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KNOWLEDGE, ATTITUDE, AND PRACTICES OF RURAL WOMEN ON THE USE OF FAMILY PLANNING AT AN OUTPATIENT'S DEPARTMENT IN THE NORTHERN CAPE PROVINCE, SOUTH AFRICA

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A thesis submitted in fulfilment of the requirements for the degree of Master in Nursing at the

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KEYWORDS

Knowledge

Attitude

Practices

Rural

Women

Family planning

Outpatient department

Hospital

Health Belief Model

ABSTRACT

Background: Interventions to prevent unwanted pregnancies are based on the belief that knowledge is needed to prompt behavioral change to improve acceptance of family planning methods. Numerous interventions have been developed to improve knowledge, attitude, and practice in the use of family planning methods. It is specified in literature that economic, sociocultural, environmental factors; location, age, educational, traditional beliefs, religion, family type and level of knowledge affect the attitude of individuals towards their practice in the use of family planning.

Aim of the study: To investigate the knowledge, attitudes and practices of rural women at an outpatient's department at a hospital in the Northern Cape Province, South Africa regarding family planning use.

Methodology: A descriptive quantitative survey design was used with a structured questionnaire that explored the knowledge, attitude, and practices of 152 rural women visiting the outpatient's department of the identified hospital on the use of family planning. The conceptual framework used for this study was the Health Belief Model which states that any health-related actions are influenced by the perceived knowledge, attitudes and practices of the presenting health condition. Data were collected by means of a self-administered questionnaire, which was coded, captured on an Excel spreadsheet and analysed using the Statistical Package for Social Sciences version 28.

Ethics: Ethical approval for the study was granted by the Humanities and Social Sciences Research Ethics Committee at the University of the Western Cape, the Registrar of the university as well as the Department of Health in the Northern Cape before the commencement of data collection. Informed, written consent was obtained from respondents before the questionnaire was supplied and their anonymity and confidentiality were assured by assigning a number to each questionnaire rather than requesting personal particulars.

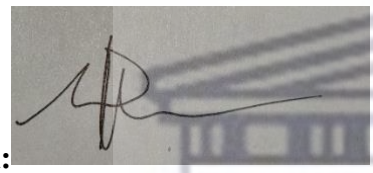
Findings: A total of 152 women of reproductive age participated in the study. All the participants (100%; n=152) have heard of family planning methods before the study. In assessing the attitudes regarding family planning use, most of the respondents (97.4%; n=148) agreed that it is embarrassing to be seen at a family planning facility. The same proportion of respondents (97.4%; n=148) agreed that using family planning is the best option to prevent STI's, HIV and unwanted pregnancies. None of the respondents (0%; n=0) agreed that a woman loses her self-worth while using family planning, and while the oral pill was reported to be the most convenient family planning method, only 36.2% (n=55) indicted they make use thereof. Most of the participants (58.6%; n=89) reported that their nearest reproductive health service is within walking distance and none of the respondents (0%; n=0) were ever denied reproductive health services.

Conclusion: This study recommends that further research be done in South Africa to arrive at a broader understanding of the factors that promote and inhibit family planning use among women living in rural areas. Community intervention programmes that seek to provide information about family planning should be provided by health personnel and community caregivers stationed in the rural areas and be more male inclusive. In terms of further research, more studies and literature in South Africa should focus on the use of family planning, especially in rural areas and the study samples should attempt to focus on different age groups.

DECLARATION

I hereby declare that the research study entitled *Knowledge, Attitude, and Practices of Rural Women on the Use of Family Planning at an Outpatient's Department in the Northern Cape Province, South Africa* is my own work, that it has not been submitted before for any degree or examination to any other university, and that all resources I have used or quoted have been indicated and acknowledged as complete references.

Name: Wilfred Hermanus Koopman

Signed: 

Date: 12 December 2022

DEDICATION

I dedicate this thesis to my wife Michelle who has supported me throughout my studies. I would like to thank my family and friends who have encouraged me throughout the years of my study. To my daughters Jade & Aniston, may this serve as a motivation that anything is possible if we put God first and allow Him to always lead the way.

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OPERATIONAL DEFINITIONS OF KEY TERMS

Perceptions about family planning use: Refer to a settled way of thinking or feeling, typically reflected in a person's behavior (South African Oxford Dictionary, 2020). *In the study, it refers to the client's feelings, behaviour and ways of thinking towards use of a family planning method.*
Knowledge of family planning use: The ability of a client to remember and interpret information" (Online medical dictionary, 2020). *In the study, it refers to the interpretive information that the client has with regard to the use of a family planning method.*
Service factors influencing family planning use: In the study it refers to the factors influencing the uptake of family planning services by rural women.
Barriers influencing family planning use: In the study it refers to obstacles preventing rural women influencing the uptake of family planning use.
Family planning use: Refers to one's usual way of carrying out or performing an activity regularly (Online medical dictionary, 2020). *In the study, it refers to the current, regular approaches clients follow with regard to the use of a family planning method.*

ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CHC	Community Health Center
CPR	Contraceptive Prevalence Rate
DHET	Department of Higher Education and Training
DOH	Department of Health
FP	Family Planning
HBM	Health Belief Model
HIV	Human Immunodeficiency Virus
IUD	Intrauterine Device
IUS	Intrauterine system
KAP	Knowledge, Attitudes and Practices
KZN	KwaZulu-Natal
LARC	Long-acting reversible contraception
MPoA	Maputo Plan of Action
OCP	Oral contraception pill
SADHS	South African Demographic Health Survey
SDG	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Infection
TFR	Total Fertility Rate
UK	United Kingdom
UN	United Nations
UNFPA	United Nations Population Fund Annual
WHO	World Health Organisation

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Introduction

Kasa et al. (2018) describes unintended pregnancies as a consequence of not using family planning effectively or consistently. They also state that this ineffective use can be due to insufficient knowledge on family planning. According to Gallo et al. (2019), there exists a theory that behavioural change can be brought forth by equipping people with knowledge, which prompted the development of various intervention strategies to better the knowledge people have on family planning. In Sensoy et al. (2018), the researchers specified that various factors such as geographical-, educational-, socioeconomic-, and sociocultural factors, and also family composition can affect an individual's attitude towards using family planning. An attitude is a hypothetical idea that may not be obvious at first glance - although it is still evident in the person's behavior (Sensoy et al., 2018). It is therefore important to note that successful, continuous use of family planning cannot be achieved by educational intervention if it does not give the adequate, needed information to women (Gallo, 2019).

1.2 Background

According to WHO (2020) globally almost two billion women of reproductive age are using some form of family planning. Approximately 1.8 billion of those using some form of family planning use methods such as oral pills, injectable methods, IUD’s or emergency contraception. In 2019 it was established that the need for family planning methods were at 75.7% globally, but this number is less than half in Western and Middle Africa (WHO, 2020). Gallo et al. (2019) found that in order for adequate prevention of unintended pregnancies to take place, the effect that knowledge have on effective family planning use has to be understood first.

The devastating health consequences and hardships faced by women that experience unintended pregnancies are only made worse by a lack of education or access to reproductive health services. These consequences are the primary cause of women in developing countries being exposed to disease and the development of disabilities. Even pregnancy-related complications can be managed when they are more easily anticipated, which would significantly improve these already difficult situations (Kasa et al., 2018). Pregnancy can be an intimidating and frightening event for anyone, but it is even scarier for those to whom family planning services or reproductive health information are inaccessible. Claiming that preventing unintended pregnancies is one of public health's most troubling issues, Kasa et al. (2018) encourages the usage of contraceptives to lower the number of these unintended pregnancies happening in both developed and developing countries alike. Not only does this help those that anticipate pregnancies, but it also reduces the number of dangerous legal abortions and related health complications experienced by those with less access to contraceptives. With family planning being one of the most critical components in deterring all of these negative outcomes, including death, it is necessary to provide such services as they stop all kinds of pregnancy-related diseases, disability, landmines such as obstetric fistula, sexually transmitted infections and mental health disorders (Kasa et al., 2018). There are many benefits to using family planning, most notably an increase in both maternal health and education. It also lowers the risk of many diseases and infections, including HIV/AIDS and can also reduce the risk of getting cancer (WHO, 2017).

Atuhaire et al. (2019) developed a classification system that splits up family planning methods into four different categories: traditional, modern, other and traditional. Traditional methods include the rhythm method, lactational amenorrhea and coitus interruptus, with condoms, oral and emergency contraceptives, as well as IUDs being modern methods of family planning. There are even more types of family planning than just these four namely, hormonal implants

and family-specific hormone care for women, and all have ongoing research on their effects on economic outcomes (Moran 2020). The knowledge of effective birth control and fertility regulation such as family planning use is a precondition for a decline in fertility rates (Moran 2020).

According to the UN (2017), in the 1990s the world had a fertility rate of 2.5 to 5.5 babies per woman. Rates fell in major areas in the world such as Europe and Africa, but rates in Africa lessened slower than rates in Europe. During the 1960s, European countries such as England began decreasing their fertility levels, but African countries were slow to follow suit. Today, birth control use is on the rise across the globe. The percentage of women using birth control rose from 35% to 63% since 1970 (UN, 2017). Modern family planning methods are most popular in Eastern Asia while other parts of the world like North America have a lower usage rate (UN, 2017). Wang (2016) found that Eastern Asian countries have a high prevalence rate of family planning, mainly because China employed the one-child policy which states that families are limited to only have one child. The central Chinese government promotes this policy, which mandates availability and use of many different types of family planning methods in a strategy committed to lowering fertility rates. All around the world, women aged 15-49 irrespective of their marital status can use family planning (UN, 2017). In 2017, worldwide statistics showed that 63% of these women made use of some method of family planning. Family planning methods comprise 92% of users worldwide. CPR was highest in Southern and Northern parts of Africa, prevalence rates were highest in Southern and Northern parts with 65% and 54%, respectively. It's higher than Western or Middle African parts at 43% (UN, 2017).

Family planning prevalence rates in South Africa are summarised by the SADHS, wherein it states that the usage of modern family planning was 61% in 1998. According to DOH (1998),

the survey marked differences in family planning prevalence rates based on geographical and demographical differences, as the usage differed in rural areas and urbanised cities 54% in rural areas and 67% in urban areas. During the survey it also became evident that levels of fertility was not the same in these areas, with the TFR of women in rural areas being 3.9 and TFR in urban areas being 2.3 (DOH, 1998).

A target was set in South Africa to better the family planning prevalence rate to 65% between 1998 and 2003, which was attained as an increase in family planning usage was marked (DOH, 2004). SADHS found in 2003 that during the indicated timeframe, more women started using family planning in rural areas, while family planning rates kept more stable in urban areas remaining 62%, but CPR in rural areas being 67% (DOH, 2004). In 2016 the findings supported that of an earlier survey, as it also found that fertility rates in urbanised areas are lower than that of rural areas, but also revealed that the use of modern family planning did not increase between 1998 and 2016, with prevalence rates changing from 55% to 54% (DOH, 2017). It could however be identified that although KwaZulu-Natal initially had some of the lowest family planning prevalence rates in 1998 with 60%, an increase was seen by 2016 where modern family planning prevalence rates were 61.2% (DOH, 2017).

The necessity to exploring CPR in rural areas became evident when it was identified that the family planning use was significantly lower in these areas than urbanised areas, and also establishing what the barriers are to family planning use in these areas (DOH, 2017). In a definition compiled by Ndinda et al. (2017) a rural area was defined as “a geographical area located away from towns”. They researched family planning in KwaZulu-Natal, where reluctancy to make use of family planning was observed in rural because of cultural barriers such as inequality between genders, but also the misconceptions regarding family planning use that exists in these areas.

In South Africa, nominal research has been done to explore family planning use in women who are 25-35 years, according to Solanke (2017). Although family planning utilisation was explored, there were a lack of knowledge on the subject as to why women do not utilise family planning, which created a need to explore it further.

A study done by Dawids (2019) especially focused on family planning use amongst teenagers and used information summarised in the report compiled from SADHS, wherein the researcher found that CPR in this age group was the lowest, except for women aged 35-49 years (DOH, 2017). A study done by Aviisah et al. (2018), however contrasts this finding, as it found women between the ages of 25-35 years to be more likely to use family planning methods. The need to further research family planning in rural areas therefore served as the motivation for this study.

1.2.1 The prevalence of family planning use

Compared to all countries in the world, Africa had the lowest CPR in 2017. A study done by Ackerson and Zeilinski (2017) attributed this to families in Africa having the desire to have more children, difficulty accessing health services and also the socio-economic status of the continent. Tsui et al (2017) however found that a steady increase in CPR can be seen in Africa, especially SSA. This can be attributed to the Maputo Plan of Action (MPoA), accepted by 48 health ministries in this region. Tsui et al (2019) describes this plan as "an advocacy of universal sexual and reproductive health". This plan aims to focus its programmes on the promotion of family planning. Despite the increase in CPR in SSA, a decrease can be seen in CPR in South Africa according to the SADHS wherein a decline can be noted be from 1998 to 2016, in the use family planning. The SADHS focusses on the methods of family planning that is being used by women in South Africa between the ages of 15 and 49 years. The CPR identified by the SADHS in 1998 was 61.2%, with the majority of women indicating they make

use of modern family planning methods, compared to the most recent CPR indicating that only 58% are making use of family planning (DOH, 2017).

Traditional family planning methods appeared to be the least popular, with less than 1% of women indicating that they make use thereof. According to Sedgh et al. (2016) a factor that has to be considered with regards to CPR, is the access that women have to health facilities in order to get family planning. They state that although women might have a need for family planning, the costs of getting family planning might be more than they can afford. Sedgh et al (2016) also conducted surveys based on demographical and health factors in Africa, wherein these claims were confirmed. They also found that a women's background also influences whether she makes use of family planning, as some factors promotes the use thereof. Findings of the SADHS indicated that women with a lower schooling are often less inclined to make use of family planning, causing a lower CPR (DOH, 2017).

1.3 Problem statement

Family planning allows individuals to plan on the number of children, timing, and spacing they would like to have (UN, 2017). Increasing access to family planning through educational and economic advancements can improve health outcomes in women (UN, 2017). The prevention of unplanned pregnancies through the use of family planning therefore has the capacity to save an estimated 2.7 million infant deaths and the loss of 60 million healthy lives of women getting pregnant globally each year by eliminating the risks of pregnancy (Alkema et al., 2018). Despite these benefits, very few countries are carrying out family planning programs; this includes any developed country (UN, 2017). Sub-Saharan African countries like Uganda have an increased total fertility rate of almost 5.4 births per woman and a low modern contraception prevalence rate (Obwoya et al., 2018). Migration has been identified as one of the factors leading to an increased fertility rate in sub-Saharan African countries, as well as some Central American countries. As part of the 69 countries in the Family Planning 2020 initiative, which

was launched by the Bill & Melinda Gates Foundation, the UK government and other partners, aimed to enable 120 million more women to use modern family planning methods by the year 2020 in the world's 69 poorest countries (Obwoya et al., 2018). A lack of knowledge about family planning has also been identified as a key cause for unplanned pregnancies (Kasa et al., 2018). According to Gallo et al. (2019), multiple interventions have been developed to improve family planning knowledge, and women in the area recognise that their lack of knowledge impacts their lives. The aim of this study is to analyse the family planning knowledge, attitude and practices currently existent in a given area.

1.4 Aim

To describe the knowledge, attitude, and practices of rural women on the use of family planning at an outpatient's department in the Northern Cape Province, South Africa.

1.5 Objectives

1. To investigate the background factors and its influence on rural women in the Northern Cape Province on the utilisation of family planning at an out-patient department.
    - *How is family planning influenced by demographic (person and social) factors?*
2. To investigate the intermediate factors and their influence on the use of family planning among rural women at an outpatient's department in Northern Cape Province
    - *How is family planning use influenced by knowledge of family planning?*
    - *How is family planning use influenced by the perception of family planning services?*
3. To investigate proximate intervening factors and its influence of rural women on the use of family planning at an outpatient`s department in Northern Cape Province.
    - *How is family planning use influenced by attitudes toward family planning?*
    - *How is family planning use influenced by perceived barriers?*

4. To investigate the use of family planning amongst rural woman at an outpatient's department in a hospital in the Northern Cape Province.

1.6 Significance of the study

The findings of this study may be useful for healthcare professionals, health facility managers and researchers to promote knowledge about family planning. If the aim is to improve the education of women about family planning methods, the findings of this study will facilitate the decision-making process by providing an overview of rural women's views on different types of family planning methods.

1.7 Theoretical framework of the study

A theoretical framework is a group of specific ideas linked together to form an overview of the topic (Fitzpatrick et al., 2011). This can help researchers come up with predictions and explain strategies for understanding health behaviours. It also provides information which helps to organise existing knowledge (Fitzpatrick et al., 2006). The conceptual framework that was used in this study was developed by Kinaro, et al. (2015) and it was based on the perceptions and barriers regarding the use of family planning methods. Different factors that predict family planning status is explored, including examining areas such as background factors (demographic factors), intermediate factors (service provision knowledge), and proximate interventions (barriers and attitudes). For the purposes of this study, the Health Belief Model was used as a framework.

1.8 Research methodology

The study was conducted at a hospital's outpatient department in the Northern Cape in the Namaqua municipality, South Africa. This chapter outlines the research methods used to conduct this study. A description of the research design, the setting and population studied will be discussed, as well as the data collection tool used. Discuss will further include how the researcher increased the studies' validity and reliability, and how data collection and analysis

took place. The ethical considerations that formed a part of this study are also discussed. Chapter 3 will provide an in-depth discussion of the research methodology

1.9 Ethical considerations

All fundamental and ethical principles were considered during the process of the research, namely the principles of autonomy, beneficence, confidentiality, justice and veracity. Ethical permission was obtained from the Humanities and Social Sciences Research Ethics Committee at the University of the Western Cape, the Registrar of the university as well as the Department of Health in the Northern Cape before the commencement of the data collection process. There was a focus to ensure that participants' rights were protected, these principles were used throughout the study, starting from the selection of the research methodology. This also ensured that participants' privacy was respected, and that no participant was exposed to harm or was uncomfortable. Obtaining written, informed consent (Appendix B), bears testimony that ethical principals were taken into consideration during the research.

1.10 Outline of the study

The outline of the study is as follows:

Chapter 1: Introduction

This chapter discusses the introduction and background of the study, its aim, objectives, and significance. The research methodology is also discussed along with a glossary of any unusual words that may be encountered.

Chapter 2: Literature review

Discussions covered in this chapter include the relevant literature on knowledge, attitude, and family planning practices among rural women in the Northern Cape Province of South Africa.

Chapter 3: Research methodology

The following chapter outlines the methodology for this study. It includes the research approach, design and data collection tool, all of which are in accordance with what was discussed in the conceptual framework, the Health Belief Model (HBM).

