The questions in this survey had not been formally asked in Solomon Islands research to date. Without this knowledge, the ability of contraceptive programmes to effectively support health workers' practice was limited. This research commenced the process of exploring health workers' views with the goal of stimulating further discussion. This discussion enabled the current situation to be brought to the fore and supported reflection on both individual practice and interagency support to help increase access to contraception for women who want it.

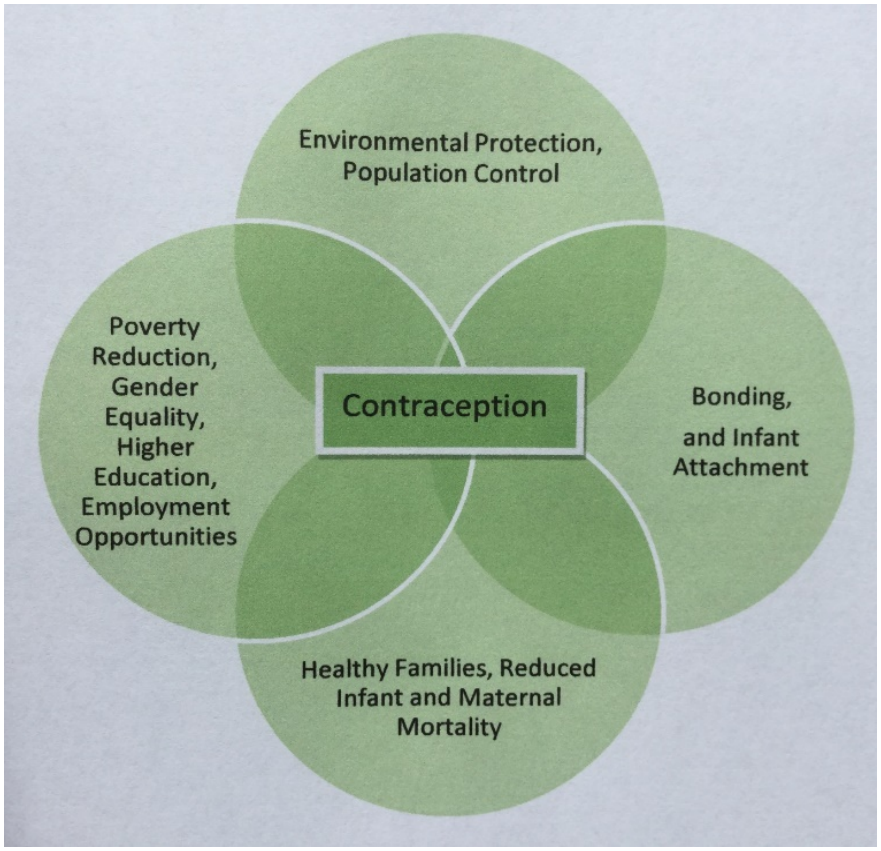
7. Personal inspiration

Since 2006 on a near annual basis I have visited remote areas of the Pacific in Papua New Guinea, Vanuatu, and the Solomon Islands, providing voluntary maternity care and teaching emergency skills. I have been deeply touched by the indigenous Melanesian people, by their traditions, strength, and resourcefulness. I have also been affected by witnessing the raw suffering that stems from poverty.

During a conference in 2017 on Pacific reproductive healthcare in Port Vila, Vanuatu, I realised the true significance of family planning and reproductive justice. I have always felt passionate about individuals' rights to control their own reproductive lives, and every person's autonomy in choosing their life path. There is no greater impact on one's life than the birth of a child, and to choose when, with whom, or whether to become pregnant is one of the most important decisions to make in determining one's future, and the future of that child. What became evident to me through conference presentations on population health strategies, was just how important the role of family planning is for wider society (see Chapter Two). Without full decision-making power to control their fertility, women cannot achieve gender equity, higher education, or pursue employment opportunities. Having too many babies puts women's lives at risk, their children are more likely to die in infancy, natural resources are depleted by overpopulation, and poverty threatens wellbeing.

As I began to weave together an understanding of the significant impact of family planning on both micro and macro issues, the image of a Venn diagram took shape in my mind. Family planning and contraception have a role to play in: health; human rights; environmental justice; and infant attachment and love. To be able to construct a study that covers my most keenly felt priorities was a privilege and a worthy project to pursue.

Working in New Zealand as well as the Pacific towards improving health and the pursuit of greater equity has given me inspiration and a keen appreciation for the significance of the relationships between health practitioners, and women and their communities. At the very core of my work and my passion in life is an ultimate dedication to love. Through my work as a midwife, I have the opportunity to use my heart and my hands to offer love at every encounter. What I dedicate my life to is supporting the protective power of maternal love: the attachment that will give that child the foundation of confidence from which to grow into a compassionate, secure, and loving person. Choosing when best to become a mother requires informed decision-making power and access to quality family planning services.



Source: author

Optimal parenting requires a safe and secure environment. Now more than ever, we need fair treatment and meaningful involvement of all people with respect to development and enforcement of protecting our environment (Ingram, 2019). This forms the final circle of my

Venn diagram, which has been the visual representation of my passion for this research project. The environment of this precious planet is so fragile, with such threat from conflict and exploitation, that I feel overwhelming concern. It will require compassion and action at this time to find sustainable ways of co-existing peacefully on this planet. Reproductive, social, and environmental justice are essential principles underpinning any cohesive society and support any hope for a sustainable future.

8. Overview of thesis chapters

This thesis is divided into five chapters.

Chapter One has presented an introduction to the topic and the rationale for undertaking my study.

Chapter Two presents an overview of issues related to access to contraception for women in the Pacific region and sets the context for this study. It explores the international literature relating to unmet need for family planning. This chapter explores the consequences for women's health and the significant benefits for the wider community resulting from access to contraception.

Chapter Three presents the rationale for choosing the methodological framework underpinning this research. Ethical implications, data collection process, and methods of data analysis utilised in this study are described.

Chapter Four presents the descriptive analysis of the survey data and sets out the health workers' responses and demographic data. Factors that influenced health workers in their ability to provide LARC, as well as their views, knowledge and confidence are reported.

Chapter Five discusses the findings of the study. The limitations of the research are examined and areas for future support and research are considered.

Summary

Access to safe, voluntary family planning is considered a human right. Family planning is central to gender equality and women's empowerment, and it is a key factor in reducing poverty. In this first chapter I have presented an introduction to the research project and explained the rationale for undertaking this study. I have provided a brief overview of family

planning ‘high impact practices’ and outlined the Solomon Islands commitments to prioritising family planning. The aims and scope of this research study were presented. I described what led to my personal inspiration to pursue this project. Finally, I presented an outline of the structure of this thesis. In the next chapter, I will present my literature review which forms the foundation for my research study.

CHAPTER TWO: LITERATURE REVIEW

During the process of exploring the existing literature relating to contraceptive use in the Pacific region and specifically the Solomon Islands, four key themes were identified: addressing the unmet need for family planning; high need and limited resources; barriers to contraceptive use; and meeting contraceptive need. The following chapter is structured around these four themes and concludes with a discussion of key gaps in the literature which form the basis for my research.

1. Addressing unmet need for family planning

The ability to decide freely the number, spacing and timing of children is a fundamental human right with proven benefits for the health of women and children. Reducing global unmet need for contraception would prevent around 30% of maternal deaths and reduce child mortality by up to 20% (WHO, 2020). Additionally, family planning contributes to universal education, women's empowerment, prevention of HIV, poverty reduction, economic independence, and environmental sustainability, making it one of the most cost-effective global health and development interventions (Kennedy et al., 2013).

The challenge is to address the unmet need for reliable contraception. In this section I will discuss the role of family planning for achieving the United Nations Sustainable Development Goals, consider the impacts of contraception on mortality and morbidity, look at trends in contraceptive coverage for the Pacific region, and finally consider what the literature says about other determinants that affect women's contraceptive knowledge and behaviour.

What is unique about contraception is that the impacts of its use are so multi-dimensional. They range from micro to macro factors, from the very personal, to societal and environmental outcomes. As described in Chapter One, impacts span from individual life choices, health outcomes and educational and employment opportunities, to contributing towards a productive society and sustainable environment. These impacts are evident throughout the literature and will be explored further.

1.1 Sustainable Development

The issue of unmet need for contraception is emphasised in the United Nation's Sustainable Development Goals (UN, 2015). As Latu and Nusair (2017) point out, family planning can be linked to most goals. For example, it will be impossible to end poverty and hunger (goals 1 and 2), ensure quality education for all (goal 4), promote sustainable economic growth (goal 8), enhance good health and well-being (goal 4), achieve gender equality (goal 5), invest in environmental protection (as addressed through goals 6, 7, 11, 12, 13, 14, and 15) and promote equality for all (as addressed by gaols 10 and 16) without ensuring that every woman has access to effective contraceptive services. UNFPA suggest a target of 75% Contraceptive Prevalence Rate (CPR) for all countries as being the global demand for family planning met (Adedeji, 2019). Tiebere (2019) further comments that CPR between countries varies dependent on inequities within the social fabric of each country.

1.2 Impacts of contraception on maternal mortality and morbidity

Mola (2017) emphasises that the differences in maternity outcomes between the rich and the poor, both within and between countries are larger than any other area of healthcare. Pacific Island countries are facing increasing populations, with fertility rates of between four to six children or more per woman, compared to New Zealand and Australia where women commonly have two children (Mola, 2017). High fertility rates increase the risks for each successive pregnancy. Some Pacific Island countries, particularly in Melanesia, have among the highest rates of maternal mortality in the world, emphasising the importance of meeting contraceptive need (Mola, 2017; Robertson, 2007). As Mola states, "If you do not get pregnant, you cannot die from birth complications" (2017, p.323).

Contraceptives prevent unintended pregnancies, reduce the number of abortions, and lower the incidence of maternal death and disability related to complications of pregnancy and childbirth. If all women in developing regions with an unmet need for contraceptives were able to use reliable methods, maternal deaths would be reduced by about a quarter, according to recent estimates by UNFPA partners (UNFPA, 2020). According to Mola (2010), there is substantial evidence that there is little need to convince women of the benefits of contraception, and that family planning is an aspect of health care that Pacific women seek.

De Silva et al. (2019) conducted a retrospective review of all maternal deaths at Honiara National Referral Hospital, Solomon Islands, over a five-year period (2013-2017). They found "a maternal mortality rate of 130/100,000 live births" (De Silva et al., 2019, p.31). This compares with Australia and New Zealand's maternal mortality rate of 6-9 deaths per 100,000 live births, which in 2019 is the "region with the lowest mortality" (UN, 2019c, p. 22). In the review, De Silva et al. (2019) determined that 79% of maternal deaths at Honiara National Referral Hospital were preventable. They concluded that access to resources and training for health workers is vital.

International organisations such as UNFPA (2017) and WHO (2020) present contraception as a primary prevention strategy for maternal mortality. Family planning through contraceptive use is certainly the most cost-effective strategy to prevent maternal mortality and morbidity (Latu, 2017). Time spent on counselling and providing contraceptive care has been statistically shown to be as effective in preventing maternal death as antenatal, intrapartum, and postnatal care (Kennedy et al., 2013). By substantially reducing unintended pregnancies and high-risk births, including those of adolescent girls, it is estimated that more than 1,200 deaths in the Solomon Islands would be averted over 15 years (Kennedy et al., 2013).

There is evidence that the type of contraception matters. Sobel (2019) reported that in a study undertaken in eight Pacific Island countries, 31% of women using short term methods (pills, condoms) would get pregnant, but only 3% would get pregnant if using long-term methods (e.g. LARC). Sobel (2019) noted that 56% of women were using no family planning method at all, and that the chance of pregnancy without any contraception meant that 85% of women will be pregnant within a year. According to the Guttmacher Institute (2019) which studies unplanned pregnancy, a sexually active teen who does not use contraception has a 90% chance of becoming pregnant within a year. In regard to effectiveness of various LARC, Sobel (2019) reported that of women using the depo injection, 1 in 17 women would get pregnant, compared to 1 in 2000 women using a contraceptive implant. Sobel (2019) concludes by saying that women have a right to choose, but we should guide them with information about effectiveness of different methods of contraception. It is clear that for reliability the evidence supports use of long-acting contraceptive methods (e.g. LARC) over short term methods (e.g. pills).

The impact of family planning on women's emotional and mental health are barely mentioned in the literature reviewed. However, these impacts are equally valid and important considerations if the health of women is viewed holistically.

1.3 Trends in contraceptive coverage for the Pacific region

According to Latu (2017), and Bateson (2017), the unmet need for contraception in the Pacific region ranges from 20% to as high as 50%. In their 2019 report on trends in unmet need and contraceptive use in Solomon Islands, Vanuatu, and Samoa, Tiebere et al. (2019) explain that the unmet need for contraception in these countries has gone up over the last decade.

Tiebere (2019) estimates that in the Pacific region the unmet need for family planning is among the highest in the world. Data for most Pacific countries is outdated, and only three countries even collect key data points for contraception. The findings from her UNFPA data review of Solomon Islands from 2006 to 2015 showed an unmet need increase from 11.1% to 34.7% across those years. She concludes that it is important to understand trends and variations in contraceptive prevalence rates (CPR) and unmet need across socio cultural demographic variables in order to provide guidance for family planning programmes. Tiebere (2019) further notes that reduction in unmet need does not always reflect good progress in family planning programming (as it would point to increased demand, but not necessarily 'demand satisfied') and suggests that progress is better assessed using both measures, unmet need and contraceptive prevalence rates.

Kawamata (2017) reported that 77% of women attending antenatal clinics in Vanuatu did not intend to get pregnant. Mola (2017) reported similar findings in antenatal clinics in Papua New Guinea, that nearly half of women had unintended pregnancies. Narasia (2019) states in her study on ultrasound training that around 57% of pregnancies are unplanned in the Solomon Islands. Further, she reports that only 15% of pregnant women access antenatal care in the first trimester, with high risks manifesting due to this. Similarly, Harrington (2019) reports in her study on barriers and enablers to using contraceptives for family planning at Atoifi Hospital, Solomon Islands, that in that region they face the continued challenge of low contraceptive use and high unmet need.

Daube et al. (2016) also state that Pacific countries consistently report contraception prevalence rates well below the United Nations' global averages for 'less developed' regions. This is significant when it is estimated that if all unintended pregnancies were avoided through use of effective family planning methods, as much as 50% of all maternal deaths could be averted (Cleland, 2006; WHO 2000; Withers, 2010). Similarly, a large study published in The Lancet which reviewed midwifery care in 78 countries suggested that family planning alone could prevent 57% of all maternal deaths globally (Homer, 2014). Immediate postnatal contraceptive implant insertion has been described as a priority strategy for preventing maternal deaths (Mola, 2017b).

1.4 Other determinants that affect women's contraceptive knowledge and behaviour

A recent study of 2,203 pregnant women in Fiji was conducted by Nusair (2019). Of the pregnant women interviewed, only 62% had planned their pregnancies. Around two thirds of women said they had not used contraception, and only 10% said they were reliable contraceptive users when not pregnant. When asked about where they received their knowledge about family planning, 59% mentioned health workers as their source, and 3% said from their friends. Nusair concluded that while women have a "high level of knowledge, their practice towards family planning is very poor" (Nusair, 2019, p. 40). She suggests it is important to consider other determinants that affect women's contraceptive use behaviour and to modify health promotion strategies to be culturally acceptable.

Evidence from successful family planning programmes in the Pacific region is clear: there is no need to do anything coercive, rather there is only the need to "give women and men what they want", and to give them accurate information that will allow them to safely negotiate decisions regarding their own fertility (Mola, 2017, p. 22). A number of studies (Daube et al., 2016; Kawamata and Aru, 2017; Latu, 2017; Morisause, 2017; Naidu et al., 2017; Raman, 2015) have all explored what women want in regard to family planning across several Pacific nations. The findings consistently point to factors such as lack of knowledge or fear preventing women from freely accessing control of their fertility and making their own choices contraception.

2. High need and limited resources

In this section the multiple challenges Pacific nations face in providing family planning care are discussed. This is followed by consideration of the significant cost benefits of investing in family planning, as well as the potential consequences of an ongoing unmet need, touching on health and environmental impacts.

2.1 Multiple challenges

In Pacific Island countries there are significant challenges to almost every aspect of health service delivery. Most notably, basic health resources are scarce, or even non-existent due to lack of infrastructure and remote geography. Most people have very limited personal financial means. Communication between regions is challenging or non-existent, and follow-up care is often impossible (Gilbert, 2017; Latu & Nusair, 2017; Mola, 2017; Theissen, 2016). Physical isolation in remote regions is also a major factor, both for the health worker, as well as for the individual seeking care (Daube, 2016; Latu, 2017). In addition, health worker training generally has been described as challenged (Latu & Nusair, 2017; Mola, 2017; Theissen, 2016; Tiebere, 2017).

2.2 Significant cost benefits of investing in family planning

Current estimates for the Solomon Islands are likely to significantly underestimate the true demand for family planning. The Solomon Islands Demographic and Health Survey (2009) reported that as many as 57% of all births are unintended, suggesting that a substantial proportion of women who want to avoid pregnancy are not using an effective method of contraception. The survey reported that 60% of the population are aged under 25 years, which includes adolescents. Combined with appropriate investment in education and employment, in other counties fertility decline in this group has been credited with contributing to economic development (Bloom et al., 2009). Further, in their report relating to the Solomon Islands, Kennedy et al. (2013) suggest there is a potential future increase in unmet need for contraception due to improvements in women's access to education and increasing community awareness.

Kennedy et al. (2013) used baseline data from census reports, demographic and health surveys, and UN agency reports. With demographic modelling programmes, they provided actual projected cost savings by investing in family planning for the small island nations of Vanuatu and the Solomon Islands. Their findings suggest high-risk births would fall by more than 20%, averting 2,573 maternal and infant deaths. Average annual number of unintended pregnancies would fall by 68% in Vanuatu, and 50% in the Solomon Islands. The study concludes that by preventing unintended pregnancies these governments would save millions of dollars in health and education expenses. Kennedy's study did not consider the possible economic gains if women were enabled to limit their family size and go into the workforce.

Preventing unintended births would result in substantial public sector savings. In the Solomon Islands, it was estimated that $30 million would be saved between 2010 and 2025 if contraceptive needs were met (Kennedy et al., 2013). Similarly, Mola (2017) reports that provision of readily accessible and effective contraception, particularly long-acting reversible contraceptive methods (LARCs) would lead to substantial cost savings to the health budget of Pacific nations. For example, this would result in a projected $11.00 saved for every $1 spent on providing contraception (Mola, 2017). He outlines the savings would be in money which otherwise would have been spent on maternity services or post-abortion care, as all abortions are illegal in Solomon Islands.

Information on potential cost-savings of increased provision of contraceptives has proven effective in increasing the commitment of financial resources by governments around the world (Adedeji, 2019a). Governments have a responsibility for ensuring greater access to, and availability of contraceptive products in health facilities and fewer stock-outs of contraceptives (a situation in which an item is out of stock). This is essential in leading to a reduction in unmet need and achieving the Sustainable Development Goals (Tiebere, 2019). When women are empowered to decide about their reproductive lives, women in turn expand health service investments by reinvesting in the lives of others and society (Dyer, 2015). Beyond the economic concern for managing resources lie human rights concerns, as discussed in Chapter One.

