EXPLORING WOMEN'S EXPERIENCES AND PERCEPTIONS ON THE USE OF IMPLANON AS A CONTRACEPTIVE METHOD IN A SELECTED PRIMARY HEALTH CARE FACILITY IN KWAZULU-NATAL

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Abstract

It has been argued that a large numbers of maternal deaths could be averted by the use of family planning; particularly long-acting methods, which are more advantageous, because these require fewer visits to health care facilities, are highly effective and cheap. Implanon is one of the many such contraceptives that have been introduced. The South African department of health recently introduced subdermal Implanon contraceptive implant with the aim to reduce teenage pregnancy and maternal mortality. Launched in 2013, the Implanon contraceptive was distributed to all public healthcare facilities across the country by early-2014, and effectively implemented nationally in all family planning and reproductive health clinics. The targets of Implanon were to every women meeting eligibility criteria living in both rural and urban areas. However, there have been a high number of complaints and issues arising with Implanon informally. It is imperative to understand the experiences and perceptions by the women using Implanon in order to adjust treatment implementation accordingly. The aim of the study was to explore the experiences and perceptions of women using Implanon at a selected primary health care clinic in Kwazulu-Natal, in order to develop a relevant intervention tool for the user that might assist the healthcare provider in service provision. This study targeted Implanon® users and employed the exploratory descriptive design using both qualitative and quantitative approach. In the quantitative approach, data was collected from 55 respondents who completed questionnaires, while in a qualitative approach seven participants were interviewed. Convenience sampling technique was used in the study. The study used close-ended questionnaires in the quantitative research, and open-ended questions were used for qualitative research as an instrument. The study setting selected a primary healthcare facility in KwaZulu-Natal. The findings of this study varying perceptions regarding Implanon®. While just more than half of respondents, 58.1%, were still satisfied with using the implant, 40.9% have discontinued using the implant, due to major side effects. Similarly, with regards to experiences of participants, while some participants were still willing to continue using this method of contraception, some reported experiencing major unwanted side effects, such as heavy menstrual bleeding, and low sex drive, which resulted in them stopping the use of Implanon. There was an identified need for clear screening tool for use by healthcare workers when initiating Implanon. The study therefore developed this tool to minimise unwanted side effects.

DEDICATION

Firstly I would like to thank God almighty for providing me with this opportunity and for granting me with the strength to do all my best, if it wasn't for him I wouldn't have completed. Therefore I would like to dedicate this dissertation to my parents, father Mgobhozi Dwight Fano and Mgobhozi Cecelia Mabusi, that have contributed to where I am today by raising me in a way they have done, they have taught me to believe in GOD in everything that I do and to have perseverance and faith in GOD. I would like to thank my late brother Thembinkosi Mgobhozi for encouragement and support. Lastly, special thanks to my brothers (Mandla, Msa, Bhi, Zwa, Jabu) and sister (Nokuthula).

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Appendices

Appendix 1: University of KwaZulu-Natal Ethics Clearance letter

Appendix 2: Permission Letter to the KZN Department of Health

Appendix 3: Letter of Approval from the KZN Department of Health District

Appendix 4: Application letter for KZN Department of health

Appendix 5: Application letter for KZN Department of health District

Appendix 6: Application letter for KZN Department of health District (Primary healthcare facility)

Appendix 7: Questionnaire for quantitative data collection

Appendix 8: Questionnaire for qualitative data collection

Appendix 9: Information letter for participants

Appendix 10: Consent form for participants

1.1. INTRODUCTION

Approximately all women who have ever had sexual intercourse have used some form of contraception at some point during their reproductive lives. The access to safe, voluntary family planning has been cited as a basic human right, and is central to gender equality and women's empowerment (Hardee et al., 2014). It is estimated that about 200 million women who want to avoid pregnancy are not using safe and effective family planning methods, for reasons ranging from lack of access, to information or services, to lack of support from their partners or communities (United Nations Population Fund, 2016). Literature shows that most of these women with an unmet need for contraceptives live in the developing countries. While the South African Government health policies support access to comprehensive reproductive healthcare, including contraceptive methods. There are still multiple barriers that prevent women from obtaining contraceptives, or from using them effectively and consistently. Such barriers have contributed to high numbers of maternal deaths (Wood and Jewkes, 2006).

Some authors have argued that such large numbers of maternal deaths could be averted by using family planning, particularly long acting methods, which are more advantageous because this requires fewer visits to health care facilities, highly effective and cheap (Bradley, Croft and Rutstein, 2011; Black et al., 2010; Hubacher, Mavranezouli and McGinnis, 2008). Implanon is one of many such contraceptives that have been introduced. The South African department of health recently introduced subdermal Implanon contraceptive implant, with the aim of reducing teenage pregnancy and maternal mortality. This sub-dermal contraceptive implant was also set to improve sexual reproductive health services, HIV transmission - as well as that of other sexually transmitted infections, improving child survival and will eventually contribute to economic growth and reduces poverty in South Africa (South African Government News Agency, 2014). Launched in 2013, the Implanon contraceptive was distributed to all public healthcare facilities across the country by early-2014, and effectively implemented nationally in all family planning clinics and reproductive health clinics. The targets of Implanon were to every women meeting eligibility criteria living in both rural and urban areas. It is still, however, not clear how this method of contraception has been received by the target population that is women of child-bearing age. Therefore, there is a great need

to investigate user's experiences and perceptions with Implanon at this period, while it is still novel.

1.2. BACKGROUND

Every day, about 800 women die due to pregnancy and childbirth related complications, almost all of which (99 %) occur in developing countries (Alemayehu at al., 2015; Haddou, 2014; WHO 2014). While an estimated 200 million women in developing countries want to use contraceptive methods, there are still barriers for them accessing such services. Some of these barriers are transport attributed to distance; as they live in remote live areas (UNFPA 2014). Kartz (2015) argues that in some instances, supply chains do not extend into remote rural areas, where the poorest segment of low-income population resides. Conversely, the reasons are often a lack of funds in developing countries, as some contraceptives are still very expensive (Kartz, 2015). However such reasons are the main issues that cause lack of access to women that comes from disadvantaged communities (Imo et al., 2013; Abiodum and Balogum, 2009).

Spencer and Hecke (2013) have argued that significant health disparities exist between rural and urban women. For this reason, rural women experience poorer health outcomes and have less access to healthcare than do those that stay in urban areas. Access to healthcare for rural residents is complicated by patient factors, as well as those related to the delivery of care. However most rural women are more likely to be poor, and to lack health insurance, and sometimes, are unable to travel long distances to acquire family planning services and other related health services (Bennett et al., 2008). In most cases, women in rural areas are not well educated, and lack the knowledge and awareness on health care services, including modern contraceptives (Spencer and Hecke, 2013). Factors such as the long distance from clinics sometimes results in uneducated women's adherence rates and awareness patterns being detrimentally affected.

Reproductive health in adolescents

In certain communities, there is silent disagreement for contraceptive use among the adolescents, in some cases, adolescents use contraceptive without the knowledge of their parents. Oyedeji and Cassimjee (2006) have reported that young girls experience some form

of oppression when it comes to using contraceptives. They hide their pills from their parents, and even forget to take them on time, which leads to further poor adherence, and in some cases, premature pregnancy (Oyedeji and Cassimjee 2006). Studies have shown that the contraceptive implants are not user-dependent in a way that condoms, injectable contraceptives and combined oral contraceptives are (Bahamondes, 2008; WHO 2015). Consequently, contraceptive implants can be used by adolescents confidentially, so as to prevent parent interference and to improve adherence rates.

Haddou (2014) argued that in the last 20 years, there has been too little progress in preventing adolescent pregnancies, abortions, maternal deaths, and sexually transmitted infection. There have also been significant gaps in availability, equality and access to comprehensive sex education and service for young people (WHO, 2014).

In South Africa, for example, the health facilities that provide contraception services mostly operate within office hours, and are therefore not user-friendly for employed people and school-going youth. Existing literature supports the need to promote youth friendly, comprehensive sexual and reproductive healthcare services for youth as a priority. Maharaj and Cleland (2006) have stated that many countries are significantly faced with a challenge to address the unmet sexual and reproductive health needs of youth people and prevention of HIV/AIDS spread. However, in South Africa, a great priority exists in promotion of youth friendly services, comprehensive sexual and reproductive healthcare services (Alli, 2011).

Contraception uptake

There is a rate of higher than 60% of South African girls and women aged 15 to 49 that used modern contraceptives, whilst the Sub-Saharan countries stands with an average of 20% (UNFPA, 2012). The South African Demographic and Health Survey (SADHS) conducted 2003 indicated that about 97% of sexually active women in South Africa have knowledge of at least one contraceptive method. MacPhail et al. (2007) indicated that prevalence use of contraceptive by young people between ages 15 to 24 years was 52.2 percent. Conversely, these findings showed that approximately half of them were not using contraceptive. Seutlwadi et al. (2012) reported that among the young sexually active women, 89.1% were using contraceptives, where 9,3% were using the pill, 5,2% used intra-uterine contraceptive

devices, 25,6% used injectable contraceptives, and 57,6% used male condoms. The rhythm method used by 7%, withdrawal used by 11,5%, as well as emergency contraception used by 5,5%, were among the other methods that were being used.

Despite the increase of contraceptive uptake nationally in South Africa, the challenge remains with the enabling policy framework, high numbers of unplanned and unwanted pregnancies indicating the unmet need for effective contraception (UNFPA 2012). This however underscores the need for community mobilisation to increase the uptake of family planning services among youths, and in some communities, particularly poverty stricken rural communities (UNFPA, 2012). The foremost challenges with contraceptive uptake may be a lack of easy access and knowledge and awareness on the value of conception, particularly for adolescence. Therefore, a need for a long-lasting contraceptive method is necessary for people to improve the uptake of contraceptives in South Africa.

Implementation of Implanon contraceptive in South Africa

Implanon has been available since 2014 in South Africa, with the annual targets for Implanon being 320 000, but then, the overall number of women who has inserted Implanon was 362 000 by July 2014 (Department of Health, 2014). This shows that the rate of women inserting Implanon has gone beyond the expected annual targets. Subsequently, the department of health also announced an increase of 850 000 women that has inserted x-ray detectable Implanon later 2015. However, such statistic indicates that women are in great need of long-lasting contraceptive methods, and its shows that women are aware of this new contraceptive implant.

A short survey performed by Mukuka (2015) titled ‘Is the hormonal contraceptive Implanon right for you’ it was reported, where most participants responded that Implanon is effective. However, some participants responded that they were using Implanon because they didn’t want to run risk of forgetting to take the pill. Another participant reported that she had a bruise for a week at the site of insertion, followed by continuous vaginal periods, and inconsistent bleeding for two weeks. She also complained that her moods were affected, and she believes that everyone reacted differently, so she argues that trying it long enough to see if it suits you is quite a significant commitment.

Similarly, in another informal investigations conducted by the Bhekisisa Centre for Health Journalism (2015), it was reported that poor outcomes with use of Implanon may be due to poor training of nurses, which has led to severe reactions of women using new contraceptive devices (Skosana, 2015). It was reported that a 28-year-old woman was introduced to Implanon by a nurse, who inserted the implant. After about one or two weeks, she experienced unbearable headaches, the arm into which the implant was inserted became weak, such that she couldn't lift heavy objects. Another 35 year-old HIV positive woman had inserted Implanon at the same facility, and she also had encountered adverse reactions. After three weeks she had pain under the right breast, where at first, she didn't take it seriously, until she went to the clinic, where she obtained pain relief pills. Still she felt the pain, which later was accompanied by heat rash. However, a few months later, this same woman read about the fact that HIV positive women on fixed dose combination antiretroviral pills should not get the implant, which later made her to remove it (Skosana, 2015). This incident may indicate that the healthcare providers are not well trained with their screening tool.

The Deputy Director of the Department of Health has also openly admitted that training of health workers might not be up to standard as in some instances effective counselling to women who want contraception are not thoroughly undertaken (Department of health, 2015). Therefore, retraining of staff programmes has been initiated to empower healthcare providers to gain this skill. However, such issues leave us with the question as to whether or not training alone will be an effective means to solve the challenges that are faced with this new contraceptive implant. Another significant issue in many facilities is that a single nurse is sent for training in each institution, however this nurse is also entitled to train other nurses when she returns from training (Skosana, 2015). This may not be effective, since there are long waiting queues, where the time for this one nurse to educate others may be limited. Instead, training should be continuous and ongoing so as to ensure that all healthcare providers are trained effectively for counselling and screening, procedure to insert as well as guidelines that are to be used.

Despites the higher percentage of users, there were two or three cases, reported in early 2015 to the national deputy director of the Department of Health regarding young women that fell pregnancy while using implant. In addition, a young woman fell pregnant after the insertion

of Implanon device (Department of health, 2015). This shows that there are shortfalls with effective screening before initiation phase. Conversely, there are several factors that counteract effectiveness of Implanon in the body such as certain drugs used to treat epilepsy, tuberculosis and antiretroviral drugs, as well as poor screening and lifestyle factors (alcohol consumption & sport) (Organon laboratories Limited, 2009). Another problem that has been referenced is that some information leaflets also state that the implant may move from the point of insertion, but this rarely happens, and may be related to deep initial insertion or external forces, such as those experienced during contact sport (Skosana, 2015). This tends to be a problem, as clients may be sent for x-ray detection to identify the implant, and it also creates fears in clients as to whether there is a possibility that the implant may not be detectable.