Chapter 4: Findings and discussion

This chapter discusses and presents the data analysis and research findings of the study supported by relevant literature.

Chapter 5: Conclusion, limitations and recommendations

This chapter presents a summary of recommendations, concludes the findings and elaborates on some limitations of the study.

1.11 Summary

The research topic has been introduced and contextualised in this chapter. A clear statement of the identified problem was provided, followed by an overview of the study. Background information with a clear problem statement, research aims, objectives, conceptual framework and significance of the study was included. The following chapter will discuss literature supporting the identified problem

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

A literature review is a summary of the published information on a certain subject (Libguides, 2021). It can also be considered as an overview of research and debates relevant to an academic topic (Libguides, 2021). A primary purpose of a literature review is to gather and present the information in written form (Western Sydney University, 2017). Literature was especially focused on identifying existing or related studies to the phenomenon studied and to determine the theoretical framework that would best encapsulate this study. To help with research, the following databases were accessed: EBSCOhost, MEDLINE, PubMed, Wiley Online Library, Science Direct, Elsevier, Google, Google Scholar and MA Healthcare. When searching for literature to ensure relevance and refresh search results on family planning methods.

The following terminology was used to search for literature focusing on emphasising family planning practices; "modern family planning", "barriers", "gender inequality" and "pregnancy" among other topics. The purpose of this chapter was to review textbooks (including those from earlier studies on this topic), as well as literature existing on this topic. The literature review for this study appraises the history on the use of family planning and provides an in-depth exploration into the various factors that promote the uptake and use of family planning. Included was a focus on the factors that inhibit family planning use, including the knowledge, attitude and practices thereof.

The literature reviewed for the research study was systematically addressed according to the following criteria:

- Conducting literature search

- Knowledge about family planning methods
- Attitude towards family planning methods
- Practice in using family planning methods
- Theoretical framework

2.2 Knowledge of family planning methods

Worldwide, there are many cultural factors that affect a person's decision to use family planning. Certain factors can be more important in certain regions than others. These include age, parity, education status and family attitude. Also notable is the cultural attitudes about family size and the acceptability of family planning (Aldabbagh et al., 2020). In a study that included female university students, it was found that their lack of knowledge of available family planning methods attributed to their failure to use long-acting reversible family planning (LARC) (Hall et al., 2016). A study conducted by Twaites et al. (2018) found that women surveyed in a postnatal ward of the University Hospital Lewisham, London, UK, lacked key knowledge to enable them to make informed decisions regarding their use and choice of family planning method.

Despite some success in improving family planning knowledge, few educational interventions have been shown to influence the behavior of initiating or continuing use of family planning or methods to prevent unwanted pregnancy (Gallo et al., 2019). This may be due to the fact that education alone might not be enough to overcome other barriers that are more noticeable, such as geographic and financial access; concerns about side effects; behavioral and cultural norms; as well as partners' roles in fertility regulation (Gallo et al., 2019). Effective family planning options for men include the use of condoms, withdrawal method and vasectomy while the responsibility for fertility regulation rests mostly with women (Aldabbagh et al., 2020).

Findings from a study conducted at the Makerere University in Kampala in Uganda indicate high levels of knowledge pertaining to the use of family planning. The study comprised of 1008 female participants and the results indicated that 86.7% of the participants had accurate knowledge about family planning (Nsubuga et al., 2016).

According to Morroni et al. (2016) a study done in South Africa found that information on family planning methods was provided to 93.4% of women of a reproductive age in one way or the other. Ndinda et al. (2017) conducted research in KwaZulu-Natal (KZN) on the knowledge women in rural areas had on family planning and found that knowledge on family planning was predominantly provided by educational programmes. Thus, women had a high level of knowledge on this topic. Despite the good knowledge women had on family planning, Ndinda et al. (2017) still found a low use thereof, resulting in high levels of unintended pregnancies.

A concern regarding the use of family planning was identified by Haffejee et al. (2018), who stated that women often had misconceptions on family planning use, which caused them to not make use thereof. Findings of a study done by Ndinda at el. (2017) stipulate that adequate knowledge on family planning does not result in family planning use, thus also not resulting in changes in sexual behaviour. Pazol et al. (2015) proposes a possible solution for the lack of family planning use despite having knowledge thereof, by stating that women should also be equipped with the knowledge regarding where family planning services are being provided. They state that a woman knowing where to get family planning, might have an impact on the actual use thereof.

Knowledge of stakeholders is important for women seeking family planning services, who are able to seek out the knowledge they need and be aware of where these services are available (Pazol et al., 2015). This impacts the use of family planning: research by Ndinda et al. (2017)

found that despite KZN women being aware of where they can get access to family planning, these services remained inaccessible to them. This acted as a barrier to their use of family planning and left them with unwanted or unplanned pregnancies. These findings, in contrast with those from Pazol et al. (2015), show that knowledge about family planning is important for women in KZN wishing to avoid unwanted or unplanned pregnancies, as well as regulating their menstruation cycle with pain relief methods like oral contraceptives and male condoms which have many benefits (Population Reference Bureau, 2019; WHO, 2020).

In general, family planning methods can be grouped into seven (7) categories: hormonal, long-acting, and short-term options; non-hormonal long-acting options; non-hormonal barrier options; emergency contraception; other more natural options; and traditional methods. A new traditional option to consider is the Temperature and Billing Method that measures the length of the fertile period (Population Reference Bureau, 2019).

2.3 Attitudes about family planning methods

Based on the research of Sensoy et al. (2018), a person's attitude is largely established by childhood experiences, and this is reinforced by imitation or social learning. Some of the most important features are that once an attitude is developed, it is very resistant to change. Based on data from Sedgh et al. (2016), 26% of women say that their primary reason for not using family planning methods is due to concerns about side effects and health risks; 24% report that they have sex infrequently or not at all; 23% report opposition from close family members or partners; and 20% say they are breastfeeding and haven't resumed their periods after giving birth (Sedgh et al., 2016).

It's recognised that attitudes can affect use of family planning services (Sensoy et al. 2018) and there is a need to examine attitudes in order to expand available effective methods (Sensoy et al., 2016). Individuals who gain knowledge about family planning services empower

themselves emotionally with information, in turn affecting their attitudes such as by becoming positive or negative in behavior (Sensoy et al., 2018).

2.4 Practices about family planning methods

Lindberg et al. (2021) released a report on trends in family planning use of adolescents in the United States of America. Women who practice family planning are not only practicing better health habits, they are also developing a brighter future. In a study done in the U.S., 2000 women reported that practicing family planning improves almost every aspect of their lives, including prevention of pregnancy and its consequences, reduced rates of unwanted pregnancy and abortion, increased birth outcomes with less risk, reduced cancer incidence, and improved menstrual-related symptoms or disorders (Adeyemi-Fowode & Bercaw-Pratt, 2019).

Casey (2020) states family planning is preventing fertilisation of an egg or the prevention of the fertilised egg from attaching to the uterine lining. This includes permanent family planning, which is intended to avoid pregnancy permanently. When a family planning method fails or has not been used, there are other options like abortion for ending an unintended pregnancy. The success depends on how closely people follow instructions and what kind of contraceptive they're using (Casey et al., 2020). As indicated by this author, oral contraceptives are more effective when taken correctly than if someone forgets their dose every so often. Many people have their own preference for the type of protection, which will depend on their lifestyle and level of reliability needed.

2.5 Factors promoting the use of family planning

In a survey by Alo et al. (2020), it was found that several factors play a significant role in the decision to use family planning methods such as the oral pill, injectables, IUD or emergency contraceptives. For example, women with higher levels of education were more likely to use these methods than those with less education. Those who had knowledge about contraceptives

also tended to use them, as did women who found it easy to communicate about family planning with someone in their community. Of course, other factors come into play; for instance, those who are married or in a relationship may be less likely to opt for birth control methods than those who are single. According to Solanke et al. (2017), the use of family planning by women can be promoted by socio-economic factors such as their employment status and level of education. They also found that family planning use is promoted by a women's desire to limit their family to a certain size.

2.5.1 Education

Archangelsky et al. (2020) conducted a study on the impact education has on women making health decisions. They found education to play a vital role to address issues women face on economic, social and health aspects, and that their level of education can determine their reproductive behaviour. A study conducted by Gafar et al. (2020) also states that health education is one of the greatest determinants of family planning use. Women can also make more informed decisions regarding their health if they are more educated. This enables them to make use of family planning and therefore have fewer unintended pregnancies. Gafar et al. (2020) concluded that higher rates of family planning use and consequently having a slower growth in population, can be the result of countries having women with higher education levels.

According to Yaya et al. (2018), the empowerment of women, especially through education, impacts health service utilisation. Arising from their research conducted in 32 countries, it became evident that the level of education of women has a clear impact on their use of family planning. Women from richer households, who also had higher levels of education, were more inclined to make use of family planning than women with no formal education. Greater chances of family planning use due to higher levels of education was also evident in a study conducted by Lompo & Bago (2018) in Burkina Faso and Nigeria. Keats (2018) also marked this in

Uganda, as more women were inclined to make use of family planning, according to their educational level. A conclusion could therefore be made that family planning use are directly impacted by the educational level of a woman. The likelihood of women in rural areas of South Africa to make use of family planning methods are therefore low, as there are often low levels of education. A fact sheet compiled by DHET (2022) using information obtained in 2020, state that 15.1% of illiterate adults resides in the Eastern Cape, 5.1 % in the Free State, 14.3% in Gauteng, 23.3% in KwaZulu-Natal, 11.2% in Mpumalanga, 9.0% in North West, 2.6 % in Northern Cape, 12.8% Limpopo and 6.4% in Western Cape. The SADHS completed in 2016 also found 7% of South African women not to have any formal education (DOH, 2017). Education also impacts a women's economic dependence and employment, which in turn also has an impact on family planning use. This will be discussed below.

2.5.2 Employment

Unintended pregnancies can be a possible risk for women with a lower economic status, as financial barriers to get to family planning facilities can cause issues with adhering to a certain method (Nkhoma et al., 2020). A disadvantaged economic status often also has a direct relation to a lower educational level, which had been already established as a factor impacting the use of family planning. Sultan (2018) states that poverty and a lack of economic independence in developing countries can cause women not to have the stance to make decisions regarding their reproductive or sexual health.

Choudhury et al. (2018) conducted a study wherein it was found that women who were employed had less constraints affecting them to act to improve their own reproductive health. They also found that women who are employed were also more likely to make use of family planning compared to unemployed women. This is due to the financial security women have while employed and also being enabled to make big decisions in their households, causing

them to also have more decision-making power when it comes to decisions regarding reproduction and family planning. Islam et al. (2016) also attributes this to women having more autonomy when being employed, describing employment as one of the most influential factors when it comes to family planning use. This line of thought was supported by other studies conducted on the relation between employment and family planning use.

The direct relation between family planning and a women's employment was also supported by a study conducted by Solanke (2017) in Nigeria, as it was found that family planning use increases with employment, which also leads to a decrease in fertility. This study also found that women who are employed are more likely to make use of modern methods of family planning. A study done by Brinton and Oh (2019) in Mahikeng, South Africa, found that employed women are more inclined to make use of family planning, due to better communication on matters regarding reproductive and sexual health. It therefore becomes evident that family planning use are promoted by employment.

The different surroundings women are exposed to while being employed often causes them to have ideas that are unwelcoming to starting families, as women often decide to leave the labour market after having a child. If employment leads to an increase in the prevalence of family planning use, this correlates with the desire to limit family size; an aspect that will be discussed in the subsequent section.

2.5.3 The desire to limit family sizes

The number of children a family wants can influence the use of family planning as it can be used to limit the family size (Odimegwu et al., 2018). According to Hailee et al. (2016), 57% of women in developing countries make use of family planning to end childbearing as well as to control space between births. As stated in their study, more women were communicating the need to limit their family size rather than spacing births. In SSA, this was also the most common

reason for women to make use of family planning, as Odimegwu et al. (2018) found in their study that women also indicated that they do not wish to delay childbearing or space the births between children, but that family planning rather has a direct correlation with the desire women has to stop childbearing. In rural areas of Ethiopia, the average TFR are 6 children per woman (Alemayehu et al, 2021). Hailee et al, (2016) however conducted a study in Harar, Eastern Ethiopia, where it was found that more that almost three quarters of women making use of family planning, does so to limit their births. This is predominantly done by permanent methods or Long-Acting Reversible Contraceptives (LARC) and permanent methods (Hailee et al., 2016). The desire to limit births in Ethiopia was thereby confirmed, which leads to higher family planning prevalence rates.

Oche et al. (2018) conducted a study in Nigeria finding the TFR to be 5.5 children per women, with the reproductive age starting at 19 years in some rural areas. They found very high fertility rates associated with low use of family planning as well as a low desire to limit family size. One of the most important factors to consider in exploring the use of family planning, is therefore the desire to limit family size.

2.5.4 Infant mortality

The Sustainable Development Goals (SDGs) set one of its goals (3.2) to reduce child mortality for all children under five by 2030. Thereby also reducing the mortality of neonates to 12 per 1000 births (United Nations, 2019). The reduction of high-risk births can be achieved by making use of family planning. According to Aheto (2019), there is a much higher rate of infant mortality in developing countries, especially SSA, where a need to put in more effort to reduce these numbers was identified. Chikandiwa et al. (2018) found that infant mortality can be reduced by increasing family planning use, therefore also influencing the use thereof. Previous studies also found that lower rates of infant mortality and high-risk births are associated with

higher family planning usage rates. According to Harries et al. (2019), the contraceptive prevalence rate of 64.6% in South Africa is quite high, but successful use of family planning is still influenced by equitable access and women's ability to correctly use the desired family planning method, still resulting in unwanted pregnancies. It is reported that 37-40 deaths per 1000 live births occur in South Africa among children five years and younger (Bamford et al., 2018). They also found that high-risk births in South Africa in 2016 could have reduced by 23%, in case CPR increased by 0.68% per year. Salawu et al. (2021) also found that high levels of risky births were reported in regions of Nigeria with a low CPR. This study, Preventable multiple high- risk birth behaviour and infant survival in Nigeria, highlights reducing child mortality rates as an important factor to consider in the promotion of family planning use. A study conducted in Kenya and Zimbabwe however indicated that there are other factors that should be considered with regards infant mortality and high-risk births, not just family planning use (Chikandiwa et al., 2018). Although a direct link was identified between these variables, they found that other factors such as HIV prevalence also impacted infant mortality directly. With areas also being predominantly rural, the limited access that women have to health services is also a factor that should be considered (Chikandiwa et al., 2018).

2.5.5 Influence of peers

Family planning use has been found to be influenced by peers, as sex-related issues are often discussed with people in the same age group and could therefore enhance family planning use (Bhushan et al., 2021). According to Bhushan et al. (2021), some of the information shared between peers are often also based on experiences they already had, making them a trusted source of information. A study conducted by Agha et al. (2021) sheds more light on the way family planning use is influenced by social norms existing in peer groups, families and other social groups. It demonstrated that social norms, especially in peer groups, have a significant impact on the behaviour of individuals. Evidence further implies that the environment younger

people find themselves in also influences their decisions, allowing peers to be a direct influence on decisions they make regarding family planning. Shanchez et al. (2021) found that parents have less of an influence on the decisions teenagers and adolescents make than their peers, but this trend seems to change with age.

Nathanson and Becker (1996), as cited in Dalessandro et al. (2021) note that women aid one another to get family planning, as well as inform one another on how to use it the correct way. Thus, women are more likely to make use of family planning where support are provided through their peers. The use thereof is also encouraged more between women as they are affected more by unintended pregnancies.

2.5.6 Impact of age

Firman et al. (2018) conducted a study to determine if the use of family planning is influenced by a woman's age finding that it appears to be an important factor to consider. Sensoy et al. (2018) also states that the reproductive phase of a woman is influenced by her age, therefore age can also determine the spacing between births.

According to Mandiwa et al. (2018), it is evident that age is a determining factor with regard to family planning use, as they identified in their study that women between the ages of 20-24 years are more incline to make use of family planning. No evidence was found indicating that age is a determinant of the family planning method women choose to use. Taking in consideration how age influences family planning use highlights the importance of understanding how different age groups make use thereof. The choice of family planning method is often determined by the maternal age at the first birth, as having children on a young age can result in women being more likely to make use thereof (Ali et al., 2021).

According to Sensoy et al (2018) older women have less fertility desires as seen with younger women. Older women are also more inclined to make use of family planning according to Solanke (2017) as seen in a study in Bangladesh and Ghana. Avvisah et al. (2018) also found that family planning use increases with age, but a decline is evident after women become 39 years of age. Nonvignon and Novignon (2014), cited in Nyarko (2020), also found a direct relation between family planning use and a woman's age, where women between the ages of 18-25 years are more likely to make use of family planning, but after the late thirties (35-39 years) family planning use seems to decline. In South Africa, the 2016 SADHS also found that women between the ages of 15-24 years are more likely to make use of family planning with a CPR of 68.7% indicating more of a decline as women gets older (DOH, 2016). It is therefore evident that older age groups in South Africa are less inclined to make use of family planning than older age groups.

2.5.7 Place of residence

Family planning use are influenced by the region where a woman lives. This is confirmed by a study done by James-Hawkins et al. (2018) where it was evident that significant differences could be seen in family planning use in rural and urban areas. In their study it was also found that family planning use differs between developed and developing countries, where differences was also found between family planning use in Congo than in Europe. These findings indicate that family planning use is influenced by the place where a woman resides. According to studies conducted by the UN (2017) it was found that there are other factors that should be considered as well, as CPR can differ in countries with similar economic status, as they found developing countries in the SSA region has different family planning use prevalence rates.

2.6 Factors inhibiting family planning use

The consequences of not using family planning use can be observed in various factors, such as economic status, health services, and other factors that influence use rates (Ackerson & Zielinski, 2017). Besides, rates of family planning use in countries that have a similar structure vary based on different policies. Ndinda et al. (2017) have "largely argued" cultural, gender, and power relations make reproductive rights harder for women residing in rural KwaZulu-Natal.

A study by Kriel et al. (2019) in the same province supported this statement, as it was determined that because of cultural norms, males have more influence with regard to decision making and therefore often decide on whether a wife can use family planning. An exploration of literature related to family planning and the issues that inhibit its use, brings an understanding on which influences shape non-use of family planning among rural women from different perspectives. That is because this section addresses factors that influence the non-use of family planning and at the same time refers to how it impacts such use among older women residing in rural areas.