2.3 Potential health consequences of an ongoing unmet need

In addition to the impacts on mortality and morbidity as discussed above, another consequence of not addressing the need for family planning is that women with an unwanted pregnancy may attempt an unsafe abortion. The cost of providing care to women suffering complications following unsafe abortion has been calculated as significant to the health system of the Solomon Islands in a study conducted by Gilbert et al. (2017). In addition, Tiebere (2019) has noted the real risk of infanticide as a result of unwanted pregnancies in the Pacific region.

Another related concern for the Pacific region is the issue of the worsening trends in certain modifiable lifestyle diseases such as obesity and diabetes, hypertension, and smoking, which are all significantly linked to higher-risk pregnancies and complicated deliveries (Gyabeshwar, 2015). As Mola (2017) indicates, this increase in risk factors for pregnancy makes prevention of unintended pregnancies an urgent issue.

2.4 From micro to macro: environmental impacts

Discussing individuals' rights to reproductive justice includes consideration for the human right to environmental justice. Care for the environment entirely aligns with the reproductive justice principle of the right to parent the children we have in safe and sustainable communities (Ross & Solinger, 2017). What is significant about contraception as a means for environmental protection, is that according to New York's Population Council (2019, cited in Stephenson, 2020) measures such as policies that strengthen human rights, especially for women and girls, lead to reduced greenhouse gas emissions. By making family planning services available to all people, a slowing of population growth, including the reported 99 million unintended pregnancies worldwide, would result in reducing greenhouse gas emissions by 40% or more per year (New York's Population Council, 2019, cited in Stephenson, 2020).

The Pacific context presents unique challenges with the geographic difficulties of accessing isolated populations. Robinson and Rolls (2019) highlight that national efforts are needed to prevent unintended pregnancies and limit the escalation of rape and violence against women and girls especially in times of crisis such as climate events. Resources become more critical with the increasing impact of climate change (Robinson & Rolls, 2019). The region is experiencing over 40 tropical cyclones per year of increasing intensity, combined with drought,

flooding and rising sea levels (United Nations, 2019b). Women and girls are the most vulnerable in humanitarian crises. Two thirds of maternal deaths and 45% of new-born deaths take place in emergent humanitarian settings (Guandiwi, 2019). In emergencies, sexual and reproductive health needs are often overlooked, despite the relevance of sexual and reproductive health care being well established. UNFPA are actively assisting Pacific governments to integrate sexual and reproductive health care at every point of health service delivery to ensure comprehensive and coordinated care during an emergency response (UNFPA, 2020).

Every country needs to set in place policies to limit the emission of carbon and reduce waste of all kinds to conserve the earth's resources. This is no longer an issue for debate (UN, 2019). The effect of an exponentially increasing population means that since 1950 the human population has tripled (Bennett, 2020). According to The Alliance of World Scientists (Ripple, 2019) there are 15,364 scientist signatories from 184 countries who have declared a climate emergency and warned that untold human suffering is unavoidable without huge shifts in the way we live. Population control is not the focus of this research but needs to be acknowledged as a global challenge.

3. Barriers to contraceptive use:

As contraceptive prevalence rates remain low in the Pacific region, much has been written about barriers to contraceptive use. A brief summary of the barriers discussed in the studies reviewed from the Pacific region will be provided. Next, barriers identified by research specifically in the Solomon Islands will be considered. The issue of gender discrimination in many parts of the Pacific region as a barrier to contraceptive use will be discussed, and finally an overview of UNFPA's recent analysis of the driving factors behind ongoing unmet need for contraception in fourteen Pacific Island countries will be presented.

Most Pacific Island countries have identified the need to make pregnancy safer and prioritise the unmet need for family planning, and this is reflected by the breadth of literature on this topic (Alkema, 2013; Bateson, 2017; Brewis, 1998; Cammock, 2017; Daube et al., 2016; Gilbert, 2017; Kennedy, 2013; Latu 2017; Latu & Nusair 2017; Marshal, 2017; Mola, 2010; Mola, 2017; Morisause, 2017; Raman, 2017; Robertson, 2007; Theissen, 2017; Tiebere, 2017;

and Withers, 2010). Review of these articles revealed consistent information about barriers to contraceptive use.

Mola (2010) conducted a literature review on contributing factors to the unmet need for contraception and summarised the main barriers. These barriers have again been confirmed by more recent literature:

Issues related to service provision: lack of access to preferred method or preferred provider; poor quality of information given to clients; provider-client relationships; limited choice of method; physical distance; availability of product; cost (of transport, or for any health expenditure); poor quality of services, including provider competence; challenges with follow-up care (Adedeji et al., 2019; Harrington, 2019; Nusair, 2019; Pegu & Nevenga, 2019; Tiebere, 2019).

Issues related to contraceptive knowledge (for both service providers and service users): lack of information and misinformation about available methods, mode of action, expected side-effects (good and bad); how to use the method (Harrington, 2019; Letter, et al., 2019; Nusai, 2019).

Issues related to objections to contraception: family/community/cultural opposition; power dynamics in relationships; gender inequity; concerns about sexual infidelity; fear of gossip; fear of side effects; objection to male providers; pronatalist views; religious objections; and a lack of perceived risk of pregnancy following childbirth, or at margins of reproductive age (Adedeji et al., 2019; Harrington, 2019; Letter et al., 2019; Nusair, 2019; Pegu & Nevenga, 2019; Raman, 2019; Robinson & Rolls, 2019; Tiebere, 2019; Vozoto, 2019).

In a recent small study, Harrington (2019) conducted nine semi-structured interviews with nurses, family planning users and non-users at Atoifi Hospital, Solomon Islands. She reported that significant barriers to contraceptive use were linked to where and how family planning services were delivered. She points to the global reduction of maternal mortality of 44% by 2015, but highlights that gains have not been evenly spread, with the majority of maternal

deaths occurring in low and middle-income countries, such as the Solomon Islands. She emphasises the continued challenge of low contraceptive use as a contributing factor to the high maternal mortality rate in Solomon Islands, a low-income nation in the Pacific. The four findings that arose were described as challenges linked with availability/accessibility; knowledge/beliefs; socio-cultural expectations; and fear. This new, albeit small study concurs with the barriers described by other authors listed above.

Recently UNFPA initiated and reported on what they call a "landscaping analysis". The purpose was to map out the various factors that drive unmet need for contraception at regional and country levels in fourteen Pacific Island countries, including the Solomon Islands. They grouped countries with similar contexts and opportunities to reduce unmet need for family planning (Adedeji, et al., 2019b). The intent was to understand where investments would lead to sustainable and transformative change towards concrete actions to achieve reduction of unmet need. Considering the multiple complex barriers, an analysis of barriers and priorities for investment provides a useful foundation for my study.

UNFPA reported a rising adolescent birth rate, overall increasing fertility rates as well as high unmet need for contraception as an indication of limited access to reproductive and sexual rights information and services in the Pacific region. For their analysis, UNFPA drew on existing evidence from around the globe that points to factors contributing to high unmet need for family planning, including what they describe as poor quality of services, variable supplies availability and accessibility, weak mechanisms to translate existing government policies into effective sustainable actions, and limited capacity to implement strategies and plans (Adedeji, et al., 2019b). In addition, government health resources for family planning services are competing with other health priorities and so often end up in the background. There are also many socio-cultural barriers that prevent people from seeking and using contraception. In areas of high unmet need, contraceptive uptake is challenged by myths, misconceptions, misinformation, and misinterpretation of side effects (Adedeji, et al., 2019b; Tiebere, 2019). By identifying these challenges, UNFPA have been able to formulate specific recommendations to reduce the unmet need for family planning, detailed in a document on strategies for prioritising the ending of unmet need for family planning (UNFPA, 2019).

Another important dimension highlighted in the literature as a barrier to contraception is the considerable role of gender in health disparity in the Pacific region (Balupa, 2019; Raman, 2019; Vozoto, 2019). Gender discrimination at each stage of the life cycle contributes to this health disparity, including sex selective abortions, neglect of girl children, overall poor access to health care for girls and women, and reproductive mortality. Raman (2019) explains that in the Pacific, gender-based violence disproportionately affects girls and women, involving early and forced marriage, honour killings, neglect, domestic labour, and intimate partner violence. Health workers have a crucial role to play in addressing gender discrimination by ensuring access to contraception. Raman (2019) suggests that health professionals, education, legal, welfare professionals and policymakers all have a critical role to play in addressing violence against girls and women. A multidimensional approach is necessary to address the causes and consequences of gender-based violence. Ensuring access to contraception for all women is critical because it is likely more difficult to access for women in violent relationships and has such a significant effect on prevention of morbidity and mortality.

Over 72% of women in the Pacific region experience physical and/or sexual violence, some of the highest rates in the world (Letter et al., 2019). Health services are often the first point of contact for a sexual or gender-based violence survivor, and health workers are well positioned to provide responsive care, with support. Culturally relevant and specialised gender-based violence training for health workers in the Solomon Islands was developed in 2013 as a collaborative project between Solomon Islands Ministry of Health, Auckland University of Technology, and UNFPA (Vozoto, 2019). One finding from Vozoto's (2019) evaluation of the programme was that health workers must examine their own attitudes and beliefs about gender, power, abuse, and sexuality before they can develop new professional knowledge and skills for dealing with victims.

Robinson and Rolls (2019) similarly emphasise that women need to be able to control their reproductive health decisions and affected populations need support to increase gender-based violence response and prevention services. Health workers need to be able to identify women that require treatment or referral for sexual, reproductive, or violence-related care at the first point of contact. This will serve to both reduce the vulnerability of women (Robinson & Rolls, 2019).

4. Meeting contraceptive need

Having considered the importance of family planning and discussed barriers to contraception, recommendations in the literature for reducing the unmet need for family planning will be outlined. The four main recommended areas for action were: a consistent call for more prioritisation of family planning; the need to build the health workforce despite limited resources; the need for strengthening services for adolescent sexual and reproductive health; and a call for more Pacific-based research to help understand family planning needs specific to this region. To complete this section, family planning high impact practices are described, and their relevance to this research study will be explained.

4.1 Prioritisation of family planning

Most of the studies and literature reviewed indicate clearly that an increased investment in family planning is necessary to meet the demand for contraceptive services and improve reproductive health in the Pacific region (Alkema, 2013; Bateson, 2017; Cammock, 2017; Cleland, 2006; Daube, 2016; Latu, 2017; Latu & Nusair, 2017; Mola, 2017; Morisause, 2017; Raman, 2017; Robertson, 2007; Withers, 2010). The challenges require higher level national strategic planning beyond the role of individual health workers and clinics.

Raitamata (2019) reports about the need for supporting in-country governance coordination mechanisms for Reproductive, Maternal, Neonatal, Child, and Adolescent Health Care (RMNCAH). She describes the importance of real government ownership and leadership in governance coordination mechanisms to ensure strong, multi-sectoral coordination and sustainability. She emphasised the importance of better integration at a number of levels such as programme leadership, human and financial resourcing, service coordination, planning, and transitioning towards sustainability. She stated that RMNCAH programmes in the Pacific within Ministries of Health still face the risk of being delivered as top-down programmes, limiting efficiency and integration at a number of levels. Most countries have their specific teams, funders, coordinators, and budgets, and often in addition to government allocations for each area of RMNCAH, other development partners are also key players. She describes the result as inefficient and fragmented efforts, with heavy demands on human resources working vertically and often in silos.

The National Health Strategic Plan 2016-2020 of the Solomon Islands clearly identifies the need to increase access to modern contraception and broadly outlines practical steps necessary to address the unmet need for family planning (Gilbert, 2017). This report is a general strategic plan that provides leadership direction for the health system, in service to the Solomon Islands government and people. The plan involves identifying priority interventions and making sure they reach the whole population, especially those most vulnerable and isolated (Solomon Islands Ministry of Health and Medical Services, 2015).

Recommendations found in the literature relate to improving knowledge among government, stakeholders, communities, women, and men about modern contraception, and integrating family planning as a priority into maternal and child health community-based care. Central to these recommendations is the need to develop and implement effective family planning training courses for all health workers that come into contact with families, ensuring competence, confidence, and current knowledge (Solomon Islands Ministry of Health and Medical Services, 2015).

LARC

Long-acting reversible methods of contraception (LARC) such as contraceptive implants, depo injections, and intrauterine devices are the most cost-effective contraceptive methods and provide the greatest health and financial benefits (Bateson, 2017; Joshi, et al., 2015; Latu & Nusair, 2017; Mola 2017). The literature was searched for studies related specifically to LARC in the Pacific region, and several references were found that commented on their use (Latu & Nusair, 2017; Mola, 2010; and Tiebere, 2017).

UNFPA have collated statistical estimates for the Solomon Islands from various sources in an unpublished document titled “Using data to inform family planning prioritisation (draft)” (2019) which provides summaries of key themes. This document was provided to me at the time I consulted UNFPA leaders. One section of that report briefly addresses ‘product availability’, but only refers to LAPMs (Long-Acting Permanent Methods, such as sterilisation) and STMs (Short-Term Methods, such as pills and condoms). The average extent to which LAPMs are available in the Solomon Islands is reported as 54%, and STMs as 79%.

No explicit data is provided on LARC. According to FP2020, citing the 2015 Solomon Islands National Demographic Health Survey, contraceptive implants comprised 9.1% of reliable contraceptive methods used (FP2020, 2020). In general, there is a minimal literature related to long-term reversible contraceptive options in the Pacific region, particularly in remote and resource-poor areas, and no research specific to the Solomon Islands. This is an area that needs further research with a specific emphasis on LARC.

To consider their potential use in developing countries the international literature was consulted, and multiple studies were found that were relevant, including several large, multi-country analyses, which all present a persuasive argument for the clear benefit of providing LARC *particularly* in low-resource countries (Affandi, 1999; Blumenthal, 2013; Cleland, 2017; Jacobstein, 2010; Jacobstein & Stanley, 2013; Joshi, Khadilkar, & Patel, 2015; Rose, 2011; Secura, 2014; Staveteig, 2015; Tumlinson et al., 2011).

Comments on LARC were made by Tiebere (2017) that recent efforts to introduce contraceptive implants in Vanuatu, Solomon Islands, and Fiji had led to an increased demand, which challenged the financial sustainability of these programmes, coinciding with a decrease in funding support from main regional donors (Tiebere, 2017). In contrast, Mola (2017b) reports that a programme of postnatal implant insertion prior to leaving hospital after giving birth at Port Moresby General Hospital, PNG, has been a "game changer" in relation to providing effective long-term reversible contraception (p. 324). A study reported at the 2019 PSRH conference following up the implementation of postnatal implant insertion at Port Moresby General Hospital found that women were 2.8 times more likely to accept an implant if they had received information about implants antenatally (Trane, 2019). As far back as 2010, Mola recommended in his report to the PNG Maternal Health Taskforce and Development Partners that there was an urgent need for escalating use of LARC. He wrote that women and men favour long-term methods and want more reliable reversible contraception. At the 2019 PSRH conference in Port Moresby, the need for increasing access to LARC throughout the Pacific Islands was a main theme throughout the conference. Campbell (2019) made the comment during his conference presentation that "We have lots of evidence, but very little evidence that evidence is being used" (p. 30).

4.2 Skilled workforce

A strong workforce is a key enabler to meeting contraceptive need in the Pacific. Campbell (2019) reports on a UNFPA review of 15 countries, using a questionnaire adapted from the 2014 State of the World's Midwifery report (Campbell, et al., 2019). It showed that a strong workforce of health workers, also trained in contraceptive delivery, is essential to improving outcomes. Although most countries had shortages of skilled staff, even in countries with high workforce availability, significant challenges exist in terms of accessibility, acceptability, and quality. The recommendations from UNFPA for policy implications stresses the need for investment in midwives via a regional midwifery strategy. This should include review of scopes of practice to reflect specific needs in different areas (Campbell, 2019).

According to the World Health Organisation, a minimum of 23 trained health professionals (nurses/midwives/doctors) per 10,000 population is necessary to deliver essential maternal and child health services (UNFPA,2019). Currently the best estimate of healthcare provider coverage for the Solomon Islands is 17.8 nurses/midwives per 10,000 population (ibid). Using this standard, countries with less than 23 trained healthcare providers per 10,000 population may struggle to meet the contraceptive needs of the population. Given the current nurse/midwife density, Solomon Islands will need to expand the healthcare workforce in order to increase efforts to reduce the unmet need for family planning (UNFPA, 2019).

Homer et al. (2019) similarly identified that challenges in the Pacific include lack of resources and reported on the needs of midwifery in particular in relation to education, regulation, professional association, having an enabling environment, developing the workforce, and recognising the key role of the midwife. Similarly, De Silva et al. (2019) concluded that access to resources and training for health workers in the Solomon Islands is vital. Considering the evidence supporting the role of contraception as a primary preventive strategy for reducing maternal mortality, this call for increased support for health workers and investment in resources could begin with investment in family planning care.

4.3 Adolescents

A high priority area for contraceptive services is adolescent sexual and reproductive health care. Around the world, complications from pregnancy and childbirth are the leading cause of death for adolescent girls (ages 15-19). Their babies also face a higher risk of dying than the babies of older women. Yet adolescents face enormous barriers to accessing reproductive health information and services, especially single, unmarried adolescents (UNFPA, 2020). In the Pacific region, the needs of young people are highlighted as an urgent issue considering the rising adolescent birth rate and additional social challenges that can result from teenage pregnancies (Adedeji, 2019). In their article on adolescent reproductive health in the Pacific, with a focus on practical interventions based on in-country experience, Latu and Ekeroma (2016) call for more realistic interventions targeting adolescent sexual health.

Barriers to adolescent sexual and reproductive health care in the Solomon Islands were evaluated by reviewing perspectives and practices of health, education, and welfare workers in a study by in a study by Raman et al. (2017). Multiple barriers were identified, and the overall conclusion was that improving services for adolescents was necessary and possible given the right support from government and global agencies, requiring commitment to collaborative inter-sectoral action.

At the Pacific Society for Reproductive Health conference in July 2019, Pego (2019) presented her project called "Improving contraceptive use for adolescents at White River Clinic, Honiara" (Pego, 2019). After restructuring their clinic to incorporate a 'Youth Friendly Corner' to improve contraceptive knowledge and access to birth control for teenagers, there was an increase of contraceptive uptake from 3% to 6%. This compares to the overall contraceptive prevalence rate for Solomon Islands of 32% (UNFPA, 2019). When compared with the global consensus that Demand Satisfied is 75%, this figure is significant.

This issue becomes even more pressing when considering the findings of Pomer's (2019) research on trends towards declining age at menarche in Pacific Island nations. She found that age at menarche has consistently decreased from an average age of 15.5 years in 1950, to 13.5 years in 2010. She suggests that this is associated with earlier sexual encounters, leading to higher risk of pregnancy during adolescence. Chandra-Mouli et al. (2017) call for global action

on strengthening investment in adolescent sexual health and rights, particularly access to contraception.

5. Key gap in the literature

There were no studies found that presented the view of health workers in regard to LARC in the Pacific region. Considering efforts to help address the unmet need for family planning in the Solomon Islands, is important to understand health workers' views of LARC, recognising the unique position health workers have residing at the interface between health policy and recommendations, and the women they care for. My study seeks to fill the important gap in understanding of health workers' perspectives. Specifically, based on recent UNFPA data, it asks health workers why they think a disparity in family planning use exists between regions, with the highest unmet need in Guadalcanal. My research explores health workers' perspectives on the barriers to contraceptive uptake and asks for their proposed solutions to addressing the unmet need for family planning in this region.