The National Department of Health sent out a circular in 16 October 2016 to all public health nurses, doctors and managers stating the fact that new evidence shows interference of enzyme producing drugs with effectiveness of progestin subdermal implants. This includes certain drugs used for epilepsy, Rifampicin, used for tuberculosis, and the antiretroviral Efiverenz (one of the antiretroviral in the fixed dose combined pills) (Department of Health 2015). Patni, Ebden, Kevelighan and Bibby (2006) performed a study on ectopic pregnancy with Implanon. It was evidenced that Implanon failure was due to potent enzyme inducers known to have deleterious effects resulting in intrauterine or ectopic pregnancy. However, two of these pregnancies were directly related to a concomitant use of rifampicin. Whereas other drugs interference were linked to anti-epileptics drugs (phenytoin, phenobarbital, primidone), antibiotics (rifampicin, rifabutin), antifungals drugs (griseofulvin), protease inhibitors (lopinavir, atazanavir, amprenavir), non-nucleoside reverse transcriptase inhibitors (efiverenz, nevirapine). The research case reports on the failure of Implanon on anti-tuberculous therapy by Gbolade (2010), stating that drug interaction with hormonal contraceptives are challenging when steroid metabolism is stimulated. However, in the liver enzyme system cytochrome P450 plays a significant role in drug metabolism, and drugs that induce these enzymes cause increased elimination of contraceptive steroids, which adversely lead to reduced reliability and unplanned pregnancy.

The exploratory study conducted on 'Contraception: everyone responsibility' by Patel (2014), it was revealed that the continuation rates of Implanon is extremely higher within the first year of insertion. The study also revealed that there were no pregnancies reported in other studies that relates to insertion issues, making timing of insertion a critical step. It was further revealed that Implanon has been identified to be safe for use, and comes with minimal side effects. At this stage, it is not clear how the women experience and perceive the use of Implanon; therefore it is fundamental and imperative to explore women's perceptions and experiences of Implanon at an early stage to promote its use.

1.3. PROBLEM STATEMENT

According to reviewed literature, there has been no formal evaluation on the use of this method of contraception, and how the users experience it. It is still too early to determine the effectiveness of this method, since its users have to be monitored and reviewed after three years have elapsed. However, it is imperative to understand the short-term experiences and perceptions by its users, in order to adjust treatment implementation accordingly.

Skosana (2015) revealed that some women in South Africa experience side effects from having Implanon device, and aren't convinced with this new contraceptive implant (Mukuka, 2015). However, clinical research indicates that it is common for women to experience side effects for the first three months after insertion of this implant (Patel 2014). There are still high numbers of women who experiences side effects, who remove the contraceptive implant early before its duration (Skosana, 2015; Patel, 2014; UNFPA 2015). In Mpumalanga Province, it has been found that some clinics have stopped providing Implanon contraceptive implant, because there were many issues raised regarding its use, and some issues are still unclear between healthcare providers and clients (Skosana, 2015)

Another challenge is that there has been little emphasis placed on staff training and development to equip the nurses with new protocol and policies of Implanon. Subsequently, Skosana (2015) reveals that in some clinics, only one nurse has been trained on this contraceptive implant, and that furthermore, it has also been found that some nurses are not well equipped with screening and counselling protocols, since it was evidenced by Skosana (2015) that an HIV-positive client was initiated onto Implanon as she was taking fixed dose

combination antiretroviral pill (Skosana, 2015). Conversely, the Implanon contraceptive is more visible at the point of insertion, and easier to remove, and requires users to visit the clinic to remove it in their arm.

The above-mentioned argument clearly supports the need to conduct this study, since this is a fairly new contraceptive method, and there seems to be gaps in the service provision. Therefore this research will focus on exploring women's experiences and perceptions with Implanon contraceptive method to women within the bearing age, at a selected primary health care clinic in KwaZulu-Natal. There are no similar studies that have been conducted in South Africa after the Implanon contraceptive method was implemented in 2014.

1.4. AIM OF THE STUDY

The aim of the study was to explore the experiences and perceptions of women using Implanon at a selected primary health care clinic in Kwazulu-Natal, in order to develop relevant intervention tool for user that will assist the health care provider in service provision.

1.5. RESEARCH OBJECTIVES

The research objectives of the study were to:

1.5.1. Explore and describe the experiences and perception of women using Implanon at a selected primary healthcare facility in KwaZulu-Natal

1.5.2. Develop relevant intervention tool to be used by healthcare workers.

1.6. RESEARCH QUESTIONS

The specific research questions for this study were:

1.6.1 What are the experiences of women using Implanon as a contraceptive method in a selected primary healthcare clinic in KwaZulu-Natal?

1.6.2. How do women using Implanon perceive this method of contraception in a selected primary healthcare clinic in KwaZulu-Natal?

1.6.2.1. What are the perceived barriers to using Implanon as a method of contraception?

1.6.2.2. What are the perceived enablers in using Implanon as a method of contraception?

1.7. SIGNIFICANCE OF THE STUDY

This study is significant to clinical nursing practice. It will prescribe baseline information and knowledge about Implanon contraceptives. Furthermore, it may contribute to improving health service delivery, by highlighting the challenges and problems of Implanon contraceptive, and further addressing women's perceptions and experiences with Implanon as a contraceptive method for the health clinical governance. Additionally, the recommendation proposed will strengthen service delivery in the field of family planning nationally.

1.8. OPERATIONAL DEFINITIONS

The following concepts will be defined and explained to develop clear understanding and meaning related to this study. The operational definitions of the key terms in this study are as follows:

Contraceptives methods

In this study, a 'contraceptive' is defined as an agent used by women to prevent conception or impregnation; such as condoms, birth control/hormonal pills and injections, contraceptive loop & diaphragm, contraceptive implant, etc.

Implanon

Implanon is described as a type of birth control implant, small flexible plastic rod, the size of a matchstick, inserted under the skin of the upper arm, so as to provide contraceptive efficacy for a maximum period of three years.

Implanon user

A user in this study is defined as a woman that has inserted Implanon as contraceptive method of choice for the duration of six weeks or more, including those who have removed Implanon in the past three months, due to various reasons.

Experiences

In this study, experiences refers to practical contact or exposure or/and observation of facts with the use Implanon contraceptive method.

Perceptions

The term perception in this study refers to an interpretation or impression, awareness or an understanding of Implanon contraceptive implant.

Primary health care facility

Primary healthcare facility in this study refers to the clinic that normally provides first level health care services and reproductive services including Implanon contraceptive operating for eight or more hours a day. It also refers to where the data collection will take place for this study.

1.9. CONCEPTUAL FRAMEWORK

Burns and Grove (2001) define a framework as the abstract logical structure of meaning that guides the development of the study and enables the researcher to link the findings to the body of knowledge that constitutes nursing science and/or health science. The health belief model was used as the conceptual framework guiding this study. This theory is used to explain the main variables of the study, and their interrelationships.

1.9.1. The health belief model

The health belief model is a cognitive, interpersonal framework that views humans as rational beings who use a multidimensional approach to decision making regarding whether to perform a health behaviour (Rosenstock 1974). Croyle (2005) defines the health belief model as a model that seeks to address problem behaviours that evokes health concerns. According to Potter and Perry (2005), the health belief model is described as a relationship between a person's belief and behaviour. The health belief model constitutes three pillars, which include an individual's perceptions, modifying factors, and then likelihood of action.

The first and foremost pillar is individual perception, which entails the importance of contraceptive, perceived threat and perceived benefits. Perceptions are mental frames of reference that can be based on either founded or unfounded statement, or real or imagined

events (Ayopo, 2009). Perceptions also relate to people's insight of an impression presented to the senses (Ayopo, 2009). For this reason, individual perceptions could create the basis for reality. An individual perception is made up of three components, namely: importance of contraception, perceived threat, and perceived benefits.

1. Importance of contraception: an individual expresses the need to use or the importance of contraception as a health promotion strategy. This occurs after obtaining some information on how essential it is to use contraceptive.
2. Perceived threat: this component comprises of two parts: (i) perceived susceptibility refers to one's opinion of the chances to get side effects or risks when trying to use contraceptives. In this study women may perceive themselves susceptible of acquiring side effects or risks when using this contraceptive implant; (ii) perceived severity; this concept explains the feelings a person has concerning the side effects or risks she may contract when using this implant.
3. Perceived benefits: this concept deals with effectiveness of the strategies developed to reduce the threats, barriers or adverse effects associated with contraceptive. In this study, Implanon users may perceive problems like religion, sexual partners and chronic illness as a barrier to either use or stop using this contraceptive implant. Therefore, these woman may take actions considering these barriers.

The second pillar is modifying factors, which have significant impacts on the individual perceptions. These characteristics create influence on the personal perceptions. They are able to be adjusted or modified, which comprises three components, and these include demographic variables, interpersonal variable, and situational variables.

1. Demographic variables include age, marital status, religion, occupation, level of education and previous method of contraception.
2. Interpersonal variables include partner or husband, siblings or parents, close friends and health care practitioners.
3. Situational variables include magazines or newspapers, advertisements, books or pamphlets and radio or television.

Third pillar entails likelihood to action, which implies to the possibility to act upon the perceptions, barriers and influence made by modifying factors. However, certain individuals could take further actions based on potential negative consequences, knowledge given by health professionals, and confidence to take their actions.

1. Perceived barriers to actions: this component refers to an individual's own evaluation of the obstacles of adopting a new behaviour (Glanz, Lewis and Rimer 2002). In simple terms, it implies barriers that may be prevented in acquiring potential negative consequences.
2. Cues of action: this refers to what professionals do to help to feel the knowledge gap of the affected women, including those experiencing side effects or potential risks.
3. Self-efficacy: refers to one's confidence to take action to change one's behaviour.

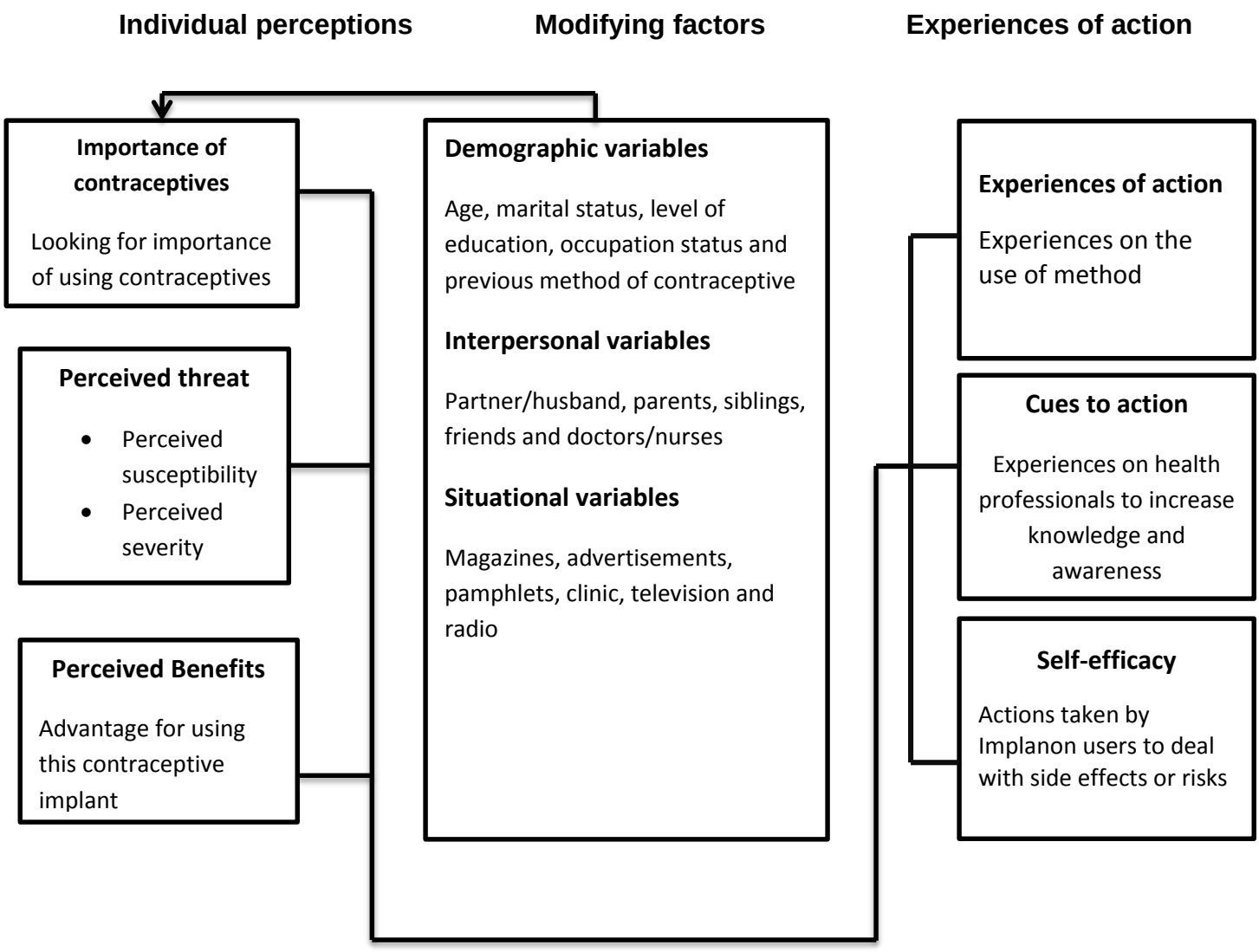


Figure1.1: Health belief model adapted from Potter and Perry (2005)

Assumptions

Concept	Assumptions
1. Perceived susceptibility	Women believe they can get pregnant and contract STIs due to the failure of Implanon.
2. Perceived severity	Women believe that the Implanon device may be lost in the body, as it might migrate inside their body
3. Perceived benefits	Women believe that Implanon will prevent them from falling pregnant, and it is an advantage, as it requires no subsequent visits for a period of three years.
4. Perceived barriers	Women identify their personal barriers to using Implanon (complains about side effects or risks associated with Implanon use).
5. Cues to action	Women receive reminder cues for action in the form of incentives (such as pamphlets with all relevant information about Implanon side effects, contraindications, etc.); advertisement.
6. Self-efficacy	Women are confident to receive information about Implanon and act correctly upon the knowledge given to them.