2.6.1 Gender inequality

The underdevelopment of a fair and equal power balance between the sexes affects women's choices of birth control. In South Africa, especially in rural areas, males make all the decisions (Kriel et al., 2019). This study identified the impact of male partner influence on family planning and contraceptive use by women in KwaZulu Natal in 2019. It found that, in patriarchal societies where males are still dominant, women have limited authority to make decisions about the use of a family planning method. In a study conducted in Northwestern Tanzania, findings indicated that married men often had such strong opinions on family planning use that their wives covertly used it (Sundararajan et al., 2019). One reason for this is the importance of male authority; perceptions that family planning encourages infidelity and

diminishes ‘control’ over their wives; and awareness that family planning reduces the number of children a woman has. Because of deeply ingrained patriarchal systems, there are many instances where women living in these environments are socially submissive and unwilling to resist a male's decision, so they don't use family planning according to Blackstone et al. (2017). Ackerson and Zielinski (2017) have noted that society places a negative social influence on birth spacing, a desire to limit size or using family planning. If a man is resistant to their partner's wish to use family planning, then the couple likely won't be able to use any form of family planning (Greno & Saikia, 2021).

2.6.2 Traditional family planning methods

Two separate studies published by Rabiu (2018) and Marquez et al. (2018), found that family planning methods like periodic abstinence, withdrawal, and traditional herbal medicines are used more often in women who have a lower level of education. Moroole et al. (2020) found that there are also some less-common family planning methods in African cultures, like postpartum abstinence and virginity testing. They concluded that these methods are gaining popularity, but they still haven't been fully evaluated by researchers (Ndinda et al., 2017).

2.6.3 Religion

Despite the availability of a number of family planning methods worldwide, a variety of factors prevent women from accessing them, according to Turner (2021). Religion and religiosity are one factor that drags down women's access to family planning. In addition, Turner (2021) states that personal beliefs and values are shaped by one's religion, which can restrict women from using family planning. Tigabu et al.'s (2018) study also found that women who strongly believe in religion and refrain from using family planning oftentimes do so because of their beliefs. One could therefore surmise the importance of considering religion as a factor for some women or couples to use or abstain from family planning choices. The views of a given religious

population greatly affect their sexual intercourse and family planning attitudes, as is obvious in Tigabu et al.'s (2018) study where participants were part of three religious groups- Protestant Christian, Orthodox Christian and Muslim.

The findings in this study suggest that Muslims are 65% less likely to use family planning. This implies that individuals may act in accordance with their faith and choose abstinence or have many children if the scriptures of their religion dictate so. Consequently, the use of family planning will be low among Muslim populations (Sinai et al., 2020). Drucker (2020) analysed and found that most Roman Catholics reject hormonal family planning methods. Drucker believes this is because they believe sexual intercourse is only for reproduction and should not be used for pleasure. They believe this is found in the old general attitude towards sex in much of history, where sex was valued for procreation alone.

According to Ventriglio and Bhugra (2019), people in the 21st century are seeing sexual intercourse as an important aspect of their lives, and as pleasurable. This is a stark contrast to rigid religious groups such as Catholics and Muslims, which are less open to change. These groups, while they may view sex as only needing to be performed for procreation, can still see that high birth rates could potentially be attributed to this belief system. For Roman Catholics, the only approved forms of family planning are abstinence and the rhythm method, both considered "natural" since it discourages use of unnatural methods. However, their beliefs prohibit abortion - even in emergency situations - as well as other types of family planning (Drucker, 2020). Mahmud et al. (2021) echo these same sentiments and argue that according to Catholic doctrines on new life at conception time and new personhood at beginning of human life cycle—which together form the basis for endo-maternal values—it is not permissible for followers to take recourse in emergency family planning including abortion due to these

beliefs. As a result, children will continue being born into society which can cause an increase in population sizes.

Keele et al. (2017) studied Muslim women in Matemwe, East Africa and found that the women's beliefs on family planning were heavily influenced by their religious beliefs. For example, the Quran warns against birth control, suggesting that using artificial methods is a violation against God's will (Keele et al., 2017). Additionally, Ariffin et al. (2017) writes that in Islam, the means of contraception is seen as going against God's wishes. Women who are adherents to Islam are unlikely to seek clarity from healthcare professionals on contraceptive usage due to this belief. It's clear that fear can inhibit the use of family planning- given these studies and our personal experience, we know how hard it can be for some communities to share the knowledge needed for women to be in charge of their reproductive health.

2.6.4 Fear of side effects

Side effects of modern family planning methods, such as menstrual changes and weight gain, has been a common reason that women either choose not to start or discontinue family planning. Side effects can also include headaches, dizziness, nausea, and cardiovascular impacts. These side effects can eventually lead to long-term effects like infertility as well as childbirth complications (Rademacher et al., 2018; Staveteig, 2017). For example, in 2014 an article found that a significant proportion of women were attributing their unmet need for family planning to a fear of side effects; over 28% in Africa, 23% in Asia and 40% in Latin America attributed their unmet need to this fear (World Health Organization 2018). A fear of side effects may occur when a woman is experiencing side effect with a particular method or when rumors or exaggerations are considered as factual.

A study by Ackerson and Zielenski (2017) in SSA indicated that women were unwilling to use family planning because they feared the side effects. These fear of side effects includes death

and infertility which is inhibiting to women who might want to use them. Due to the side effects associated with this family planning method, many women are reluctant to use it (Potgieter et al., 2018). The study suggests that some women have left the device because of prolonged menstruations and headaches. However, this study claims that it provides information and counseling services so that they understand all the risks and different options available. So many women avoid certain family planning methods based on side-effects (Potgieter et al., 2018).

2.6.5 Myths and misconceptions

According to Eram (2017), misconceptions and myths about family planning impede the use of modern family-planning methods. It's imperative for educational campaigns and policies to understand these myths and work toward dispelling them. Providers who do not understand how family planning methods work can contribute to these misconceptions by incorrectly addressing the concerns their patients' mention, which can confuse or scare these women into giving up on family planning. There are many myths and misconceptions around modern family planning methods, according to an article in The Guardian (2022).

The UN Population Fund has warned that while family-planning use is increasing worldwide, women who deliberately avoid it are more likely to be doing so because of side effects, myths, stigma, or opposition from others. For many women, taking family planning can be complicated. Nearly a quarter of all women (23%) are unable to abstain from sex, according to figures first reported in 2020. However, for those who choose freely, the UN agency found that many myths and misconceptions persist and contribute to non-use. One survey published in the United Nation's Population Fund's Annual Report (2022), found that one woman from Ghana believed she was told "that contraceptives make people grow fat." A number of women from different countries, including the US, said they had been told that birth control pills can cause

infertility. For example, 75% of Brazilian gynaecologists mistakenly believe that menstruating women who've never given birth before can become infertile if given an IUD (Da Silva- Filho et al., 2017). Other providers are unaware of accurate information which leads them to deny a women's desired family planning options. For example, some providers are unaware that girls and adolescents can safely use any modern family planning method, including long-acting methods such as the IUD (WHO et al., 2018). With a focus on sexuality in literature, this study reviewed how perceptions of family planning are impacting adolescents. It also examined how adolescents view sexuality discussions with their parents and in school.

2.7 Summary

This chapter presented the main findings from the literature relevant of knowledge, attitude and practices (KAP) related to family planning. The literature reviewed in this chapter pertains to the use of family planning from both a global and South African perspective. Reference was also made to studies conducted in South Africa as well as other parts of the world. Due to the scarcity of South African literature that speaks directly to the use of family planning among women survivors within urban and developing countries, this study has drawn on literature that depicts use of family planning amongst women with similar socio-economic status within other parts of Africa. The reviewed literature indicated that knowledge of family planning impacts its use. A further discussion indicates that high educational levels, involvement in labor markets, and desire for smaller families promote use of family planning among African women. However, gender inequality, cultural and religious beliefs as well as myths and misconceptions are seen as factors that inhibit use of family planning among African women. The theoretical framework utilised in this study was also explained and discussed. Chapter 3, the next chapter, focuses on the research methodology used in this study followed by a description of the research design, methodology, data collection and data analysis. The ethics considered for the study will also be discussed in Chapter 3.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

An outline of the research methodology used in this study will be discussed in this chapter. As stated by Willmott (2020), research methodology is the procedure whereby information on an identified topic is collected, processed and analysed. The basic outline of research methodology will be discussed including the approach, theoretical framework, design, setting, population and sampling, inclusion criteria and exclusion criteria. Furthermore, the data collection instrument with will be discussed, how data was analysed for reliability and validity, as well as the ethical considerations that was considered in this research study.

3.2 Aim of the study

The aim of this study was to describe the knowledge, attitude, and practices of rural women on the use of family planning at an outpatient's department in the Northern Cape Province, South Africa.

3.3 Objectives

The objectives of this study were to:

1. To investigate the background factors and its influence on rural women in the Northern Cape Province on the utilisation of family planning at an out-patient department.
2. To investigate the intermediate factors and their influence on the use of family planning among rural women at an outpatient's department in Northern Cape Province
3. To investigate proximate intervening factors and its influence of rural women on the use of family planning at an outpatient`s department in Northern Cape Province.
4. To investigate the use of family planning amongst rural woman at an outpatient's department in a hospital in the Northern Cape Province.

3.4 Theoretical framework

The conceptual framework for this study was based on the Health Belief Model (HBM). The HBM is a model of individual behavior that looks at both the attitudes and perceptions related to a certain action, such as practicing family planning methods. There are several different perspectives to consider when looking at motivations for taking or not taking action. It includes background determinants (demographic factors), intermediate determinants (knowledge and service provision) and the proximate activator variables (attitudes and barriers). The integrated work of previous research can be found in Ajzen, Fishbein, Magnani, Cage, Price and Hawkins; as cited by Kinaro, et al. (2015).

This study aimed to measure the health behaviour of individuals in order to analyse the impact on their lifestyle, based on the theory that knowledge and attitudes contribute to health-related decisions. Social intervention is important for changing personal behaviour, as it may influence individuals' knowledge, attitudes, and practices (KAP). Studies show that KAP are most commonly used to predict and explain variations in family planning behavior among women (Katzenellenbogen, Joubert & Karim, 2007). The HBM is one of the earliest models to anticipate health traditions such as unintended pregnancies with public intervention opportunities. It has been tested through Rosenstock's social cognitive framework devised in the 1970s and 1980s (Hall, 2012). The HBM is based on the understanding that a person will take a health-related action if they:

- Feel that a negative health condition e.g., unwanted pregnancy can be avoided;
- Have a positive expectation that a negative health condition will be avoided by taking a recommended health action e.g., taking family planning; and
- Believe that they are able to take a recommended health action with confidence and comfort (Polit & Beck, 2004).

The HBM has six components, which are the following:

- Perceived susceptibility is an individual's thoughts about their risks for many unwanted pregnancy outcomes (births, abortions, parenthood). This increases the need for family planning.
- The likelihood of using family planning methods changes if the person is mindful about how not being able to continue with their studies, not having financial support, undergoing an abortion, and whether they're worried about the physical and emotional changes their body may go through will affect them.
- The perceived benefits are the advantages of family planning. These are completing your studies, getting better job prospects, financial success and general health promotion. One example is protection against ovarian cancer, which will improve use of family planning.
- There are many perceived barriers to family planning, for example weight gain, mood swings and taking the pill daily. Some people also worry about side effects of the family planning choice they make. Additionally, since unmarried females often feel shame when using family planning, this stigma can prevent them from choosing it.
- Cues to action come in many forms and can be triggered by many events. For example, a missed menstrual period might prompt thoughts about the possibility of pregnancy. Other cues include post-coital consideration or even a partner's concern. Counselling from a healthcare provider on family planning use can also serve as a cue to action.
- One of the best ways to help improve your self-efficacy is by using family planning (Hall, 2012).

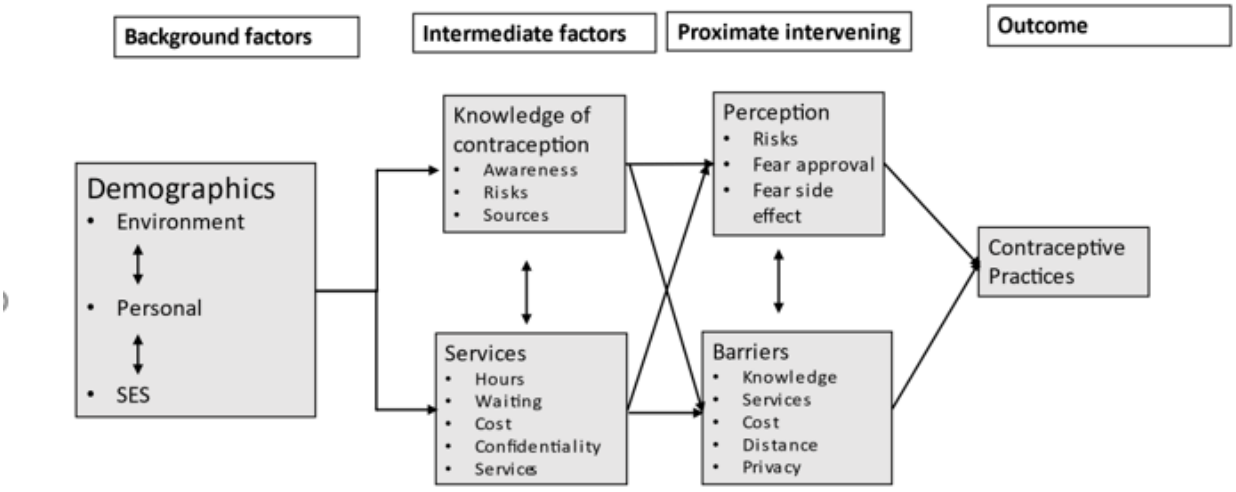

Figure 3.1: Perceptions and barriers to family planning use (Kinaro, et al., 2015)

In this study, a questionnaire which applied the principles of Kinaro's model of perceptions and barriers to family planning was used was integrated with the six components of the HBM (Kinaro, et al., 2015). Constructs applied included demographic factors consisting of background factors, intermediate factors such as knowledge and proximate intervention factors such as barriers and attitudes which can make predictions on the use of family planning (Figure 3.1).

The HBM was used to analyse the data gathered to understand attitudes, knowledge and practices that women in a rural area of the Northern Cape had on family planning by the knowledge, attitude, and practices of rural women on the use of family planning.

3.5 Research methodology

A research methodology is described by Marvasti (2018) as a process where data is collected, analysed and interpreted to conclude on the research topic ensuring that the aim and objectives of the study was met. There are three (3) research approaches, namely quantitative, qualitative and mixed method (Marvasti, 2018). In this study, the researcher used a quantitative research methodology, with a descriptive design. The quantitative approach enables the researcher to

present data that were obtained numerically, which allow statistical analysis. This approach also allows the researcher to gain a better understanding of the identified topic as complex problems are explored using variables and questions that are being used are direct and quantifiable (Bloomfield & Fisher, 2019). The quantitative approach was used to obtain quantitative data on the attitudes, practices and knowledge of rural women regarding the use of family planning through questionnaires, which were analysed using the Statistical Package for Social Sciences (SPSS), version 28.

3.6 Research design

A research design is a blueprint being followed to answer a research question, and can be descriptive, correlational, causal-comparative/ quasi-experimental or experimental (Cox, 2019). According to Siedlecki (2020) a descriptive study design refers to the study of individuals, events or conditions as they appear in nature without the manipulation of variables, in order to describe a specific phenomenon. Descriptive research therefore examines multiple variables and is especially useful in looking at variations in characteristics of groups or identifying characteristics of different populations (Siedlecki, 2020).

3.6.1 Descriptive research design

A descriptive research design allows the researcher to gather quantitative information that can be analysed statistically, which in turn makes it possible for generalisations about the sample population to be drawn (Siedlecki, 2020). Survey research is non-experimental research that obtains information about the practices, views, attitudes or knowledge that an identified group has on a specific topic (Story & Tait, 2019).

3.6.2 Descriptive survey study design

The researcher surveyed rural women using a quantitative, descriptive survey study design to learn more about the knowledge, attitudes, and practices they had with regards to family

planning. This was done through the administering of questionnaires, purposed to summarise the collected quantitative data through statistical analysis (SPSS Version 28) and generalisation of the results.

3.7 Research setting

The research setting refers to the location or environment physical or social, in which research were being conducted (Majid, 2018). For this study the research was conducted at a hospital in the Namaqua District in the Northern Cape. This setting was chosen because the researcher has reasonable access to this specific health facility and also due to the facility being a level one referral hospital to which all clinics and Community Health Centres (CHCs) in the Namaqua district refers their patients. This includes twenty-nine (29) clinics and five (5) CHCs. The hospital also has four (4) major departments including general, trauma, maternity and surgical wards. There is also an obstetric and pediatric department, an operating theatre, a 24-hour trauma unit and an out-patient department, which all add up to an overall bed capacity of sixty-three (63). Although women primarily make use of clinics or CHCs for access to reproductive health services, these services are also made available in the maternity ward, though it was the outpatient department of the hospital where research was conducted. The outpatient department attends to emergency medical care, intensive care, medical care, family planning and paediatric care.

The accessible population (N= 152) was therefore all women of reproductive age between 18 to 49 years who visited the selected hospital, but were selected according to the inclusion and exclusion criteria that will be outlined in the next section.

Figure 3.2: Dr. Van Niekerk Hospital, Springbok, Namaqua district, Northern Cape, South Africa

Figure 3.3: Map of the region indicating where Springbok is located

Figure 3.4: Outpatients department of the hospital

3.7 Research population

A research population is the total number of people residing in a certain area or region in which a study is conducted, while the target population refers to a smaller group of the population that share similar characteristics that were identified as possible participants for the study (Banerjee & Chaudhury, 2010). The target population is the group of interest which the researcher intends to derive the conclusion from the study. The target population that was identified for this study was all women of reproductive age between 18-49 years who visited the selected health setting. However, sampling was done from the targeted population with a population size of 152, according to the inclusion and exclusion criteria.

3.7.1 Sampling and sample procedure and sample size

Cox (2019) describes sampling as the process through which participants are identified who meet the outlined criteria for the study but are still representative of the total population. According to Cox (2019), the sample of a population is therefore the group of individuals that was identified to participate in the study. Participants who met the inclusion criteria was identified from those who visited the out-patient department of the selected hospital on a monthly basis. This was done by monitoring their visits through the available statistics at the hospital. Sampling was done through probability sampling methods including simple, random sampling methods (Berndt, 2020).

Participants for the study were selected upon their visits to the selected health facility based on their compliance to the inclusion and exclusion criteria. The sample size of the study was not predetermined. A total of 152 women participated in this study that was conducted between January 2022 and August 2022 by means of a questionnaire. An online sample size calculator was used to calculate the sample size of the study. To calculate the sample size the following parameters were made used: confidence level = 95 %; confidence interval = 5%; and population size = 152. The researcher inserted the confidence level (95%); confidence interval (5%) and with the total population size being at 250, the calculated sample size arrived at a sample size of 152 (www.calculator.net). The confidence level refers to the percentage of the researcher's confidence that answers of the population would fall in a certain range and the confidence interval refers to the margin of error indicating the probability that answers of the population might fall in a different range (Hazra, 2017).