Summary

This chapter has reviewed key literature relating to contraceptive use in the Pacific region. A background picture of the current situation was provided, relating to unmet need; high need and limited resources; barriers to contraceptive use; and meeting contraceptive need. Following this I offered an overview of recommendations arising from the literature to address the ongoing unmet need for contraception in the Pacific. Finally, I explained the key gap in the literature which forms the basis for this research. In the next chapter I will discuss the methodological framework, ethical implications and methods used to undertake this study.

CHAPTER THREE: METHODOLOGY AND RESEARCH PROCEDURE

In this chapter I describe the methodological approach and methods used to achieve the aims of this research project, previously described in Chapter One. To begin, the rationale and background for the choice of research design and method are explained, followed by a description of the advantages of exploratory research and development of the survey. Next, the ethical and cultural considerations of the research are discussed, including acknowledgement of Te Tiriti o Waitangi/Treaty of Waitangi. Key aspects of the research design are explored including the role of the Solomon Islands research assistant, participant selection criteria and the recruitment of health workers. This is followed by an overview of the data collection process. Finally, the approach used for analysing the data is explained.

1. Choice of research approach: exploratory descriptive study design, survey research

The methodological framework and research procedure of a study must be carefully planned in order to produce data that is consistent with the study's aims (Daniel & Harland, 2018). As this study sought to hear from health workers and understand their opinions and perspectives, it became clear that the data collection tool needed to be simple, as English would be health workers' second or third language; brief, as they can be very busy in the clinics; and with the possibility for some open-ended questions to maximise the potential to elicit health workers' views. As Nardi (2018) notes, if the goal is to understand human behaviour in its natural context, and from the perspective of those participating in the study, then an appropriate aspect to the research would include the potential for qualitative responses.

This study therefore had an exploratory descriptive research approach using a survey method. According to Nardi (2018, p.10), exploratory research is about "getting a rough sense of what is happening on a particular topic for which we don't yet have enough information." Additionally, descriptive research involves gathering descriptive information about the characteristics of participants, such as demographics and basic information profiling respondents (Nardi, 2018). Nardi goes on to explain that survey research obtains information from people using a systematic process with standardised questions and measurable answers.

To be effective a target population must be defined, who can effectively answer the survey questions. Disadvantages of this research approach include dependence on accessing participants, their time and motivation, their candour and honesty (Daniel & Harland, 2018).

As explained by Daniel and Harland (2018) questionnaires are tools used in survey research for collecting data to measure behavioural and social phenomena. They usually consist of a set of questions with a choice of answers and may also have a qualitative dimension. As Drisko (2005) described, the richness of qualitative answers and the presentation of raw data (quotes) reassures the reader that the researcher's interpretation is accurate and enhances the trustworthiness of the findings. As an 'outside' researcher it was important for me that i considered a research process that captured participants' views in their own words, and that presented the data in a way that had the potential to be most useful to them (Braun & Clarke, 2013). At the same time, it was important to collect as much data as possible from a sample collected from busy heath workers, with only one collection opportunity, in a short period of time.

The contribution of the quantitative element to the survey was the outcomes which could be measured in numerical form. For this study, the quantitative results were simple descriptive statistics describing the basic features of the data gathered (Daniel & Harland, 2018).

1.1 Method: survey as a method for data collection

Using Nardi's (2018) format suggestions, I developed a paper questionnaire. I anticipated that potential participants would find this an acceptable data collection method as it could be completed at a time that was convenient to them; included simple written questions that would be easy to understand (and be translated with ease if necessary); and ensured anonymity. My next steps were to decide where to distribute the surveys, how to deal with issues around potential language barriers and the need for translation, and importantly how to ensure health workers did not feel coerced to participate. A survey method offered significant advantages in that the questionnaires could be translated into Pidgin and could be left with an intermediary to be distributed and collected in a way so as to ensure anonymity.

I designed the questionnaire with the intent to gain an understanding of what key factors enable or constrain health workers in their ability to offer and promote the option of long-acting reversible contraception to women, asking about their practices, beliefs, and attitudes. Using survey research allowed me to structure questions systematically and provide open questions to elicit fuller responses from health workers. The questionnaire enabled me to request specific answers, as well as to simply offer health workers a place to be heard but without the potentially coercive element of directly engaging with an outsider researcher.

1.2 Survey format and questions

Being external to the research field myself, broad consultation was necessary to meet the aim of my questionnaire development being "rigorous, meeting the needs of the research and appropriate to the sample" (Daniel & Hartland, 2018, p. 62). To this end I attended a Pacific Society for Reproductive Health conference in Port Moresby in July 2019, which provided opportunities to discuss my proposed project informally with members of UNFPA and Health Ministry officials from the Solomon Islands. Further conversations took place with a Solomon Islands Sexual and Reproductive Health Specialist and the UNFPA Pacific Region Director. Out of these discussions a clear focus for my research crystallised in response to their recommendations and my own desire to maximise the utility of my findings by undertaking a project that could dovetail into research they were themselves undertaking and had identified a need for.

UNFPA informed me that currently the highest area of unmet need for contraception in the Solomon Islands was Guadalcanal, somewhat intriguing given the province contains the only urban area, the capital Honiara. That knowledge enabled me to plan a project which would be logistically simpler than the larger study I had initially planned, in terms of travel and proximity to the research assistance I had been offered, by focusing on a single region of the Solomon Islands rather than a wider focus. UNFPA generously shared their own local data to inform the development of my survey and expressed strong interest in being appraised of my results. They were eager to understand from my qualitative data the barriers and enablers to contraceptive uptake identified by the health workers involved in reproductive healthcare in the Province. This reinforced my decision to include a qualitative dimension to my survey.

Based on UNFPA data (Adedeji et al., 2019) and my review of the existing literature (see Chapter Two) I structured the questionnaire around issues of access to LARC training, barriers to contraception for women, health workers' general knowledge about side effects, assessing degrees of confidence (and willingness) to promote LARC, and open requests for suggestions and opinions. Following review of the draft questionnaire by the Solomon Islands Health Research Ethics Review Board (SIHRERB), UNFPA, my newly appointed research assistant (discussed later in this chapter), and my supervisors from Otago Polytechnic, a finalised version was agreed upon. The survey was made up of a total of 32 questions. The first question asked for confirmation that the respondent had read the Participant Information Sheet and consented to be part of the study.

Questionnaire design included 13 'tick-box' questions, two with extra space for additional qualitative comments respondents might choose to elaborate on. There were five questions that asked respondents to list or specify an answer; eight open qualitative questions; one question asking respondents to rank choices; two likert-style questions; and three demographic questions. The questionnaire is included as Appendix VII.

2. Cultural safety

In this section I define the key principles of cultural safety in research, outline why they were important to my study, and provide specific detail about how I applied them in my study design and procedure. I acknowledge my Treaty of Waitangi responsibilities, and the Kaitohutohu Office review and how I addressed their recommendations. An explanation of how I incorporated cultural considerations into the research protocol is also explained.

Tolich (2002) describes cultural safety in research as research of a person/family from another culture by a researcher who has undertaken a process of reflection on their own cultural identity and recognises the impact of their own culture on their research methods and process. He considers that a researcher who understands his or her culture and the theory of power relations can be culturally safe in any human context (Tolich, 2002).

From the outset of this project, I had been aware of the need for cultural safety. I recognised my culture influences my world view and therefore my interpretation of research findings. I

am a midwife with a European background and have lived in Aotearoa New Zealand for twenty years. The three principles of partnership, participation, and protection embedded in midwifery from the Treaty of Waitangi (Durie, 2001) are central to my philosophy as a researcher and form the foundation for both my professional and personal relationships. This partnership embraces the principles of equality, respect, trust, and shared decision making, while supporting the individual differences inherent in each relationship. I applied these principles to my study by consulting and collaborating with Solomon Islands health authorities at every opportunity. This was initially through contact with Solomon Islands health centre managers I knew from the times I had visited undertaking voluntary work, then with Solomon Islands Ministry of Health officials, and UNFPA representatives working in the Solomon Islands. During the data collection trip, I was guided by my research assistant in all matters related to the research and was careful to uphold the research protocol which meant I did not have contact with health workers until their participation in the survey was completed. Finally, I have remained in contact with my research assistant and continued to consult her as I documented the findings and completed this thesis. We hope to together present this study at a Pacific Society for Reproductive Health Conference.

One important cultural consideration was how the research would be informed by consultation with tangata whenua and my responsibilities under the Treaty of Waitangi, given the study focussed on an indigenous Pacific population of which I am an outsider. Prior to the research proposal being submitted for NZ Otago Polytechnic Ethics Committee review and approval, I consulted with the Kaitohotohu Office of Otago Polytechnic. This was to uphold the principle of partnership embraced with Māori in Aotearoa New Zealand, under the articles of the Te Tiriti o Waitangi. I believe these principles must extend beyond Aotearoa New Zealand when working with communities anywhere. This is based on an emphasis of cultural safety stemming from the Treaty of Waitangi. The goal of cultural safety sets up an opportunity for championing a route to inclusion and mutual respect (Tolich, 2002).

Otago Polytechnic has a Memorandum of Understanding with Kā Papatipu Rūnaka, which means Māori are consulted about any ethics in research, whether conducted in NZ or elsewhere (Otago Polytechnic, 2018). The Kaitohutohu Office reviewed my research proposal and asked the following four questions:

1. *What difference are you hoping to make?* I explained that this research aims to support women to make life choices that lead to the greatest fulfilment for themselves and their families. Health workers are key to ensuring women have access to the education and family planning services they need. I explained that this study hopes to support health workers in their efforts to provide contraception to women by identifying barriers and solutions to addressing the need for contraception in Guadalcanal, Solomon Islands.

2. *How will you know if you are successful in achieving this, how will you know if it is a worthwhile piece of research?* I explained that I was realistic about the measure of success I hoped to accomplish with this basic study. My aim was to help address the unmet need for contraception. I would know my efforts had been successful if this study identified some practice recommendations that could be presented to the Pacific health workforce and Solomon Islands government and identified areas for further research. By doing this research we would also lift the profile of need for access to LARC in Guadalcanal, Solomon Islands.

3. *Who will own / benefit from the research?* I explained that I approached this study with a partnership perspective. I hoped that a sense of 'ownership' is felt by the Solomon Islands Ministry of Health, whose input I had sought through consultation at significant points. However, the publication would be my own. Ultimately my hope was that the results of this study would benefit families in Guadalcanal, Solomon Islands. My hope was that health workers are given the resources they need to provide the best family planning service these families deserve.

4. *Is there the opportunity to co-publish with workers from the remote Solomon Island clinics that could be beneficial to their communities, provide an opportunity for their voice of minority to be heard, and potentially provide a stepping-stone in their own career aspirations?* I confirmed that I would actively explore, pursue, and encourage the findings of this project to be disseminated in such ways that health workers are involved. I included the suggestion that the Ministry of Health and Honiara City Council publish the findings in their local regions.

The Kaitohutohu Office responded positively to my proposal and offered their encouragement for my study.

I was aware that there are many complex social and cultural determinants of family planning and these were considered and incorporated into the analysis and presentation of findings when applicable. As a visiting researcher I was conscious that cultural safety applied to the individual health worker participants, as well as to wider Solomon Islands government and agencies. DeSouza (2008) notes that cultural safety paradigms can provide operational guidance for clinicians, or researchers, in practice settings that can complement the implementation of cultural safety.

I was aware of the utmost importance of preventing reputational harm, and explicitly stated my wish to be allied with health workers and government efforts. I outlined specific strategies that would optimise respect and autonomy. As there was the potential for health workers to feel pressure to participate, the aim was for the Solomon Islands research assistant to distribute the research packs. I considered it critical that health workers did not feel pressured to participate, or to answer the questions in any particular way. There was the potential for participants to feel uncomfortable with the primary research language being English. There was the potential for participants to feel self-conscious about their skills/responsibilities, so the questionnaire was carefully worded in a non-judgemental tone. In order to maximise anonymity, surveys did not identify from which clinic the response came, nor did they report findings specific to different health professions. Finally, there were potential sensitivities for the Solomon Islands government initiatives on family planning, therefore I had sought guidance and research governance from the Solomon Islands Research and Ethics Committee. I was dedicated to ensuring a partnership approach in an alliance with health workers and government efforts to address the unmet need for contraception in the Solomon Islands through this research.

3. Ethics review and approval

The process of addressing ethical considerations is a requirement of all research. The research proposal was approved by the Otago Polytechnic Research Ethics Committee on the 2nd of August 2019 (Appendix I).

As mentioned above, I had the opportunity to consult with senior health officials from the Solomon Islands at a Pacific Society for Reproductive Health conference in July 2019. Amongst these was Freda Pitakaka, who is the Chief Research Officer of the Solomon Islands Health Research Ethics Review Board (SIHRERB), Secretariat to the Ministry of Health & Medical Services. I discussed my study proposal with her, and she was very encouraging, explaining the role of the SIHRERB, and what was involved with the process of applying for a research permit in the Solomon Islands. She provided me with valuable advice about practicalities and logistics, and most significantly the information that I would be required to have a Solomon Islands research assistant, which SIHRERB would provide. Following our meeting, I completed and on the 8th of August 2019 submitted a formal application as outlined by SIHRERB requirements.

The SIHRERB responded asking for minimal amendments to the research proposal. This included changing the date for data collection, adding three more questions to the questionnaire, and asking for a research budget. Most encouraging were the comments on my questionnaire, requesting inclusion of more specific questions about training and types of LARC. I attended to all these requirements and returned the amended application again a few weeks later. A formal SIHRERB research permit was received on 15th of November 2019 (Appendix II).

4. Role of the Solomon Islands research assistant

At the time of the data collection trip, the Solomon Islands ethics committee appointed research assistant, Jenny Narasia, led the research process. She is the Reproductive Health Coordinator for the Ministry of Health, and Solomon Islands Safe Motherhood Representative. I had had the opportunity to meet with her briefly at the Pacific Society for Reproductive Health conference in July 2019. At that time, she had suggested that she begin logistical planning for visiting the clinics for data collection. Jenny expressed interest in having contact prior to the data collection trip to navigate the next steps of the research process together. I had provided her with the full research proposal and accompanying documents and asked for her review of the questionnaire. Jenny informed me that all health workers are expected to be literate in English, and she therefore did not feel it would be necessary to translate the questionnaire into Pidgin. She expressed full approval of the questions chosen for the survey.

During the data collection trip, Jenny organised the logistics for visiting the clinics and involved another Solomon Islands research assistant as well as a driver as part of our research team. She distributed the research packs to health workers in their clinics and was available to answer questions or assist with the survey if needed. A more detailed description of the data collection trip is documented separately as field notes.

My contribution to the partnership as explicitly discussed between Jenny, Freda, and I involved completing the research, recognising the vital role of Solomon Islands involvement in the research process, and offering Solomon Islands the opportunity to distribute the findings and completed study locally. Consistent with my commitment to cultural safety it was important to me that this study was a joint venture, and while I would 'own' the data, the Solomon Islands Ministry of Health had been included in the process and may distribute the results in the ways best for them.

5. Participant selection criteria

Participation was sought from any Solomon Islands health worker who provided family planning care on the island of Guadalcanal. This included nurse aids, nurses, midwives, medical trainees, and doctors. The exclusion criteria were if health workers did not provide family planning care. According to the Solomon Islands Ministry of Health (2012) 'Health Service Delivery Profile' it was estimated that there were approximately 0.26 doctors per 1,000 people in all of Solomon Islands, and most doctors worked in provincial hospitals or Honiara. Therefore, nurses and midwives in the Solomon Islands were often very experienced and skilful and provided the majority of family planning services.

6. Recruitment of health workers

Health workers providing family planning care were approached by the Solomon Islands research assistant, who distributed the research packs. Informed choice and voluntary participation were explained on a detailed participant information form which was included in the research pack with the questionnaire (Appendix V). This included information about the aims of the research project, an explanation of voluntary participation, anonymity, and

identification of where the data is likely to be presented and published. Completion and return of the questionnaire indicated consent to participate as the first question regarded confirmation of consent. Jenny explained her role as research assistant to participants to ensure that they did not feel any external pressure to participate as my position as an outsider might have had the potential to subtly coerce them. No personal identifiers were collected on questionnaires. There were no incentives offered.

The structure of the questionnaire was designed especially with the aim of not requiring a lot of time from participants: the survey was short, succinct, but also offered space for further comments if health workers chose to elaborate. I had estimated that there would be between one and three eligible participants at each clinic and thought that we might visit 10-12 clinics around the island. I had therefore hoped that there would be between 20-30 surveys returned, based on Nardi's (2018, p. 73) projections of realistic response rates of anywhere between 30% from mailed surveys to 80% response rate with some face-to-face contact.

7. Overview of data collection

Overall, 56 surveys were completed and returned. Guadalcanal Island is divided into two health districts; 41 surveys were returned from the urban Honiara district, and 15 from the remote Guadalcanal Province region. Health workers from all clinics (health centres) visited were invited to participate in the study. Some health workers declined, saying they were too busy or reluctant to discuss family planning on religious grounds. The names of the clinics visited have not been recorded on individual questionnaires in order to anonymize their identity. The Solomon Island research assistant, Jenny, led the logistics effort to visit the clinics, based on her knowledge of their location and accessibility within the time constraints of the data collection trip. She was known to nearly all the health workers and had positive long-standing relationships with many of them.

Jenny and I had discussed which clinics to visit, in light of the two health districts, and she assisted me with securing consents to conduct the research from both Guadalcanal Province Health Secretariat and the Honiara City Council Health Secretariat (Appendix III & IV).

The map below (Figure 1) shows the one main road in Guadalcanal, which stretches west and east from Honiara. The road to Lambi (west) is a dirt track and was so rutted, flooded, and washed out in places that our driver, an essential member of our four-person research team, struggled at times to navigate the flooding and erosion. In addition to Jenny and the driver, we had the assistance of another Solomon Islands Ministry of Health staffer, who assisted with collecting surveys when we left them for health workers in Honiara to complete over a few days.

Figure 1. Map of Guadalcanal, including village names

(photo source: Solomon Islands Ministry of Health)

For the region east of Honiara, once the road became very difficult, Jenny organised for us to take a dingy along the eastern coastline to visit the clinics on the east side of the island that were inaccessible by road (see Appendix VIII for several photos of the data collection trip).

Our approach where possible, was to visit twice. Jenny explained how to complete the questionnaire and answered any questions. We then left to give the health workers time to consider and complete the survey if they chose, returning at an appointed time usually a day or

two later to collect the completed surveys. These were left in their research pack envelopes, again to ensure confidentiality. If Jenny felt it was helpful, I would accompany her to chat with health workers, otherwise I would wait at a distance. Our visits to the clinics were often as brief as possible to minimally disrupt or distract health workers.

Health workers at the centre- researcher reflections

An important observational finding, not captured in the data itself, was my experience of the health workers responses to being asked their perspectives whilst conducting the survey in the field. Health workers often appeared reluctant and suspicious when we first arrived at the clinics, but when they realised this study was designed to hear their views and perspectives, there was a sense of enthusiasm and warmth. Many wrote extra comments than the survey required. It was my impression that health workers had a strong desire to be heard. Many approached me after they had completed the survey to say that for so many years, they "have been told what to do, but no one has ever bothered to ask our opinion" (Anonymous, personal communication, November 18, 2019). Given their centrality to the delivery of contraceptive services in Guadalcanal, Solomon Islands, this research centred on the health workers' perspective and I believe as the findings and following discussion attest, they have much to teach us about how to address unmet need for contraception in the Pacific.