1.10. OUTLINE OF THE STUDY

Chapter 1: Introduction: scientific foundation of the study

Chapter 2: Literature review

Chapter 3: Research methodology

Chapter 4: Research results, discussion and research manuscript

Chapter 5: Conclusions, limitations and recommendations

Chapter 6: Screening tool and algorithm for healthcare practitioners

1.11. Conclusion

This chapter acts as a foundation of this study. This chapter also discusses the research topic, problem statement, study objectives and significance of the study. The literature review for the study is addressed in the next chapter.

CHAPTER TWO

Literature review

2.1. Introduction

Burns and Grove (2005, 96) explain the literature review as a systematic and explicit approach to identification, retrieval and bibliographical management of independent studies (usually drawn from published sources) for the purpose of locating information on a topic, synthesising a conclusion, and identifying areas for future studies. Literature describes what is already known about the topic, and helps to compare the finding of the existing studies with those of the study at hand.

The literature review for this study serves to explore what is known about Implanon® more broadly, and the existing knowledge that has been publicise about the topic. The researcher identifies the existing research studies that explores experiences and effects associated with Implanon® contraception. The summon database was used to obtain this literature; the search words used were: 'perceptions with Implanon®',' experiences with Implanon' and/or acceptance of Implanon (Brink et al., 2012)

2.2. Definition of Implanon®

Implanon® is a small, single-rod contraceptive implant of 40 mm in length and 2 mm in diameter, that is inserted into subdermal area on the upper arm. This flexible, long acting Implanon® contains only progestin which last for 3 years underneath the subdermal tissue of a women.

The new Implanon® contains 68mg of etonogestrel which releases 30 micrograms of its content into the body on daily basis (Implanon® Product Monograph NV Organon, 2005). Implanon® suppresses ovulation in the ovaries thus causing changes to the cervical mucus that makes it difficult for spermatozoa (sperm cell) to reach uterine cavity (Mecksroth and Darney 2001).

2.3. HISTORICAL BACKGROUND OF CONTRACEPTIVE METHODS

2.3.1. European population 1880 - 1930

In previous eras, a woman was able to bear 15 children over her reproductive lifetime without fertility restraints (Bongaarts and Potter 1983). Some societies, fertility prevalence ranged from 4,5 to 6,5 live births per women, without complications. Historically, life fertility was guided by two factors, which are prolonged breast-feeding and restrictions on entry to sexual involvements, bonded by marriage rules and customs. However, the contribution of contraception and abortion, to the moderation of fertility is hotly contested. The contraceptive methods by ancient scholars are a mixture of the fanciful, those reasonable ways and avoidance of intercourse on the days following menses, as well as those contraceptive methods thought to be effective, such as pessaries and barriers (Cleland 2008). Riddle (1997) has argued that herbal preparations that were taken orally were both effective, and the most widely used.

The hallmarks of regulated fertility appeared in Europe until around 1880, with the exception of France, where this can be found to have occurred approximately 100 years earlier (Coale and Watkins 1986). Cleland and Wilson (1987) state that the earliest surveys of women are from Africa and Asia, conducted before international promotion of family planning started, and there were very few women aware of contraceptive methods, with even fewer that reported any choice of contraceptive precaution. It indicates that past generations used little or no control over childbearing, or had no planning over family size within their marriage.

Mason (1997) has argued that traditional societies were using postnatal adjustments, namely that of infanticide; child abandonment, adoption, fostering, and release of children in their early teens, as apprentices and domestic labour. At some point, reproduction was taken as a lottery, due to the unpredictable death of the child. Mutual support from other families was effective for couples with too many children.

Towards the end of 18th century, French couples began to limits family size. Easier to understand is the fertility decline that spread rapidly across the rest of Europe from 1880 to 1930. Child mortality, not specifically amongst infants, had fallen in many countries by 1880, which evidences child survival and mass education spreading, including ideas about the

status of women. Industrialisation and urbanisation were well advanced in parts of Europe and scientific progress was rapid. It became inevitable that the increasing human mastery over nature would extend to reproduction. The fertility level in many countries fell to a standard of replacement.

The first revolution in reproductive status occurred more or less synchronously in all countries of Europe descent as well as Asia and other parts of USA. Non-European countries meanwhile remained largely unaffected. The well-known prominent birth control pioneers, Annie Besant and Margaret Sanger, fell to the hostility that the subject evoked. Besant was taken to court in 1877 in London for an American tract on birth control quaintly named “Fruits of Philosophy”, and Sanger was arrested and imprisoned for opening a birth control clinic in Brooklyn in 1916. Evidence of the prevalence of variety options of contraception is unavailable before 1950s. Subsequently, coitus interruptus was the first reason that led to the introduction of reduced childbearing in Britain. At the same time, condoms and spermicides became widely available, and were used in the early decades of 20th century (Cleland 2008).

In the United States, diaphragms and periodic abstinence were also used, but coitus interruptus was less popular than it was in Great Britain (Freedman et al., 1959). In United States it was found that these methods were showing low efficacy in woman, testifying to the determination of couples to restrict family size, although resorting to illegal abortion no doubt acted as an important back up to contraception. This first contraceptive revolution was not essentially a response to improved methods. It is characterised as the consequence of motivational and moral change. Family size limitation becomes a major preoccupation, and the aversion to coitus interruptus waned.

2.3.3. Development in European population in 1960s

Modernisation was radically occurring in 1960s with the fertility regulation in European populations. In 1960, oral contraceptives were approved for use in the USA, as well as many European countries. However, intrauterine devices (IUDs) became available. Techniques of contraceptives sterilisation were refined, and in the 1970s, many countries enacted laws that explicitly permitted the procedure. Lastly, the liberation of abortion practices occurred widely.

Transformation of technology and access manifested themselves immediately in the North America and Western and Northern Europe. Westoff and Ryder (1985) reported that in the USA, between 1955 and 1965, the percentage of married non-Hispanic white female contraceptors who used oral contraceptives rose from 0 to 24%, while the percentage using periodic abstinence, condoms and diaphragms fell. Earlier in 1982, condoms and diaphragm use among contraceptors had fallen to 7% and 4%, respectively, among the same population group, but a huge in sterilisation had taken place; 43% of contraceptors had been sterilised, while 26% females and 17% male (Piccino and Moser, 1982).

Freeman, Whelptoo and Campbell (1959) reported that oral contraception was already challenging the popularity of the two male methods, viz. condoms and coitus interruptus, by 1967, however by 1976, about 38% of married contracepting women reported use of the pill. Prior to the 1970s, the level of contraceptive sterilisation was negligible, but by 1976, only 19% of contracepting couples had been sterilised, and this proportion rose to 37% by 1986.

The improvements of less effective methods, which require the active participation of men to more effective methods controlled by women, was slower to arrive in Southern and Eastern Europe, and has not been reached in many countries. A survey conducted in 1996 revealed that Albania, Bosnia and Greece commonly use coitus interruptus, as was the case in Italy (Department of Economics and social affairs 2008). Between 1950 and 2005, fertility in developed countries fell from 2,8 to 1,5 births per women. A fertility rate sustained at 1,5 births will result in a halving population size (Cleland 2008).

2.3.4. Contraceptive revolution in developing countries

Cleland (2008) has argued that the history of family planning in undeveloped countries is inextricably linked to government policies and programmes. By the 1950s and 1960s, mortality decline was attained, however the fertility rates remained high at five to eight births per woman. This huge gap was caused by a sharp increase in the rate of population growth. Many Asian, Latin American and African populations were showing growth at a pace that implied a doubling in size every 25 years or so.

Coale and Hoover (1958) wrote a seminal book in 1958, where they argued that the social and economic progress of poor countries was jeopardised by rapid population growth, largely

because of the inherent age structure of rapid growth, in which half the population is aged 15 years or less. However, the household and government savings have to be devised from investment to develop industry and modernise agriculture in order to support the huge burden of the unproductive youth (Cleland 2008). In the United Nations, a new agency was introduced, the United Nations Fund for Population Activities, with the shrewd choice of a Roman Catholic Filipino as its first executive director. The stage was set for the era of state-sponsored family planning programmes. In 1960, only two developing countries had official policies to promote contraception, but this number rose to 74 by 1975 and further to 115 by 1996 (Cleland 2008).

2.3.5. Asian population developments

The governments of Asian populations actually embraced the messages from New York and Washington that population control was a priority, however, the various programmes they designed in response were poorly designed. However, in Pakistan and Bangladesh, their President became active enough to launch a 'crash programme', which was more centered on the intrauterine device. The clients, recruiters and the clinicians were all receiving a small payment for each insertion, which gave rise to massive corruption at the later stage. There was little medical back-up for women experiencing adverse effects available, with the consequence that the Intrauterine device became extremely unpopular. Later, after five years this programme was phased out of service in 1969, since it was understood to have been a complete failure. The cause of family planning languished in Pakistan from then until the 1990s (Khan 1996). Events in recently independent Bangladesh took a very different course.

In 1977, population control was proclaimed by President Ziaur Rahman to be a top national priority. The staff at district hospitals were trained to perform tubectomies and vasectomies, and a new cadre of literate, married, female community-based workers was created, called 'family welfare assistants' (FWAs). Family Welfare Assistants were trained for a basic family planning and childcare, and then they were returned to their own villages to provide a domiciliary service, supplying oral contraceptives and condoms, and referring women for clinical or surgical methods. This strategy was found to be effective in a way of popularising contraception. FWAs, being literate, were well-respected in their local communities; at some instances they could act as a bridge between village life and the alien world of scientific

medicine and, perhaps most importantly in a culture that makes it difficult for women to travel alone outside their immediate neighborhoods. However, they brought contraceptives to the doorstep and acted as companions when trips to health facilities were necessary. Contraceptive prevalence among married women rose from 12% in 1979 to 49% in 1996, although increases in the past decade have been modest. Fertility rates have fallen from historic levels of six to seven births per woman, to three births. Since then, early effort to deliver family planning services in India was unsuccessful. Even the passive clinic-based approach, initiated in the 1950s, has achieved little. In the 1960s, the programme was extended, and contraceptive and demographic goals were set but again impact was minimal. Summons et al. (1988) argued that the focus shifted to promotion of vasectomy by means of financial incentives by early 1970s, typically amounting to several weeks' wages for an unskilled labourer. However, most of the vasectomies were performed in carnival-like settings where thousands of people would gather for entertainment. These high-pressure tactics culminated in instances of outright physical coercion during the two years of Prime Minister Gandhi's emergency rule (1975–1977) (Cleland 2008). The annual statistics for sterilisations rose to a huge figure of 8.26 million. A backlash was inevitable, where Minister Ghandi lost the election and the programme then the programme was discredited. It took about a decade for family planning to regain momentum and progress as measured by contraceptive prevalence.

The comparison of family planning progress in the Philippines and Indonesia is intriguing. In 1960, the Philippines had an income per head double that of Indonesia and much higher levels of adult literacy and women's labour force participation. However, between 2002-2003, contraceptive prevalence in Indonesia was 60% compared with 49% in the Philippines (Cleland 2009). The reason for this unexpected outcome lies with religion and politics. The Indonesian government has been skillfully in avoiding the danger of opposition from Islamic leaders, by agreeing neither to authorise abortion nor to promote sterilisation. It mounted a forceful programme with the strong involvement of local leaders. Similarly, several other Asian countries, the family planning agency sidestepped the weakness of Ministry of Health services by developing their own dedicated network of centers and staff (Cleland 2009). In the Philippines, by contrast, no agreement between State and Church was reached, and Roman Catholic leaders remained openly and vocally opposed to most forms of contraception.

However, this opposition prevented the development of a comprehensive programme in the catholic country. There was no complete account of family planning in Asia without consideration of China. In the 1970, the Bucharest World Population Conference in China was the main opponent of United States' calls for a worldwide effort to arrest rapid population growth. However, the Chinese government had initiated its own massive programme to reduce fertility two years earlier. This voluntary programme proved to be a huge success, partly because of China's uniquely effective organisational abilities. However, in 1979, economic organisers successfully debated that deeper cuts in population growth were necessary, and the one-child policy was introduced, with benefits for couples pledging to have only one child and penalties for those exceeding the quota (Baochang et al., 2007). However, in rural areas, the opposition was entrenched, and local government ultimately had to relax the rule and allow two children, irrespective of their sex, or alternatively allow a second child if the firstborn was a daughter. Junhong (2001) indicated that the fertility rate in China was approximately 1.5 births per woman. In an increasingly overcrowded planet, huge global benefits have accumulated from China's population policy, because the country accounts for approximately one-fifth of humanity. China's economy has also benefitted. The cost, however, has been high, not least in terms of sex-selective abortion and the abandonment of unwanted daughters (Junhong 2001).

2.3.7. History of contraceptive in South Africa

Historical perspective on the National Contraception Policy of 2008

In South Africa, fertility was controlled through variety of cultural practices that provide support to family planning in modern times. Some countries were under the colonisation and were industrialised by foreign hegemonic interests. Africans were at a loss when it came to the ability to exercise control over various aspects of their society, community and personal lives, which contributed to rapid population growth, where migrant labour and influx control regulations were affected by African control over reproduction, as the result husbands are separated from their wives. The disruption of family life and the break-up of viable and stable social relations led to the frequent discontinuation of traditional practices of fertility regulation, and substantial changes in sexual habits (Plaatjie, 1982).