As the aim was to get a clear view of the knowledge, attitudes and practices of rural women on family planning, the probability sampling method was used as this involves the random selection of participants which allows the researcher to make inferences about the whole

population group. According to the sample size calculator (Survey System, 2020), the confidence interval is the plus (+) or minus (-) figure usually reported in newspaper or television opinion poll results, also called margin of error. Furthermore, during the abovementioned timeframe, women were identified between 08:00 and 16:00 to partake in the study. The researcher firstly introduced himself to the potential participant and informed them of the study he was conducting. When a patient who met the criteria agreed to participate, they were taken to a private room where the questionnaire **(Appendix E)** and informed consent form **(Appendix F)** were given and explained to them. This process of collecting data was repeated until the desired number of participants were reached. Questionnaires were therefore numbered from one (1) to 152. Each questionnaire had five (5) pages that were also numbered accordingly. Before the researcher captured the data, each questionnaire was checked to ensure that there were no errors in the data. The data were then captured by the researcher as soon as possible after the completion of questionnaires and were backed up on a flash drive to prevent the loss of data in case the computer failed. This flash drive with data will be stored for five years after the completion of the research, as well as all the hard copies of the data.

3.7.2 Inclusion criteria

Inclusion criteria are seen as the primary characteristics or features that must be met by individuals in order to be included in a study, as these characteristics enable the researcher to answer their research question (Patino & Ferreira, 2018).

The inclusion criteria for this study were as follows:

- Women of childbearing age between 18-49 years;
- Women with a fair understanding of the Afrikaans language

3.7.3 Exclusion criteria

Exclusion criteria refer to the features or characteristics that exclude individuals from being selected for a study, as these characteristics can cause the study to be ineligible (Patino & Ferreira, 2018).

The exclusion criteria for this study were as follows:

- Children/ adolescents under 18 years of age;
- Women challenged with health issues;
- Men;
- Institutionalised individuals; and
- Geriatrics

3.8 Data collection

Data collection is the systematic process whereby information is gathered on the identified variables or topic, in order to answer the research question and achieve the aims that were set for the research (Clarke & Vealé, 2018). In this section, the following will be discussed: data collection instrument; data collection process followed; validity and reliability of the study.

3.8.1 Data collection instrument

A self-administered questionnaire was used as it was developed by Gopaul (2015) to explore the knowledge, attitudes and practices with regard to family planning use amongst undergraduate female students living in tertiary institution residences in KwaZulu-Natal. Seeing that it explored the same issues as this study, permission was obtained to use the questionnaire **(Appendix C)** for the data collection purposes in this study. There was no change made to the questions of the questionnaire, it was only translated into Afrikaans. Before data collection commenced, it was also established that the language for communication must be English, therefore all questions had to be answered accordingly. The questions were framed in

such a manner that it could be easily understood by participants and consisted mainly of closed-ended questions which ensured that participants could respond more efficiently. This contributed to the questionnaire also being more time effective as it took approximately 15 minutes for participants to complete it. The questionnaire had 27 items and was divided into five sections, which included the demographic profile of participants and the questions addressed the key applied constructs: (a) demographics (b) knowledge of contraceptives; (c) Attitudes (perceptions) with contraceptive use (d) Practices with contraceptive use (e) Barriers and factors. The following sections were explained and included in the literature review with the necessary references: Section A: Social and demographic factors, which included the age, marital status, religion and culture of participants and level of study; Section B: Knowledge of contraceptives, which explored the knowledge participants had on the various family planning methods that is available; Section C: Attitudes towards contraceptive use, where the participants' attitude towards family planning use, as well as towards certain family planning methods was explored; Section D: Practice with contraceptive use, which explored the use of family planning by participants; and Section E: Barriers and factors promoting contraceptive use, which explored the factors that could be preventing participants from using family planning as well as factors which promoted their use.

3.9 Validity

The validity of a study refers to how accurately the method being used in research measures the identified variables that are being explored (Sürücü & Maslaçi, 2020). For the purpose of this study, content validity as well as face validity were applied.

3.9.1 Content validity

Content validity ensures that an instrument measures all the relevant variables that are being researched (Almanasreh et al., 2019). Through the use of the questionnaire, valid information

could be obtained from participants regarding their knowledge, attitudes and practices on family planning use, as each section of the questionnaire focused on obtaining information on these concepts. Section A focused on the social and demographic factors of the participants. Section B focused on the knowledge participants had on family planning. Section C focused on the attitude's participants had regarding family planning use, Section D focused on the practices on family planning use, and Section E focused on the barriers and factors promoting family planning use, ensuring content validity.

Table 3.1 Content validity

Questions	**Content**
Knowledge of contraception	Q11.1 - Q11.8 (8 questions)
Attitude with contraceptive use	BQ1 - Q 11 (11 questions)
Practice with contraceptive use	C1 - C7 (7 questions)
Barrier and Factors promoting contraceptive use	D1 - D8 (8 questions)

3.9.2 Face validity

Face validity entails making sure that the tool subjectively measures the variables that is supposed to be measured (Moses & Yamat, 2021). This was established before the commencement of the study by ensuring that the questionnaire included questions to explore all the identified issues, as well as ensuring that the wording of questions was clear and understandable.

3.10 Reliability

Reliability entails the accuracy and consistency of the information in a study (Polit & Beck, 2018). Cronbach's alpha is defined as a measure of internal consistency, that is, how closely related a set of items are as a group, as well as a measure of scale reliability (Statistical Methods and Data Analysis, 2016). Internal consistency reliability is a measure of how well a test addresses different constructs and delivers reliable scores. The test- retest method involves

administering the same test, after a period of time, and comparing the results (Shuttleworth, 2009). Internal consistency is evaluated through calculation of the Cronbach's alpha coefficient, if in addition to measuring internal consistency, one wish to provide evidence that the scale in question is unidimensional, additional analyses can be performed (Statistical Methods and Data Analysis, 2016).

In this study, reliability of the subscales of the instruments was computed which are; Knowledge of family planning with α = .930, Attitude with family planning use α = .823, Practice with family planning use α = .586 and Barrier and Factors promoting family planning use with α =.733. The overall Cronbach alpha of the whole instrument is α =.768. The reliability of an instrument is determined by its proximity of the alpha number to 1 (Duad et al., 2018). The closer the alpha number is to 1 determines reliability of the instrument. The Cronbach alpha value ranged between 0.6 and one (1) and is considered reliable (Daud et. al., 2018). The instrument for this study is therefore reliable. The reliability index instrument was not stated by the author where the instrument was adopted (Gopaul, 2015).

3.11 Data collection

Data collection is the gathering of information on the various variables of interest in a systematic manner and can be done with different data collection tools (Clarke & Vealé, 2018). For this study, a questionnaire was used to collect data. Each questionnaire was numbered with the number assigned to the participant upon agreeing to take part in the study. Participation in the study were voluntary and participants were not compensated. The questionnaires were administered daily between 08:00 to 16:00 at the triage section of the outpatient's department of the selected health setting where a private room was used to ensure confidentiality and privacy. The researcher introduced himself and informed the participants about the research. The researcher then sought their participation in the research. In the event the participant was

willing to participate, the researcher obtained signed and written consent. The process was repeated until 152 questionnaires were completed by the participants. All the questionnaires completed were put into an envelope, sealed and taken for analysis. The researcher supervised the collection of data.

3.11.1 Pretesting of the instrument

To ensure the reliability of data, the questionnaire was first piloted on ten (10) rural women of reproductive age at the outpatient department of the selected health setting. By pretesting the questionnaire, gaps were identified, and corrections and adjustments were made in order to improve data collection for the study. This added to the reliability of the tool, as participants of the pilot study were given the opportunity to make suggestions on how the questionnaire could be altered to improve the clarity of questions, as well as any additions that could be made. All the participants of the pilot study understood the questions; thus, no adjustments were made to the questionnaire. Although the participants of the pilot study had similar characteristics to the sample participants, none of the pilot participants were part of the study itself. Furthermore, the questionnaire that was used for data collection, was structured in such a manner that it explored the knowledge, attitudes and practices of rural women on the use of family planning. This was ensured by obtaining permission to use a data collection tool that was formulated for a study where the knowledge, attitudes and practices of university students were investigated. Since the themes that were explored in the two studies overlapped, the reliability and validity of the tool were already confirmed. Written, informed consent was received from all participants before they partook in this study.

Table 3.2: Research questions in relation to the questionnaire and the HBM

Research Question	Questionnaire	Health Belief Model
1. What is the knowledge of rural women in the Namaqua District in the Northern Cape regarding family planning?	1.Knowledge Question 7 to Question 12	**Perceived susceptibility** The knowledge women have regarding family planning will trigger their subconsciousness to use it in order to avoid certain threats.
2. What is the attitude of rural women regarding family planning use?	2. Attitude Question 13 to Question 19	**Perceived susceptibility** The attitudes women foster towards family planning use will determine the use of family planning.
3. What are the practices of rural women in the Namaqua District with regard to family planning use? 4. What are the barriers that prevent rural women from taking family planning? 5. What factors are promoting family planning use?	3. Practice Question 20 to Question 42	**Perceived severity** When the consequences of unwanted or unplanned pregnancies are realised, a need for family planning use might be provided. **Perceived barriers** The barriers that rural women experience to get access to family planning can be eliminated to prevent unplanned/ unintended pregnancies, abortions and STI's. **Perceived benefits** In realising the benefits of family planning, the use of family planning might be improved.

The questionnaire was piloted on 10 rural women of reproductive age at an out-patients' department in the Northern Cape Province. Pretesting the instrument was necessary to improve data collection. Pretesting was done in order to identify any gaps and make corrections, so that the respondents were given the opportunity to comment on the clarity of the questions and make suggestions on additional responses or input. Unambiguous language and questions were used in order to eliminate ambiguity, difficult wording, or unacceptable questions.

3.12 Data analysis

Data analysis is the process of translating quantitative information into a descriptive format to make meaning out of the data (Gopaul, 2015). Before data analysis took place, all the questionnaires were numbered to ensure anonymity, evaluated, checked for completeness and for errors. Only questionnaires properly completed were used for the analysis. Statistical analysis is used for processing quantitative information; thus, the Statistical Package for Social Sciences software (SPSS version 28) was used to capture and analyse the data. It was important to create a code book, which spelt out the structure pattern to guide the data entry. This helped to ensure that the data could be captured into SPSS, using the codes identified **(Annexure G).** Data analysis was done and data were presented using frequencies and simple percentages. Frequency is the number of occurrences of the phenomena under study per time. It is mainly represented using the alphabet letter 'f'. However, in the study, the researcher used frequency alongside the percentage to illustrate the rate of the occurrence. Through the use of this software tables, graphs and percentages were generated for the variables that were explored through the questionnaire, which made it possible to understand the knowledge, attitudes and practices on family planning use of women in the identified setting. The questions on the Likert scale containing: strongly disagree to agree were recoded. Strongly agree and agree were recoded into agree, while strongly disagree and disagree were recoded into disagree.

3.13 Ethical considerations

Before the study began, both the University of the Western Cape Research Ethics Committee and the Northern Cape Department of Health were notified. The study adhered to ethical principles and all fundamental ethical obligations were taken into consideration. Permission to conduct the study was obtained from both parties **(Annexure A; Annexure B)**. This included the principles of autonomy, beneficence, confidentiality, justice and veracity to ensure that participants' rights were protected. This ensured that participants' privacy was respected and that no participant was exposed to harm or were uncomfortable. Obtaining written, informed consent **(Annexure F),** is an indication that ethical principals were taken into consideration.

3.13.1 Autonomy

Autonomy is a concept that was applied to the study by informing all participants of their rights to agree or decline participation in the study, in addition to the fact that they can withdraw from the process at any point. It is also outlined in the information sheet as well as in the consent form, ensuring that participants are adequately informed about their options (Polit & Beck, 2010).

3.13.2 Beneficence

The sensitive topics we discussed in the article would have made the participants feel judged if their information was connected to them. The use of anonymity helped protect them from this feeling.

3.13.3 Confidentiality

It was explained to participants that the information they share remains confidential throughout the study, with the limitations of legal responsibilities stating that child abuse or neglect, or the risk to harm oneself or others, have to be reported. Further execution of confidentiality included

capturing the data in a passcode protected folder on a computer and on a hard drive that was stored in a locked drawer.

3.13.4 Respect for the community

The researcher attempted to make sure that any disruption of care was limited, as they knew that it would distract the hospital staff and could result in interruption of care to infants (Polit & Beck, 2010).

3.13.5 Justice

All participants were selected in a fair way, and they were all treated the same as well. Additionally, the researcher ensured that all participants fully understood their own role and the role of the researcher.

3.13.6 Veracity

The researcher ensured that all the information that participants received during the study was truthful and that no deceptive techniques were used to obtain information from the participants (Nursing and Midwifery Board of Ireland, 2015).

3.13.7 Benefits and risks of the research

The perceived benefits of this study are as follows:

1. Better access to family planning services for women in the rural areas.
2. More appropriate and conducive atmosphere at reproductive health facilities for women to be more comfortable to obtain family planning.
3. Access to skilled staff that can discuss problems that women of reproductive age may have.
4. Participants might have acquired more knowledge on family planning by interacting with the researcher, or by introspection.

5. Participants might be more inclined to make use of family planning methods they have not heard of before.
6. Satisfaction of participants that the information they provided might provide more insight to the challenges women in rural areas face with regard to getting access to family planning which might help overcome these challenges.

Perceived risks of the study are as follows:

1. Participants might have experienced discomfort as they were visiting the outpatient department of a hospital due to medical reasons.
2. The introspection, disclosure of sensitive information and fear or embarrassment to answer questions in the questionnaire might have caused emotional stress to the participants.

If considered, the perceived benefits of this study outweighed the perceived risks it might have presented.

3.14 Conclusion

In this chapter, the following topics was covered: research approach and design, the setting and population of the study, inclusion and exclusion criteria, the sampling and data collection processes, as well as the validity and reliability of the data collection instrument. Further discussions included the process of data analysis and the ethical considerations. Findings of the study will be discussed in the following chapter.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

In this chapter, the findings of the data analysis are discussed. The aim of this study was to describe the knowledge, attitude and practices of women who are of child-bearing age on the use of family planning at an outpatient's department of a hospital based in a rural area of the Northern Cape Province, South Africa. The results of the study, as obtained and analysed from completed questionnaires are presented in this chapter using tables, charts and graphs, and address the following objectives of the study:

- To investigate the background factors and its influence on rural women in the Northern Cape Province on the utilisation of family planning at the out-patient department.
- To investigate the intermediate factors and their influence on the use of family planning among rural women at an outpatient's department in Northern Cape Province
- To investigate proximate intervening factors and its influence of rural women on the use of family planning at an outpatient`s department in Northern Cape Province.
- To investigate the use of family planning amongst rural woman at an outpatient's department in a hospital in the Northern Cape Province.

The researcher distributed a total of 152 questionnaires, of which there was a 100% (n=152) response rate.

4.2 Demographic data

Background variables that were considered during the research included socioeconomic characteristics such as age, marital status, religion, cultural ethnicity, and level of education.

The population of this study consisted of women between 18 to 49 years of age and are of reproductive age who visited the selected health setting and met the criteria for inclusion in the study. A total of 152 (n=152) women voluntarily participated in the study having met the inclusion criteria as stipulated in Chapter Three.

4.3 Sociodemographic variables

As indicated in Table 4.1 below, all respondents (100%; n=152) in this study were of reproductive age of which 70.4% (n=107) of the respondents were single, 21.7% (n=33) were married, 6.6% (n=10) were divorced or separated and 1.3% (n=2) were widowed. The majority of the respondents (66.4%; n=101) were part of the Coloured cultural group. This is in accordance with the demographical profile of this specific region where 7.32% of the population is African, 8.96% is white, and 83.06% is Coloured (Department of Cooperative Governance and Traditional Affairs, 2020). A total of 94.7% (n=144) of respondents had schooling up until Grade 12; 1.3% (n=2) of respondents had schooling until Grade 11; 3.3% (n=5) of respondents had schooling until Grade 10; and only 0.7% (n=1) of respondents had schooling until Grade 9. It was found that all respondents in this study formed part of the Christian religion (100%; n=152). This is consistent with a study done by Schoeman (2017) where it was determined that the majority (97.9%) of the population in the Northern Cape ascribes to Christianity, with 1% forming part of the Islamic faith, and the rest identifying with traditional African religions or no specific religious group.

Table 4.1: Sociodemographic variables of the respondents

SN	Variable		N	%
1.	Age	18-20	55	36.2
		21-25	41	27.0
		26 and above	56	36.8
2	Marital Status	Single	107	70.4
		Married	33	21.7
		Divorced/ Separated	10	6.6
		Widow	2	1.3
3.	Religion	Christianity	152	100.0
4.	Cultural group	Coloured	101	66.4
		White	37	24.3
		Black	14	9.2
5.	Grade level	Grade 9	1	0.7
		Grade 10	5	3.3
		Grade 11	2	1.3
		Grade 12	144	94.7

Khraif et al. (2017) found that a number of factors play a role in influencing whether or not someone chooses to use family planning. Several of these, including age, marital status, education level, and type of job. Some factors will be discussed in the following subsections to provide deeper insight into the respondents in this study.

4.3.1 Marital status

Almost three quarters of respondents in this study were single (70%; n=107), followed by 22% (n=33) of respondents indicating they were married. A small portion of respondents (7%; n=10) stated they were divorced/separated and 1% (n=2) were widowed.