8. Data analysis

Data was transcribed from the paper survey and the quantitative responses were entered onto an Excel spreadsheet. Additional open-ended answers were thematically grouped, coded, and analysed using thematic analysis, as described by Braun and Clarke (2013). There are two main styles of thematic data analysis, deductive and inductive (Pope et al., 2000). Deductive analysis usually means the categories were selected before the data was collected, whereas with inductive analysis the categories come directly from the data itself. Inductive analysis is more often used in qualitative research and is very useful when research is based on discovering new ideas from the data. When I came to analyse the data there were themes that surfaced that I had not expected, so my analysis included both deductive and inductive coding.

The outcome of a thematic analysis highlights the most noteworthy or interesting collections of meanings present in the data (Daniel & Harland, 2018). Understanding what is meant by thematic analysis was important for me as the researcher, to evaluate the research and make decisions regarding reliability and trustworthiness. Braun and Clarke's (2013) approach to thematic analysis was used to identify codes and themes in the data. They described six steps in the analysis of data: to become familiar with the data, generate initial codes, search for themes, review themes, define and name themes, and produce the report. This was an effective approach for the qualitative data of this research project.

Coding

As the data was collected from two distinct health regions (remote and urban) with the potential for understanding important differences, I coded the data separately, labelling each questionnaire with the letter of the region (H for Honiara, or GP for Guadalcanal Province) followed by a number. It is therefore clearly identifiable in quote references from which region the data comes, while anonymity is maintained.

Validity and reliability of findings

Trustworthiness of the findings relies on accuracy and consistency in measurement, a central component to effective research. Attention is required to two core concepts of research methodology, namely, validity and reliability. Validity is about accuracy and includes both *internal validity* (ruling out alternative explanations) and *external validity* (generalisability), reliability is about consistency (Nardi, 2018). For this study, the consultation with Solomon Islands Ministry of Health, UNFPA, Otago Polytechnic supervisors and ethics committee as key advisors on the contents of the questionnaire supported the results. The answers were consistent for this small sample of the population of health workers on Guadalcanal Island.

From a methodological point of view, the quality of the research needed to be checked against the soundness of problem formulation, research design, theoretical alignment, methods for data collection, analytical rigour, and the conclusions drawn (Daniel & Harland, 2018). In constructing this study I committed to establishing rigour from the start, reporting findings as directly as possible. Although Daniel and Harland (2018, p. 118) comment that "what

constitutes ‘rigour’ will remain open to interpretation,” in my view survey methodology for this study has provided the right approach for a rigorous research process. By being able to combine basic quantitative data with the rich descriptive qualitative results, survey methodology has been an appropriate, valid research tool.

Summary

In this chapter, I have described the study design of this exploratory descriptive survey research and given an overview of why this method was chosen. I have explained the details involved with the development of the questionnaire. I also presented the considerations necessary for obtaining ethical approval, including recognition of my responsibilities under the Treaty of Waitangi. I then outlined my interactions with Solomon Islands Research and Ethics Board, and the role of the Solomon Islands research assistant. I provided an overview of the data collection trip and concluded by explaining the approach chosen for data analysis. In the following chapter I describe and present the results of the survey of health workers’ views on addressing the unmet need for family planning in Guadalcanal, Solomon Islands.

CHAPTER FOUR: RESULTS

In this chapter the results from the questionnaire 'Addressing the unmet need for family planning' are presented, with the objective of understanding health workers' views on issues related to provision and promotion of long-acting reversible contraception (LARC) in Guadalcanal, Solomon Islands. The results are presented in three sections: Context, Challenges, and Solutions. In the first section, Context, a brief overview of the clinics visited is presented along with an overview of the demographics of the health workers who responded to this survey and the methods of contraception available in their clinics. In the second section, Challenges, the main barriers identified by the health workers to meeting the unmet need for LARC are presented in five themes: opposition; misinformation; side effects; geographical distance and unskilled staff. The third section of this chapter, Solutions, explores health workers views on how these barriers/challenges can be addressed. These findings are presented across three main themes: education and skill of health workers, raising public awareness and countering misinformation, and addressing systemic issues.

1. Context

This first section provides some background to position the findings. Overall, 56 surveys were completed and returned. Guadalcanal Island is divided into two health districts, the urban district of Honiara, and rural Guadalcanal Province, which is the rest of the island. According to the Solomon Islands research assistant (J. Narasia, personal communication, September 8, 2020) there are 8 urban clinics in Honiara City and 44 remote clinics in Guadalcanal Province. For our study 41 surveys were returned from the urban Honiara district, and 15 surveys were returned from the remote Guadalcanal Province region. Differences in number from each district were expected as there are significantly fewer health workers in Guadalcanal Province compared with the urban area of Honiara. The names and locations of the clinics visited have not been recorded on individual questionnaires to ensure anonymity, as stipulated in the research proposal. The results are generally reported in total, as a combination of both regions making up Guadalcanal Island. However where differences of interest were observed these will be noted, particularly in the context section. The choice of which clinics to visit was based on their accessibility and was decided upon by the Solomon Islands research assistant given her knowledge of the area.

The results are drawn from a mixture of quantitative (closed-ended) and qualitative (open-ended) questions. The majority of questions in each survey were completed, although some surveys had missing data. The reasons for missing data include 'more than one option selected', 'no response' or 'not applicable'. Many questions had an 'other' option where respondents could describe their own opinion or provide further comments if desired.

As this survey is based on the objective of understanding health workers' views on issues related to provision of LARC, the presentation of results will emphasise the qualitative responses. Quantitative data is provided where applicable to support the information given. The survey generated a wealth of rich data, covering ground from the very personal to national systemic issues. This reflects the complexity of family planning care, and the micro to macro impacts of it, as described in Chapter One.

1.1 Health workers' demographics

The survey included three simple demographic questions, asking what professional group the health worker belonged to, which gender they identified as, and for how many years they have worked in this role. Most of the data came from the Honiara urban area. The demographic profile of the survey respondents indicates that most health workers were nurses and midwives. At face value, the proportion of male health workers – where gender was reported - was higher in Guadalcanal province (23%) than in Honiara (7.5%). The 'years in practice' data reveals an experienced workforce with the majority of workers having practiced for over 20 years. These statistics are reported in Table 1 below.

Table 1.

Health Worker Demographics

		Honiara Clinics n= 41	**Remote Guadalcanal Clinics** n=15	Total n=56
		n (%)	n (%)	n (%)
Professional group	Nurse aide	4 (9.8%)	2 (13.3%)	6 (10.8%)
	Nurse	20 (48.8%)	8 (53.4%)	28 (50%)
	Midwife	16 (39%)	3 (20%)	19 (33.9%)
	Medical trainee	0	0	0
	Doctor	0	0	0
	Not stated	1 (2.4%)	2 (13.3%)	3 (5.3%)
Gender	Female	37 (90.3%)	10 (66.7%)	47 (83.9%)
	Male	3 (7.3%)	3 (20%)	6 (10.7%)
	Not stated	1 (2.4%)	2 (13.3%)	3 (5.4%)
Years in practice	0-4 years	2 (4.8%)	2 (13.3%)	4 (7.1%)
	5-9 years	6 (14.6%)	6 (40%)	12 (21.4%)
	10-14 years	8 (19.8%)	2 (13.3%)	10 (17.8%)
	15-19 years	9 (21.9%)	0	9 (16%)
	> 20 years	15 (36.5%)	3 (20.1%)	18 (32.4%)
	Not stated	1 (2.4%)	2 (13.3%)	3 (5.3%)

1.2 Contraceptive methods available

The survey asked which methods of contraception the health workers were able to provide in their areas of work. Eight methods were listed in the survey, with an additional option of "other…". Results are presented in Table 2. The findings show that all health workers, regardless of their setting, stated that they were able to provide condoms, pills, and depo injection. Provision of other long-acting methods varied between clinics.

Only one health worker from one remote Guadalcanal clinic responded that they could offer emergency contraception, potentially suggesting that this method is not widely available in remote Guadalcanal. Sixteen of the 41 Honiara health workers (39%) indicated that they could provide emergency contraception. No health workers from remote Guadalcanal answered that they could offer vasectomy, but eight health workers from Honiara indicated that they could offer this procedure.

Table 2.

Contraceptive Methods Health Workers Can Provide

Method	**Honiara Clinics** n=41 (%)	**Remote Guadalcanal** n=15 (%)	**Total** n=56 (%)
Condoms	41 (100%)	15 (100%)	56 (100%)
Pills	41 (100%)	15 (100%)	56 (100%)
Depo Injection (LARC)	41 (100%)	15 (100%)	56 (100%)
IUD (LARC)	35 (85.3%)	4 (26.6%)	39 (69.6%)
Implant (LARC)	35 (85.3%)	7 (46.6%)	42 (75%)
Vasectomy	8 (19.5%)	0	8 (14.2%)
Tubal ligation	0	0	0
Emergency pill	16 (39.0%)	1 (6.6%)	17 (30.3%)
Other	7 (17%)	2 (13.3%)	9 (16%)

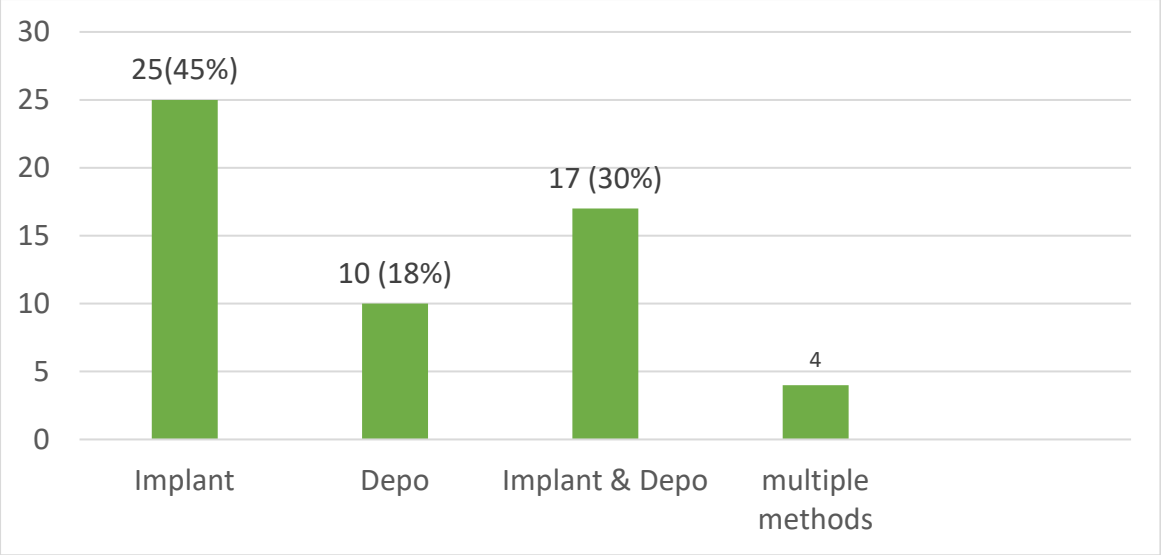
In response to the "Other" category, all respondents mentioned "natural methods" aside from one Honiara response, which stated: "For male and female- offer consultation, refer them to Honiara hospital for operation" (H15).

Health workers were asked what, in their experience, was the most common type of contraception women want. All respondents completed this question. Seventeen health workers responded with the answer "depo and implant." Many listed two or three options in combination.

Overall for the combined regions, Figure 2 depicts what health workers believe are the methods of contraception that women want:

Figure 2.

Health Worker Perceptions of What Methods of Contraception Women Want



When health workers were asked to suggest why they perceived particular methods were wanted by women, the most common response was about the long-term nature of the method, meaning that there could be a longer period of time before women need to return to the clinic: "It is a long term service [sic]" (GP15); and "No need for regular follow up" (H14).

However, other reasons were captured in participant responses. One male respondent from remote Guadalcanal mentioned privacy and minimal invasiveness (in relation to Depo injection): "Only ok method for male nurse to give [sic]" (GP3); and "It is hidden in their body" (H35).

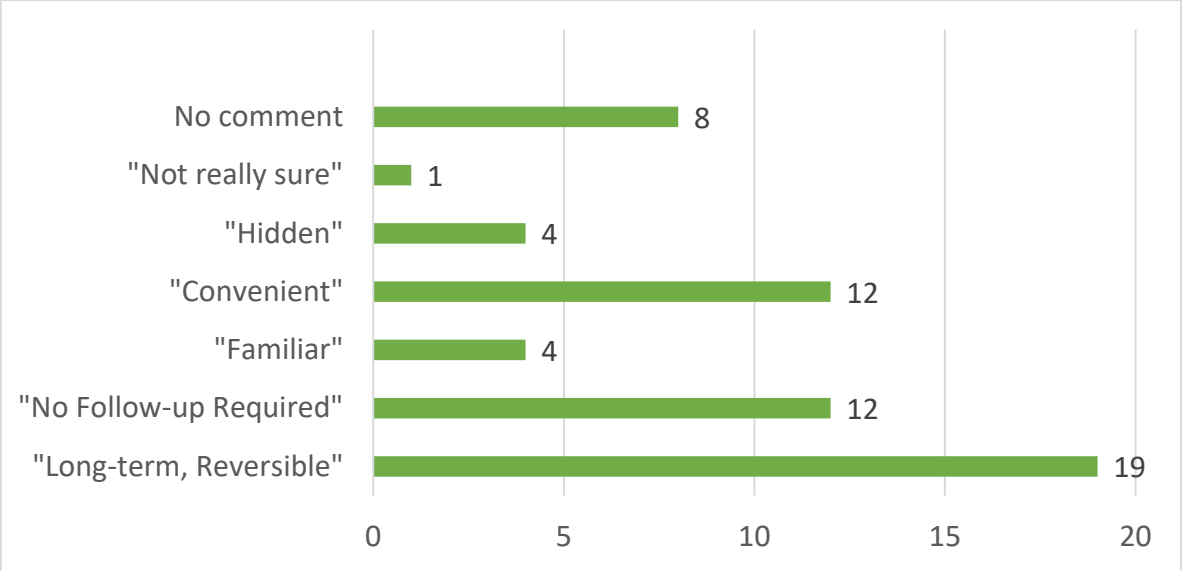
Several respondents mentioned as benefits that: the method could be removed, was reversible, was easy to remember, with low side effects, and was simple. One health worker commented:

> Because it is long lasting, it wouldn't cause any worries for them to return in months like many other FP methods. Easy to remember. It serves time- both partners helped each other during these five years helps children grow strong and healthy and mothers recovered well before plan for another pregnancy [sic] (GP10).

For respondents who indicated that Depo was the method of choice, several answers reflected the practicalities of administration. One respondent with ten years' experience wrote: "Depo-long acting period of time, easy compliance. Most nurses aware how to give. Only male nurse here and only this method appropriate to give [sic]" (GP 3). Figure 3 shows the responses health workers gave as the reasons why women prefer the method of contraception they chose.

Figure 3.

Reason for Women's Preference for Contraceptive Method Chosen



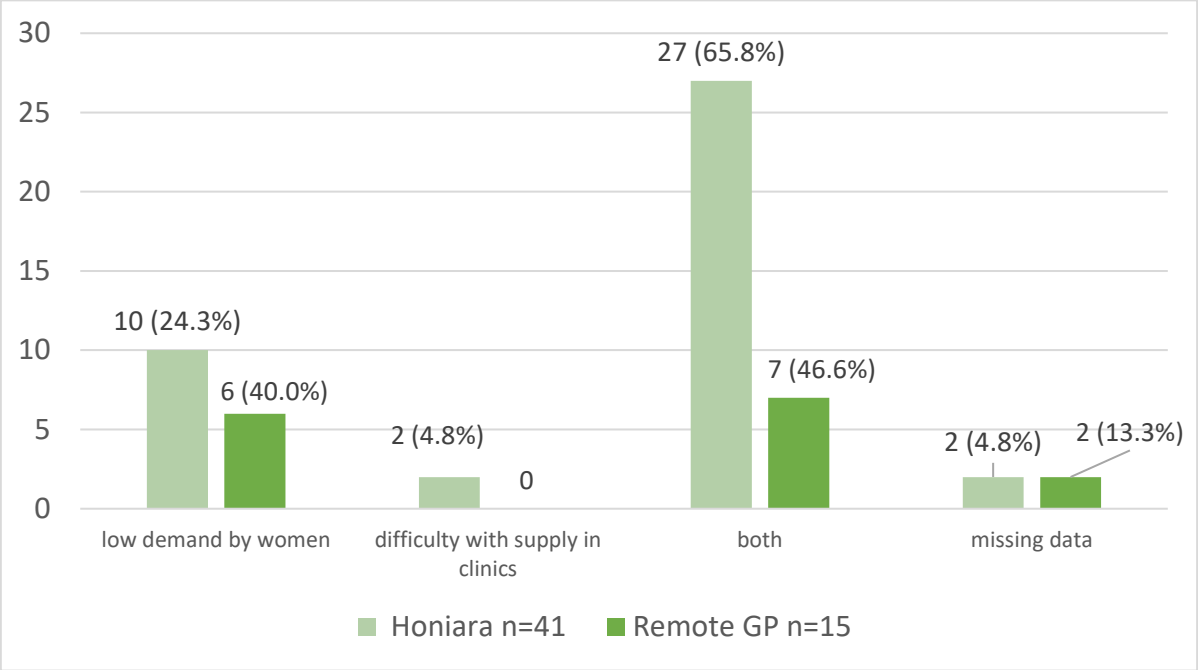
1.3 Highest unmet need for contraception in Guadalcanal

As UNFPA identified Guadalcanal as the area of highest unmet need for contraception in the Solomon Islands, health workers were specifically asked their views on why this might be, and what could be done to improve family planning coverage. Health workers' responses are described below.

Health workers were asked if, in their view, the problem of highest unmet need for contraception in the Solomon Islands related to challenges with low demand for family planning by women, difficulty with supply of family planning in clinics, or both. Figure 4. shows the responses by region, with most health workers suggesting challenges with both low demand for, and supply of, contraception.

Figure 4.

Highest Unmet Need Due to Challenges with Demand or Supply



Challenges with family planning for the Pacific region both on demand and supply sides are well documented in the literature (Latu & Nusair, 2017; Mola, 2017). In a separate open question, health workers were asked about this topic more broadly, exploring why they thought Guadalcanal has the lowest use of contraception in the Solomon Islands. This question led to a rich abundance of answers, with several clear themes. Health workers mentioned religion as a main barrier, as well as opposition from men, fear of side effects, fear of 'rumours', and difficulty with access for women living far from clinics. These multiple barriers were consistent themes throughout the survey and will be discussed in greater detail in the next section on 'Challenges'.

Health workers were asked a range of different questions to elicit their views on issues that influence contraceptive use. When asked whether they thought women are having their contraceptive needs met, most health workers said no (Table 3).

Table 3.

As a Health Worker, Do You Believe Women are Having Their Family Planning Needs Met?

	Honiara Clinics n=41	Remote Guadalcanal n=15	Total n=56 (%)
Yes	11 (26.8%)	5 (33.3%)	16 (28.5%)
No	30 (73.2%)	9 (60%)	39 (69.6%)
Missing	0	1 (6.7%)	1 (1.9%)

To assess the demand for family planning services, health workers were asked whether in their experience women often decline contraception. Results are shown in Table 4.

Table 4.

Do Women Often Decline Family Planning?