However, family planning services in South Africa began in the 1930s, as mother's clinics that were aimed mostly to deliver white, poor, married women with birth control methods and guidance. Thereafter, the South African government commenced its support for birth control, where at that time the aim was to improve the quality care of the white population through limiting the number of children born to poor white women. From the end of the 1930s onwards, there was a falling birth rate amongst white population, together with an increase in the non-white population. Demographically, racial contradictions emerged, where there was a fear amongst the white population of being vastly outnumbered by the black population, a fear referred to colloquially at the time as 'die swart gevaar' (which translates from Afrikaans as 'the black menace'). The 1960s government announced new demographic policies and programmes in response to this fear. Certain modes of social and political resistance emerged, such as the growth of the 'Black Consciousness Movement', and the so-called 'winds of change' far-reaching through the rest of the continent. New government structures were put in place to ensure that Africans were systematically oppressed, deprived of access to education, healthcare, and all other services beneficial to reproductive transformation. Incentives such as child grants payments were offered to the white population in the country in order to rapidly increase the child birth rates in white families. A highly strategic white settlement programme was also introduced. These strategies were implemented in concert with programmes that aimed at reducing the black population of the country.

2.3.7.1. The family planning programme

In the late 1960s, the government began preparations to launch a national family planning programme. The political rationale for family planning now became black birth control, in an attempt to reduce the non-white population growth rate. Family planning clinics throughout the country were slowly appropriated to render State-run services. The national Family Planning Programme was formally established in 1974. The family planning services became free, and were made available to all racial groups, but on a segregated basis. In municipal areas, family planning was offered as an integral part of maternal and child health services, but elsewhere national and provincial health departments developed strong vertical family planning services. These were provided at single-purpose stationary or mobile clinics and run by specially-trained family planning nurses. Additionally, well-paid and trained family planning advisers

carried out family planning promotion. However, the family planning services operated independently of other health services, which were not free, and often not accessible.

During the 1970s, many other countries developed family planning programmes with an underlying demographic rationale. However, in the 1980s, while international trends changed to integrating family planning into broader maternal and child health programmes, the government in South Africa continued to promote vertical family planning services as a tool for population control. Consequently, the Family Planning Programme attracted much criticism. In response, the programme's management endeavoured to break the association between family planning service provision and population control by emphasising that the goal of the Family Planning Programme was to improve women's health through birth spacing.

Despite this ideological shift, there was no real improvement in the quality of care, because the delivery of family planning services was firmly institutionalised within a demographic framework, rather than a health and human rights framework. It was not until the late 1980s and early 1990s that family planning services were integrated into primary healthcare services, chiefly for financial reasons, but also in response to international trends and pressure by opposition groups within the country.

2.3.7.2. The population development programme

In the early 1980s, in response to the recommendations of a government-commissioned report, an explicit Government policy decision was made to lower the national population growth rate in line with resource availability especially water. This led to the establishment of the Population Development Programme (PDP) in 1984. The major thrust of the PDP was fertility reduction through family planning, but this was to be supported by interventions in other relevant sectors that could influence fertility levels, such as education, primary healthcare and economic development. However, the PDP was unable to meet its objectives, largely because it lacked both the resources with which to make real changes and the authority over other government sectors to ensure that they initiated appropriate interventions. Hence, from 1990, the PDP shifted its focus of work to the development and implementation of population information, education and communication programmes.

2.3.7.3. Family planning post 1974

However with the development of the Family Planning Programme, the coverage by public sector family planning services became extensive. By the end of 1992, the number of service delivery points had mushroomed to a total of 65 182, many of these in areas with no other accessible health services. The provision of family planning services was left to individual government, and generally fell under the control of local hospital superintendents. Consequently, in most cases, peripheral clinics were given less priority than hospital facilities, resulting in the suboptimal delivery of primary healthcare services, including family planning.

In the private sector, family planning services were provided by a number of individuals and institutions. Some occupational health services also offered family planning. In the early 1990s, as part of a Department of Health initiative to increase access to oral contraceptives, about 2 000 pharmacists were trained on a voluntary basis to dispense oral contraception. Traditional practitioners continued to promote traditional family planning practices. The Catholic Church promoted natural family planning through literature and personal instruction to interested couples.

2.4. SEXUAL AND REPRODUCTIVE HEALTH ISSUES

The International Conference on Population and Development (ICPD) in 1994 at Cairo was the global seminar that showed significant commitment to ensuring good sexual and reproductive health (Askew and Berer, 2003). The ICPD was formed by 180 countries; however the new approach was proposed concerning population issues that placed emphasis on a more comprehensive, client-centered approach to sexual and reproductive health (Maharaj and Cleland, 2005). Although sexual and reproductive health issues have formed a major area of focus in the past, relatively few programmes since the 1994 ICPD. The launch of the Millennium Development Goals (MDGs) has focused on the sexual and reproductive health needs of youth within developing countries. Although the developmentally distinct from children and adults in relation to physical, cognitive and social characteristics, traditionally youth have been neglected as a distinct target group and subsumed under the promotion of family, women's and child health (Bearinger et al., 2007).

Literature reveals that many young people from developing countries do not have access to available health services, because they lack knowledge with services that are offered in their health facilities (Tylee et al., 2008). It has been evidenced that young people in Sub-Saharan Africa lack knowledge with regards to health services and this further creates a huge barrier to obtain reproductive services (Biddlecom et al., 2007). A study on youth sexual and reproductive health services has revealed that a substantial proportion of sexually active young people were not aware of any source to obtain contraceptive methods, ranging from 22% of females in Malawi, and 49% in Ghana, to 25% of males in Uganda, and 41% in Burkina Faso. Furthermore, it was revealed that seven to 20% of sexually active youth in all four countries were not aware of where to access reproductive services regarding sexual transmitted infections (Biddlecom et al., 2007). Lack of visibility and publicity of health services within developing countries therefore remains one of the key concerns.

However, Sub-Saharan Africa faces a historic challenge of extraordinary population growth and economic difficulties in the health services (Hubacher et al., 2008). Williamson et al. (2009) argued that women in the sub-Saharan Africa have showed lack of awareness and knowledge, difficulties to access contraceptive services and they report concerns with side effects such infertility, frequent bleeding patterns and gaining weight. In addition, it was revealed that certain Sub-Saharan countries still continue to experience a shortage of contraceptive supplies (Fribeg et al., 2010). Thus, poor government policies have shown a great impact to address challenges and barriers that hinder effective contraceptive provision (Fribeg et al., 2010).

Williamson et al. (2009) revealed that previous studies show most women to have demonstrated limited knowledge with regards to modern contraceptive methods usage in developing countries. A comparative study conducted on contraceptive knowledge and usage reported that women in Sub-Saharan Africa have the lowest knowledge on contraceptive methods compared to the women in most countries (Rutenberg et al., 1991). However, this attribute creates a demand to health practitioners in providing sufficient information with regards to available contraceptive options and their side effects (Williamson et al 2009). According to Rutenberg et al. (1991), it was reported that there is a strong positive correlation between contraceptive knowledge and level of education. The underlying relationship

between these two factors can be studied separately. The ability of the person to know and understand contraceptives may depend upon her educational standard.

The promotion of reproductive health is a great priority in South Africa. Huge progress has been made in South Africa to expand access to health services through political leadership and development of policies and guidelines and legislature (Ramkissoon et al., 2010). But still, there is poor development in reproductive health services as well as limited access to those in need for reproductive health. This outcome is reflected by high percentage of preventable conditions, such as sexually transmitted diseases, unsafe abortions, teenage pregnancy and cervical cancer (Health System Trust 2015). The government sector faces obstacles and challenges in comprehensive treatment, family planning and contraception, sexual and reproductive health (Ramkissoon et al, 2010).

South Africa has many good policies and guidelines for reproductive healthcare, but then again, the challenge remains in the effective implementation of these policy and guidelines (Wouters et al., 2010). Major challenge also remain with ensuring that guidelines are implemented, and that standards protocol are followed and that healthcare workers performance is improved and monitored (Ramkissoon et al 2010). The provision of comprehensive and holistic care, evidence-based interventions, optimal therapeutic care, as well as sexual and reproductive health services need to be strengthened. The strengthening of sexual and reproductive health services also involves integration of reproductive health and provision of effective guidelines for implementation.

South African family planning services are provided separately from other health services. This mostly occurs with the result that when women come into contact with healthcare practitioners, they are not examined holistically, and are checked for other illnesses, such as cancer of the cervix or hypertension. This shows a lack of concern for women's health, since this information can also be required in helping to select appropriate and relevant contraceptive for this women. Wood and Jewkes (2006) argued about the attitude of health care practitioners when rendering family planning services to teenagers. It was revealed that nurses stigmatise teenagers for their sexuality by treating them harshly and even show unwillingness to support them in using contraceptives. Consequently, this has led to non-adherent and poor compliance as far as use of contraceptive methods (Williamson et al

2009). Another incident reported by News24 in Cape Town was when the healthcare providers gave birth control injections to pre-teenage girls, with the aim of preventing pregnancy in case of rape. Nevertheless, this action was unprofessional, according to health practice, because these teenagers were underage and reaching puberty. Despite their morally wrong action, the right to consent was deemed in their disregard. As a result, staff attitude may have negative influence on the client's decision on contraceptive options.

The issue of culture as barrier for women to use contraceptives is also a great challenge. Srikanthan (2008) also states that culture has the potential to influence acceptance and use of contraceptives. Other cultures claim that modern contraceptives are promoting people to have more sexual partners. Catherine (2010) also views virginity as more highly prized than fertility demonstration when it comes to eligibility for marriage in certain cultures. Additional examples include the Zulu tradition, which encourages virginity testing over family planning to unmarried women, which is done as early as possible in childhood. Therefore, health practitioners must be aware of cultural barriers when rendering family planning services, in order for them to suggest ways that doesn't affect one's culture.

The increase in usage of contraception has contributed to new understanding of the role sexual intercourse to society as whole (Caldwell 2011). Women worldwide are faced with number of factors that influence their use of contraceptives. For example, some cultures and religions bring controversy to family planning methods (Tilahun 2014). In Christianity, Islam and Judaism for example, there is a widely held belief that life begins at conception (Maddox and Bortnick, 1989). Furthermore, sexual intercourse is viewed as a practice for married couples, meaning that family planning is not advisable for unmarried couples.

In South Africa, the health facilities that provide contraception services mostly operate within the confines of office hours, and are therefore are not user-friendly for working people and school-going youth. Existing literature support the need to promote youth friendly, comprehensive sexual and reproductive healthcare services for youth as a priority. Maharaj and Cleland (2006) have stated that many countries are faced with the significant challenge to address the unmet sexual and reproductive health needs of young people, towards the prevention of the spread of HIV and AIDS. However, in South Africa a great priority in public

healthcare ought to be promotion of youth friendly, comprehensive sexual and reproductive healthcare services.

2.5. Contraceptive Legislature

2.5.1. World Health Organisation comparison of subdermal implant versus other contraceptive methods

Most of the contraceptive implants contain progestogen, and are long-acting reversible contraceptives. The main common potential advantages of these contraceptives implant include the following (Power et al., 2008):

Potential advantages of contraceptive implant:

a.) has longer lifespan; can last longer in the body;

b.) no need for user compliance; once inserted, they are so-called “forgettable” methods of contraception;

c.) high contraceptive effectiveness; are more effective compared to other contraceptive;

d.) minimal requirements for medical follow up once inserted; whereas other contraceptives requires more frequent visits as a review regimen;

e.) rapid reversibility upon discontinuation; once they are removed, fertility returns immediately; and

f.) low, stable serum hormone levels minimising metabolic effects; they have limited metabolic reaction as they contain lower serum hormone levels.

2.5.1.1.. Comparison of the subdermal implants

	Norplant®	**Implanon®**	**Jadella®**	**Elcometrine®**
Type of progestogen	Levenorgestrel	Etonogestrel	Levenorgestrel	Nestorone

Size	Each capsule is 34mm long and 2,4mm diameter	Single rod is 40mm long and 2mm diameter	Each is 2,5mm diameter and 4,3mm length	
Licensed life span	Guaranteed for five years	Last about three years long	Can be effective for five years	Last only six months long
Reservoir	Six silicone capsules	One polymer (ethyl vinyl acetate) rod	Has two sealed silicone rods	One silicone capsule
Registration Countries	Over 60 countries worldwide	Over 40 countries worldwide has been registered	Register in USA and EU countries	In Brazil

2.5.1.2. Overview comparison of subdermal implant with other contraceptive methods

According to Bahamondes (2008) the percentage of continuation rates with Implanon® and Norplant® in developing countries (90, 6% of women continuing to use Implanon® and 91, 4% Norplant® at two years) compared with developed countries (55, 4% for Implanon® and 47, 5% Norplant® at two years). However, these findings show that women in developing countries are not having a wide choice of contraceptive methods.

The clinical trial reveals the review finding that Norplant®, Jadella® and Implanon® are highly effective methods of contraception; only a small number of pregnancies were recorded in women in years of follow-up, respectively. These figures were represented for pregnancy rates of 0.05, 0.13, and 0 per 100 women in years of use for Norplant®, Jadella® and Implanon®, respectively. There were no statistically significant differences between the three

implants with respect to contraceptive efficacy. The age range of the women in the trials was 18-40 years (Bahamondes, 2008).