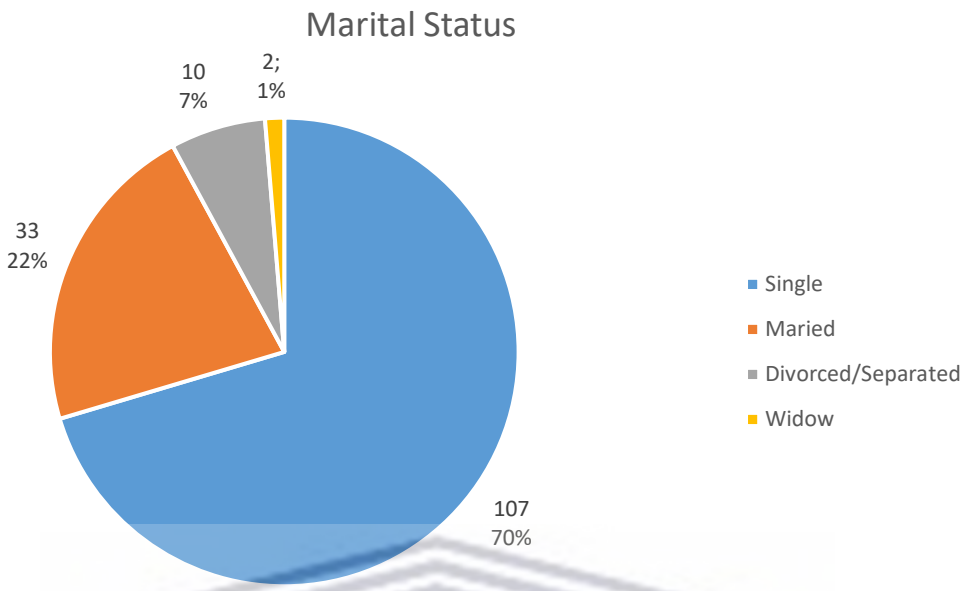

Figure 4.1: Marital status of respondents

As indicated in Figure 4.1, 70% (n=107) of the respondents were single. This can be attributed to the random selection of respondents based on their visits to the identified health setting. The disparity between married and single women can be explained from the findings of Statistics South Africa (Stats SA, 2020) where it became evident that significant less marriages took place between 2010 and 2020 in the Northern Cape Province. This variable could therefore also have influenced the responses in this study, as most respondents (70.0%, n=107) were single. Wang et al. (2017) conducted a study providing evidence that the marital status of women could influence their family planning use practices, as it was found that unmarried women are more likely to abstain and would therefore provide responses indicative of their current situation, not elaborating on their family planning use while being in relationships.

4.3.2 Cultural group of respondents

As illustrated in Figure 4.2, the respondents were predominantly Coloured, which fits into the demographic profile of the Namaqua region. A breakdown of the cultural groups of the population in the region was described in a profile that was compiled for the region, stating

that 7.32% of the population is African, 8.96% is white, and 83.06% is Coloured (Department of Cooperative Governance and Traditional Affairs, 2020).

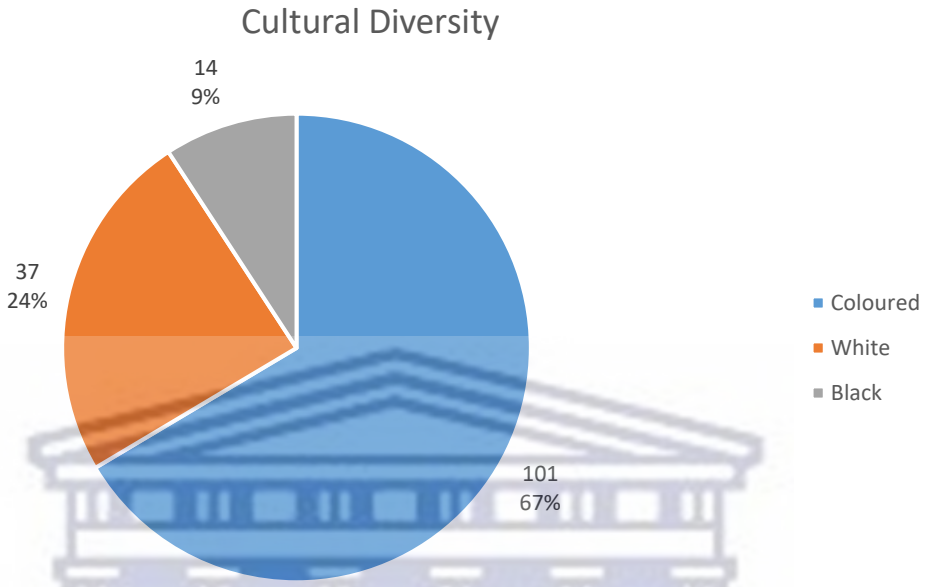

Figure 4.2: Cultural diversity of respondents

As illustrated in Figure 4.2, the majority of respondents were from the same cultural group (67%; n=101). All the respondents (100%; n=152) also belonged to the same religion, conformed to the same religious values and sociocultural norms. Mwanangombe et al. (2020) found that despite providing education on family planning, factors such as sociocultural norms and especially religious values, were still experienced as barriers to family planning use.

4.3.3 Education level of respondents

An analysis of the educational level of respondents indicated that 95% of respondents (n=144) completed Grade 12. Very few of the respondents completed Grade 11 (1%; n=2) and Grade 10 (3%; n=5), while only 1% (n=1) of the respondents were on a Grade 9 level (Figure 3). These findings can be attributed to the increase in adult literacy in the province as indicated by the Department of Higher Education and Training (2021) which states that literacy levels increased from 83.6% in 2010 to 91.6% in 2019.

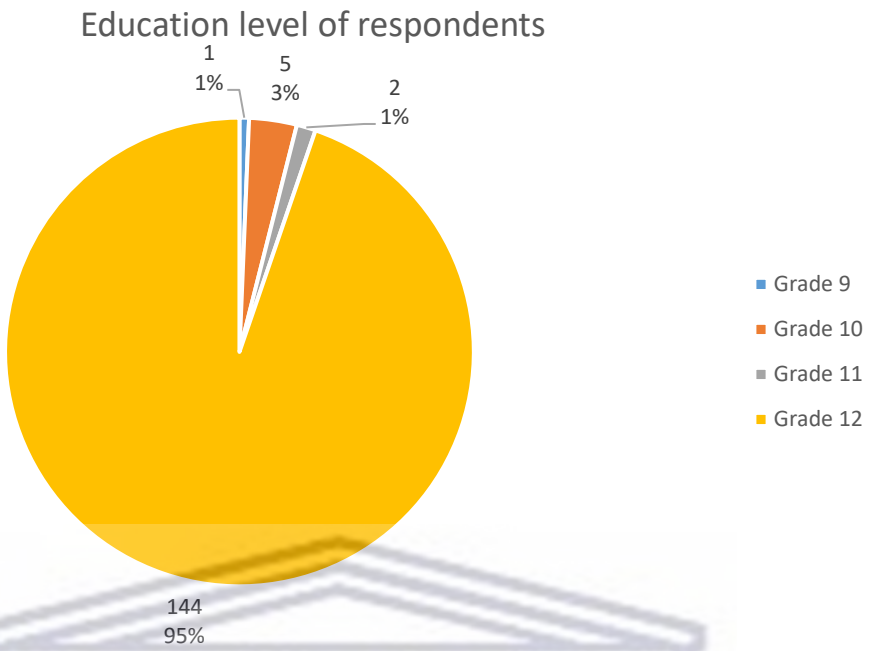

Figure 4.3: Education level of respondents

Although the respondents were randomly selected having met the inclusion criteria, the education level of respondents could have had a significant impact on their level of understanding of family planning. Bongaarts and Hardee's (2019) study examined the increase in education of women over the past few decades and its impact on family planning. Although they found that maternal education leads to an increase in the initiation and use of family planning, there are other barriers that need to be considered such as lack of knowledge about family planning methods, as well as a lack of programs in communities providing education on family planning.

4.4 Knowledge of family planning

The intermediate factors assessed studied respondents' knowledge of family planning. As the HBM postulates, a respondent's understanding of the various family planning methods may have an effect on their use of family planning methods. This can be due to the increase in knowledge that allows one to make a decision that avoids being confronted with negative health conditions such as unwanted/unplanned pregnancies (Yakubu et al., 2019). The assessment of

knowledge consisted of asking five questions to respondents as indicated in Table 4.2 below. All the respondents (100%; n=152) had heard of family planning or pregnancy preventing methods prior to the study. More than four-fifths (85.5%; n=130) of the respondents reported that prevention of unplanned pregnancies was one of the benefits one can be derived from the use of family planning, while three-quarters of respondents (75%; n=114) indicated that a controlled number of births are also a benefit of family planning. The respondents (85.5%; n=130) also reported that the use of family planning has no significant negative effect on the body while using it. Most of the respondents (92.8%; n=141) reported that healthcare workers were their source of information while 51.3% (n=78) of the respondents reported their main source of information to be the classroom. All the respondents (100%; n=152) reported to be informed about oral family planning and 92.8% (n=141) were aware of both injectable family planning methods and male and female condoms.

Table 4.2: Knowledge of family planning

SN	Statements	Responses	F (%)
1.	Have you ever heard of contraceptives/Pregnancy preventing methods?	Yes	152 (100%)
2.	What benefits one can derive from contraceptive?	Prevent unplanned/unwanted pregnancy	130 (85.5%)
		Control number of births	114 (75%)
		Prevent sexually transmitted infection	88 (57.9%)
		Enhance sexual performance	10 (6.6%)
3.	What in your opinion are the negative effects of contraceptives?	No significant negative effect	130 (85.5%)
		Decrease sexual pleasure	9 (5.9%)
		Unreliable	7 (4.6%)
		Cancer	3 (2.0%)
		Enhance marital unfaithfulness	3 (2.0%)
4.	What are your sources of information?	Hospital/health worker	141 (92.8%)
		Classroom	78 (51.3%)
		Internet	77 (50.7%)

		Family/friends	75 (49.3%)
		Mass media	17 (11.2%)
5.	Which methods of contraceptives are you aware of?	Oral pills	152 (100%)
		Injectables	143 (94.1%)
		Condom/Male and female	141 (92.8%)
		Emergency Contraceptive (morning pill)	134 (88.2%)
		Norplants/Implants	123 (80.9%)
		Natural Family Planning	71 (46.7%)
		Male sterilisation (Vasectomy)	58 (38.2%)
		Intra-uterine contraceptive IUCD	54 (35.5%)
		Dermal patch	23 (15.1%)
		Spermicidal	4 (2.6%)

A study conducted by Leon-Larios et al. (2020), where women indicated that the family planning methods they used most frequently were condoms and oral family planning methods, correlates with the findings of the current study. This is evident in the current study, as all the respondents (100%; n=152) were aware of the oral contraceptive and 92.8% (n=141) of respondents were aware of condoms (Table 4.2). The following subsections will discuss the findings of this part of the study.

4.4.1 Benefits derived from family planning

One of the most important aspects of the HBM in relation to the study is that, if people feel it will help them, family planning can drastically increase in usage rates. Perceived benefits, such as higher chances of financial success or health promotion benefits, including lower chances of contracting STIs, made more people inclined to use family planning methods (Aldohaian et al., 2019. A large number of respondents (57.9%; n=88) stated they are aware that the use of certain family planning methods could prevent sexually transmitted infections, while only 6.6% (n=10) of the respondents said that they knew the use of a family planning method could enhance sexual performance (Table 4.3).

Table 4.3: Benefits of family planning according to respondents

Responses		N	%
Prevent unplanned/unwanted pregnancy	Yes	130	85.5
	No	22	14.5
Control number of births	Yes	114	75.0
	No	38	25.0
Prevent sexually transmitted infection	Yes	88	57.9
	No	64	42.1
Enhanced sexual performance	Yes	10	6.6
	No	142	93.4

There is a direct connection between the prevention of unplanned pregnancies and family planning use because an increase in the use of family planning decreases the number of unplanned pregnancies, and it also controls the number of births being reported (Yaya & Ghose, 2018). The findings of the current study support these statements, as the majority of respondents (85.5%; n=130) indicated they were aware that using a family planning method prevented unplanned or unwanted pregnancies, and 75% (n=114) of respondents agreed that it allowed them control over their number of pregnancies. These findings also correlate with the findings of a study in Nepal by Brunson (2020) in which the concept of 'smart families' was explored. There the use of family planning was described as a method to plan family size and also decrease economic difficulties a family might face due to consisting of a large number.

4.4.2 Negative effects of family planning

In analysing the data as shown in Table 4.4, more than three quarters of the respondents (85.5%; n=130) stated that the use of family planning has no significant negative effect on sexual pleasure, marriage unfaithfulness or a women's health. This perception becomes more evident in the responses to the rest of the statements regarding the negative effects of family planning as 94.1% (n=143) indicated that it does not decrease their sexual pleasure. A total of 95.4%

(n=145) of respondents indicated that family planning was reliable. Only 2% (n=3) of respondents gave an indication that family planning use could cause marital unfaithfulness.

Table 4.4: Negative effects of family planning

Responses		**N**	**%**
No significant negative effect	Yes	130	85.5
	No	22	14.5
Decreased sexual pleasure	Yes	9	5.9
	No	143	94.1
Unreliable	Yes	7	4.6
	No	145	95.4
Cancer	Yes	3	2.0
	No	149	98.0
Enhance marital unfaithfulness	Yes	3	2.0
	No	149	98.0

The knowledge that respondents has about the negative effects of family planning are quite limited and does not correlate with findings of studies done in the past. This includes a study conducted by Wahidin et al. (2018) in which it was found that the use of oral family planning increased the risk of breast cancer in women with a higher risk in women who have been using it for a longer period. Kanadys et al. (2021) found that the use of oral contraceptives causes an increased risk of developing breast cancer by modifying the development thereof in cases where women have been using oral contraceptives before their first full-term pregnancy or where they have been using oral contraceptives for longer than five years. Despite numerous studies that contradict the following statement, almost all of the respondents (98%; n=149) still indicated that family planning use does not increase the chances of getting cancer. Ali et al. (2022) identified that family planning methods' effectiveness is impacted by instructions with regard to taking it, especially, for example, while using an oral family planning method and neglecting to take all of the doses as instructed causing the pill to lose its effectivity. They also state that the provision of counseling with regard to family planning can overcome this barrier

to effective use of family planning. Despite the findings made by Ali et al. (2022), only 4.6% (n=7) of respondents in the current study questioned the reliability of family planning.

4.4.3 Awareness of family planning methods

In Table 4.5 it is evident that oral pills, injectable methods and condoms (male and female) are the most commonly known methods of family planning. All the respondents 100% (n=152) in this study stated that they were informed on the use of oral pills as a family planning method; while 94.1% (n=143) indicated awareness of injectable methods; and 92.8% (n=141) indicated that they were informed on the use of condoms (male and female) as a family planning method.

Table 4.5: Awareness of family planning methods

Method		**N**	**%**
Oral Pills	Yes	152	100
	No	0	0
Injectables	Yes	143	94.1
	No	9	5.9
Condom- Male and Female	Yes	141	92.8
	No	11	7.2
Emergency Contraceptive	Yes	134	88.2
	No	18	11.8
Norplants/ Implants	Yes	123	80.9
	No	29	19.1
Natural Family Planning	Yes	71	46.7
	No	81	53.3
Male Sterilisation (Vasectomy)	Yes	58	38.2
	No	94	61.8
Intra-Uterine Contraceptive (IUCD)	Yes	54	35.5
	No	98	64.5
Dermal Patch	Yes	23	15.1
	No	129	84.9
Spermicidal	Yes	4	2.6
	No	148	97.4

It became apparent that there were family planning methods that only a few of the respondents were aware of. These methods referred to male sterilisation with only 38.2% (n=58) of respondents indicating that they were aware of this method, 35.5% (n=54) of respondents were aware of intra-uterine contraceptive devices (IUCD) and 15.1% (n=23) of respondents were aware of dermal patches. Almost all the respondents (97.4%; n=148) said that they were not aware of spermicides as a family planning method. Figure 4.4 provides a comparison on the level of awareness that respondents have on various family planning methods.

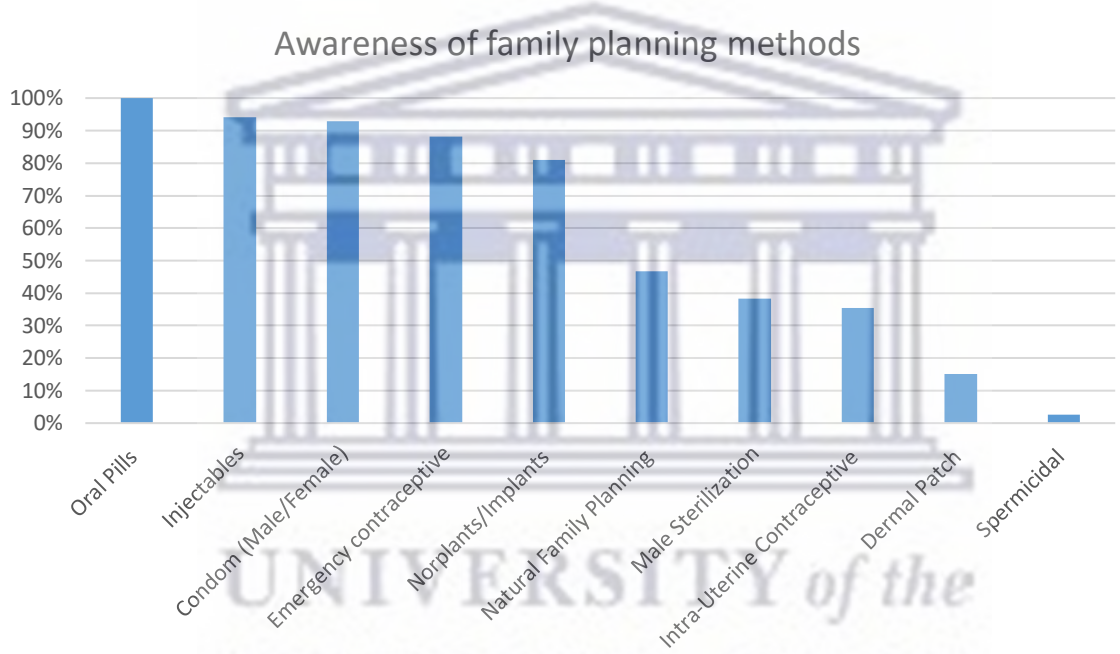

Figure 4.4: **Awareness of family planning methods**

Villaflor and Amparado (2020) conducted a study in the Philippines that found that women are more aware of condoms, oral pills, implants and injectable family planning methods, but had the least awareness of spermicides. Alhusain et al. (2018) supported these findings with their study, as they also found that women are more aware of oral pills, injectable method, condoms and IUCDs. The findings of the current study correlate with the abovementioned studies, as it also found that oral pills are the method respondents are most aware of (100%; n=152), followed by injectable methods (94.1%; n=143) and condoms (92.8%, n=141) (Figure 4.4).

4.4.4 Knowledge on the use of family planning

In assessing the knowledge that respondents had of family planning methods, eight questions were asked from the knowledge of family planning scale. Summarised in Table 4.6 below the obvious majority of respondents (96.7%; n=147) agreed that condoms protect against STIs, HIV and unwanted pregnancies. More than three-quarter of the respondents (79.6%; n=121) agreed that family planning had side effects that could be managed. Edwards et al. (2020) identified that the use of long-acting reversible family planning methods presents with adverse reactions including uterine bleeding, pelvic pain, weight gain and acne, which could be managed through medicinal treatment. The least number of respondents agreed on the statement that contraceptive pills may cause cancer (1.3%; n=2), and on the statement that you only need to take the pill on the days you are sexually active (2.6%; n=4). This indicates that the respondents had knowledge of the benefits of family planning use, as well as how family planning should be used to ensure its optimal effectivity.