	Honiara Clinics n=41	Remote Guadalcanal n=15	Total n=56 (%)
Yes	32 (78%)	12 (80%)	44 (78.7%)
No	7 (17%)	3 (20%)	10 (17.8%)
Missing	2 (5%)		2 (3.5%)

Health workers mentioned fear, opposition, and misinformation as main contributing factors to why women decline contraceptive care. These themes are discussed more fully in the section on ‘Challenges’.

To further explore contraceptive knowledge and behaviour, health workers were asked “When you see a woman in family planning clinic, do you think she already has a plan for what she wants?” Health workers indicated that women often came with an intention for what contraception they wanted, with only 16% responding that women did not have a plan when they came (Table 5). The differences were small and not tested for statistical significance between the two regions.

Health workers were then asked what they believe drive women's preferences in their choice of family planning. This open question led to a wealth of qualitative data with several consistent themes emerging. These included the distance to a clinic, myths women had heard about the problems with contraception, fear of their partner's disapproval, fear of gossip, and fear of side effects specifically. Several health workers also commented that they were mindful of being in a position of influence when women came to the clinic looking for family planning care, indicating an awareness of their power and role in guiding women in their contraceptive choice. Health workers from both regions mentioned religious beliefs as a major influence on women. The factors that health workers identified as preventing women from choosing freely were consistent with barriers to family planning raised in other sections of the survey as well.

In this first section of the chapter, data relating to contraceptive availability and preferences have been presented. In the next section, challenges for women and health workers are explored.

2. Challenges

Difficulties in accessing family planning in the Pacific region are well documented in the literature (see Chapter Two). Several questions in the survey specifically asked about barriers, and significant barriers to contraception were evident in nearly all responses from health workers, particularly in answers to open questions. What became clear as the results were analysed, is that many barriers reoccurred as overlapping themes throughout the survey. The five main themes that emerged are: opposition; misinformation; misunderstanding and concerns about side effects; geographical distance to care; and finally, lack of skill to provide contraceptive care. Each of these themes will be discussed in more detail below.

2.1 Opposition

Many sources of opposition to family planning in general were mentioned by health workers. The role of religion emerged as a significant factor that deterred women from seeking family planning care. In response to the question asking why Guadalcanal has the lowest rate of contraceptive use, religion was stated as being a main barrier from 17 of the 41 Honiara health workers (41%). One health worker gave the following response: "The reasons might be

different- due to customs/beliefs. False rumours about the side effects. Religious belief-R/Catholics doesn't accept Family Planning, against their church doctrines [sic]" (H8). Another respondent elaborated: "I thought its so due to the fact that Guadalcanal is dominated by Roman Catholic church parishioners that forbid other methods of Family Planning except for the ovulation one [sic]" (H15).

Similarly, remote Guadalcanal health workers mentioned religion as a factor that contributed to Guadalcanal having the lowest rate of contraceptive use, stated by 10 of the 15 respondents (66%). One respondent stated:

> Due to lack of knowledge about what is planning. Most of them is Catholic churches the believed that Family Planning is a barrier between what the believed/priests catholic not allowing them to take Family Planning. Husband do not allow wife to take Family Planning [sic] (GP8).

However, like respondents in Honiara, most respondents in remote Guadalcanal mentioned multiple sources of opposition in addition to religion such as from men, other women in their community, or even health workers themselves: "Low literacy level among mothers and even spouses. Promotion of religion. Heath workers knowledge on family planning methods and a lot of time more ignorance by parents and Health Workers. Access to health facility. Preference of Health providers. Rumours [sic]" (GP2).

When asked about what influences women's preferences on contraception, health workers mentioned opposition, especially from men, other women, and religion as main influencing factors for women: "Spouse and mother-in-laws [sic]" (H23). "Men. Discouragement from other womens. Religious beliefs [sic]" (H25). "Not enough clinics and nurses, the only clinic in most populated area and run by Religion which is against family planning [sic]" (H19).

2.2 Misinformation

Health workers highlighted concerns about misinformation in connection with LARC as a major challenge to meeting contraceptive need in their communities. Some health workers mentioned their necessary work in "tackling rumours." Health workers referred to "rumours" most often, but also mentioned "myths," "misconceptions", and "misunderstanding", all of which will be considered under the umbrella term of "misinformation." One respondent from remote Guadalcanal mentioned multiple sources of misinformation when listing barriers to family planning: "Rumours of diseases certain methods can cause. Either partner refuse family planning methods, no education on side effects. Culture, religion. Jealousy, rumours. Most lack of understanding of service due to remoteness [sic]" (GP13).

In response to the question asking why Guadalcanal has the lowest rate of contraceptive use, misinformation was mentioned in 38 of the 56 answers (67.8%). One health worker stated simply: "Not enough information to tackle rumours" (H39).

Health workers mentioned the belief that contraception can cause poor health. For example, one health worker reported: "Women in the remote communities do not really understand the importance of taking the contraceptive methods. Rumours also quickly spreads that contraceptive commodities are not good for a woman's health. It can cause severe disease [sic]" (H18). Another health worker from Honiara commented:

> Yes, most women believe that Jadelle is a sign of 666. Some women already died from Jadelle. It is sent to us from Cuba and not sold for a person's health. It may cause cancer. It is like sending out rubbish from another country [sic] (H18).

Lack of accessible and evidence-based information about LARC was noted as an additional compounding challenge. Health workers mentioned "ignorance," "lack of understanding," "lack of education" as well as the more general problem of illiteracy and women not having access to primary education as grounds for not knowing about contraception. As one health worker described: "Most women have lack of knowledge information about each contraceptive and them might affect them and believe them family planning methods can lead to other

sickness like eg cancer [sic]" (GP7). Comments were consistent about lack of knowledge: "Lack of good background knowledge from health workers and women not well educate, most not attend school before [sic]" (H11).

Similarly, from remote Guadalcanal health workers, education was a challenge identified multiple times: "Majority of women are uneducated, and all family planning methods are not meaningful to them [sic]" (GP3). Another health worker from remote Guadalcanal responded similarly:

> Low literacy level among mothers and even spouses. Promotion of religion. Heath workers knowledge on Family Planning methods and a lot of time more ignorance by parents and Health Workers. Access to health facility. Preference of Health providers. Rumours. Women in our community have small knowledge about Family Planning [sic] (GP2).

Cancer

Concerns about the relationship between contraception and cancer were mentioned by respondents with such prevalence throughout the survey responses, that it is presented here as its own sub-theme. In analysis of the data from the 56 returned questionnaires, there were repeated references to "cancer". Most of the health workers mentioned concerns that contraceptives could lead to "severe disease." Thirty-one of 56 health workers (55%) explicitly referred to cancer and stated that women believed use of contraception could result in the development of cancer: "Fear due to rumours that family planning methods are cancer causing agents. Using of LARC might cause cancers [sic]" (H29).

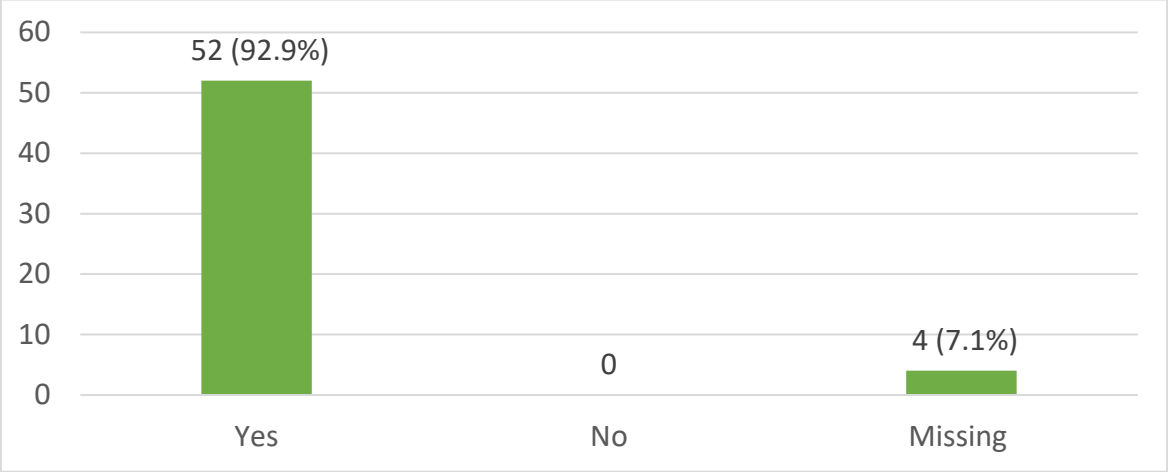
Cancer was also referred to as a potential side effect: "Yes, the most common one [side effect] is fear of developing cancer ie cervical and breast [sic]" (H8). The answers in the data did not offer any explanation of why cancer was such a concern for so many respondents in relation to contraception. This theme will be explored further in the discussion in Chapter Five of this thesis.

2.3 Side effects

Concerns about side effects from contraception are mentioned as a barrier to family planning in the literature (see Chapter Two). A key finding from this study was that health workers describe significant concern about side effects (both their own and women's concerns) and these need to be taken seriously, better understood and addressed. In this survey, health workers were asked if they thought women have any concerns about side effects from the use of LARC. The overwhelming response was "Yes" (93%), with no health workers answering "no" to this question, shown in Figure 5.

Figure 5.

Do Women Have Concerns About Side Effects From LARC



In this part of the survey, almost all health workers added extra comments in the space provided. For example: "Severe headache, PV bleeding. Hair falls. Lower pain abdominal. Dizziness. Prolonged irregular- husbands do not accept prolong bleeding- disturbs sex [sic]." (H25). Another health worker from remote Guadalcanal region commented: "Side effects Eg like jadelle implant, most women come to clinic and complain of effects like body weakness, severe headache, acute chest pain, and even fall of hair. Lose weight, feel sick often. Obesity/over weight [sic]" (GP8).

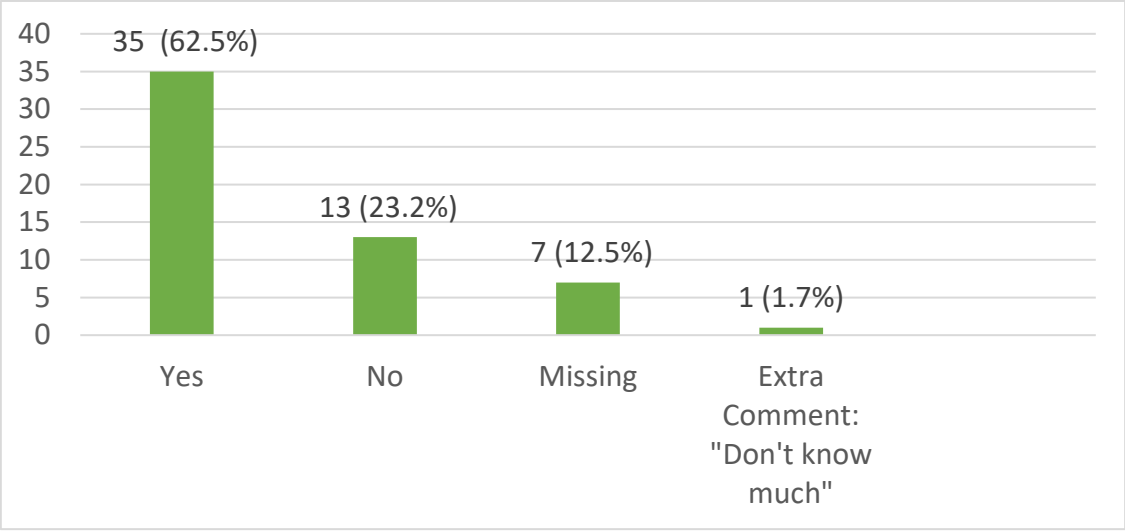
Comments were similar from both urban and remote regions: "Yes, some women have body rash, hair fall off and loose weight. Some have difficulty conceiving again. Some believe FP can cause barrenness Having develop other disease Side effects may affecting normal

menstruation [sic]" (H2). Another health worker described concerns about side effects from the depo injection: "Depo- become cold and shivering esp seen dark clouds. Don't want to be with opposite sex/husband. Feels hungry all the time. May form blood in uterus and cause cancer [sic]" (GP10).

Health workers were then asked if there were any side effects that would lead them to discourage women from using LARC, and to please describe if so. Of the 56 respondents, 35 answered "yes", and 13 said "no", with several adding extra comments that if there were concerns about side effects, they had to be explained and that women could be educated about the expected side effects. These answers are summarised in Figure 6.

Figure 6.

Do You Have Concerns About Side Effects That Would Lead You to Discourage Use of LARC?



Another respondent had various concerns related to different methods of contraception: "Jadelle: discourage- hair falling. Depo: severe headache. Combined pill: migraine headache. IUD: vaginal bleeding, pelvic inflammatory disease, sexual transmitted disease, multiple partners [sic]" (H25).

2.4 Geographical distance

As expected, due to the very rugged and inaccessible nature of much of Guadalcanal, most respondents mentioned distance to clinics and geographical remoteness as challenges for women wanting to access family planning services: “A lot of women have no access to the facility, due to geography location, sometimes staff not available, not enough manpower to provide the service [sic]” (H10).

Challenges around infrastructure are to be expected, considering there are only two partially paved roads, one connecting Honiara to Lambi (dirt and very rutted) in the western part of Guadalcanal, and to Aola (even more eroded) in the eastern part. So many villages up into the mountains and along the shorelines are very remote, with minimal vehicle access, or rely on sea access by dinghy: “What influences choice of family planning is the distance which they come from [sic]” (H31).

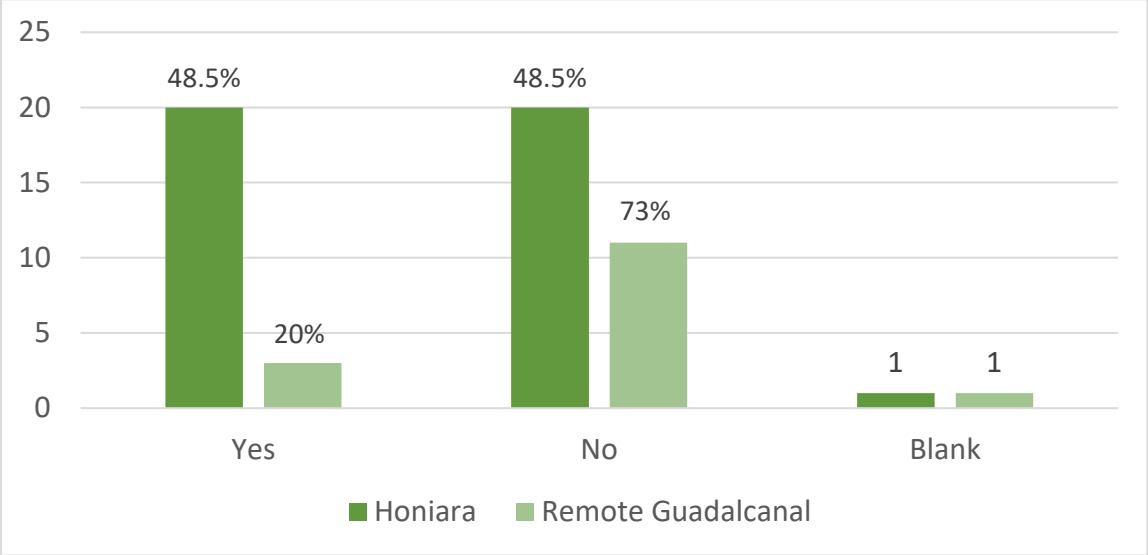
2.5 Health worker skills with family planning care

Throughout the survey responses, health workers mentioned the need for more skills to provide family planning services. This included both the need for more education on counselling women, and to administer contraceptive methods, and was mentioned especially for those providing a greater outreach to the remote and inaccessible areas.

Health workers were asked several questions about their confidence to provide LARC and if they had received training, whether they received any upskilling workshops on family planning while in their current clinic, and whether they felt confident about communicating and promoting long-acting contraception. Overall, 41% of health workers who responded to this question said they had received training for LARC, while 55.3% answered that they had received no training. Two left this question blank. The results are shown by region in Figure 7, below:

Figure 7.

Have You Received Training for LARC? by Region



Many health workers offered extra comments on "why/why not," almost all noting that they were not offered or included in training opportunities, for example: "No, not every body nurse chosen [sic]" (H2); "No, I am not selected for any training on LARC [sic]" (H7); "No, not invited. Because only the midwives are selected [sic]" (GP1); and "No, because not included in the trainings, only Bosses or Midwives incharge are allowed to always attend such training [sic]" (H8).

When asked how often health workers received any upskilling workshops or opportunities, 39.2% answered "never". The results for both regions are presented in Table 5.

Table 5.

Have You Received Any Upskilling on LARC? by Region

	Honiara n=41	**Remote Guadalcanal n=15**	**Total n=56**
"Never"	18 (43.9%)	10 (66.7%)	28 (50%)
"only once"	3 (7.4%)	2 (13.3%)	5 (8.9%)
"only had training"	4 (9.7%)	0	4 (7.2%)
"rarely"	4 (9.7%)	1 (6.7%)	5 (8.9%)
Blank	12 (29.3%)	2 (13.3%)	14 (25%)

Some health workers added extra comments asking for more upskilling opportunities. One respondent, with over 30 years of experience responded: “Not too often, never, should be done every 2 years” (H15).

Health workers were asked about their confidence levels concerning LARC. They were asked how confident they felt about providing LARC to women, and how confident they felt about communicating with women and their families about the benefits of LARC. The results are presented in Table 6.

Table 6.

Confidence Levels for LARC Insertion, by Region

“How confident do you feel to insert LARC?”	**Honiara n=41**	**Remote Guadalcanal n=15**	**Total n=56**
“confident”	24 (58.5%)	4 (26.6%)	28 (50%)
“somewhat confident”	2 (4.8%)	1 (6.6%)	3 (5.3%)
“not confident”	8 (19.5%)	9 (60.0%)	17 (30.3%)
Blank	7 (17.2%)	1 (6.6%)	8 (14.4%)

Next, health workers were asked how confident they felt about communicating with women and their families about the benefits of LARC. Half of respondents felt very confident to communicate about LARC. The extra comments offered in response to this question referred to not being trained, therefore not feeling confident. The results are presented in Table 7.

Table 7.

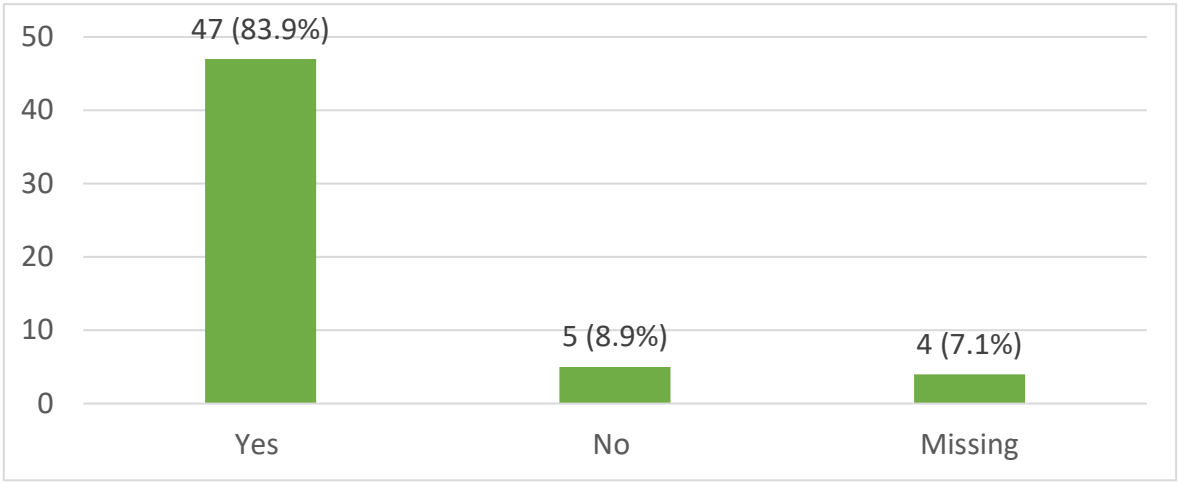
Confidence Levels for Communicating About LARC, by Region

"How confident do you feel about communicating with women/families about LARC?"	**Honiara n=41**	**Remote Guadalcanal n=15**	**Total n=56**
"very confident"	22 (53.6%)	6 (40.0%)	28 (50%)
"capable"	14 (34.2%)	5 (33.3%)	19 (33.9%)
"not confident"	1 (2.4%)	3 (20.0%)	4 (7.2%)
Blank	4 (9.8%)	1 (6.7%)	5 (8.9%)

Health workers were asked whether they felt comfortable recommending LARC to women and their husbands. Despite the many concerns about side effects that health workers reported, a strong majority of health workers, 83.9%, responded that they felt comfortable to recommend LARC. Results are shown in Figure 8.