The study review also evaluated bleeding disturbances and amenorrhea, which are related to subdermal implantable contraceptives. Bleeding disturbances and amenorrhea were the most important side effects, which could lead to premature discontinuation of the method, possibly resulting in unintended pregnancy if the woman does not switch over to another contraceptive method (Bahamondes, 2008). With attention to bleeding disturbances, infrequent bleeding and prolonged bleeding in a 90 day reference period were more likely to occur among Implanon® users, when compared with Norplant® users (Zheing et al., 1999). Additionally, amenorrhea was found to be statistically significantly higher in users of Implanon® compared with those of Norplant® and increased with number of years of use (Bahamondes, 2008). Nevertheless, it is possible that the rate of amenorrhea may be affected by the number of discontinuations. Due to this, more attention is required in the interpretation of these data, and women should be informed with respect to the differences between the different types of implant (Bahamondes, 2008).

As regards to hormonal side-effects, there were no significant differences found between the Implanon®, Jadella® and Norplant® implant evaluated. The duration needed for insertion and removal on the different types of implant was also evaluated in the review, although only limited data were available for evaluation. Comparatively, Implanon® was significantly quicker to insert and remove when compared with Norplant®, probably due to the fact that Implanon is a single-rod implant whereas Norplant® consists of six rods. Similarly, Jadella® was also significantly quicker to remove compared with Norplant®, probably because Jadella® contains only two-rods (Bahamondes, 2008).

The efficacy of Implanon® based on the finding review reports no failure rate for Implanon® implant. However, during the period between the introduction of Implanon® in 1998 and March 2007, a total of 1688 pregnancies were reported, resulting in an overall postmarketing Pearl index of 0,024. Most of the pregnancies were attributable to three causes which are as follows (Bahamondes 2008):

a.) insertion of the implant in women who were already pregnant or insertion after the recommended first few days of the cycle;

b.) concomitant use of hepatic enzyme inducing antiepileptic drugs; and

c.) failure to insert the implant.

The World Health Organisation (2016) states that delivery of implants requires very well-trained healthcare providers to perform insertions and removals, and good follow up skills to resolve any problems principally bleeding irregularities. Otherwise, this challenge is more significant at the first level of care in developing countries, or in remote communities where access to higher levels is unreachable. Secondly, at secondary care the main challenge with implants is the establishment of service for the insertion and removal of the implants, however, most commonly, hospitals are run by doctors who sees provision of family planning methods as a primary level activity that is not specific to hospital. Consequently, in many cases, trained doctors often fail to provide implant services to women (Bahamondes, 2016).

2.5.2. South African National Contraception Clinical Guideline on subdermal implants

The National contraception clinical guidelines describe Implanon® implant as a small plastic rod, the size of a matchstick, administered subdermally in the upper arm, that releases small amounts of progestogen into the body for the period of three years. Implants do not contain estrogen, therefore they are more suitable for most women, including those that are breastfeeding, or those that don't want to use estrogen.

The implants are the most effective contraception method, because they have very low failure rates and high continuation rates. Regardless of their high cost, they have proven to be cost-effective when compared with pills and injections over the course of one year.

The trained healthcare professionals, either a doctor or a nurse is required to insert and remove implants. These professionals should be familiar with the most up to date national contraception clinical guideline policy, most specifically the medical eligibility criteria for progestogen-only implant.

According to national contraception clinical guideline (DOH, 2012), the contraceptive methods are effectively discussed, considering the key characteristics which include effectiveness, age limitations, parity limitations, mode of action, common side effects, non-contraceptive benefits, effect on STI and HIV risk, drug interaction, duration of use and return to fertility. Other information needs to be stated about contraceptives includes: the procedure required for initiation and screening medical eligibility (including HIV-related considerations and drug interaction where relevant), timing of initiation, methods-specific counselling, follow-up: schedule content, management of common side effects, availability: the availability of the method in South Africa and key recommendations for the future. The key characteristics of Implanon® are broadly explained below, underpinning with those explained for subdermal implant in the National clinical guidelines for contraception:

I.) Effectiveness

Implanon® has been proven worldwide as a highly effective contraception in prevention of pregnancy. It is atleast 99,9% effective and its last up to three years as long as the person meets the eligibility criteria.

ii.) Age limitations

No restrictions from menarche to menopause so no age boundary has been set.

iii.) Parity limitations

No restrictions with parity

iv.) Mode of action

Its prevent ovulation in the ovaries thus causing changes to the cervical mucus so that spermatozoa don't reach uterine cavity. It's also alters the endometrium lining of the uterus. According to Implanon® product monograph NV Organon (2005), in previous clinical trial conducted shows evidence that serum levels of etonogestrel over 90pg/ml will inhibit ovulation in 97% of women, but that lower concentrations can ultimately results into ovulation in up to 52% of women. Thus, the serum levels of above 90pg/ml have been detected within eight hours of implant insertion. The serum concentration decreases with time from maximum

of between 472 and 1270 pg/ml after 1–13 days of insertion, to a mean concentration of approximately 200pg/ml at the end of the first year. At the end of 3rd year, the mean concentration of etonogestrel ranges from about 111 to 202 pg/ml. The range of serum concentration may vary with the person's body weight in certain cases.

A clinical review of contraceptive failure in the United States has estimated a percentage of 0.05 in women experiencing unintended pregnancy during their first year of using the progestogen-only implant (Implanon Product Monograph NV Organon 2005).

v.) Common side effects

Changes in menstrual bleeding are common, including lighter bleeding, irregular bleeding, infrequent bleeding and amenorrhea. Other side effects include weight gain, headaches, nausea, dizziness, breast tenderness, mood changes, insomnia and abdominal pain due to enlarged ovarian follicles.

vi.) Non-contraceptive benefits

Prevention of symptomatic PID and iron-deficiency anemia

The implant may also help to alleviate dysmenorrhoea (painful periods were significantly improved) and acne (skin problems).

vii.) Effects on HIV and STI risk

This method does not protect a person against HIV, and other sexually transmitted infections. The consistent and correct use of condoms is the most efficient means of protecting against HIV and other sexually-transmitted infections.

viii.) Duration of use

Can be used throughout the reproductive years

ix.) Return to fertility

Fertility can come back immediately after removal

x.) Follow up regime

There is no routine follow-up regime required, unless when there are problems experienced by these women that need to be discussed, or which show significant issues that requires them to change to other contraceptive methods. Women should be advised to return immediately for assistance if: a) they can't feel their implant or has changed shape suddenly; b) they notices skin changes or any pain on the site of the implant; c) they become pregnant; and d) they develop any condition that can contraindicate continuation of the method concurrently.

Summary characteristics of subdermal implants

- Constant blood levels of hormone, much lower dose than progestogen-only injectable contraceptives
- Suppresses ovulation for the duration of use
- Efficacy is greater than male or female sterilisation
- Common side effects include irregular bleeding and amenorrhea, but both are less pronounced and/or frequent than with progestogen-only injectable
- Minimal effect on bone mineral density
- Minimal metabolic effects, no effect on blood pressure
- Rapidly reversible (undetectable blood levels seven days after removal)
- Single and two-rod systems much easier to insert and remove than older six-rod systems

Availability

Clients who have had implants inserted outside South Africa are seen at our services with increasing frequency. In these instances, referral systems need to be in place to deal with requests for implant removals. Implants are to be introduced into the public sector as soon as they are registered and procured. This requires a phased approach with service provider training and (IEC) Information, education and communication promotion amongst the general public.

2.6. CONTRACEPTION PRACTICES

Contraceptive practices consist of a wide spectrum of concepts, namely contraceptive methods, the use of contraceptives, the discontinuation of such use, and the non-use of contraceptives methods (Ahman and Shah, 2006; Maja and Ehlers, 2004). Maja (2007) has stated that factors that impact on contraceptive practices, effectively or ineffectively, resulting in planned or unplanned pregnancies respectively, where these factors are age-related issues, level of education and status, cultural values, beliefs and norms, religious affiliations, knowledge about contraceptives, contraceptive providers, and accessibility of contraceptives.

In South Africa, contraceptives and all family planning services are available free of charge at government hospital clinics. These contraceptive services are provided at different levels of care in accordance with service delivery guideline and scope of practice. There are expanded to facilitate contraceptive counselling and provision at different levels of service delivery. According to Maja and Ehlers (2004) adolescent mothers have failed to use these freely available services. A qualitative study conducted on 273 girls about contraception in Limpopo province reported 60% of the girls were not utilising the healthcare services, and gave different reasons for this, including that health workers denied them access to contraceptives since they perceived them as too young to engage in sexual intercourse (Ramuthuba et al., 2012).

In the National Contraception and Fertility Planning Policy and Service Delivery Guidelines (2014) it is stated the percentage of contraceptive use which is relatively higher, with estimation of 65% of sexually active women between the ages of 15 to 49 using modern contraceptive methods. According to a second national youth risk behaviour survey, in 2008 on Grade 8 to 11 learners, 37,5% of learners had already had sex using condoms commonly as their method of contraception, whereas 7% used injectable contraceptive and 4.2% used oral contraceptives. In addition, the main challenges with adolescent with regards to using contraception were peer pressure to be sexually active, or to conceive and demonstrate their fertility, inaccurate ideas about conception, reproduction and conception, and negative and judgemental healthcare provider attitudes towards teenagers who are sexually active clinics, which are not open after school.

2.6.1. Partner involvement/negotiation

Involvement of a partner is a significant variable influencing effective contraceptive practices. Women often report their male partners' resistance to family planning as a significant barrier to uptake and continuation, resulting in decisions to use contraceptive undercover, or indeed not at all (Miller, Severy and Pasta, 2004). However, on the other hand, men dominate decision making regarding family size, and their partners use contraceptive methods among variety of traditions (Soldan 2004). For example, there is a belief that many children are a symbol of prosperity, where this have been a great value in some men in certain traditions, thus contributing to a failure of effective contraceptive practices (Ziyane et al., 2003). It was evidenced that men show a lack of interest in matters related to reproductive health, where as effective decision-making in family planning is depicted by male engagement (Greene, 2000).

A qualitative study performed in Uganda on barriers to male involvement in contraceptive uptake and reproductive health services of men and women's perceptions in two rural districts, found that women participants perceived men as an obstacle to women's utilisation of family planning, and largely uninvolved despite the fact that men are often responsible for decisions which affect the household (Kabayenyi, Jennings, Reid, Nalwanda, Ntozi and Aluyambe, 2014). This was attributed to men's reluctance to support the use of modern contraceptive methods for their spouses or themselves, based on fears of harmful side effects and spousal infidelity, as well as preferences for the family size. Furthermore, findings also relate that men's lack of involvement stems from fear and negative health beliefs originating from lack of knowledge about contraceptives (Kabayenyi, Jennings, Reid, Nalwanda, Ntozi and Aluyambe, 2014). Literature has shown that spousal communication and approval are significant determinants to women's decisions to use modern contraceptive (Yue, O'Dannel and Sparks, 2010).

Williams, Stephenson, Juveka and Andes (2008) conducted a study on domestic violence and contraceptive use in a rural Indian village, it was reported that women experience limited autonomy, mobility and power related to household and fertility decision-making. Conflict arose in violation of gender roles. The autonomy described by women is subversive and nested within a framework where they are not able to make overt decisions about their bodies, often manifested by covert use of contraceptives. According to one of the participants

in their study, some husbands feel that a wife should always listen to them and obey them. Male power was related to men's ability to fulfill their duties and exercise control over their wives. According to women, covert contraceptive use merited discipline, because the decision to use contraception should ultimately belong to the husband (Williams, Stephenson, Juveka and Andes, 2008).

A qualitative research study conducted a systematic review on the limits to modern contraceptive use among young women in developing countries in 2009, where it was found that men attempt to control women not to use contraceptive (Williamson, Parkes, Wight, Petticrew and Hart, 2009). It was also evidenced that certain men even fight against women visiting the clinic for family planning. In some instances, men destroy clinic cards or contraceptive received from the clinic. This action was due to some men wanting to prove their fertility as the result of their action (Williamson, Parkes, Wight, Petticrew and Hart, 2009).

A cross-sectional exploratory study performed on contraceptive decision-making background and outcomes of contraceptive methods by Picavet and Wijsen (2011) argued that the partner may not always be the source of information or advice for women. However, it is evidenced that the influence is much more prominent for those methods controlled by a woman's partner, especially condoms, vasectomy and the natural method. Women rated their partners' involvement in contraceptive decision-making and use as moderate score. The majority of them did not find it particularly important that their partners are involved. In some cases women did think their partners are very satisfied with the method that is currently used. They also tended to think that their partners regard the current method more favorably than other methods. Furthermore, it was found that women who use oral contraceptive pills communicate less with their partners about contraception than do the users of other methods. Users of natural family planning on the other hand communicate more with their partners (Picavet and Wijsen, 2011).

2.6.2. Cultural, Societal norms and Values system

In general, a person's decisions are most formed from the perceived attitudes and behaviours of others in the community. Societal norms are likely to influence women's own attitudes, therefore may eventually influence their use to family planning (Rimal and Real, 2003). A

study performed by Stephen et al. (2007) in six Sub-Saharan countries found that the percentage of women in the community approving of family planning was positively associated with individual women's current use of modern contraceptive. Another ethnographic study conducted amongst Hindu women in one semi-urban village of Nepal revealed that women had internalised the expectation of their society and family and felt a strong pressure to produce sons (Brunson, 2010). However, this expectation led women to keep on trying their lucky to produce sons if only birthing daughters. Nepal is patriarchal, demanding obedience to one's husband. Therefore, a husbands' approval of family planning is taken as a pivotal determinant of women's contraceptive use (Kamal and Lim, 2010).