Table 4.6: Knowledge of family planning statements

SN	Statement	Agree/ Strongly agree	Uncertain	Strongly disagree/disagree
11.1	Contraceptive pills may cause cancer	2 (1.3%)	11 (7.2%)	139 (91.4%)
11.2	Contraceptive pills may cause infertility	4 (2.6%)	27 (17.8%)	121 (79.6%)
11.3	Emergency pills can be used several times a month	73 (48%)	43 (28.3%)	36 (23.7%)
11.4	Condoms protect against STIs, HIV & unwanted pregnancies	147 (96.7%)	1 (0.7%)	4 (2.6%)
11.5	Emergency pills can be taken after 120hrs	17 (11.2%)	68 (44.7%)	67 (44.1%)
11.6	You only need to take the pill only on the days you are sexually active	4 (2.6%)	15 (9.9%)	133 (87.5%)
11.7	Medical history is an important factor in the choice of contraceptive	17 (11.2%)	59 (38.8%)	76 (50%)
11.8	Contraceptives has side effects that can be managed	121 (79.6%)	24 (15.8%)	7 (4.6%)

In analysing the data from Table 4.6 it is evident that respondents had a relatively clear view on the statements, as 96.7% (n=147) agreed that condoms provide protection against STIs; HIV and unwanted pregnancies; 79.6% (n=121) agreed that family planning has side effects that can be managed; 48% (n=73) agreed that emergency pills can be used several times a month; 79.6% (n=121) disagreed with the statement that contraceptive pills can cause infertility; and 87.5% (n=133) disagreed with the statement that contraceptive pills only need to be taken on days you are sexually active. From these findings it is evident that the respondents of this study

had a fair amount of knowledge with regard to family planning and the use thereof. Only 15.8% (n=24) of the respondents indicated that they were uncertain if family planning methods have side effects that could be managed; 28.3% (n=43) of respondents were uncertain if emergency pills could be used several times a month; and 17.8% (n=27) of respondents were uncertain if oral pills could cause infertility. Sedlander et al. (2021) indicated that although there is no evidence supporting the fear that family planning causes infertility, this is a common misconception already existing within communities. The mean for knowledge on family planning statements was 19.93 and the standard deviation (SD) was 6.25.

4.5 Attitudes regarding family planning use

In assessing the proximate intervention factors, the attitude respondents had with regard to the use of family planning was explored. This was done by asking eleven questions from the attitude of family planning user scale. The attitude people have towards family planning, including that health risks can be avoided by family planning use or that the benefits outweigh negative effects, can influence them to be more likely to make use of family planning (Alagrisamy & Arokiasamy, 2019). Most of the respondents (97.4%; n=148) in this study agreed that it is embarrassing to be seen at a family planning clinic. The same proportion of respondents (97.4%; n=148) agreed that using family planning is the best option to prevent STIs, HIV and unwanted pregnancies. None of the respondents indicated that a woman loses her self-worth if she uses family planning. A reduced number (7.2%; n=11) of respondents agreed that traditional methods were the best family planning methods.

Table 4.7: Attitude with family planning use

	Statement	Agree	Neutral	Disagree
12.1	Education on contraceptives should begin at puberty	147 (96.7%)	2 (1.3%)	3 (2.0%)
12.2	Education on contraceptives encourages a woman to engage in sexual intercourse.	122 (80.3%)	6 (3.9%)	24 (15.8%)
12.3	Does a woman lose her self-worth if she is on contraceptives?	0 (0%)	1 (0.7%)	151 (99.3%)
12.4	Is it the responsibility of the female to ensure that contraceptives are used regularly?	145 (95.4%)	0 (0%)	7 (4.6%)
12.5	Is it embarrassing to be seen at a family planning clinic?	148 (97.4%)	1 (0.7%)	3 (2.0%)
12.6	Is it acceptable for a female to suggest to her partner to use a contraceptive method?	92 (60.5%)	6 (3.9%)	54 (35.5%)
12.7	Using contraceptives is the best option to prevent STIs, HIV & unwanted pregnancies.	148 (97.4%)	4 (2.6%)	0 (0%)
12.8	Traditional methods are the best contraceptive methods.	11 (7.2%)	11 (7.2%)	130 (85.5%)
12.9	Contraceptives cause weight gain.	50 (32.9%)	17 (11.2%)	85 (55.9%)
12.10	Contraceptive pills are inconvenient to use.	48 (31.6%)	9 (5.9%)	95 (62.5%)
12.11	Condoms reduces sexual pleasure	56 (36.8%)	7 (4.6%)	89 (58.6%)

The findings of this study as depicted in Table 4.7, correspond to the findings of a study done by Idris et al. (2022) as well as Gele et al. (2020). Idris et al. (2022) found that one of the biggest barriers to the use of family planning are the sociocultural beliefs and norms that exist in communities, which are visible in the responses given by respondents in this study as almost all respondents (97.4%; n=148) indicated that it is embarrassing being seen at a family planning

clinic. Gele et al. (2020) also stated that the use of family planning is widely influenced by cultural factors such as customs and gender roles, as well as the acceptability of family planning use, which can also explain why respondents found it embarrassing to visit family planning clinics. In a study done by Abbe et al. (2020) it was found that there is a lack of family planning options available for men, which can attribute to 95.4% (n=145) of the respondents indicating in this study that it is the responsibility of the female that family planning is used regularly.

A study done by Hossain et al. (2018) in Bangladesh found that one of the factors influencing the use of family planning, is the attitude and opinion of men/partners on the use thereof, stating that women often do not make use of family planning because of their partners being against the use of family planning. This can possibly account for the 35.5% (n=54) of respondents in this study who indicated that it is inappropriate for a woman to ask her partner to use a family planning method. Therefore, for the attitude with family planning use, the mean value was 19.86 and the standard deviation was 4.35.

4.6 Practices regarding family planning use

In assessing the outcome, the background, intermediate and proximate factors on the use of family planning, the family planning practices of the respondents were explored. To assess this, questions were asked regarding the respondents' view on the most convenient method of family planning, the reasons why they are not taking/using family planning, as well as assessing their view on family planning use practices by means of statements. This will be discussed in separate subsections.

4.6.1 Most convenient method of family planning

As indicated in the table below, about two-fifths of the respondents (36.2%; n=55) reported that an oral pill was the most convenient method of family planning. This was followed by

29.6% (n=45) who stated condoms is most convenient; and 21.1% (n=32) who reported that injectable methods were the most convenient method of family planning (Table 4.8).

Table 4.8: Most convenient method of family planning

SN	Method	Responses	N	%
1.	Oral pills	Yes	55	36.2
		No	97	63.8
2.	Condom	Yes	45	29.6
		No	107	70.4
3.	Injectables	Yes	32	21.1
		No	120	78.9
4.	Implants	Yes	17	11.2
		No	135	88.8
5.	Intra-Uterine Contraceptive Device (IUCD)	Yes	3	2.0
		No	149	98

As portrayed by the information in Table 4.8, a minuscule number of respondents stated that implants or intra-uterine contraceptive devices are convenient methods of family planning with only 11.2% (n=17) indicating implants are convenient and 2.0% (n=3) indicating that intra-uterine contraceptive devices are convenient. This can most probably be attributed to a lack of knowledge on these two methods. In a study done by Bolarinwa et al. (2022) in SSA countries it was also found that a lack of knowledge contributed to a low rate of long-acting reversible family planning method use. They also found that women who were cohabitating, had secondary or higher education or had four or more children, were more likely to make use of these family planning methods. A clear comparison was identified on the use of family planning methods that respondents found more convenient (Figure 4.5).

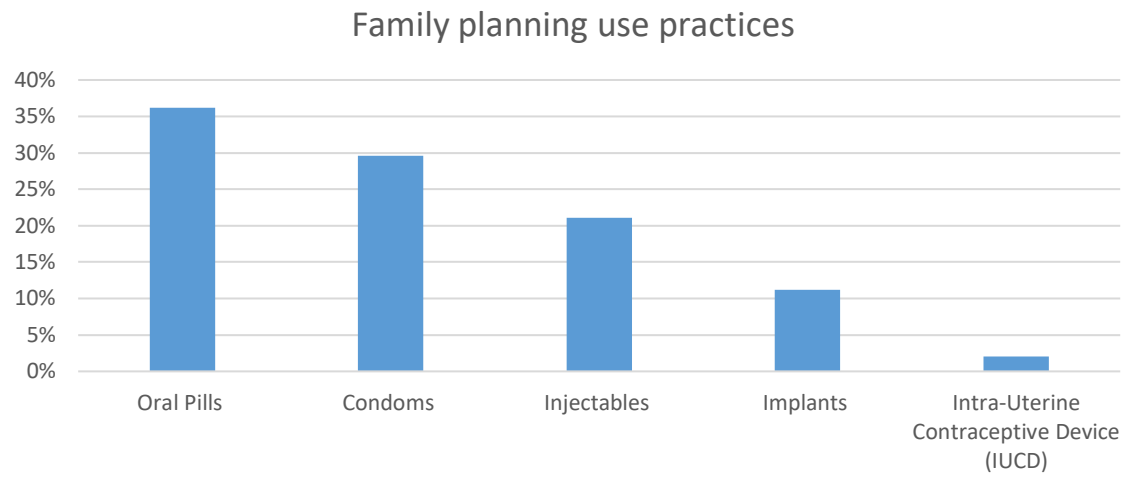

Figure 4.5: Family planning use practices

The use of oral pills (36.2 %; n=55) and condoms 29.6% (n=45) were the preferred methods of respondents indicating that oral pills and condoms are more convenient. The findings of this study correlate with the findings of a study done by Munakampe et al. (2018) in which it was found that the oral pill and male condoms were the most preferred methods of family planning, mostly due to these methods being the most accessible.

4.6.2 Reasons for not taking/using family planning

According to the HBM, the perceived consequences of a certain action could cause a person not to act in the expected or specific way (Cosavalente, 2022). For the purpose of this study, this concept had to be considered when exploring why people were not using family planning, as some respondents indicated the desire to get pregnant. As shown in Table 4.9 below, 38.8% (n=59) of respondents indicated that the reason for them not using any family planning is that they were not being sexually active at the time of the study. The majority of the respondents (82.2%; n=125) stated that they were not using any other method or means to prevent pregnancy although they were sexually active. Only 2.6% (n=4) of respondents indicated that they were not taking or using family planning because they felt that they would not be able to fall pregnant in future.

Table 4.9: Reasons for not taking/using family planning

SN	Statements	Responses	N	%
1.	Desire to get pregnant	Yes	62	40.8
		No	90	59.2
2.	Not sexually active	Yes	59	38.8
		No	93	61.2
3.	Preventing pregnancy by other means	Yes	27	17.8
		No	125	82.2
4.	I feel I can't get pregnant	Yes	4	2.6
		No	148	97.4

In analysing the reasons why respondents were not taking/using family planning, about two-fifths of the respondents (40.8%; n=62) reported the desire to get pregnant as a reason for them not taking/using family planning, followed by less than two-fifths (38.8%; n=59) who stated not being sexually active as a reason for not taking/using family planning (see Table 4.9). In a study by Morse and Moos (2018) it was found that the use of family planning allowed men and women to make use of reproductive life planning and decide if and when they want to have children. In this study, 40.8% (n=62) of respondents indicated that they chose not to use family planning as they have the desire to fall pregnant. This decision also relates to reproductive life planning.

4.6.3 Statements on family planning use practices

This section included seven questions based on the practice of the contraception use scale. All the respondents (100%; n=152) agreed that it was important to follow the instructions on how and when to take the oral pill, followed by 99.3% (n=151) of respondents who agreed that one must use condoms to prevent HIV, STIs or unwanted pregnancies. A minuscule proportion of the respondents (0.7%; n=1) agreed that condoms can be used more than once and 6.6% (n=10) of the respondents agreed that the pill only needs to be taken when engaging in sexual intercourse.

Table 4.10: Statements on family planning use practices

SN	Statement	Agree	Neutral	Disagree
1.	Condoms can be used more than once.	1 (0.7%)	0 (0%)	151 (99.3%)
2.	A sexually active woman has to take the pill daily at the same time to ensure effectiveness.	149 (98.0%)	3 (2.0%)	0 (0%)
3.	A sexually active woman needs to only take the pill when she engages in sexual intercourse.	10 (6.6%)	2 (1.3%)	140 (92.1%)
4.	It is important to follow the instructions on how and when to take the pill.	152 (100%)	0 (0%)	0 (0%)
5.	Woman must use a condom when on a certain taking certain medication.	84 (55.3%)	28 (18.4%)	40 (26.3%)
6.	Women must use condoms to prevent HIV, STIs or unwanted pregnancies	151 (99.3%)	1 (0.7%)	0 (0%)
7.	It is important for a woman on the injectable contraceptive to return on the appointed date.	149 (98.0%)	1 (0.7%)	2 (1.3%)

It became apparent that the respondents had a fairly good understanding regarding the use of family planning, except the use of condoms while taking certain medication (Table 4.10). A total of 55.3% (n=84) of respondents agreed to having a good understanding on the use of family planning, while 18.4% (n=28) was neutral and 26.3% (n=40) disagreed. The responses to the rest of the statements had more of a consensus, where more than 90% of respondents had the same response to the statements. All the respondents (100%; n=152) agreed to the statement regarding the importance of following the instructions on how and when to take oral pills. A total of 99.3% (n=151) of the respondents agreed that the use of condoms prevents HIV, STIs and unwanted pregnancies. Respondents (98.0%; n=149) agreed to the statement saying that a sexually active person must take the pill the same time every day to increase effectiveness and

the statement saying that it is important to return for injectable family planning on the appointed date.

Further, 92.1% (n=140) of respondents indicated that they do not agree with the statement that the pill only needs to be taken when engaging in sexual intercourse, and 99.3% (n=151) disagreed to the statement indicating that condoms can be used more than once. A study done by Liddelow et al. (2020) reviewed women's adherence to the contraceptive pill. It was determined that the guideline regarding taking the pill needs to be adhered to in order for it to work as intended. Not taking the pill every day therefore reduces its effectiveness. In addition, LeMessurier et al. (2018) researched methods that can be used to lower the risk of being exposed to HIV, wherein it was found that the use of condoms does significantly decrease that risk. This is however also subject to following the instructions provided with condoms to ensure effective use thereof. The mean for the statement on family planning use practices were 10.61 and the standard deviation was 0.86.

4.7 Barriers and factors promoting family planning use

The proximate factors considered during this study, included the barriers and factors that promote the use of family planning. The HBM states that the perceived benefits and barriers play a vital role in decision making as the perceived benefits can promote the use of family planning, while the barriers can inhibit family planning use (Yakubu et al., 2019). It was important to explore these factors for the purpose of this study, as it allowed the researcher to gain a better understanding with regard to family planning practices. Nine questions were asked in this section to assess the barriers and factors promoting family planning use. More than half of the respondents (58.6%; n=89) reported that their nearest reproductive health service is within walking distance, while 52.0% (n=79) of respondents reported that they used private hospitals as their family planning service provider.

All the respondents (100%; n=152) were aware that family planning services are easily accessible, and more than half of the respondents (54.6%; n=83) reported that family planning services were always accessible. None of the respondents (0%; n=0) has ever been denied reproductive health service and none (0%; n=0) has been turned away from a reproductive health clinic during working hours for any reason. About three-quarters of the respondents (76.3%; n=116) agreed that the hour the facility opens is convenient for them. A study done in Africa by Savage-Oyekunle and Nienaber (2017) found that access to family planning has a direct impact on the use thereof, especially access to emergency contraception. Furthermore, Hlongwa et al. (2020) found that geographical challenges are one of the factors influencing the access women have to family planning. Due to these challenges' women are not always close to family planning service providers, which makes it more challenging for them to access these services. These factors also cause women not to make use of family planning as they have difficulty accessing it.

Table 4.11: Barriers and factors promoting family planning use

SN	Statements	Responses	N	%
16.	How close is the nearest reproductive health service to you?	Within walking distance	89	58.6
		One taxi drops	52	34.2
		Two taxi drops	9	5.9
		Outside place of residence	2	1.2
17.	What is the nature of your service provider?	Private hospital	79	52.0
		Health Centre	57	37.5
		Pharmacy Centre	16	10.5
18.	Are you aware if there are reproductive health services in your area?	Yes	152	100
		No	0	0
19.		Yes	152	100

	Can you easily access the family planning services?	No	0	0
20.	Are these services always available?	Yes	83	54.6
		No	69	45.4
21.	Have your ever been denied reproductive health service?	Yes	0	0
		No	152	100
23.	Have you been turned away from your reproductive health clinic during working hours for any reason?	Yes	0	0
		No	152	100
25.	Are the hours the facility opens, convenient for you	Yes	116	76.3
		No	36	23.7
26.	From question if no, what time is most convenient for you	Early in the morning	24	15.8
		Weekends	7	4.6
		Evening/night	3	2.0
		Over lunch hour	2	1.3

It is evident that respondents in this study experienced minor barriers or difficulty accessing family planning as illustrated in Table 4.11. All the respondents (100%; n=152) indicated that they could easily access family planning services and none of the respondents were ever denied reproductive health services. Furthermore, 58.6% (n=89) of the respondents also indicated that the nearest reproductive health service was within walking distance, which makes it even more accessible. The only barriers identified were that family planning services were not always available at facilities that 45.4% (n=69) of respondents made use of. The hours that the facilities were open were not convenient for 23.7% (n=36) of the respondents. These findings stand directly in contrast to findings of a study done by Potasse and Yaya (2021) where it was found that financial constraints and misconceptions were some of the biggest barriers to family planning use.

4.7.1 Statements on Barriers and Factors promoting family planning use

In assessing the barrier and factors promoting family planning use, eight questions were asked using the barriers and factors promoting contraceptive scale. The majority of the respondents (98.0%; n=149) agreed that skilled healthcare personnel and a conducive or private environment influenced the usage of family planning. While half of the respondents (50.0%; n=76) agreed that religious beliefs could act as a barrier to the use of family planning.