Figure 8.

Do You Feel Comfortable to Recommend LARC?

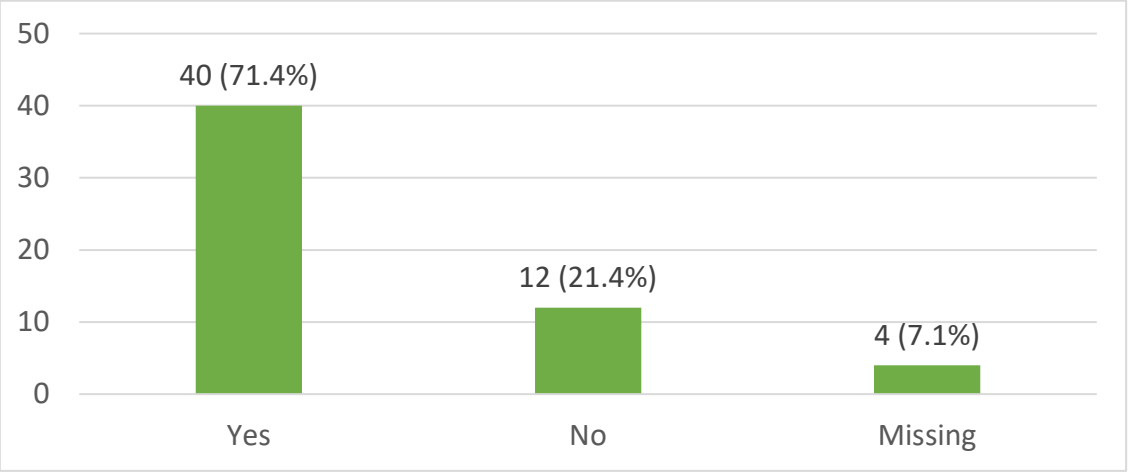


Finally, health workers were asked about whether they would recommend LARC to teenage women. There have been multiple reports in the literature (see Chapter Two) about the need to increase access to contraception particularly for adolescents, identifying this group is a priority target. This survey asked health workers very simply whether they felt comfortable to recommend LARC to teenagers, without specifying about their relationship status

(single/unmarried or married). The results are shown in Figure 9, with 71.4% answering that yes, they would recommend.

Figure 9.

Would You Recommend LARC to Teenagers?



In addition, several health workers mentioned adolescents in their extra open-ended answers. Several felt that contraception should only be provided for married young women, for example: "Family planning only for teenage women with husbands/ who are married [sic]" (GP10). Other health workers volunteered comments that suggest they are mindful of needing to make contraception accessible to women who are at particularly high risk of unplanned pregnancies: "Associate with mothers, adolescents outside clinic to talk on family planning [sic]" (GP13).

3. Solutions

Having presented the findings on challenges health workers described, the third section of this chapter presents the themes that arose from health workers' suggested solutions to these challenges. Health workers consistently mentioned three themes as suggestions for what was needed to help address the unmet need for family planning in Guadalcanal, Solomon Islands. They called for increased training opportunities for health workers; they emphasised the need to raise awareness in the population generally about the importance of family planning; and they identified larger systemic issues that need to be addressed. The findings under these themes are presented in this final section of the results chapter.

3.1 Education and skill of health workers

The survey asked health workers how they might be supported best to strengthen their ability to provide LARC and provided six options for them to select from. In response, most health workers (87.5%) chose more training, and more education as highest priorities. The only option significantly less chosen was for extra funding. For the additional option of "Other- please describe" valuable extra comments were provided. The emphasis was on need for more training of health workers. As several health workers described: "Main barrier to use LARC is most of staff/nurse are not trained for inserting LARC excerpt for midwife only. That's main barrier [sic]" (GP8); "all health worker need to be trained and well aware of the LARC [sic]" (H32); "more staff training on insertion from there the LARC strengthen confidence to provide [sic]" (GP8), and "if theirs more training for all health workers than the number of women taking those method will be high [sic]" (GP14).

Health workers were asked what national efforts would help increase use of family planning. Out of the 56 respondents, 49 offered ideas with only 7 leaving this blank. Of those who responded, the need for more training for health workers was the most identified national priority. Twenty-nine of the respondents (51.9%) emphasised the need for more training for health workers, for example: "We should prioritise Family Planning…More Family Planning, less mortality/morbidity. Trainings and awareness aggressively [sic]" (H12), and "More training for all Nurses, not midwives only- Organise exchanges programs for Nurses so that they can learn from others and implement in their own context [sic]" (H41).

In addition, when simply asked if they had any further comments at the end of the questionnaire, many health workers again mentioned the need for extra training, for example "Family Planning Program is very important and all nurses needs upskilling every year to be knowledgeable especially in counselling and awareness [sic]" (H16); "More training to Health Workers. More funds for health awareness in communities. More training for insertion to workers [sic]" (H5); and "All health workers should do upskillings so that they can provide satisfactory knowledge for women. All health workers should be trained on all LARC so that all method can be provide [sic]" (GP11). The comment below demonstrates a sense of care for the wider community:

> Social mobilisation is lacking in the communities in Guadalcanal Province. Strong social mobilisation with the staff on the facility have to well equipped into knowledge and skill in counselling and insertion on LARC and then that would be make the service accessible and available to that community. Couple counselling must be done not individually because men are the decision makers in Guadalcanal Province not women [sic] (H18).

Emergency contraception

Only 30% of health workers reported being able to provide emergency contraceptive pills. Regional differences were apparent, with only 1 (6.6%) health worker from the remote region reporting the ability to provide this essential service. This contrasts with 39% (16) of Honiara health workers reporting this as part of the care they can offer women. The World Health Organisation lists no medical condition for which the risks of emergency contraceptive pills outweigh the benefit (WHO, 2020).

Antenatal plan for contraception

One of the high impact practices in family planning is offering contraceptive counselling and services as part of pregnancy and post-birth care (Johns Hopkins, 2020). Three questions were included in the survey to elicit health workers' understanding of antenatal planning for contraception. Of the completed surveys, 88% of health workers reported that they discussed postnatal contraception during pregnancy care, and 62.5% reported that the plan was reviewed postnatally.

In addition, several health workers mentioned antenatal clinics in their extra open-ended answers about what might help address the unmet need for contraception. For example: "Both wife/husband needs to attend Antenatal clinic eg on first visit so that both can heard about informations on family planning from the nurse [sic]" (H24); "All Guadalcanal Province women to attend clinic for Antenatal Care and family planning" (H33); and "Both women and husband should come to first visit during Antenatal Clinic so that counselling done for both

[sic]" (H34). Continuing to increase postnatal uptake of contraception may be an easy and effective strategy for reducing the unmet need for contraception in Guadalcanal, Solomon Islands.

3.2 Raising public awareness and countering misinformation

The need to raise public awareness about the importance of family planning and the need to counter misinformation about LARC were also identified as a key solution amongst survey participants. In the section of the questionnaire that asked about what suggestions health workers had for most effective ways of addressing unmet need for family planning, the majority (66%) answered that education was key, and that health workers needed to be resourced for contraceptive health promotion. Many heath workers emphasised the need for both education on the benefits of LARCs and family planning for their community, and also the need for more education for themselves. For example: "Educate needed population. Involve representatives in training. All nurses must be train on how to motivate the needy population. Every clinic a nurse must allocated to do family planning. This nurse must not involve in other programs [sic]" (GP13), and "More training on importance and benefits of Family Planning to H/Workers. More training /awareness on side effects of contraceptives to couples [sic]" (H37).

Many participants also commented on the need to increase general knowledge about contraception in the community. For example: "More educational awareness at high school. More awareness in the communities and womens group, eg church groups. Have a separate Antenatal Classes for Antenatal mothers apart from. Antenatal care services. More logistic support and funds allocate on FP awareness [sic]" (H28); "Awareness at all levels. Proper counselling. Health workers trained in all contraception, so can provide all methods. Logistic support for outreach work [sic]" (H14); "Funding should be provided to enable Health Workers to do outreach. Train more nurses. Continue awareness for Family Planning clients or through radio, newspaper etc. [sic]" (GP10); and "There should be continuous education on Family Planning in schools, church sessions/lessons, and social media outlet eg facebook, FM [sic]" (H18).

Participants also commented on the need to increase acceptance of family planning in the community: "Chiefs/elders to do more awareness to their civilian [sic]" (GP2); "We must

continue to do awareness on family planning to men as partners [sic]" (H36); "Support increase of human resource. Engage volunteers to advocate for Family Planning [sic]" (H22); and "Community Awareness and training village to village. Funding allocation for family to support supportive supervision from health workers and community [sic]" (H38).

3.3 Addressing systemic issues

The final theme identified from health workers was the need to find ways to address broader systemic issues. Specifically, health workers identified that many of the challenges in providing contraceptive care to women had to do with wider systemic issues such as lack of infrastructure, limited resources, lack of government prioritisation, and social and religious challenges.

In their open-ended responses, many health workers recognised that the challenges of improving this vital health service would require social, cultural, and structural change. Interestingly, gender issues, or addressing gender-based-violence were hardly mentioned in their suggestions for solutions, which was noteworthy as gender relations, and specifically male dominance were so central in the data on barriers and opposition. This quote was given in response to the open question "any extra suggestions or comments you might like to offer?", for example: "Some women having fear to their partner [sic]" (GP15).

The answers to the open question of what national efforts would help increase use of family planning largely focussed on increasing health worker capacity and increasing public access. Many health workers also mentioned the need for government financial support for women to educate their children (and themselves) and decrease the number of children that families have, as a way to reduce poverty, for example: "Use of Nationwide radio awareness. Amend laws that all women bearing more than 4 children must take Family Planning [sic]" (H2);"Government should provide more effort to Family Planning since Solomon Islands depends very much on donor partners for most access of living and problems of the country [sic]" (H1);"More Health Centres on sites that far from Health Services [sic]" (H23); "More capacity building. For both service provider and women as well as general population and in secondary institution [sic]" (H7); and "Provide awareness to local communities about contraception method or even to secondary schools. Avoid unplanned Birth/Delivery to family. Avoid teenage pregnancy [sic]" (GP4).

More than half (66%) of health workers commented on the need to increase access to health clinics, especially for women in the remote villages: “Provide funding to helping doing satellite clinic and family planning to other community levels [sic]” (H31); and “Enough staff at every health setting. Infrastructure. Equipments must be provided [sic]” (H32).

Finally, when health workers were asked if they had any other comments/suggestions they would like to offer, many offered extra comments, again highlighting the themes of need for increased education, training, and infrastructure:

> Provide awareness to people/womens to educate them regarding types of contraceptive methods. Other ordinary nurses are not train to insert such contraception methods, only specialist who train for inserting contraception methods can do such work. Provide funds to implement such training. Do logistics for outreach. Continue awareness for family planning clients through radio, newspaper etc [sic] (GP4).

In addition, when asked specifically how health workers can be supported best to strengthen their confidence and ability to provide LARC, the overwhelming majority of answers had to do with increased access to training, and public awareness of the benefits of LARC: “Financial support are much needed to conduct more workshops or trainings for health workers, and also to provide more equipments in the health facilities [sic]” (H29); and “Funding available for logistic to do more awareness [sic]” (H13).

Summary

This chapter has presented the answers health workers provided in the questionnaire survey ‘Addressing the unmet need for family planning’. Overall, 56 surveys were completed and returned. The findings resulted from a mixture of quantitative and qualitative questions, with many health workers volunteering detailed comments. Guadalcanal Island is divided into two health districts, and 41 surveys were returned from the urban Honiara district, and 15 from the remote Guadalcanal Province region. The results were mostly reported as a combination of

both regions making up Guadalcanal Island; however, where differences were observed these were noted. The choice of clinics visited was decided upon by the Solomon Islands research assistant, with a total inclusion of 15 clinics/locations.

The results were grouped into three broad areas: context, challenges, and solutions. Health worker demographics were presented, followed by data on methods of contraception they can provide. Under the theme of challenges, main barriers were presented. These included multiple sources of opposition; misinformation; concern about side effects; geographical distance; and lack of skills with LARC for health workers. This was followed by themes which health workers identified as potential solutions, such as increasing access to education and skills training for health workers; increasing community awareness and countering misinformation; and addressing systemic issues.

The following chapter of this thesis discusses the significance of the results of this study and the implications for addressing the unmet need for contraception in Guadalcanal, Solomon Islands.

CHAPTER FIVE: DISCUSSION

This study investigated the perspective of health workers in Guadalcanal, Solomon Islands, as they provide essential family planning care to women and their families. In this chapter, the results from this research will be discussed in two sections: challenges, followed by potential solutions. This research aligns closely with and extends existing literature that describes the multiple and complex barriers to contraception for women in the Pacific, and specifically in the Solomon Islands (see Chapter Two). The role of structural barriers outside of the health system that limit access to contraception are acknowledged. However, given their intractability and the scope of this study, the focus of discussion is the health system specific barriers that are potentially susceptible to change.

The second half of this chapter considers potential solutions by exploring five themes that recurred as suggested solutions from health workers. This chapter concludes with a statement on building resilience for the future by valuing health workers as they look after their communities.

1. Challenges- finding permission space for change

The literature on family planning in the Pacific is filled with discussion of the multiple and complex barriers women face in accessing contraception (see Chapter Two). To begin, I briefly summarise key data from my research to provide background for the following discussion. Participants confirmed the role of certain structural barriers (as identified in Chapter Two) that are difficult to change. Following discussion of these structural barriers, I will explore what I have termed 'health system specific barriers': issues that I believe are more amenable to improvement and change in the short term. In looking for potential solutions to address unmet need for contraception, I have found it useful to think of the need for finding a permission space for change. This study recognises that many barriers to contraception are rigid and difficult to alter, but finding the space where change is possible is the important challenge to address.

1.1 Review of key findings from this research

My research confirmed existing evidence that in health workers' view there is an unmet need for contraception generally, and LARC specifically in Guadalcanal, Solomon Islands. To

summarise the data set of the 56 surveys returned, 50% of participants were nurses, and 34% were midwives, and the majority of participants were female (84%). Thirty-two percent of participants reported they had more than 20 years of experience working in their current role. From the remote region, less than half (47%) reported that they could provide contraceptive implants. Health workers reported that they thought implants were the most common type of contraception that women want (45% selected 'implant'; and additional 30% selected 'implant & depo'). Overall, emergency contraception could be provided by 30% of respondents. The majority of participants reported that women often decline family planning (79%). This provides a brief background picture for exploring why there is unmet need, and what can be done about it, which will be discussed in the following section on potential solutions.

1.2 Structural barriers: barriers outside the health system

In looking for the permission space for change it is helpful to recognise the structural barriers to contraception, such as socio-cultural political norms, as well as direct barriers such as resources and education which are the potentially more malleable barriers amenable to change. Many of the suggestions from health workers mentioned the need to target structural barriers to address the unmet need for family planning. Significant structural barriers to family planning exist globally (see Chapter Two), and similar challenging dynamics impact on health workers' ability to address the unmet need for LARC in Guadalcanal. Consistently, health workers in this study described barriers to family planning as including "culture", "religion", and "infrastructure". These are intractable as they are beyond the healthcare system and therefore outside the specific scope of my research. As an outsider researcher committed to cultural safety caution is required about commenting on cultural norms and understandings. However, I provide a brief discussion of three pertinent structural barriers below as they were emphasised by participants to indicate areas for further consideration by programme developers in the Solomon Islands.

Gender relations

In describing structural barriers to contraception, a consistent theme amongst health workers' responses was the impact of gender relations. Health workers suggested women were most likely to be influenced by the attitude of their husbands and additionally described fear of

'rumours' and disapproval from others as primary concerns. Gender relations in the Solomon Islands and the impact on contraceptive uptake is a complex and multifactorial issue that is beyond the scope of this research and my role as an outsider researcher (Robinson & Rolls, 2019). However, the relationship between gender equity and contraceptive uptake has been identified elsewhere and further consideration of this issue could usefully inform efforts to improve contraceptive uptake in Guadalcanal, Solomon Islands (Vozoto, 2019). More broadly, there is recognition in medical ethics that as a matter of social justice there is the need to move toward shared contraception responsibility. The bias is that contraception is the responsibility of women – however, it is a shared responsibility and priority, and lack of access adversely affects women (Campo-Engelstein, 2012).

Religious influence

Another common structural barrier identified by health workers related to the role of religion in influencing contraceptive uptake. Nearly every participant in my study mentioned the influence of the Roman Catholic Church as a barrier to contraceptive uptake in this region. Guadalcanal has one of the highest rates of Catholic faith in the Solomon Islands (J. Narasia, personal communication, November 20, 2019). Further investigation is needed to understand the relationship between family planning use and religion and how this might explain regional differences in family planning within Solomon Islands (UNFPA, 2019). For example, in the remote region 66% of health workers stated religion as a main barrier.

Infrastructure

Many health workers mentioned significant infrastructure constraints as a key influence on contraceptive use particularly for the remote region. Roads, where they exist, can be impassable in the rainy season, hindering access to and from remote villages. There is also a recognised scarcity of health workers in remote regions, and one nurse with 30 years' experience said simply, in response to the question of why her region had the highest unmet need, "no manpower." Lack of infrastructure in the Solomon Islands must be seen in the context of global inequities between countries. Further investigation is needed to identify the relationship between infrastructure constraints and contraceptive uptake in Solomon Islands and what infrastructural improvements could best optimise contraceptive uptake.

Addressing issues of unmet need from a holistic and multi-sectoral position is vital. Importantly, the growing recognition and application of "indirect interventions" signal an understanding of the political, economic, and social determinants of morbidity and mortality in vulnerable communities (UNFPA, 2020). Examples of indirect interventions include increasing gender equity; general health promotion; healthy environment; health education; and removing financial barriers to accessing health care (Johns Hopkins University, 2020).

In summary, structural barriers to family planning, confirmed again in this study, point to ongoing challenges despite national efforts to improve access to contraception since 2012. There are deep-seated beliefs that family planning is only appropriate for married women, and that women fear lack of consent from their husbands. Infrastructure remains an intractable challenge. These barriers can and need to be addressed but are beyond the scope of this research. The next section of this chapter will discuss health system specific barriers, as these are potentially more malleable barriers, susceptible to influence and change.