However, cultures have restrictive laws and traditions, which affect the effective use of contraceptive. For example, in some African cultures, women and young girls seek their husband or partner's approval for using contraceptives (Maja, 2007). In Swaziland, women are marked with minority status, which, adversely, causes them to become submissive to their husbands, and to look for their assistance in family planning (Ziyane, Ehlers and King, 2003). Cultural taboos are major obstacles to informed discussions about sexual and reproductive health issues, particularly with regards to young people (Cobh 2010).

A Cross-sectional survey conducted on factors associated with contraceptives used in a rural area of the Western Cape Province found that cultural values, beliefs and communication with partners affects use contraceptives. South Africa society, particularly in rural areas, is still male-dominated, and women feel the pressure to prove their fertility (Peel and Moreje 2013). It was further evidenced that communication between women and their partners is reported to increase the likelihood of them to use contraceptives, even though high self-esteem was reported among women. The South African women with higher education levels were evidenced to be more likely to use contraceptive as far as other studies globally support this determination (Kham, Shah and Saba 2007, Department of Health 2005).

In now days, traditional values and cultural beliefs regarding reproduction can cause variety concerns about the effects of certain contraceptive and may result to unexplained rejection of effective contraceptive methods. The taboo against pregnancy before marriage and breakdown of social mechanisms is valid issue, especially with young women.

2.6.3. Contraception Education: Nurse initiated education

Health Practitioners play a vital role in the delivery of high quality contraceptives. Bednash, Worthington and Wysock (2009) argues that family planning assists women and men in maintaining reproductive health, allowing women to avoid unintended pregnancies, and helping families in determining the number, timing and spacing of their children. This contributes to the wellbeing of individuals, families and the broader community as well. However, nurse practitioners provide the majority of family planning and other health facilities.

The current practices guidelines have emphasised the critical importance of contraceptive counselling and the provision of initial and continuing contraceptive care (Landry, Wei and Fast, 2008). The World Health Organization in 2004 released updated eligibility criteria for contraceptive use, and included recommendations for general practices and counselling, stating that counselling is a fundamental element in quality of care, and is also an essential part of both to client's needs, not only in contraception, but also related to sexuality and prevention of STIs such as HIV (WHO 2014). Noones (2007) suggests that strategies for ensuring contraceptive success including barriers to use, such as waiting periods and prerequisite screening, especially with provision of hormonal methods.

The family planning centres are facing a variety of challenges at the present time, such as serving more diverse populations, with increasingly complex needs, rising costs, a poor economy and new technology (Butler and Clayton, 2009). Despite the challenges, there is a huge need for more staff or health practitioners to cover the shortage of healthcare providers in the Family Planning Department, which continues to be an unresolved issue (Bednash, Worthington and Wysock, 2009).

A study on healthcare provider's knowledge about contraceptive evidence examining a barrier family planning care (Dehlendof, Levy, Ruskin and Steinauser, 2010) reported that one contributor to poor communication between providers and parents about contraceptive methods may be that providers have incomplete knowledge of evidence based information about contraceptive method. On the other hand, the impact of contraceptive counselling on the use of contraception is not well understood (Moos and Bartholomew, 2003). Additionally, the finding showed that there is a considerable amount of misinformation about contraception

among the providers and those gaps in knowledge to be more common with the older providers and family medicine providers. Knowledge of actual contraindications for specific methods is also essential to quality contraceptive care (Dehlendof et al., 2010).

In South Africa, the healthcare providers are provided with training and capacity-building to ensure they have sufficient knowledge, attitude, and skills to provide holistic quality contraceptive and fertility-planning services, according to their scope of practice (National Contraception Policy and Service Delivery Guideline, 2012). Previous literature argues that women in particular may be discourage from using contraceptives, with evidence that the methods option is frequently limited in the public sector by the options and practices of primary health care nurses. Other findings show that the primary health care providers play a critical role in influencing a woman's uptake of contraceptive services (Department of Health, 2001; Schneider and Barron, 2008).

The foremost significant tool for contraceptive is effective counselling. Effective counselling requires that provider is empathetic, respects, non-judgmental toward all clients, regardless of a client's age, sex, age, race, religion, culture, disability and/or social status. The provider should be a good listener to client's needs, develop open interactive communication, and use appropriate language and materials. She must help the client choose an appropriate contraceptive method, a method that is medically safe, and which takes into to account the risk of exposure to STIs and HIV (Department of Health 2001)

According to the Department of Health (2001) the healthcare providers can become a barrier to effective contraceptive use, especially if the guidelines that are laid down by the National Contraceptive Policy Guidelines are not followed. The initiation of hormonal contraceptives must not be restricted to a period when a woman is menstruating. Until a reliable test is available, a woman's menstrual history should be taken as sufficient and accurate to exclude pregnancy, as long evidenced or history validate that the women has not conceived. Conversely, it was mentioned that counselling and discussions between the contraceptive provider and a client should take place in a private and comfortable environment and that confidentiality should be maintained. After the counselling session, the client should be satisfied with the method chosen, and be aware of how to use the contraceptive methods, including understanding their side effects and the actions to be taken when experiencing

problems and how to undertake follow up. Subsequently there were frequent reports from contraceptive clients about the negative attitudes and rudeness of service providers, which in general are also regarded as not being youth friendly (Department of Health, 2001).

It is the role of a nurse practitioner to educate the patient on contraceptives. It is a general expectation that nurse practitioner will give patients the information they need to take their oral contraceptive pills correctly, so that the method is safe and effective (Schrader and Schrader, 2001). A descriptive study conducted on healthcare provider communicator style and patient comprehension of oral contraceptive use discussed that there was poor instruction from the practitioners of oral contraceptive pill, which contributed to a lack of understanding by the patient and patient had poor recall or lack of motivation, tied to failure. However, it was stated that patient noncompliance and/or dissatisfaction may result not from healthcare providers' lack of knowledge or expertise, nor from their failure to provide accurate and complete information, but instead from the manner in which the information is presented (Schrader and Schrader, 2001).

The healthcare provider must be prepare to be attentive, listen and use friendly communicator style to bring positive provider-patient relationship, where, by so doing, they prompt client to become active participants in their healthcare encounter. Consequently, the provider is in the position of power that can intimidate or frighten the patient, and result in a less than optimal communication exchange (Schrader and Schrader, 2001).

A global survey of healthcare practitioner's beliefs and practices around intrauterine contraceptive method use in nulliparous women conducted by Black et al. (2013), it was found that healthcare nurses were more familiar were with medical eligibility criteria of World Health Organization, which should be used when screening for contraceptive use. The finding reveals that practitioners perceived barriers in the provision of intrauterine contraceptive methods, which were difficult insertion, concern about pelvic inflammatory diseases, concern about insertion pain, and concern about infertility. It was further revealed that internationally, nurses were significantly more likely to have correct knowledge of medical eligibility criteria of WHO compared to other practtioners, knowledge was highest amongst Latin Americans 57,7%, and lowest amongst Australians.

A survey of knowledge, attitudes and practices relating to emergency contraception among health workers in Manisa, Turkey by Sevil et al. (2004) evidenced that almost one in ten of the healthcare providers were not familiar with the term ‘emergency contraception’. Furthermore, findings demonstrate how only a few healthcare providers knew how to use the intra-uterine contraceptive devices for emergency contraception and doses of emergency contraceptive pills. It was further revealed that knowledge among healthcare providers about emergency contraception is inadequate. Many healthcare practitioners were feared to be disseminating information about emergency contraceptives will encourage young people to have unprotected sexual intercourse and also lead to increase sexually transmitted infections such as HIV.

2.6.4. Psychosocial determinants of contraceptive use

2.6.4.1. Trust

Trust is a psychosocial variable that needs further exploration in relation to contraception. According to Glasier et al. (2000), who investigated women’s attitudes in a scale of 1894 women, where there were 450 in Scotland, 900 in China, and 544 in South Africa, it was found that only 36 women believed that they would not trust their partners, which creates a threat to the idea that new forms of male contraception would not be successful for the reason of trust. However, this is contradictory to findings revealed by Erbehardt et al. (2009) in a study on attitude towards the male contraceptive pill in men and women in casual and stable sexual relationships in England, where it was found that women had less trust that men would use the male pill effectively. These results also revealed that being a female and having trust in men’s reliable use of the male pill predicted a positive attitude, while males involved in causal sexual relationships or in relationships and having low trust in the efficacy of contraception each reliably predict negative attitude (Van Wersch et al., 2012).

Erbehardt et al. (2009) have argued that the trust-related psychological factor is self-efficacy, which is a theoretical construct representing the belief that one is capable of making the correct decision in order to come to the desired outcome. According to Van Wersch et al. (2012) once a male has the self-belief to take responsibility for the contraception in sexual

interaction, he will adhere to the prescriptions of proper use and will at least trust himself to do so.

Bauman, Karasz and Hamilton (2007) conducted a qualitative study in 26 adolescents on understanding failure of condom use intention among adolescents, where it was found that 21 participants that they do not use condoms with the trusted partner. Both boys and girls noted that comfort with the partner was important to their decision to stop condom use, and described several situations in which comfort resulted in trust. It was evidenced that young women do not use protection with their partners if they have known them for a long time, with no other relationships and if they know that their partners are faithful to them and they can trust or rely on them. As one participant is cited as noting, 'well ok this is somebody I can trust too maybe it wouldn't bother you as much that you didn't use a condom', 'if I know him for a long time'. It was also found that asking a partner to use a condom is often avoided due to embarrassment or fear that one will be perceived as untrustworthy, or infected.

2.6.4.2. HIV/AIDS determinant

Agboghoroma (2011) conducted an investigation on contraception in the context of HIV/AIDS review, where it was reported that the control of the spread of HIV in both adults and children is a major challenge to reproductive health. Despite the availability of safe and effective contraception methods, unintended pregnancies and STIs continue to remain reproductive health concerns for women (Barbour and Salamoh, 2009). Family planning can play a fundamental role in preventing HIV transmission and more HIV positive births would be prevented by increasing contraceptive use than by increasing nevirapine use during pregnancy (Reynolds et al., 2006). According to Watts et al. (2008), there are reports that simultaneous use of antiretroviral and hormonal contraception may present some challenges with regards to potential drug interaction, however, direct evidence on drug interactions is limited, and has be addressed elsewhere. Consecutively, eight observational studies reported no increased risk of HIV disease progression with hormonal or intrauterine contraceptive use; whereas one randomised controlled trial found that there is an increased risk of declining CD4 cell and death for hormonal contraceptive users, compared with intrauterine device users. HIV-infected women who used hormonal contraception had increased risks of acquiring sexually transmitted infections, compared with women not using hormonal contraception,

similar to the risks reported among uninfected risk of HIV transmission to uninfected women (Curtis et al. 2009).

According to World Health Organisation (2006), reportedly in most Sub-Saharan African nations, over 20% of the adult population is infected with HIV, for example, South Africa, with an adult HIV prevalence of 21.5% and Swaziland with 38.3% followed by Botswana 37.3% the outcome of unprotected sex, including unsafe abortion and planned pregnancy, can even be prevented by access to contraceptive. Gay et al. (2011) argues that more programming is needed to expanded access to contraceptive information and care provided by trained providers adhering to rights-based approaches to service provision. Furthermore, more policies are required, including those that support integrated services. Also other interventions such as transforming gender norms, reducing violence against women, promoting legal rights and increasing employment opportunities need to be implemented in order to support safe sexual behaviour.

The risks factors are due to higher number of lifetime sexual partners, who are at greater risk for intended pregnancy, and show higher risks of sexual transmitted diseases. In addition, less than a third of young adults use condoms consistently, and some teenagers use alcohol and drugs in combination with sex, which impairs safer sex decision making (Centers for Disease Control and Protection, 2002).

2.7. Experiences of contraceptives and existing literature on Implanon contraceptive in other countries

The Cross-sectional retrospective study on Users' perspectives on Implanon in Malaysia, a Multicultural Asian countries (Mastor et al., 2011) reveals that most of the population choose Implanon® implant because it is effective for the long period and doesn't requires any compliance. Furthermore, it was revealed that most women discontinue Implanon due to irregular bleeding as a major concern. Other medical side effects that were commonly raised were weight gain, mood swings, headache, nausea, reduced libido and hair loss. These effects are giving a concern whether South African women are experiencing the similar problems with use of Implanon contraception or not. Hence, if not we can conclude that these

effects are influenced by lifestyle and environment modifications, ethnicity and other factors which are indirectly related to the use of Implanon®.

In a study conducted on experiences with Implanon® in Southern Nigeria (Ojule, Oranu and Enyindah, 2012) it was found that women who are currently on Implanon® experience unwanted side effects, where the study found vaginal spotting 60%, menorrhagia 13,3 % and inter-menstrual bleeding 13,3% were the most prevalent side effects encountered during this study. Among the participants 51,8% of the clients changed from other contraceptive methods to Implanon®. Other participants discontinued Implanon® during the study period, whereas the continuation rate was 94,6% (participants who accepted Implanon®). This also indicates client satisfaction, acceptance and continuation with Implanon®.