Table 4.12: Statements on Barriers and Factors Promoting Family Planning use

SN	Statement	Agree	Neutral	Disagree
1.	Religious beliefs can act as a barrier to contraceptive use	76 (50.0%)	6 (3.9%)	70 (46.1%)
2.	Does convenient geographical location influence contraceptive use?	146 (96.1%)	4 (2.6%)	2 (1.3%)
3.	Does friendly approachable staff influence the usage of contraceptives?	148 (97.4%)	1 (0.7%)	3 (2.0%)
4.	Do skilled healthcare personnel influence the usage of contraceptives?	149 (98.0%)	0 (0%)	3 (2.0%)
5.	Does health education influence the usage of contraceptives?	146 (96.1%)	4 (2.6%)	2 (1.3%)
6.	Does a conducive/private environment influence usage of contraceptives?	149 (98.0%)	3 (2.0%)	0 (0%)
7.	Does the availability of all contraceptive methods influence the usage?	148 (97.4%)	1 (0.7%)	3 (2.0%)
8.	Ignorance is a barrier to contraceptive use.	148 (97.4%)	0 (0%)	4 (2.6%)

Statements on barriers and factors promoting family planning use (Table 4.12) identified that privacy and the personnel working at family planning clinics influenced the willingness to make use of family planning. A total of 98.0% (n=149) of the respondents indicated that the

skill level of healthcare personnel has an influence on the use of family planning and 97.4% (n=148) of respondents indicated that the friendliness or approachability of staff also influences family planning use. Furthermore, the majority of respondents (98.0%; n=149) stated that a private environment also has an impact on the use of family planning. Pazol et al. (2018) found that lack of family planning education has an influence on the knowledge and effective use thereof, which correlates with the findings of this study where 96.15 (n=146) of respondents indicated that health education has an influence on the use of family planning. According to Gothwal et al. (2020), the attitudes of healthcare workers towards the use of family planning influenced the use thereof, as a negative attitude towards family planning can cause people to be less inclined to make use thereof. A further 50.0% (n=76) of respondents stated that religious beliefs could be a barrier in the use of family planning. This finding was consistent with the findings of Turner (2021) who found that religious beliefs could act as a barrier to family planning use as all family planning methods were not allowed in certain religious beliefs, e.g., Catholic and Islamic beliefs.

4.8 SUMMARY

The results of the study as well as a discussion thereof were presented in this chapter. The findings indicated that women in the specific area that was identified for the study, namely Namaqualand, have good knowledge and understanding with regard to contraceptive use, as well as their attitudes towards the use thereof. It was also evident that the barriers preventing access to family planning services in certain culture. Furthermore, the results revealed that few of the respondents actually make use of the available family planning methods, either because of lack of knowledge or feeling that the methods are not convenient. Chapter 5 will discuss the recommendations, limitations that was identified and present the conclusion of the study.

CHAPTER 5

SUMMARY, RECOMMENDATIONS, LIMITATIONS AND CONCLUSION

5.1 Introduction

In this chapter a summary will be provided of the findings of the study as discussed in Chapter Four. Recommendations will also be provided on how to address the shortcomings of current family planning use, as well as decreasing the barriers that prevent effective family planning use. Within this chapter, the researcher will take a look at the limitations of the study and give conclusions and recommendations based on the findings.

5.2 Conclusion of the study

The National Department of Health in South Africa have recognised the problem of unintended pregnancies and have created a national policy to address the issue. These guidelines stipulate that family planning must be available for distribution at all public health facilities, and they are free of charge (Adeniyi et al., 2018). The aim of this study was to explore the knowledge, attitude, and practice of rural women on the use of family planning at an outpatient's department in the Northern Cape Province, South Africa. The conceptual framework used in this study was the Health Belief Model by Rosenstock (Green et al., 2020). According to the model, reproductive health education can trigger consciousness in an individual to decide on which family planning method they want to use from all those available. This model predicts and explains variations in one's behavior, seeing humans as rational beings who are able to make decisions about whether or not to do something and recognise the seriousness of their actions when they behave badly. In this study, the researcher explored knowledge, attitudes, practices, and barriers that promote family planning among rural women using an exploratory quantitative design.

5.3 Objective 1

To pinpoint the family planning knowledge, attitudes and practices of rural women.

5.3.1 Respondents' current knowledge of family planning

The assessment of knowledge on family planning falls under intermediate factors that influence family planning use as set out in the contextual framework in Chapter One. According to the HBM, an individual will be more inclined to make use of their knowledge and understanding on family planning if they think a negative health condition can be avoided (Luquis & Kensinger, 2019). Results in the current study (Table 4.2) show that respondents have a higher knowledge and awareness of family planning methods compared to the practice/ use of the different methods of family planning as demonstrated in Table 4.8. As indicated in Table 4.2, 100% (n=152) of respondents were aware of oral pills, 94.1% (n=143) were aware of injectables, and 92.8% (n=141) were aware of condoms. Despite these high levels of awareness, only 36.2% (n=55) indicated they make use of the oral pill, 29.6% (n=45) make use of condoms, and 21.1% (n=32) make use of injectables. These disparities between the knowledge and use of family planning were similar to the findings in countries such as Ghana and Tanzania (Seidu et al., 2019; Safari et al., 2019), where high knowledge of family planning methods did not result in the use thereof.

Results of the current study indicates that rural women are only knowledgeable with regard to certain benefits, namely prevention of unplanned pregnancy (85.5%; n=130), controls number of births (75%; n=114) and certain methods of family planning, for example, condoms (92.8%; n=141), oral pills (100%; n=152) and injectable (94.1%; n=143). Based on the Health Belief Model, people may act when they understand the benefits and all possible routes of family planning. If rural women are educated on these, it can improve their use of family planning.

A large percentage of women indicated a lack of knowledge on the negative effects of family planning, where 98.0% (n=149) of the women indicated that they were not aware that family planning puts one at risk for certain types of cancer (Table 4.6). An unexpected finding included that 42.1% (n=64) of the respondents indicated that they were not aware that family planning helps prevent STIs and 57.9% (n=88) agreed. It was interesting to note that the respondents were most knowledgeable about the following planning methods: condoms (92.8%; n=141), oral pills (100%; n=152), injectable (94.1%; n=143) and the emergency contraceptive (88.2%, n=134). These findings are similar to a study conducted in China (Wang et al., 2019). Respondents had the least knowledge of the following family planning methods as shown in (Table 4.5): the IUCD (35.5%; n=54), spermicidal (2.6%; n=4) and dermal patch (15.1%; n=23). A study by the National Department of Health of South Africa found that campaigns at road shows, on television, and in newspapers have been helpful at making people aware of family planning. Massive family planning awareness campaigns have been carried out using the implant method - a form of birth control (Mullick et al., 2017), which proved to have been fruitful as 80.9% (n=123) of respondents indicated that they had awareness on this family planning method.

5.3.2 Respondents' attitude towards family planning use

Many rural women are faced with health-related problems, including unwanted pregnancies. The HBM is founded on the concept that with a better attitude, personal behaviour can be improved. Therefore, fostering a positive attitude with regard to family planning use and also being aware of its various benefits, might result in a positive change in behaviour in women in rural areas being more inclined to make use of it (Toerien et al., 2019). The majority of the respondents stated that reproductive education should commence when puberty begins (96.7%; n=147); similar to studies conducted by Shakour et al. (2018) and Sieving et al. (2021). Family planning health education is very important in South Africa, if the alarming rate of teenage

pregnancy is considered (Kassa et al., 2018), and 36.2% (n=55) of females in this study fell in this age category. A large number of respondents, as shown in Table 4.7, had strong opinions regarding family planning use: 58.6% (n=89) did not agree that the use of condoms reduces sexual pleasure, and 62.5% (n=95) did not agree that contraceptive pills are inconvenient to use. More than half of women who live in rural areas had a positive attitude towards suggesting family planning use to their partner, with 60.5% (n=92) of respondents agreeing that it was acceptable to suggest to a partner that family planning must be used. Weight gain did not prove to be a barrier to family planning use, as 55.9% (n=85) of respondents did not agree that family planning causes weight gain and11.2% (n=17) felt neutral about the statement. These findings indicate a need for education on all aspects relating to family planning emphasising its barriers in that needs to be addressed in order to improve family planning use.

5.3.3 Respondents practice with family planning

According to the HBM an increase in knowledge can cause behaviour change, implying that the more knowledge rural women have on family planning methods, the better their ability to practice sexual behaviour responsibly (Sridhar et al., 2019). The main form of family planning practiced by respondents was the oral pill (36.2%; n=55), followed by the condom (29.6%; n=45), and thereafter by the injectable (21.1%; n=32). A surprising finding is that a high percentage of respondents do not use the implant for family planning (88.8%; n=135) which may be because of the lack of awareness of this method. A total of 80.9% (n=123) of the respondents indicated that they were aware of the option of implants, which could have resulted from numerous campaigns by the National Department of Health in South Africa to promote various family planning methods, particularly the implant. A significant portion of respondents responded negatively to a statement about the oral contraceptive, that it should only be taken on the days when sexually active (87.5%; n=133), while 9.9% (n=15) were uncertain; suggesting a fair understanding of this family planning method. There was a significant

difference in the number of people who did not use certain methods of family-planning in this study (Table 4.8), compared to the awareness of the family planning methods as shown in (Table 4.5); although they are freely available at all public health clinics e.g., the intra-uterine device, of which 98.0% (n=149) of respondents in this study were non-users; possibly due to ignorance. If rural women were made aware of the benefits of family planning, according to the Health Belief Model, they may change their behavior and begin to make use thereof. According to this model, when one perceives the severity of an action, that can trigger their willingness to take preventative measures. Sexual intercourse without family planning could lead to pregnancy, so rural women may start using family planning as preventative measure. (Butame, 2019).

5.4 Objective 2

To recognise any barriers that rural women experience that inhibits them to make use of family planning.

5.4.1. Barriers that hinder respondents from family planning use

During the assessment of the proximate intervention factors, the barriers that can inhibit family planning use were explored. According to the HBM, perceived barriers such as the negative consequences of contraception, can inhibit the use thereof (Sulat et al., 2018). Half of respondents agreed that religious beliefs acted as a barrier to using family planning (50%; n=76), while 97.4% (n=148) of respondents indicated that ignorance also has an influence on the use of family planning; similar to a study conducted in Pakistan by Ashraf et al. (2022). This study found that the majority of rural women are content with the reproductive health services available to them as shown in Table 4.12, with a very low percentage of respondents having barriers that hindered them from family planning use as shown in Table 4.11. More than half of the respondents (58.6%; n=89) indicated that their nearest reproductive health service is within walking distance, all the respondents (100%; n=152) indicated that they can access

family planning services easily, and none of the respondents (0%; n=0) has ever been denied access to these services. It can be hard to make decisions when you have so many available options. To address this, the Health Belief Model states that information and training could help women overcome barriers to family planning use, leading to a negative outcome (Sulat et al., 2018).

5.5 Objective 3:

To gather factors promoting family planning use among rural women.

5.5.1 Factors promoting family planning use

The majority of respondents agreed that staff who are friendly and approachable, skilled, knowledgeable and have health education, an environment with cleanliness (both material and mental) and the availability of all family planning methods would promote the use thereof as shown in Table 4.12; similar to a study conducted by Solo and Festin (2019). According to the Health Belief Model, when women perceive the severity or threat of an unwanted pregnancy, they may be influenced to use family planning (Yakubu et al., 2019).

5.6 Recommendations

The Health Belief Model is explained through the example of influencing women living in a rural area to make changes in their life by altering their knowledge, attitude and practices relating to family planning. Specifically, the effects of pregnancy are seen as negligible and being relieved by family planning. This can be addressed by nursing staff by applying the HBM into practice and following the aforementioned steps to promote the use of family planning and lessen unintended pregnancies.

5.6.1 Recommendations for education and practices

Schools and communities may provide reproductive education to ensure that rural women are fully aware of the consequences of unprotected sex, HIV and STI transmission and unwanted

pregnancies. Clinic staff can also conduct surveys to explore how best they can meet the needs of rural women who require reproductive services. The clinic's operational matters should be catered for in nursing administration to ensure that it is an ideal place for rural women - for example, by ensuring opening and closing times meet their needs. Nursing education should be conducted on an ongoing basis to ensure that staff stay updated with current knowledge, so that education can be provided on the protection against unintended pregnancies as well as STDs like HIV/Aids. All health care providers should feel comfortable delivering sex education in any setting including schools, clinics, homes or religious settings.

5.6.2 Recommendations for research

Further research is required to explore the knowledge, attitude and practice of rural women with respect to use of family planning. Qualitative methods are recommended for exploring this topic and findings are likely to contribute to the overall picture we have of health outcomes in this rural population.

5.7 Limitations

This study was limited to quantitative data. Respondents may have desired to elaborate on certain questions rather than answering closed-ended questions, which could have limited their desired responses and influenced the study findings. The collection of data was also limited to women who visited the outpatient department of the district hospital; women with more difficulty commuting to the hospital might have been excluded. Further, the study was also conducted only at one setting which could have influenced the respondents that was included.

5.8 Conclusion

The study aimed to describe the knowledge, attitude, and practices of women who are of child-bearing age on the use of family planning at an outpatient department of a hospital in a rural area of the Northern Cape Province, South Africa. Based on the findings of the study, there are some suggestions to better inform women about family planning. According to HBM (Health

Belief Model), people will act if they believe that a health-related problem such as unwanted pregnancy can be avoided. Therefore, every effort should be made to encourage and positively influence rural women to use family planning (Alagrisamy & Arokiasamy, 2019). The study found that there was a significant percentage of women who knew about family planning and had a positive attitude about using it, experiencing few barriers preventing the use of family planning. Though the study shows a high percentage of women that are aware of family planning (Table 4.5) and have a positive attitude towards family planning (Table 4.7), with a low percentage of barriers to family planning use (Table 4.11), a large number of women are not practicing family planning due to varying reasons (Table 4.12). It is therefore crucial to design patient strategies to manipulate rural women so that they understand the possible dangers from an unwanted pregnancy, STIs and HIV infections and make an informed decision about whether or not to use any form of free birth control from the National Department for Health, South Africa.

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ANNEXURES

Annexure A: Ethics clearance letter

UNIVERSITY of the WESTERN CAPE

Department of Institutional Advancement
University of the Western Cape
Robert Sobukwe Road
Bellville 7535
Republic of South Africa

21 January 2022

Mr W Koopman
School of Nursing
Faculty of Community and Health Sciences

Ethics Reference Number: BM21/10/47

Project Title: Knowledge, attitudes and practices of rural women on the use of family planning at an outpatient health care department in the Northern Cape Province, South Africa.

Approval Period: **21 January 2022 – 21 January 2025**

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project and the requested amendment to the project.

Any further amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report annually 30 November for the duration of the project.

For permission to conduct research using student and/or staff data or to distribute research surveys/questionnaires please apply via:
https://sites.google.com/uwc.ac.za/permissionresearch/hom

The permission letter must then be submitted to BMREC for record keeping purposes.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape O

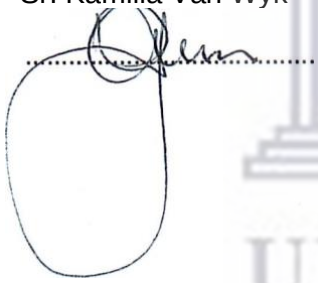
Annexure B: Permission letter from Dr Van Niekerk Hospital

DR VAN NIEI<ERK HOSPITAL
PRIVATEBAGX23
SPRINGBOK
8240

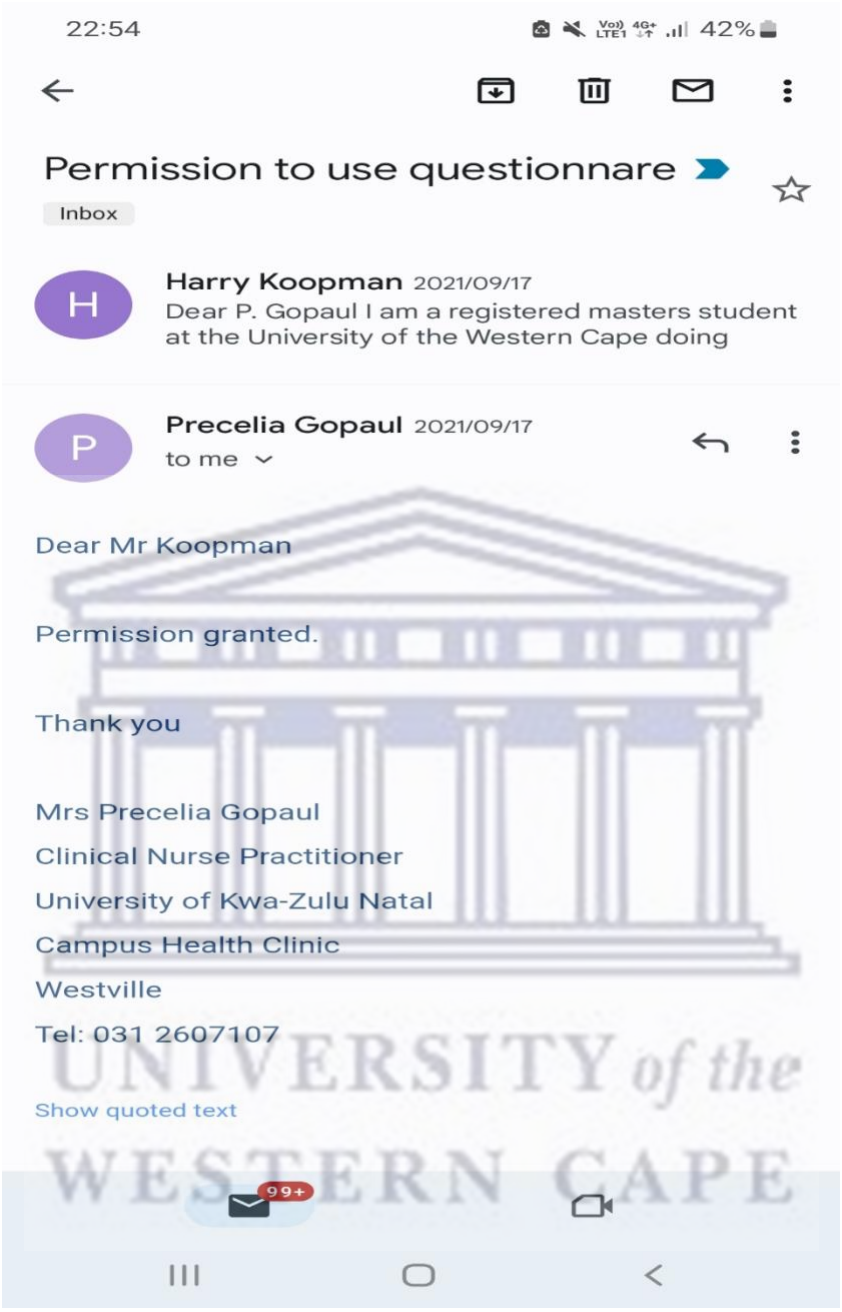
To whom it may concern

Re: Permission to collect information from clients.
This is to confirm that Mr. Wilfred Koopman has been granted permission to obtain/collect information for his studies/ research, in a confidential and professional way, which will not hinder or disrupt the service being rendered at Dr. Van Niekerk hospital/ outpatient department and in such a way that it not disrepute the status of the hospital or the Department of Health.
Kind regards.
Dr Van Niekerk hospital
CEO Acting.