1.3 Direct barriers: health system specific barriers

The structural barriers to family planning discussed above influence and in many ways underpin and result in health system barriers. My results have identified a range of health system barriers that include misinformation about and fear of contraception; health workers lack of confidence with LARC; health worker lack of skill with inserting LARC; and the importance placed on the gender of health workers.

Misinformation

The data from this study supports and expands upon current literature (Adedeji et al., 2019; Harrington, 2019; Nusair, 2019; Pegu & Nevenga, 2019; Tiebere, 2019) that misinformation about, and fear of, contraception are significant barriers to contraceptive uptake for women in Guadalcanal, Solomon Islands. The health workers placed very strong emphasis on the impact of misinformation about contraception, in various forms, in their responses throughout the survey. The findings produced in this research show that despite significant efforts by UNFPA

since 2012 (FP2020, 2019) to increase family planning coverage in the Solomon Islands, the same challenges remain, such as discrimination against youth and unmarried women, gender inequity, and difficulties with quality family planning services. As found in other studies, such as Adedeji et al., 2019; Harrington, 2019; Letter et al., 2019; Nusair, 2019; Pegu & Nevenga, 2019; Raman, 2019; Robinson & Rolls, 2019; Tiebere, 2019; Vozoto, 2019, participants reported that suspicion about contraception and fear of side effects are prevalent throughout the population.

Health workers particularly emphasised a key concern amongst the population that family planning is associated with cancer. Interestingly, although there were many comments suggesting many women are concerned that family planning can cause cancer, there were very few explanations as to why women might believe this. Multiple health workers mentioned that women fear developing cervical and breast cancer from the use of contraception. My findings suggest that there is important work to do to understand the origins and drivers for this concern and to address these through evidence-based education efforts.

Throughout the survey, in response to various questions, participants said women have multiple misconceptions regarding family planning in general. Commonly, health workers mentioned that family planning was regarded by the community as only for married women. Similarly, some participants mentioned that family planning was not for teenagers. There were many references to women worrying that family planning would lead to infertility and infidelity. Health workers reported that mistrust of contraception was common, mostly in the community but also among themselves.

Concern about side effects from contraceptive methods is one of the long-standing, recurrent themes in the literature throughout the Pacific, and was very evident in the findings of this study. In one question, health workers were asked specifically if they thought women have any concerns about side effects from the use of LARC. The overwhelming response was “yes” (93%), with no health workers answering “no” to this question.

Health workers (93%) mentioned women were concerned about a range of physical and emotional side effects. There was also acknowledgement that if women did not feel well, there would be consequences for the family: “because if they are sick, no one will find food/ support their families.” Health workers identified a need for education on side effects and debunking myths. As with concerns about cancer, concerns about side effects need to be taken seriously and used to inform education efforts. Health workers are perfectly placed to engage with women about these concerns and to deliver evidence-based and responsive contraceptive education and counselling in their communities if they are resourced to do so.

Health workers’ confidence with LARC

While ample research exists around the benefits of family planning and barriers to contraception (see Chapter Two), there is little research on the views of health workers about how to address the unmet need for family planning or LARC in the Pacific. This is a gap in the literature, considering health workers are recognised as agents of change, existing in a unique position of mediation between the community and health services (Johns Hopkins University, 2020a).

Most participants demonstrated awareness that lack of access to LARC for women who want to avoid pregnancy threatens their ability to build a better future for themselves, their families, and their communities. There was good understanding of the complex barriers women face with accessing contraception. While there was a general sense of advocacy for LARC from health workers, this was also countered by concerns amongst participants about potential disadvantages of this type of contraception. While a strong majority of health workers (83.9%) responded that they felt comfortable to recommend LARC, health workers also expressed concerns about possible side effects. When asked how confident participants felt about communicating with women and their families about the benefits of LARC, 50% said they were “very confident”, and 34% said they felt capable. This suggests that UNFPA efforts to work with health workers to encourage family planning has had an educating effect. However, given how key health workers are delivering contraception on the ground my findings suggest a need to engage with and address health workers concerns about side effects of contraceptives.

It was noteworthy that health workers' attitudes towards long-acting contraception for adolescents were reasonably positive. However, 21.4% responded that they would not recommend LARC to adolescent women, despite wide recognition from health officials throughout the Pacific that adolescent sexual and reproductive care is a high needs priority (Adedeji, 2019). This aligns with other studies (Pego, 2019; Raman et al., 2017) that highlight the especially complex multiple barriers to contraception for adolescents in the Solomon Islands. My findings suggest that health workers need to be supported to enhance the delivery of contraception to young women in Guadalcanal.

Health worker skill with LARC insertion

When health workers were asked about their confidence levels with LARC insertion only 50% said they felt confident. Many participants expressed their disappointment and frustration that they were unable to provide LARCs, especially as this was the method of contraception participants felt most women wanted. Repeatedly, in response to questions there were extra comments offered about limited access to training.

From the remote region many commented that only the midwives receive training rather than the nurses. This exclusion of nursing staff from LARC insertion training is significant, especially as the total number of nurses in the Solomon Islands, according to latest WHO data (2015) is recorded as 936; and the number of registered midwives is 120 (Homer, 2017). Midwifery is an additional specialisation with many clinics not staffed by a midwife, according to Jenny Narasia, Reproductive Health Coordinator at the Ministry of Health, Solomon Islands (personal communication, September 13, 2020).

Gender of health workers

Most health workers in this study were female although there were some male nurses who participated. There was a significantly larger proportion of male health workers from the remote region (20% compared to 7.3% in Honiara). The gender of health workers was noted as being a significant barrier to contraception uptake by participants, with male nurses seen as a barrier due to the cultural sensitivities around providing family planning services. It also became evident that many participants felt that part of the appeal of the contraceptive implant is that it is not an "intimate procedure," therefore "ok for male nurse to give." Barriers to

contraceptive uptake resulting from the gender of health workers should be considered in strategies to address unmet contraceptive need in this region. Trained male nurses/nurse aids could have a powerful role in working with husbands and partners.

In the first half of this chapter, structural barriers outside of the health system that limit access to contraception have been acknowledged. The focus of discussion has been the health system specific barriers that are potentially susceptible to change. In this study, health workers reported ongoing challenges from the impacts of misinformation, as well as their own challenges with lack of knowledge and skills to provide LARC.

2. Solutions- high impact change enablers

This second half of the chapter will consider potential solutions for addressing unmet need for family planning in Guadalcanal, Solomon Islands as suggested by health workers in this study. The themes include: listening to health workers and valuing the relationships they have; increasing training, information, and education about side effects; the need for public education programmes; addressing key reproductive healthcare priorities; and continuing efforts to address structural factors. These potential solutions are presented in five subsections below.

2.1 Listen to and value health workers – they are the experts on the ground

This study emphasises the need to hear from health workers – they are the experts on their communities, working at the frontline of this health care challenge. The question that follows is, "how can health workers be better supported?"

The value of investing in health workers to help improve access to family planning can be highlighted by considering the mediating position they occupy between barriers to contraception, and health promotion on all levels (Johns Hopkins, 2020a). Structural family planning barriers such as lack of resources and the limited decision-making power of women have been discussed. Health workers work locally to provide care and information and understand the situation in their own communities, and as such can be a high impact intervention (Johns Hopkins, 2020). The benefits of health workers being supported to provide care could be improved knowledge about family planning and increased agency for women,

enhancing informed decision-making and demand for contraception. Measurable outcomes are always important, and in this case might be an increase in women's agency and reduction in unintended pregnancies. The findings from my research suggest that there is a unique mediating position health workers occupy for accelerating change and improving family planning care. This is demonstrated across key action areas discussed below.

According to latest UNFPA data, Solomon Islands was categorised as a country with 'high potential' for accelerated improvement, given recent data on fertility (well above the recommended 'ideal fertility rate'), contraceptive use, and intention. There may be substantial demand for family planning if services are available and misinformation is addressed. Modern contraceptive prevalence (use of contraceptives) was less than 50%, meaning there may be room for rapid growth once supply and demand patterns change (UNFPA, 2019).

The findings from this research confirm the importance of health workers as potential agents of change and highlight their unique position at the interface of relationships between women and wider society. At the heart of human rights are respectful relationships between individuals and communities (Hunt, 2020). Health workers have relationships with women, men, the community, the church, government agencies, and aid organisations. There is increasing discussion in scientific literature that emphasises the phenomenon of relationship as a powerful catalyst for change, understanding that to uphold the integrity of a complex system, we must look at the relationships that make the system robust (Bateson, 2016). What seems particularly important to recognise is that context influences how the relationships form and communication develops, and health workers know this context better than any external "expert."

Health workers are critically important in counteracting misinformation and fear about contraceptive side effects and who contraception is for, along with contraception stigma, and other fears that result from the multiple barriers discussed above. Health workers are in a unique position to explain normal physical effects from contraception, and work towards educating men and families on the benefits of contraception. A critical element of being trustworthy is that the health workers need to be viewed as knowledgeable and non-judgemental, offering

contraception as a health promotion activity (Johns Hopkins, 2020a). Conversation has profound potential to change views. There is a need to ensure health workers are informed, supported, and resourced to provide this key health promotion role in relation to contraception.

Another clear point that health workers raised repeatedly was the need to involve men. Health workers consistently stated the need to involve men as partners, because men/husbands are the ones who are the decision-makers in the family. Like so many frontline health workers in any context, there are many competing priorities and demands on their time. Health workers must be supported to foster the important relationships, for example with men, that they have.

2.2 Increase access to LARC insertion training and education resources

A clear theme related to solutions in the study was a desire from health workers for more training. The need to expand training to nurses, and even nurse aids, is therefore a key finding from this study. Certainly, this was the strongest recommendation that surfaced throughout the research, with heath workers commenting throughout the survey that all health providers must have a good understanding of LARC and the skill to provide this care to women. Increasing access to training is a central recommendation that comes out of this research. These findings are similar to other research (Crabtree, & Tolley, 2018) that suggests 'bosses' go on a lot of trainings, collect the skills, and then are promoted to management positions. This does little to increase the knowledge and practice of health providers in practice unless there are active efforts to pass the skills on.

This is a clear message, reflecting that remote health workers see an opportunity to help address the unmet need for family planning by increasing their skills. Of all health workers, 41.2% said they had received training for LARC. When broken down into regions, it is significant that 73% of remote participants said they had not received training. In addition, 50% of all health workers reported that they had “never” received any upskilling on family planning. Although 75% of all health workers reported that contraceptive implants could be provided, only 50% said they felt confident with insertion or advising women about LARC. Significantly, this contrasted with 84% of participants reporting they would recommend LARC.

Respondents from the remote region emphasised that only the midwives receive training for LARC. A Solomon Islands MOH employee explained that there are only one or two midwives at some of the larger health facilities, and much less in the remote region. Training of nurses seems especially important as they see a wider range of patients, rather than midwives who care for pregnant and postnatal women. A trained nurse is a family planning resource even if patients come to them for something else, which offers up the opportunity for potential 'incidental' education about family planning.

Table 8 shows the distribution of population and health facilities by province. This data is important as a reminder that the remote Guadalcanal region has a larger population and more health facilities. However, anecdotally I was consistently informed that training and midwifery coverage is much higher in the urban Honiara area.

Table 8.

Distribution of Population and Health Facilities by Province

Province:	**Population:**	**Health Facilities:**
Guadalcanal	78,290	40
Honiara	63,311	14

(WHO, 2015)

As discussed earlier in this chapter, the focus of this study is to find the permission space to assist with meeting contraceptive need. Further implementing a comprehensive training programme that includes incremental, practical, competency-based education, training, and mechanisms to reinforce skills is a clear and feasible recommendation. What health workers are asking for is that training extend beyond just midwives, who are a small proportion of the entire health workforce. There are opportunities to explore mobile outreach, to extend training opportunities to the remote health workers, in particular. These health workers are competent with inserting intravenous lines into young children, for example, so inserting a small implant is well within their competencies.

Health workers also reported that LARC insertion training has been centralised in Honiara, and thus only senior staff have been transported in to attend workshops. Despite an awareness of national efforts to prioritise of family planning care, there was a general feeling among the participants, especially from the remote region, that this was not 'filtering down' to their areas. An alternative is encouraging those who have developed their competency to pass the skills and knowledge on, to all capable staff in their own local clinics.

Education

The findings from this study highlight a call for consistent, accurate, and accessible information to ensure health workers are able to respond to concerns from women and communities about the safety and side effects of LARC. There is an abundance of literature about family planning misinformation in the Pacific region (see Chapter Two). What has been reinforced by my study is the need to explicitly target side effect misinformation about family planning and specifically, side effects.

Correcting misinformation is a challenge seen throughout the world, on issues great and small. Educating health workers on what the evidence tells us about side effects from LARC is a basic starting point. One approach to changing perspectives and increasing understanding is to work with language. Nusair (2019) emphasises that we should refer to 'expected effects' from LARC as a way of confirming normal physical changes and decreasing suspicion and concern that are linked to fear of harmful 'side effects'.

Clarifying the different expected effects from different contraceptive methods is a simple and important way of reassuring women about the changes they may experience. With evidence-based education, health workers can reassure women that the potential changes they experience from contraceptive methods should not be feared. Health workers should be supported to confidently explain to women, men, and their communities, that the benefits of family planning far outweigh any potential expected effects they may notice.

The fear of cancer linked to contraception was evident throughout the survey. It is possible that this myth stems from the misunderstood issue of cervical cancer risk from unprotected sex due to human papilloma virus. This is a critical issue to clarify with an urgent need for re-education of health workers and the wider population. Understanding the source of this belief is critical to help develop education strategies to address it. Correcting misinformation will require consistency of information, woman-to-woman examples and encouragement, clarity from leaders, and trust.

Dr Howard Sobel, from the World Health Organisation, in his oral conference presentation said, "Women have a right to choose, but we should guide them" (personal communication, July 6, 2019). Contraceptive implants have many advantages, including that they are less invasive to insert, and have less side effects than a depo injection. They cause less bleeding than copper IUDs, which is helpful in a population who are already very prone to complications from anaemia (Roberts, 2020). Regarding effectiveness of the depo injection, it is reported that 1 in 17 women would get pregnant, compared to 1 in 2000 women using a contraceptive implant (Sobel, 2019). There are excellent resources, such as simple videos from the World Health Organisation that explain the essential role of contraception, like a vaccine against pregnancy, as a critical health service to help prevent morbidity and mortality. Around the globe, the role of reliable family planning as a health promotion strategy must be emphasised.

2.3 Enhance community acceptance

Health workers described the need to invest in growing informed and responsive public education programmes that address conceptive stigma and communities' concerns about the safety and effectiveness of LARC. Health workers described a lack of understanding about contraception in the general population as an additional barrier to contraceptive uptake and health workers ability to counter misinformation. Health workers mentioned a lack of understanding and lack of education, and women not having access to primary education as grounds for not knowing about contraception.

Certainly, education and family planning awareness must start at school, and church-based support is essential. There is an opportunity to learn from other positive and successful

examples of public health campaigns such as immunisation outreach (Johns Hopkins, 2020). Women seeing other women engaging with care can have a powerful impact on increasing acceptance and changing behaviour (Service et al., 2015).

'Public awareness' refers to the attitudes, behaviours, opinions, and activities that comprise the relations between the general population as a whole, to scientific and medical knowledge (WHOa, 2020). Public awareness campaigns are important because they can be used to contribute to policy change by putting pressure on policymakers and encouraging the community to take action (WHOa, 2020). Government regulations, such a school education programmes, can influence behaviour, but often without changing underlying values and motivations. Public awareness campaigns can inform the community about a current problem by highlighting and drawing attention to it in such a way that the information and education provided can solicit action to make changes (Nusair, 2019).

In addition, indirect influences, such as a 'social nudge' can also have a significant impact on behaviour change. A "nudge," in this sense, is:

> Any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not (Thaler & Sunstein 2008, p. 6).

There are simple proven frameworks that can be adapted to encourage social and behavioural change. With a simple approach there is the potential for changes in population behaviour that have a measurably beneficial impact. Two examples are provided in Table 9 below.

Table 9.

Behaviour Change Framework Examples

Nudge Theory	Nudge theory is a concept in behavioural economics, political theory, and behavioural sciences which proposes positive reinforcement and indirect suggestions as ways to influence the behaviour and decision making of groups or individuals. Nudges are not mandates. A nudge makes it more likely that an individual will make a particular choice, or behave in a particular way, by altering the environment so that automatic cognitive processes are triggered to favour the desired outcome. For example, tempting fruit instead of lollies at the checkout isle in supermarkets (Thaler & Sunstein 2008).
EAST Framework	The EAST framework states that to change behaviour the intervention must be a simple, pragmatic approach. EAST stands for Easy, Attractive, Social and Timely. It is an accessible, simple way to make more effective and efficient policy (Service et al., 2015).

The value of considering approaches such as Nudge Theory and the EAST framework is that they are based on the idea that behaviour change strategies need to 'make it easy' (Thaler, et al., 2008).

Behavioural science has when applied across dozens of developing countries with successful outcomes (Dalton, 2018). It is possible to integrate behavioural science in complex development settings. Perhaps it is particularly necessary to embrace complexity when dealing with myriad contexts and settings—complexity of implementation, complexity of people, and complexity of results. As Dalton suggests, implementing these programmes can have enormous impact that reverberates down the beneficiary chain.

2.4 Three key sexual and reproductive healthcare priorities in Guadalcanal

In evaluating the data from my survey, I noted that health workers suggested three high needs areas to prioritise: emergency contraception, teenagers, and immediate postnatal contraception. Each are discussed briefly below.

Emergency contraception, or 'the morning-after pill', is an effective way of preventing pregnancy in select cases after sexual intercourse. For individuals facing reproductive coercion[4], or who are not able to plan contraception, access to emergency contraceptive pills may be the most viable option available (Cleland et al. 2014). But according to health workers in this study, only 30% of participants reported being able to provide this essential service. An emergency contraceptive pill is easy, cheap, ethical, and should be universally available (WHO, 2020b). It is possible that due to abortion being illegal in the Solomon Islands, there is a reluctance to supply post-coital contraception. Considering the harms prevented by use of emergency contraception in select cases, there is a need for education of health workers and women. Using emergency contraceptive pills prevents pregnancy after sex. It does not cause an abortion. In fact, because emergency contraception helps women avoid getting pregnant when they do not choose a pregnancy, it can reduce the harms caused by unsafe abortion, which some women will turn to in desperation if there are no legal alternatives (Cleland et al. 2014).

Improving sexual and reproductive health and rights for adolescents is fundamental to social and economic development and attainment of Sustainable Development Goals (UN, 2015). This has been recognised as a particular priority for the Solomon Islands as more than half the population is under 20 years of age, and the country has one of the highest population growth rates in the Pacific (Population Reference Bureau, 2017). It was encouraging to see that 71.4% of health workers in my study felt confident in recommending LARC for teenagers. There is scope for more improvement however, as 21.4% said they would not, and several written comments indicated disapproval for teenagers accessing contraception if they were not in a married union.

A recent study on immediate postnatal contraception following up the implementation of postnatal implant insertion at Port Moresby General Hospital found that women were 2.8 times more likely to accept an implant if they had received information about implants antenatally

[4] Reproductive coercion is a collection of behaviours that interfere with decision-making related to reproductive health. These behaviours are meant to maintain power and control related to reproductive health by a current, former, or hopeful intimate or romantic partner, but they can also be perpetrated by parents or in-laws. Ultimately, these behaviours infringe on individuals' reproductive rights and reduce their reproductive autonomy (Grace & Anderson, 2018).