A study on implantable contraceptives for women with regards to their effectiveness, discontinuation rates, returns of fertility, and outcome of pregnancy study (Glasier, 2001), revealed that continuation rates are high compared to other hormonal methods. Menstrual disturbance is the common reason for discontinuation, with headache, acne, weight gain, and desired for pregnancy which are other reasons for removal. Also, it was found that fertility returns immediately after Implanon removal. Among 1716 Implanon® users, discontinuation rates were 30,2% within the period of three years in Europe and Canada, when compared with only 0.9% in South East Asia. In another similar cohort study on multicenter efficacy and safety of the single contraceptive implant Implanon® (Craxatto et al., 1999), 31% of women discontinued Implanon® in the first two years, whereas the continuation rate was 6% for the next three years.

a study on the safety and efficacy of Implanon®, a single-rod implantable contraceptive containing etonogestrel. Uterine bleeding patterns were respectively the primary adverse effect reported in 43 subjects (13%), resulting in the discontinuation of treatment. Women who discontinued Implanon® were found to be the highest within the first eight months, whereas prolonged bleeding episodes were greatest with figures of 36% and 14%, later decreasing to 14% and 7%, respectively. Other adverse effects, apart from bleeding irregularities, were emotional lability, weight increase, depression, and acne. The most common adverse effects raised rapidly include headache, vaginitis, acne and dysmenorrhea, emotional lability and upper respiratory tract infection. Other serious adverse effects that occurred were one acute

exacerbation of depression and one ruptured ovarian follicle, which was also investigated further. Furthermore, four subjects had breast masses, which were not present during the baseline examination.

An integrated analysis of nonmenstrual adverse events with Implanon®, (Urbancsek, 1999) study conducted in Chile, Europe, Thailand, Singapore and Indonesia. Implanon® related adverse effects that were frequently reported were acne 15.3%, breast pain 9.1%, headache 8.5%, weight increase 6.4%, abdominal pain 4.3%, libido decrease 2.9%, dizziness 2.9%, injection site pain 2.6%, emotional lability 2.5%, influenza like symptoms 2.1%, and nausea 2.0 percent. There were no serious adverse effects reported in the study population. Adverse events raised as the primary reason for discontinuation in the study population were weight increase amongst 13%, acne amongst 9%, and decreased libido amongst 6%, depression amongst 4%, and headache amongst 3 percent. Implanon® users showed no significant effect in blood pressure; beside which, changes were 0.1% systolic blood pressure and 0.4% diastolic blood pressure, whilst Norplant® had figures of 0.9% systolic and 0.7% diastolic pressure, respectively. In comparative studies the reasons for discontinuation were not distinctly different between Norplant® and Implanon®.

Unintended pregnancies with the etonogestrel implant (Implanon®): a case series from postmarketing experience in Australia (Woolrych and Hill, 2005) conducted to identify common reason for unintended pregnancy to Implanon® users. The study findings showed 218 cases of unintended pregnancy, 45 of which had insufficient data to assess the reason for contraceptives failure, where 46 women were determined to have been already pregnant before Implanon® insertion. In the 127 cases that were remaining there was failure to insert the implant in 84 women. The other 19 cases were linked to incorrect timing of insertion, three cases were due to expulsion of Implanon® and there were 8 cases of interaction with hepatic enzyme-inducing medicines. The remaining 13 cases involved product/method failures; where Implanon® was known to be still in place, and there was no other explanation for contraceptive failure.

A comparative randomised multicenter study comparing the efficacy and bleeding pattern of a single-rod (implanon) and a six-capsule (norplant) hormonal contraceptive implant (Zheng et al., 1999), a total of 200 health women were recruited and were also randomised to receive

Implanon® (100) or Norplant® (100). The cumulative continuation rates of both implants were high, and no significant differences were able to be observed in the continuation rates. The contraceptive efficacy with regards to number of pregnancy reported no pregnancies in treatment. The highest number of bleeding/spotting days occurred within the first 90 days period to both implants were 33,5 with Implanon® and 34,5 days with Norplant®. The bleeding was less frequent in the Implanon® group than in the Norplant® group. Heavy or prolonged bleeding and irregular bleeding were the major reasons for removal of the implant in all treatment groups. The discontinuation rates due to bleeding problems were 4.0%, 6.1%, 8.4% and 8.4% for the Implanon® group at 1, 2, 3 and 4 years, respectively; and 4.0%, 9.4%, 15.0% and 15.0% for the Norplant group, respectively. Body weight showed a tendency to increase during the study periods in both treatment groups.

A comparative study on insertion and removal of Implanon® conducted by Mascarenhas (1999), also presented a comparison between Implanon® and Norplant®. In comparative studies, the time of insertion was assessed in 670 and 665 women. The mean time for insertion of Implanon® was 1.1 minutes, and 4.3 minutes for Norplant®. Removal times of Implanon® and Norplant® were assessed in 633 and 137 women, respectively, in comparative studies. The mean time for Implanon® removal was 2.6 minutes, and 10.2 minutes for Norplant® removal. Other study findings were bruising and tenderness at the insertion site for the first few days after insertion or removal. The incidence of complications during removal was significantly lower with Implanon® when compared with Norplant®.

A qualitative survey in young women's knowledge, attitudes and behaviors related to long acting reversible contraceptives (Spies et al., 2010) conducted in rural Midwestern states. It was found that only 8.0% of women had heard of Implanon® and that most women reported knowing little about long-acting reversible contraceptives. Women were concerned with potential side effects and problems stemming from using new contraceptives. Women desire more information about long acting reversible contraceptives, and other women had questions about cost, length of use, effectiveness, and side effects, how they work, and how they affect fertility. Although women were concerned with the potential side effects of using long acting reversible contraceptives, they perceived other benefits, such as ease of use and having ability to have regular periods.

Another study done on contraceptives and personal responsibility (Patel, 2014) reveals that the main issue for the Implanon® implant is the change in bleeding patterns, and this adverse effect is responsible for women discontinuing use if they were not adequately counselled. While no pregnancies were reported in the study population, pregnancies reported were related to insertion issues. Implanon® was found to be safe for use in obese and hypertensive women. Intrauterine system contraception (IUS) is comprised of T-shaped plastic frame with cylindrical shaped reservoir, which contains 52mg levenorgestrel used as an emergency contraceptive. Common misconception with intrauterine contraceptives was difficulty with insertion, pain and discomfort during and after insertion, with a higher risk of uterine perforation and expulsion.

In review of the above studies, it shows that Implanon® is highly effective method of contraception. However, there were several side effects which were highly problematic for Implanon® users. The main side effect commonly raised was menstrual bleeding, which was a cause for premature discontinuation of Implanon®. Also, there were few pregnancies reported as a failure of Implanon® in the study findings.

Although continuation rates for Implanon® are very high, there were other side effects, which were similar in most clinical studies, including weight gain, mood changes, headache, skin problem, breast pain, insomnia and menstrual bleeding. If women were given proper counselling regarding these side effects, then it would have contributed to great possibility for them to continue with treatment.

2.8. CONTRACEPTIVE THEORIES AND FRAMEWORKS

2.8.1. Vigilant decision making Model

According to Picavet and Wijsen (2011) the quality of the decision can be determined by the quality of decision-making process the person has undergone. It is clear that there is no of an ideal contraceptive method, because all methods have both advantages and disadvantages (Mills and Barclay, 2006). However, the conflict theory of decision-making presents indicators of the quality of decision-making (Chambers and Rew, 2003). According to this approach, vigilant decision-making is a seven-step process, in which the decision maker: canvasses a wide range of alternative courses of action; clarifies relevant objectives and values related to

the choice to be made; carefully weighs the positive and negative consequences of each course of action; searches intensively for new information to use in evaluating each course of action; takes new information into account even if it does not support the preferred course of action; re-examines positive and negative consequences of all courses of action before making the final choice; and makes detailed plans and contingency plans to implement the chosen course of action. Vigilant contraceptive decision-making requires commitment to the decision-making process, and trust in one's capability to make a satisfactory conclusion. Chambers and Raw (2003) also referred this as a decisional esteem. This theory claims that the decision-making process ought to be as explicit and conscious as possible. The searching of relevant information and the weighing of that information against personal values and objectives is deemed very important. Therefore, the model has a mostly individual and cognitive focus (Picavet and Wijsen, 2011).

Another significant theoretical approach is the theory of reasoned action (Fischbein and Ajzen, 2010). It further suggests that stronger intentions lead to increased effort to perform the behaviour, which may also increases the likelihood for the behaviour to be performed. A positive attitude toward a given course of action, and perceived norms supporting that behaviour lead to a high intention (strong commitment) to perform the behaviour. According to the theory, the intention to perform certain behaviour precedes the actual behaviour. This reflects people's beliefs about their capabilities. Although the planned behaviour model was developed only to investigate the intention to perform a single behaviour, results of various studies indicate that the model works even more adequately in situations involving alternatives (Trafimow, 2009).

2.8.2. The social cognitive theory

Social cognitive theory is based on the belief that people do not only learn from their own experiences, but instead through observing the actions of other people and the outcomes of those actions. According to Bandura (1989) the theory stresses the importance of observational learning, imitation and modeling. However, the theory also suggests that there is reciprocal interaction between personal factors, behaviour, and environmental influences, where 'triadic reciprocal causation' is the term that refers to the interrelationship between these factors (Eysenck, 2004). The influence of behaviour, environment and person depends

on which factor is strongest at any particular moment. Maddox-Brown (2011) states the concepts of the social cognitive theory that are relevant to health behaviour change are, observational learning, reinforcement, self-control and self-efficacy. Contraceptive research shaped by this theory accepts the possibility of contraceptive use or non-use as being learned behaviour, based on how a person perceives and reacts to environmental influences. The person's reaction to contraceptive will then be also determined by personal factors.

2.8.3. The reason action theory

According to Picavet and Wijsen (2011) the theory of reason action approach is used to describe the decision making process and acceptance when a person has to choose the contraceptive method to use. The model is adapted to include relevant determinants and outcomes for contraceptive decision-making and acceptance. The model has been adapted to address demographic background variables, as well as contraceptive information and sexual background. This further comprises previous experiences with contraception, sexual behaviour, relationship characteristics, and childbirth. This reflects that contraceptive decision-making is a dynamic process dependent on life stage, situation, experiences, knowledge and new information (Free et al., 2005). However, previous experiences are to be considered when a woman has to choose the course of action regarding birth control, as variables such as values and social influences are taken as important, based on the conflict theory. According to Picavet and Wijsen (2011) decisional esteem is a form of self-efficacy with regard to contraceptive decision-making. Unlike the theory of reasoned action, this model does not have behaviour as its end point, but outcomes with regard to contraception and reproductive health.

Characteristics of contraceptive method choice

The following elements are used in this model to explain their correlations to contraceptive method choice as investigated in previous studies.

Background characteristics

Background characteristics comprise of demographics or personal information of a woman. This characteristic is crucial in the model, as they serve as indicators on the basis of a woman's decision-making process. Background information includes age, religion, culture, ethnicity, educational standards, and marital status. They may have an impact or influence on behaviour.

Age is of great importance. It is, moreover, connected with many other background characteristics, such as relationship type and duration, number of children (parity), child wish or other life aspirations. For example, in contrast to younger women, older women are more likely to have a steady, long-lasting relationship, and children. They are also more likely to have more experience with multiple birth control methods and presumably have a more educated opinion on the subject. Older women are less likely to use the pill than younger women. In contrast, older women are more likely to use long-lasting methods or sterilisation.

Wijsen and Zaagsma (2006) argued that educational level is related to contraceptive method choice and compliance on a chosen method. Religion and ethnic background also prove to be important in determining use of contraceptives (De Graaf et al. 2005). It is common for strong religious people to refuse using contraception, or abstain from sexual intercourse. With experience on use of contraceptive, either good or bad experiences may also influence the decision-making process.

Determinants

Information and values are important determinants according to the conflict theory of decision-making. Woman can find different aspects important about their contraceptive method. Emphasising different aspects of contraception like effectiveness, side effects, and health risks, protection against STIs and HIV/AIDS, or effects on one's sex life can result in different behavioural preferences. For example, if a decision is mainly based on the absence of side effects, hormonal methods are probably not the first choice. Literature shows that the aspects that are judged as most important by most women change over time. Effectiveness used to be most important. Nowadays, health risks caused by prolonged use of hormones are becoming more prominent (Van Dalen et al., 2004).

Previous research has shown that people's behaviour is strongly influenced by the confidence in their ability to perform that behaviour (self-efficacy). Having a specific sense of self-confidence and self-esteem about one's decision-making abilities has also been called decisional esteem. It has been linked to improved quality of the decision-making process (Chambers and Raw, 2003).

Social influences

Although it is often the woman who makes a decision about what contraceptive method to use, she doesn't make that decision in a social vacuum. In this section, social influences are explored. First, the partner may be important in the decision-making process. When a doctor is consulted, he or she may exert influence as well. More generally, sexuality education or other sources of information are important for coming to a well-informed decision. Finally, environmental constraints may also act as barriers to obtaining or using particular methods of contraception.

The influence of the partner

Most women using methods of family planning have partners. In many cases, these partners are, to some extent, involved in the decision-making process. The partner's demographic characteristics, attitudes, beliefs and expectancies towards contraceptives can influence contraceptive method choice and use in a relationship. Quality and power dynamics of a relationship may determine birth control preferences. However, many women actually make their contraceptive decision without the involvement of their partner. Women prefer having control over contraception themselves and most men believe it is women's responsibility to protect themselves from getting pregnant (Picavet and Wijsen, 2009).

Women consider birth control to be their responsibility, because they are the ones running the risk of getting pregnant. This is the main reason why women are more reserved towards a possible male contraceptive pill than men are. They all encourage/support research developing such a pill, but more than half of these women do not intend to use it when it becomes available. They don't trust men to take responsibility for birth control, because they are not ultimately the ones at risk of getting pregnant when it is not correctly used.

Some men don't want their partners to use any kind of birth control, which may cause women to choose a product that can be kept secret from their men, like an implant or IUD (Lowe, 2002). They may also veto the use of particular methods, like condoms.