Sr. Kamilla Van Wyk



Annexure C: Permission to use questionnaire



Annexure D: Information sheet

UNIVERSITY OF THE WESTERN CAPE
Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-9592274, Fax: 27 21-9592271

PARTICIPANT INFORMATION SHEET

Title: Knowledge, attitudes, and practices of rural women on the use of family planning at an outpatient health care department in the Northern Cape Province, South Africa

What is this study about?

I am Wilfred Koopman, a registered Masters student at the School of Nursing at the University of the Western Cape. I hereby invite you to participate in this research project to explore your knowledge, attitude, and practices of rural women on the use of family planning at an outpatient's department in the Northern Cape Province, South Africa.

What will I be asked to do if I agree to participate?

You will be asked to complete a questionnaire to share your knowledge, attitude, and practices as a rural woman on the use of family planning. The questionnaire has 27 questions that will be completed face-to-face at the outpatient's department for family planning while observing all COVID-19 protocol. You will be requested to provide permission in the form of written consent to partake in the project.

Would my participation in this study be kept confidential?

I will do my best to keep your personal information confidential. To help protect your confidentiality, all printed documents will be locked in a filing cabinet in the office of the research supervisor. The information will not be available to any person, other than the researcher, research supervisor and independent coder. All computer files related to this research project will be password-protected on the computer of the researcher. The questionnaire will be anonymous and will not contain any information that will personally identify you. The issues of confidentiality will be revisited to align to the legal responsibilities to report any child abuse or neglect, or the risk of harm to oneself or others.

What are the risks of this research?

There should not be any risks associated with participating in this research project, as the opinions and perceptions of the participants will be protected. Should a participant display any signs of psychological and emotional stress acquired directly as a result of participating in this study, the researcher will report this directly to management of the outpatient's department for family planning and request a formal referral to the social worker or psychologist employed by the healthcare facility to assist the client if needed.

What are the benefits of this research?

The research is not designed to personally benefit the researcher, but provide information about the knowledge, attitude, and practices as a rural woman on the use of family planning.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits for which you otherwise qualify.

What if I have questions?

This research will be conducted by Wilfred Koopman, a registered Masters in Nursing student at the School of Nursing at the University of the Western Cape. Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Willemse
School of Nursing
University of the Western Cape
Private Bag X 17
Bellville 7535
Email: pmartin@uwc.ac.za

Prof Anthea Rhoda
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BMREC, Research Development
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Annexure E: Data collection tool

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Private Bag X 17, Bellville 7535, South Africa
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11) Please answer the following Statements by ticking the relevant block below. Where 1 = Strongly Disagree; 2 = Disagree; 3 = Uncertain; 4 = Agree and 5 = Strongly Agree

		1	2	3	4	5
1.	Contraceptives pills might cause cancer	☐	☐	☐	☐	☐
2.	Contraceptive pills can cause infertility	☐	☐	☐	☐	☐
3.	Emergency Contraceptive Pills can be used several times a month	☐	☐	☐	☐	☐
4.	Condoms protect against sexually transmitted diseases, HIV and unwanted pregnanies	☐	☐	☐	☐	☐
5.	Emergency contraceptives can be taken after 120hrs	☐	☐	☐	☐	☐
6.	You only need to take the pill only on the days that you are sexually active	☐	☐	☐	☐	☐
7.	Medical history is not an important factor in the choice of contraceptives	☐	☐	☐	☐	☐
8.	Contraceptives have side effects that can be managed effectively	☐	☐	☐	☐	☐

Section C: Attitudes with contraceptives use

12) Please answer the following Statements by ticking the relevant block below

		AGREE	NEUTRAL	DISAGREE
1.	Education on Contraceptives should begin at puberty?	☐	☐	☐
2.	Education on Contraceptives encourages a student to engage in sexual intercourse?	☐	☐	☐
3.	Does a student lose their self-respect or self-worth if they are on contraceptives?	☐	☐	☐
4	Is it the responsibility of the female student to ensure that contraceptives are used regularly?	☐	☐	☐
5.	Is it embarrassing to be seen at a Family Planning Clinic?	☐	☐	☐
6.	Is it acceptable for a female student to suggest to her partner to use a contraceptive method (i.e. Withdrawal/Condom)?	☐	☐	☐
7.	Taking/Using contraceptives are the best option to prevent STI's, HIV and unwanted pregnancies?	☐	☐	☐
8.	Traditional contraceptive methods are the best? (i.e. Safe Method, Withdrawal)	☐	☐	☐

9. Contraceptives causes weight gain?	☐	☐	☐
10. Contraceptive pills are inconvenient to use?	☐	☐	☐
11. Condoms reduce sexual pleasure?	☐	☐	☐

Section D: Your practice with contraceptive use

13) In your opinion, which is the most convenient method of contraception for undergraduate students?

- ☐ Oral pills
- ☐ Intra-uterine contraceptive (IUCD)
- ☐ Condom
- ☐ Emergency contraceptive
- ☐ Spermicidal
- ☐ Injectables
- ☐ Norplant/Implants
- ☐ Dermal patch
- ☐ Natural family planning
- ☐ Other (Please specify) _____

14) In your opinion, what are the reasons for a student not taking/using contraceptives

- ☐ Not sexually active
- ☐ Preventing pregnancy by other means
- ☐ Afraid of possible side effects
- ☐ Other reason (specify) _____
- ☐ Desire to get pregnant
- ☐ I feel I can't get pregnant

15) Please answer the following Statements by ticking the relevant block below

		AGREE	NEUTRAL	DISAGREE
1.	Condoms can be used more than once?	☐	☐	☐
2.	A sexually active student has to take the pill daily and at the same time to ensure effectiveness?	☐	☐	☐
3.	A sexually active student only needs to take the pill when she engages in sexual intercourse?	☐	☐	☐
4.	Is it important to follow the instructions on how or where to commence taking the first pill on the packet?	☐	☐	☐
5.	Students must use a condom when on certain medication?	☐	☐	☐
6.	Students must use condoms to prevent HIV, STI's or unwanted pregnancies?	☐	☐	☐
7.	Is it important for a student on the injectable contraceptive to return to the clinic on the appointment date or a few days before?	☐	☐	☐

Section E: Barriers and Factors Promoting Contraceptive use

16) How close is the nearest reproductive health service to you?

Within walking distance ☐ One taxi drop ☐ Two taxi drops ☐

Outside your place of residence ☐ I don't know ☐

17) What is the nature of your service provider?

Pharmacy store ☐ Health Centre ☐ Private Hospital ☐

Provincial hospital ☐ Dedicated family planning centre ☐

18) Are you aware if there are reproductive health services on your campus?

Yes ☐ No ☐

19) If yes from, 18. Can you easily access the family planning services?

Yes ☐ No ☐

20) Are these services always available?

Yes ☐ No ☐

21) Have your ever been denied reproductive health service at your campus clinic?

Yes ☐ No ☐ Not applicable ☐

22) If Yes above, what was the problem or reason (Specify)

_____

23) Have you ever been turned back/refused family planning services during official working hours before, for any reason?

Yes ☐ No ☐ Not applicable ☐

24) From question 23. If yes, what was the reason? Please specify

_____

25) Is the hours the facility opens, convenient for you?

Yes ☐ No ☐ I don't know ☐ Not applicable ☐

26) From question 25. If No, what time is most convenient for you?

☐ Early in the morning ☐ Over lunch hour ☐ Afternoon

☐ Evening/night ☐ Weekends ☐ Holidays

☐ Other

27) Please answer the following Statements by ticking the relevant block below

	AGREE	NEUTRAL	DISAGREE
1. Religious beliefs can act as a barrier to contraceptive use?	☐	☐	☐
2. Does convenient geographical location influence the usage of contraception?	☐	☐	☐
3. Does friendly/approachable staff influence the usage of contraception?	☐	☐	☐
4. Does skilled health care personnel influence the usage of contraception?	☐	☐	☐
5. Does health education influence the usage of contraception?	☐	☐	☐
6. Does a conducive/private environment influence the usage of contraception?	☐	☐	☐
7. Does the availability of all contraceptive methods influence the usage of contraception?	☐	☐	☐
8. Ignorance is a barrier to contraceptive use?	☐	☐	☐

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Annexure F: Consent form

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-9592819, Fax: 27 21-9593515

Title of Research Project: Knowledge, attitude, and practices of rural women on the use of family planning at an outpatient's department in the Northern Cape Province, South Africa.

The study has been described to me in a language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits. I understand that the issues of confidentiality will be revisited to align to the legal responsibilities to report any child abuse or neglect, or the risk of harm to oneself or others.

Participant's name …….

Participant's signature…….

Date……

Annexure G: Code book

KNOWLEDGE OF FAMILY PLANNING

A: Demographics

SPSS NAME	LABEL	TYPE	TYPE CODING INSTRUCTION
ID	Questionnaire number	String	Subject Identification number
A1	Age	Scale	18-20yrs =1 21-25 =2 25+ =3
A2	Marital status	Nominal	Single = 1 Married = 2 Divorced/separated =3 Widow = 4
A3	Religion	Nominal	Christianity =1 Islam = 2 Hinduism =3 Other =4
A4	Cultural group	Nominal	Black =1 White =2 Indian =3 Coloured =4 Others =5
A5	Level of study	Nominal	1st year =1 2nd year =2 3rd year =3 4th year =4

B: KNOWLEDGE OF FAMILY PLANNING

SPSS NAME	LABEL	TYPE	TYPE CODING INSTRUCTION
B6	Have you ever heard of contraceptives/Pregnancy preventing methods?	Nominal	Yes = 1 No = 2
B7	What benefits one can derive from contraceptives?	Nominal	Control number of births Enhance sexual performance No significant positive effect Prevent unplanned/unwanted pregnancy

			Prevent sexually transmitted infection I don't know
B8	What in your opinion are the negatives effects of contraceptives?	Nominal	Caused cancer =1 Increases promiscuity Unreliable Enhances marital unfaithfulness Decrease sexual pleasure No significant negative effect
B9	What are your sources of information?	Nominal	Internet =1 Hospital/healthworker =2 Classroom=3 Mass media =4 Family/friends =5
B10	Which methods of contraceptives are you aware of?	Nominal	Oral pills=1 IUCD =2 Condom =3 Dermal patch =4 Female sterilization= 5 Male sterilization =6 Injectables =7 Norplants/implants =8 Emergency contraceptive =9 Spermicidal =10 Natural family planning =11 Others =12
B11.1	Contraceptive pills may cause cancer.	Nominal	Strongly disagree =1 Disagree =2 Uncertain =3 Agree =4 Strongly agree =5
B11.2	Contraceptive pills may cause infertility	Nominal	Strongly disagree =1 Disagree =2 Uncertain =3 Agree =4 Strongly agree =5
B11.3	Emergency pills can be used several times a month.	Nominal	Strongly disagree =1 Disagree =2 Uncertain =3 Agree =4 Strongly agree =5

B11.4	Condoms protect against STIs, HIV & unwanted pregnancies.	Nominal	Strongly disagree =1 Disagree =2 Uncertain =3 Agree =4 Strongly agree =5
B11.5	Emergency pills can be taken after 120hrs.	Nominal	Strongly disagree =1 Disagree =2 Uncertain =3 Agree =4 Strongly agree =5
B11.6	You only need to take the pill only on the days you are sexually active	Nominal	Strongly disagree =1 Disagree =2 Uncertain =3 Agree =4 Strongly agree =5
B11.7	Medical history is an important factor in the choice of contraceptive	Nominal	Strongly disagree =1 Disagree =2 Uncertain =3 Agree =4 Strongly agree =5
B11.8	Contraceptives has side effects that can be managed effectively	Nominal	Strongly disagree =1 Disagree =2 Uncertain =3 Agree =4 Strongly agree =5

C: ATTITUDES WITH FAMILY PLANNING

SPSS NAME	LABEL	TYPE	TYPE CODING INSTRUCTION
C1	Education on contraceptives should begin at puberty	Nominal	Agree = 1 Neutral =2 Disagree =3
C2	Education on contraceptives encourages a student to engage in sexual intercourse.	Nominal	Agree = 1 Neutral =2 Disagree =3
C3	Does a student loose her self-worth if she is on contraceptives?	Nominal	Agree = 1 Neutral =2 Disagree =3
C4	Is it the responsibility of the female to ensure that contraceptives are used regularly?	Nominal	Agree = 1 Neutral =2 Disagree =3
C5	Is it embarrassing to be seen at a family planning clinic?	Nominal	Agree = 1 Neutral =2 Disagree =3
C6	Is it acceptable for a female student to suggest to her partner to use a contraceptive method?	Nominal	Agree = 1 Neutral =2

			Disagree =3
C7	Using contraceptives is the best option to prevent STIs, HIV & unwanted pregnancies.	Nominal	Agree = 1 Neutral =2 Disagree =3
C8	Traditional methods are the best contraceptive methods.	Nominal	Agree = 1 Neutral =2 Disagree =3
C9	Contraceptives cause weight gain.	Nominal	Agree = 1 Neutral =2 Disagree =3
C10	Contraceptive pills are inconvenient to use.	Nominal	Agree = 1 Neutral =2 Disagree =3
C11	Condoms reduces sexual pleasure	Nominal	Agree = 1 Neutral =2 Disagree =3

D: PRACTICE WITH FAMILY PLANNING USE

D13	1. Oral contraceptive 2. IUCD 3. Condom 4. Emergency contraceptive 5. Spermicidal 6. Injectables 7. Norplant/implant 8. Dermal patch 9. Natural family planning		
D14	What are the reasons for student not taking/using contraceptives 1. Not sexually active 2. Preventing pregnancy by other means 3. Afraid of possible side effects 4. Desire to get pregnant 5. I feel I can't get pregnant		
D15	1. Condoms can be used more than once.	Nominal	Agree = 1 Neutral =2 Disagree =3
	2. A sexually active student has to take the pill daily at the same time to ensure effectiveness.	Nominal	Agree = 1 Neutral =2 Disagree =3
	3. A sexually active student needs to only take the pill when she engages in sexual intercourse.	Nominal	Agree = 1 Neutral =2 Disagree =3
	4. t is important to follow the instructions on how and when to take the pill.	Nominal	Agree = 1 Neutral =2 Disagree =3

	5. Students must use a condom when on a certain taking certain medication.	Nominal	Agree = 1 Neutral =2 Disagree =3
	6. It is important for a student on the injectable contraceptive to return on the appointed date.	Nominal	Agree = 1 Neutral =2 Disagree =3
D16	Barriers and Factors promoting contraceptive use How close is the nearest reproductive health service to you?	Nominal	Walking distance =1 One taxi drop 2 Outside your residence 3 I don't know =4
D17	What is the nature of your service provider	Nominal	Pharmacy store =1 Provincial hospital =2 Health centee =3 Dedicated family planning centre =4 Private hospital =5
D18	Are you aware if there are reproductive health services in your campus?	Nominal	Yes =1 No =0
D19	Can you easily access the family planning service at your campus?	Nominal	Yes =1 No =0
D20	Are these services always available	Nominal	Yes =1 No =0
D21	Have your ever been denied reproductive health service at your campus	Nominal	Yes =1 No =0 Not applicable =2
D22		Nominal	
D23	Have you been turned away from your reproductive health clinic during working hours for any reason?	Nominal	Yes =1 No =0 Not applicable =2
D24			
D25	Is the hours the facility opens, convenient for you	Nominal	Yes =1 No =0 I don't know =2 Not applicable =3
D26	From question if no, what time is most convenient for you	Nominal	Early in the morning=1 Evening/night=2

			Over lunch hour=3 Weekends =4 Afternoon =5 Holiday -6
D27	Religious beliefs can act as a barrier to contraceptive use	Nominal	Agree = 1 Neutral =2 Disagree =3
2.	Does convenient geographical location influence contraceptive use?	Nominal	Agree = 1 Neutral =2 Disagree =3
3.	Does friendly approachable staff influence the usage of contraceptives?	Nominal	Agree = 1 Neutral =2 Disagree =3
4.	Does skilled healthcare personnel influence the usage of contraceptives?	Nominal	Agree = 1 Neutral =2 Disagree =3
5.	Does health education influence the usage of contraceptives?	Nominal	Agree = 1 Neutral =2 Disagree =3
6.	Does a conducive/private environment influence usage of contraceptives?	Nominal	Agree = 1 Neutral =2 Disagree =3
7.	Does the availability of all contraceptive methods influence the usage?	Nominal	Agree = 1 Neutral =2 Disagree =3
8.	Ignorance is a barrier to contraceptive use.	Nominal	Agree = 1 Neutral =2 Disagree =3

Annexure H: Editing certificate

TO WHOM IT MAY CONCERN

This letter confirms that the thesis with the title *The Use of Family Planning at an Outpatient's Department in the Northern Cape Province, South Africa* by Wilfred Harry Koopman (Student number: 3003224) for the fulfilment of the requirements for the degree of Magister Curationis at the School of Nursing, Faculty of Community and Health Sciences, University of the Western Cape, has been edited for grammatical and structural concerns by the undersigned language professional. Neither the research content nor the author's intentions were altered in any way during the editing process. The responsibility lies with the author to effect changes and to attend to any anomalies indicated during the editing process. The editor's professional profile can be viewed on LinkedIn. (https://za.linkedin.com/in/gava-kassiem-a7569b39).

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Email: gkassiem@gmail.com
Independent Language Specialist/Academic Editor
MA (Linguistics and Language Practice)
Member of Professional Editors' Guild
Member of Pro Lingua
2 December 2022

Annexure I: Similarity Index Report

3003224:edited_11_12_2022_3003224.docx

ORIGINALITY REPORT

15%	7%	6%	8%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to University of the Western Cape Student Paper	4%
2	Submitted to University of KwaZulu-Natal Student Paper	2%
3	researchspace.ukzn.ac.za Internet Source	2%
4	Patricia Rodrigues, Aisa O. Manlosa, Joern Fischer, Jannik Schultner, Jan Hanspach, Feyera Senbeta, Ine Dorresteijn. "The role of perceptions and social norms in shaping women's fertility preferences: a case study from Ethiopia", Sustainability Science, 2022 Publication	<1%
5	ulspace.ul.ac.za Internet Source	<1%
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7	S Özgür, Aİ. Bozkurt, S Şahinöz, B Özçirpici, T Şahinöz, G Saka, A Ceylan, E İlçin, H Acemoğlu, Y Palanci, F Akkafa. "Family planning in the	<1%