(Trane, 2019). Immediate postnatal contraception is important because a substantial number of women and their partners can be reached through facility-based childbirth. In low-income countries there has been an increased interest in the placement of long-acting reversible contraceptives at or immediately after birth. The post birth period is a unique occasion for offering contraceptive methods. Having just given birth, women may desire contraceptives to prevent further pregnancies (Harrison & Goldenberg, 2017). If health workers use the opportunity to raise awareness and discuss contraceptive options during pregnancy clinic check-ups, women have time to consider their options, and immediately start their contraception before they are discharged from the facility following birth. The qualitative answers in my survey strongly confirmed participants' understanding of this critical opportunity for family planning care.

Encouragingly, 87% of participants said they discussed contraception during antenatal care, however, only 62% said that the plan was reviewed postnatally. This study confirms that there is scope for improvement in increasing the standardisation of review and implementation of contraception planning post birth. As Dr Mola states, "time spent on family planning counselling can be as effective in preventing maternal death as is antenatal, intrapartum, and postnatal care" (Mola, 2017, p. 324).

2.5 Continue to acknowledge the need to address macro factors, and invest in family planning

For sustainable solutions there is need for support in three critical areas: service delivery, social and behavioural change, and enabling environments. Enabling environments such as national policies, community norms and relationships among organisations influence interpersonal dynamics and behaviours and improve outcomes on an individual level. Addressing structural factors will require ongoing commitment and investment. Funding for family planning in the Pacific has fallen over the last decade despite good evidence that family planning is one of the most cost-effective investments a country can make towards sustainable development (Raman et al., 2017). For sustainable individual and societal benefits, work must continue at *every* level.

Final comment: build resilience for the future by valuing health workers

The Solomon Islands Ministry of Health have made significant advances to improving reproductive, maternal, child and adolescent health over the past 20 years despite the challenges of a lack of resources, high rates of disease, dispersed islands, and natural disasters (Homer et al., 2019). Developing and maintaining a sufficient health workforce is challenging, and although it is clear progress has been made, new and ongoing efforts are necessary to meet the needs of women and their families. It is also important to acknowledge that the global situation has changed since the time of my data collection trip, and that the impacts of COVID-19 place even more pressure and competing demands on health workers. Now more than ever, health workers deserve recognition and support.

Health workers are critical to improving the health of individuals and society. In order to fulfil their caring capacities, health workers have educational and professional needs, and developing a workforce that is supported by an enabling environment should be prioritised. Resilience and sustainability of health workers will depend on recognition of the contribution, individually and collectively, that they make to improving health for their communities.

<u>Strengths and limitations of the research</u>

Overall, the results of this study support findings published in other studies. One of the strengths of this study evolves from the extensive efforts to consult with Solomon Islands Ministry of Health officials, and the major aid organisation, UNFPA. Of enormous contribution to the strength of this research was the Solomon Islands Health and Research Ethics Review Board's decision to provide me with a Solomon Islands' research assistant from the Ministry of Health, who so aptly and successfully fulfilled the role of intermediary. Her expert involvement adds credibility and robustness to the study outcome. Another strength is the willingness of the researchers to negotiate significant travel challenges to collect data from health workers in remote areas.

Another strength of this study, stemming from a suggestion that arose during consultation with the regional director of UNFPA, was the inclusion of and emphasis on qualitative data. Qualitative research tends to create very detailed and rich data (Daniel & Harland, 2018) and

this research was no exception. This study provides a unique insight into understanding health workers' views on long-acting reversible contraceptive methods (LARC).

This study was limited by resources, focusing on 15 accessible clinics in two districts from one of Solomon Islands nine provinces. This study therefore only provides a snapshot of the situation. Health workers from other areas could not logistically be included. Therefore, this study does not suggest results are generalisable to all health workers or other regions of the Solomon Islands, or to other countries.

A further limitation of the study only became apparent at the data analysis stage when it became clear that some questions in the questionnaire were ambiguous, and those findings were therefore not useful. Due to resource constraints, a proper pilot of the survey was not able to be undertaken. An in-country pilot survey may have exposed those weaknesses and enhanced the effectiveness of the questionnaire.

I am unable to say with certainty whether my presence influenced the participants in some way. The research assistant led the data collection process, and I was careful not to engage with health workers until after they had completed the survey; however, I was present. My own experience of working in the Pacific, of seeing remote health workers' practice and directly experiencing the lived realities of these health worker's context I see as both a strength and a limitation. The similarity in the findings of this research to other related studies is encouraging. As a small contribution of qualitative research this study was not designed to be generalisable to all health workers, however a larger sample size may have produced additional insights.

Suggestions for further research

This study was focused on a specific topic, in a small geographic area and as such produced results linked to those health workers and that setting. Further studies could be conducted with a larger sample size, from differing locations, different working styles, and possibly different professional roles. Future research could be conducted exploring differences in where health workers access their family planning training and skills and could investigate in more depth

the relationships that health workers form with their clients, noting differences between urban and rural, for example. Participants' comments suggest that further research could also look at health workers' experiences of interactions with professional/aid/governmental agencies and training organisations.

Thesis summary

The aim of this research project is to help address the continuing unmet need for contraception in Guadalcanal Province, Solomon Islands, by giving voice to those who provide this care. The study was designed to explore health workers' family planning knowledge, attitudes, and practice to identify factors that may influence health workers in their ability to provide long-acting, reversible contraception (LARC). The focus on LARC was chosen as they are the most cost-effective contraceptive methods and provide the greatest health benefits. UNFPA implemented training for contraceptive implants in Guadalcanal in 2015, so this research sought to explore why a greater uptake of effective contraception has not been seen since then. The study has clearly demonstrated that health workers perceived multiple barriers for women to receive family planning care and highlighted that health workers are limited in their ability to provide LARC.

This study found that more than half of the health workers surveyed said they had not been trained for implant insertion nor received any upskilling education on family planning care. In addition, findings confirm there is an ongoing need to educate the wider population on the benefits of contraception generally, and LARC specifically. In addition, health workers highlighted the need to continue to understand and develop strategies to address structural barriers. These findings offer up potential actions that will help address the unmet need for family planning in Guadalcanal Province, Solomon Islands.

<u>Recommendations</u>

Health workers identified direct strategies to address many of the barriers to family planning. Their practical suggestions, with the right political support, are feasible. The findings of this study support current literature and present health workers' perspectives on factors that will increase use of family planning. They identify many challenges but offer attainable solutions.

Key recommendations from this study are to:

- Value health workers and the relationships they have with their communities.
- Increase health workers' access to LARC training, information, and education about side effects.
- Undertake work to counter misinformation and educate women about expected effects from LARC. Work to understand the origins and drivers for concerns about cancer as a side effect from contraceptive use, and address these through evidence-based education efforts, disseminated by local people within a local context.
- Increase public education programmes to support community acceptance of LARC to provide a better understanding and thus allow women and families to make informed choices.
- Focus on key reproductive healthcare priorities such as the aim for universal access to emergency contraception, improving access to contraception for teenagers, and strengthening postnatal implant insertion.
- Continue efforts to address structural factors through basic behavioural change strategies, and overcome logistical challenges such as trickle-down training programmes to reach remote health workers.

The recommendations from this study are in essence, very clear: support health workers to optimise their family planning care in their communities. Encourage health workers' pride and ownership of their vital role, support their agency, and provide resources. The findings from this study are a confirmation that strong relationships are what make any system robust.

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APPENDIX I

Otago Polytechnic Ethics Committee Approval

Congratulations on your ethics approval Sahra.
There are just a couple of minor comments in the feedback from the final panel reviewer.
I suggest you work with George and Tricia to consider these prior to starting your project.
There is no need however for you to report these to the ethics committee in any formal way.
On behalf of the panel I wish you every success in your research and look forward to hearing your progress.
Warmest regards

Ngā mihi nui
Jean

Jean Patterson RM, PhD.
Assoc. Professor & Postgraduate Lecturer
School of Midwifery Te *Kura atawhai ka Kaiakopono te Hakuitaka*
Otago Polytechnic | Te Kura Matatini ki Otago
Forth Street, Private Bag 1910, Dunedin 9054, New Zealand
+64 0800 762 786 | www.op.ac.nz

APPENDIX II

Solomon Islands Health Research and Ethics Review Board,

Ministry of Health and Medical Services, Research Permit

No: HRE029/19

Solomon Islands Health Research and Ethics Review Board
Ministry of Health & Medical Services

Research Certificate

To Ms. Sahra Kress
Otago Polytechnic
New Zealand

The Solomon Islands Health Research and Ethics Review Board (SIHRERB) of the Ministry of Health & Medical Services has received amendments and additional documents following recommendations made on 19th August 2019 and has approved your application to do research titled: "Understanding health workers' views on promotion and provision of long-acting reversible contraception (LARC) in Guadalcanal Province, Solomon Islands."

You are hereby granted permission to conduct the research in Solomon Islands for the proposed duration in 14th November 2019 to 31st December 2019 only. This approval is for the one-time conduction of your research and any amendments, repetition and/or extension of this research will need further SIHRERB approval. Refer to the SIHRERB report for terms and conditions of your permit. Failure to abide to the terms will result in suspension or discontinuation of approval.

Dr Nemia Bainivalu
Chairman, SIHRERB

15/11/2019
Date

APPENDIX III

Permission for Conducting Study Survey at

Guadalcanal Province Health Facilities

Guadalcanal Provincial Health Services
Bahali Centre
East Honiara
Honiara
Solomon Islands

Attention: Dr Sarah and Jenny Narasia

Date 13th Nov 2019

Dear Sarah/Jenny,

RE: **REQUEST FOR CONDUCTING STUDY SURVEY AT GP HEALTH FACILITIES**

Greetings from Guadalcanal provincial health services.

I have received your email regarding the study survey on "Understanding Health Workers" in which you have requested our health authority to allow you conduct it at some of our health facilities/clinics.

I am very much delightful about it and have granted you my permission to do so, as it an opportunity to open up improvements on our health service delivery especially in the field of antenatal care and others.

I would like to acknowledge your decision to conduct that survey in our province and looking forward to supporting your aims and goals in carrying out your study survey in Guadalcanal province.

I am optimistic about this and hope our staff will continue to provide the needed support you've anticipated during your time with us.

Sincerely,

Dr Joel Denty
Guadalcanal Provincial Health Services.

APPENDIX IV

Director-Health & Medical Services Honiara City Council- Consent for study

Jenny Narasia

From: Dr. Sarah Habu
Sent: Tuesday, 19 November 2019 6:03 PM
To: Freda Pitakaka; Moses Karuni; Jenny Narasia; Joel Denty; Harvest Miabule
Cc: sahramid@gmail.com
Subject: RE: small family planning study consent

Dear Freda,

I am short of time to compile and print out a formal letter of consent so I am just emailing you.

I have read the study proposal for the study 'Understanding Hea lth workers' views on promotion and provision of LARC in Guadalcanal Province, SI".

I understand that the study will involve interviewing some of our health workers in HCC as we also contribute to provide service to the Guadalcanal Province population.

I appreciate this initiative of getting Health Workers' perspective and the results of this study would be beneficial, not only in a high level decisions making and intervention planning but also in the Provincial level.

I, on behalf of HCC Health & Medical Services do give consent to this study.

On this note, I request that a copy of results or any feedback sessions on the results of this study be inclusive of the HCC HMS.

I also request if we could be informed in advance of the schedulle of surveys for which clinics so that our Nursing Management can consider and inform our staff (minimum 2-3 days depending on workload) . On this note, I also request that any survey be done in the afternoon or at a time that is not particularly busy in each clinic so as not to disrupt services and that nurse in charge be the first point of contact on arriving at each clinic.

I wish the researcher and research assistant all the best in the study.

Dr Sarah Habu-Hopkins
Director-Health & Medical Services
Honiara City Council

From: Freda Pitakaka
Sent: Wednesday, 13 November 2019 11:43 AM
To: Moses Karuni; Jenny Narasia; Joel Denty; Dr. Sarah Habu; H arvest Miabule
Cc: sahramid@gmail.com
Subject: RE: small family planning study consent

Thanks Moses,

PHDs - please find attached the study protocol of this project for your review.

1

Participant Information Form

Project title

Understanding health workers' views on addressing the unmet need for family planning and long-acting reversible contraception (LARC) in Guadalcanal, Solomon Islands

General Introduction

Contraceptives do not solve every problem. But women want access to voluntary family planning in order to avoid unintended pregnancies, to birth healthy children, and to better care for the children they have. However, in the Pacific there is a high "unmet need" for family planning, meaning that many women who would like effective contraception (family planning) are not using it. LARCs are the most reliable method of family planning and can be removed if the woman wants to get pregnant.

What is the aim of the project?

To help address the unmet need for effective contraception in the Solomon Islands by investigating frontline family planning health workers' perspective on LARC. At its core, this study strives to hear from, and support health workers as they provide essential care to women and their families.

How will potential participants be identified and accessed?

Through family planning clinics, with the assistance of a Solomon Islands Research Assistant

What types of participants are being sought?

Any health worker (health aid, nurse, midwife, doctor, etc) who provides family planning services

What will my participation involve?

Should you agree to take part in this project you will be asked to complete a simple questionnaire. It should take you less than half an hour to complete.

How will confidentiality and/or anonymity be protected?

No personal information will be collected that could identify you.

What data or information will be collected and how will it be used?

This study is simply interested in your views and opinions. Your perspective on women's access to LARCs is important and will be used to help provide more understanding about what enables or constrains your ability to provide LARC as an option for women.

Data Storage

The data collected will be securely stored. After completion of the study, the data will be retained in secure storage for a period of seven years, after which it will be destroyed.

Can participants change their minds and withdraw from the project?

You can decline to participate.

What if participants have any questions?

If you have any questions about the project, either now or in the future, please feel free to contact the researcher at kress1@student.op.ac.nz or supervisor George Parker at George.Parker@op.ac.nz

APPENDIX VI

Consent Form

Title of project:

"Understanding health workers' views on addressing the unmet need for family planning and promotion and provision of Long-Acting Reversible Contraception (LARC) in Guadalcanal, Solomon Islands"

Name of researcher:

Sahra Kress

1.

☐ I have read and understood the Participant Information sheet and have had the opportunity to ask questions.

2.

☐ I know that my participation in this project is entirely voluntary, and that I can withdraw at any time.

3.

☐ I understand that all information collected is entirely anonymous, that once data has been analysed all questionnaires will be destroyed, and that there will be no risk to patients or staff.

4.

□ I understand that the findings of this survey will be published to help understand issues of access to family planning in Solomon Islands.

5.

□ I agree to take part in this study.

| --- | --- | --- |
| Name of Participant | Date | Signature |

| --- | --- | --- |
| Name of Researcher | Date | Signature |

[prepared as part of the Research Proposal, but not used due to recommendation by Otago Polytechnic Ethics Committee that tick-box for consent on Questionnaire was deemed more appropriate]

APPENDIX VII

Addressing the Unmet Need for Family Planning-

Questionnaire:

1. □ I have read and understood the Participant Information sheet and have had the opportunity to ask questions. By completing this survey, I am consenting to be part of this study.

2. What contraception are you able to provide for women in your area?

□ Condoms
□ Pills
□ Depo Injection
□ IUD
□ Implant
□ Male Sterilisation
□ Female Sterilisation
□ Emergency Contraception
□ Other - describe……

3. Please list the types of LARC women use in your area:
……

……

4. In your experience, what is the most common contraception women want?.....……
Why……
……

5. Do you think women are having their family planning needs met?
□ yes
□ no

6. Do women often decline family planning?
□ yes
□ no

7. Recent statistics from UNFPA indicate that Guadalcanal has the lowest use of contraception in Solomon Islands. In your opinion, why might this be?

……
……
[spacing and number of lines provided have been altered for neatness in this appendix]

8. What do you believe drive women's preferences in their choice of family planning?

……
……

9. When you see a woman in family planning clinic, do you think she already has a plan for what she wants?

- yes
- often
- no

10. All research on unmet need for family planning suggests that fear is a main barrier for women. What fears do you believe women have?

……
……

11. As a health worker, how might you respond to these fears?

……
……

12. Do women have any concerns about side effects from use of LARC?
Please explain:
……
……

13. Are there any side effects that would lead you to discourage women from using LARC?
Please describe
……
……

14. Have you received training for insertion of LARC?
- Yes
- No

Why?/
Why not?.....

15. Please specify the type(s) of LARC you have been trained to insert:

……
……

16. How confident do you feel to insert LARC?

    - Confident
    - Somewhat confident
    - Not Confident

17. How confident do you feel about communicating with women and their families about the benefits of LARC?

    - Very confident
    - Capable
    - Not confident

    Why?/why not?.....

18. Please indicate what you consider to be the main barriers for women to use LARC, beginning with 1= greatest barrier, to 7= least barrier

    ….. staff knowledge
    ….. woman's knowledge
    ….. family opposition
    ….. fear and misinformation
    ….. staff competence with insertion
    ….. cost
    ….. other, please explain……
    ……

19. How can health workers be supported best to strengthen confidence and ability to provide LARC?

	High priority	med	low priority
More training on insertion……	1	2	3
Education on benefits for women……	1	2	3
Extra funding……	1	2	3
More time……	1	2	3
More staff……	1	2	3

    Other – please describe……
    …….

20. Would you consider training for providing LARC more important than any of the following?

    Newborn resuscitation- training…….yes……..no

Haemorrhage control- training…….……..yes……..no
Infection control- training……..yes……..no
Education on Non-Communicable Diseases……. yes…….no
Cervical cancer screening- training……..…..……...……..yes…….no

21. How often do you receive upskilling on family planning care?
……
……

22. Do you feel comfortable recommending LARC to women and their husbands?

- yes
- no

23. Would you recommend LARC to teenage women?
- yes
- no

24. In your view, what national efforts would help increase use of family planning?
……
……

25. According to UNFPA Solomon Islands data, there is the highest need for family planning in Guadalcanal Province. From your perspective, is this related to problems with

- low demand for family planning by women
- difficulty with supply of family planning in clinics
- both

26. In your Antenatal Clinic, are plans for contraception

discussed…….yes no
documented…… ……yes no
don't know…….

27. Do you think that routine discussion of family planning and documentation of a plan for contraception with women and family during Antenatal Clinic increases their uptake of LARC?

- yes
- no
- don't know

28. Do you get to see the contraception plan from their Antenatal Card?
- yes
- no

29. Any other comments/suggestions you would like to offer?

……

……

30. Are you a:

- health aid
- community health worker
- nurse
- midwife
- doctor
- medical trainee
- other……..

(this information will not be used to identify you, it will just be used to present a summary of who completed the survey)

31. Are you:

- female
- male

32. How many years have you been working in this role?.....

Thank you so much for your time and valued perspectives

APPENDIX VIII

Data collection trip- Photographs (field notes excluded)

[source, all photos: author, with permission]

Image 1. Research assistant Jenny Narasia

Image 2. Dinghy crew that took research assistant and I around eastern coastline

Image 3. Jenny walking to clinic- east coast

Image 4. Honiara

Image 5. Roads- at times sealed but still challenging

Image 6. Jenny with research pack, navigating Honiara flooding

Image 7. The road to Lambi

Image 8. Busy Honiara clinic

Image 9. Research team- driver Sixtus, intermediary Stanley, Jenny, and I outside WHO headquarters at the Solomon Islands Ministry of Health

Image 10. Once survey completed, occasionally there would be more discussion about the study

Image 11. Author, with appreciation