Family doctors and other providers

When a doctor has actively involved the women in the decision-making process, she is less likely to use contraception inconsistently (Moreau et al., 2006). It is essential that women are sufficiently informed by their doctors about possible alternative contraceptive methods, because those might better suit their situation. Therefore, doctors should not rely on the initiative of the woman, but take the initiative for providing information themselves.

Sex education and information

An important way to gain knowledge about contraceptives is sex education received from parents, schools and the media (Skouby, 2004). Men and women learn about available birth control methods and are enabled to compare them. Parents are an important source of information. Seventy-one percent of young women have talked about contraception with their parents (De Graaf et al., 2005). Parents' attitudes towards contraceptives determine to a great extent whether their children confront them with questions concerning sexuality or birth control (Van Dalen et al., 2004).

Through different media, like magazines and the internet, people can be informed about the contraceptive experiences of other men and women. In this way, social norms may become evident. The internet is an increasingly important medium for searching information about health-related subjects, including sexuality and contraception. Friends and other people in the woman's environment may provide information and advice concerning birth control as well. Source of information may be related to contraceptive method choice, but research is needed to confirm this.

Environmental constraints

However, younger women are still concerned about being stigmatised as 'looking for sex' when carrying a condom (Van Dalen et al., 2004). Other possible constraints are the lack of health facilities, while availability and cost of such facilities are determining factors. The

mentioned liberal abortion legislation, extensive sex education in schools, general practitioners as the primary source of contraceptive care and special contraceptive care facilities for groups at risk of poor contraceptive practice are the prerequisites of contraception use and low abortion rates. These requirements all apply to Dutch society. Since (complementary) health insurance and contraceptives are expensive, personal income may also be an important factor, because one must be able to afford the product.

Outcomes of contraceptive decision-making

Usually, research on the quality of contraceptive decision-making is limited to the outcome over whether or not a reliable method of contraception is being used. More users of reliable methods correlate to better decision-making. However, increasingly, other measures are used to assess the quality of the decision-making process. For example, satisfaction with the contraceptive method of choice, as measured by continuation rates after a specified time frame, is taken into consideration. Outcomes of contraceptive use may influence the continuation of its use and a possible reconsideration of alternative methods. Important factors that have been described in the literature as predictors of a revision of method choice include dissatisfaction with side effects and fear of long-term health risks (Free et al., 2005).

2.9. Conclusion

In this chapter, a review of the literature revealed the history of contraceptive as it started from Europe and Asian countries, showing how ancient contraceptives have transformed to influence the modern family planning practices. However, Implanon® is an effective contraceptive method, where existing literature shows the great impact it has made across in various populations, while detailing its drawbacks. In addition, there is a lack of adequate research in evaluating the extent to which contraceptive services are rendered in remote countries, as well as issues that are experienced by young women, particularly within developing country contexts. This research attempts to address and explore experiences and perception of Implanon® users, including gaps, barriers and issues related to Implanon® as a contraceptive method. The following chapter, Chapter three will focus on the research methodology used for the study, including the advantages and limitations; as well as the tools used to analyse the data.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. INTRODUCTION

The purpose of this research study is to explore and describe the experiences and perceptions of Implanon® users at a selected primary healthcare clinic in KwaZulu-Natal. Research methodology refers to the steps, strategies and procedures used for data gathering and analysis in research (Polit and Beck 2008). In this chapter, the research process and design which include the sampling methods, data collection procedure and instrument, data analysis, target population and sample, as well as means of to ensuring trustworthiness, are described in detail.

3.2. RESEARCH DESIGN

A research design is the blueprint for planning the layout of the study and maximises control over factors that could interfere with the validity of the findings (Burns and Grove, 2005). Research design is a clearly defined structure within which the study is implemented (Burns & Grove, 2001). Botma et al. (2010) indicate that research design serves as the proverbial 'backbone' of the study.

This study adopted mixed method design which is the combination of qualitative and quantitative approach to collect and analyse data (Creswell and Tashakkori, 2007). The integration of qualitative and quantitative methods is common in research, because mixed method design can provide detailed and comprehensive data in order to achieve the research objectives and further provide answers to the research questions.

This study employed the exploratory descriptive design using both qualitative and quantitative approach, which covers firstly quantitative data collection, followed by qualitative data collection. This method was used to obtain a significant understanding from the quantitative data, and then the qualitative data, in order to provide better explanation and description of the study in question. The quantitative approach was used to explore perceptions regarding the use of Implanon® as perceived by respondents, whereas qualitative approach focuses on experiences with the use of Implanon®. The exploratory descriptive design is recognised as

the easiest and most straightforward of the mixed method designs commonly used (Creswell and Clark, 2007). The benefits of the exploratory descriptive research design are as follows:

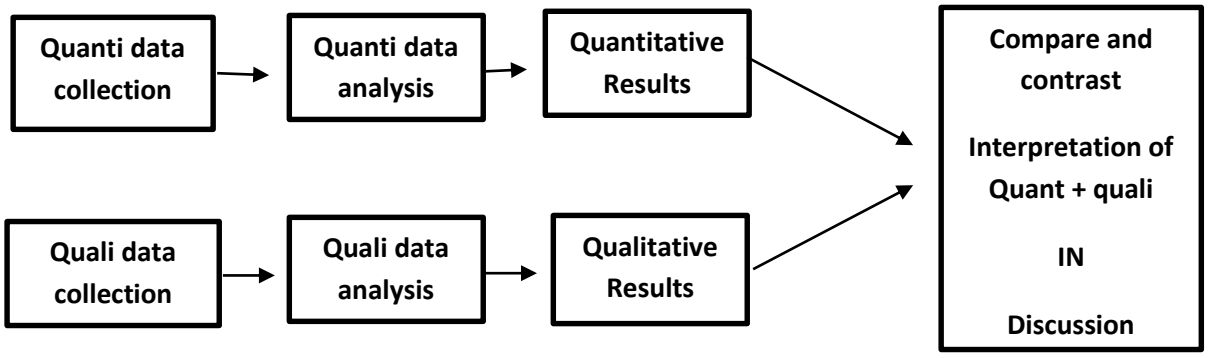
- an effective method to collect accurate data and to provide clear picture and true meaning on the phenomenon, making it much easy for the reader to understand the study findings.
- an appropriate design to gain new insights, discover new ideas and increase knowledge.

Therefore, using both methods can provide detailed and comprehensive data and interpretation of data. The current study is based on the experiences and perceptions of Implanon® users, and therefore the use of mixed method design is made that much more appropriate in this investigation.

3.2.1. Triangulation design in convergence model

In this study triangulation of convergence model, the researcher collected and analyzed quantitative and qualitative data separately on the same phenomenon and then the different results are converged by comparing and constrasting the different results in discussion while interpretation is made. The purpose of this was to conclude with valid and well substantiated conclusion about single phenomenon (Creswell, 2016). A fixed mixed approach was used because the use of quantitative and qualitative method was predetermined and planned before the study was implemented. The data was collected in the two methods and was merged in the data collection, and discussion.

Diagram 3.2.1. The below diargram shows how the two approaches will leads to data being merged and interpreted (Creswell, 2016)



3.2.2. Exploratory descriptive design

In this study, exploratory descriptive design was used as a framework for implementing this research. Lo Boindo-Wood and Harber (1994) point out that the terms “exploratory” and “descriptive” were used alone, interchangeably or together to describe the design of the study. Firstly, an exploratory study explores and investigates the full nature of the phenomenon, the manner in which it is manifested, and the factors to which it is related (Polit and Beck 2004). Descriptive method is one in which the research describes and explores a phenomenon in a real life situation, and also generate new knowledge about a topic (Burns and Grove 2005). This design assisted in the provision of data to determine the phenomenon as it happens naturally, where no manipulation of the subjects will be made. The phenomenon in this study focused on experiences and perceptions of women that have inserted the Implanon® implant as contraceptive method. However, mixed methods were used which were quantitative in approach in order to address perceptions and qualitative approach to address experiences of women that are using Implanon® as a contraceptive.

3.2.2. Organisation of the study

The study will be conducted in **two phases** and the methodology used in each will be discussed separately.

Phase 1: (section 3.3) Quantitative approach, this approach was used in data collection to understand and analyse perceptions of Implanon® users.

Phase 2: (section 3.4) Qualitative approach was used to obtain experiences of Implanon® users on a portion of the sample as described by in the study sampling.

Because of the two approaches used and the uniqueness of steps between these two different approaches, these approaches will be discussed under separate phases.

3.3. PHASE 1: QUANTITATIVE APPROACH

Burns and Grove (2005) define quantitative research as a formal systematic process in which numerical data was used to obtain information in a problem area of the research. A quantitative research approach is appropriate for this research as it addresses the

perceptions regarding the use of Implanon®, which was explored and analysed through numerical and statistical procedures. Evidence for a quantitative study is gathered according to a specific plan in which formal instruments are used to collect the needed information. However, the data was determined by counting the responses given by respondents under each question and presenting these numerically. A quantitative approach was used in this study to obtain information regarding the perception on Implanon® users in the selected primary healthcare facility in KZN.

3.3.1. Target population

Population refers to all elements, such as individuals, objects, events or substances that meet the sample criteria for inclusion in a study (Polit and Beck, 2004). The target population in this study was all clients at the clinic who have inserted the Implanon® in the past six weeks, attending the clinic for follow up, and individuals who have removed the Implanon® for other various problems.

The accessible population refers to those people in the population that are currently available for a particular study, selected non-randomly in the target population. The accessible population in this research would be clients present at the community health clinics waiting for review of Implanon® or any Implanon® user available at the clinic meeting the eligible criteria of the study.

3.3.2. Sample

Sampling is defined as a process of selecting the sample from a population in order to obtain information regarding a phenomenon in a manner that represents the population of interest (Burns and Grove, 2005). The sampling technique used was convenience sampling. The sampling technique used for the first approach is random sampling.Simple random sampling of the probability sampling design was utilized for the selection of the women using Implanon contraceptive. This method was chosen because the sampling frame was readily available from the selected healthcare facility. This random sample is most probable to yield a sample that truly represents the population as each subject has an equal and independent chance of

being selected (Brink, Van der Walt and Van Rensburg, 2012). The researcher used clinic register as it outlines every client that was seen for family planning to identify the respective women who had been consulted for Implanon. Therefore all women meeting eligible criteria for the study, their names were written in a piece of paper and inserted in the bowl. The fish bowl technique was then used to select the women that participated in this study. Consent to participate in the study was obtained from the women sampled. The participants were all women that were visiting the clinic's reproductive health section at the time of data collection. Also eligible were those that had discontinued their use of Implanon®.

The sample size for the quantitative study was determined by the target population; in this study it was women that had had an Implanon® device inserted. Since data collection was done over the a period of a month, to calculate the sample size, the population estimated at ±267 and more was divided by the total number of months in a year, which is 12, in order to estimate the number of women who might be in the clinic on average in a month. This brought the number of each client seen at the clinic in to 22.3. The researcher was working towards achieving a number of 55 as a sample size. According to Burns and Grove (2001), in quantitative studies, the sample size should be 50. The quantitative sample size in this study was 55 participants, as advised by the statistician.

3.3.3. Data collection

According to Burns and Grove (2002) data collection is the accurate and systematic gathering of information relevant to specific objectives and questions of a study. The study variables were measured using a variety of techniques, such as questionnaires or interviews. However, data collection in a quantitative study is gathered according to a structured plan, using self-administered questionnaires with questions that have response options, with little opportunity for respondents to explain their answers. The data collection process will take place after obtaining ethical approval and permission from the relevant authorities to conduct the study, namely the University KwaZulu-Natal and the Department of Health ethics committees.

On obtaining the ethical clearance, the researcher approached the management of the selected Clinic situated at uMgungundlovu District so as to arrange for data collection process commencement. The data collection venue where interviews were conducted was also

identified and suitable interview dates confirmed. Data collection process was conducted over a period of a month, until the required number of participants was reached.

On the day of data collection, the researcher arrived at the selected primary healthcare clinic early in the morning around at 08h00. Then upon arrival the researcher confirmed his arrival with the clinic manager's office. The researcher explained to the staff allocated at the family planning clinic on the day regarding the data collection process. The researcher would then wait upon each client coming in for family planning services in waiting area; specifically, those coming for consultation or review were asked to participate in this study. Then those women with Implanon® were asked to follow the researcher into a consultation room, where data collection procedure took place. In the consultation room, everyone was provided with a chair to sit and a table. Thereafter, all the women that met the recruitment criteria were briefed on the study, and asked if they were willing to participate. Those who were willing were then asked to sign consent forms before they participated in the study.

In the collection of quantitative data, all participants were given the questionnaires to complete. Amongst those participants who were unable to read and write, questions were read to them by the researcher as they were listed in the questionnaire tool. Clarity was given to every participant in every questions and questions or misunderstanding was attended to immediately by the researcher. Furthermore, the researcher also assisted them to complete questionnaires according to their own response.

Data was collected from female participants that met the recruitment criteria, at the time when they visited the research setting. Data was collected through administering questionnaires and pens for the respondents to fill their relevant responses provided while they were seated. The data collection procedure took approximately 20 to 30 minutes, and upon completion, respondents were asked to deposit their answer sheet in the box provided.

3.3.4 Instrumentation

The questionnaire was designed in a specific format by means of which the data could be easily entered on the computer spreadsheet. Code numbering that was used in data set as incorporated into the questionnaires. The questionnaire developed was divided into different sections in order to enable the processing of the data.

The questionnaire contained only closed-ended responses that were included. The researcher consulted the statistician and computer expert, as well as supervisors, to sort through any errors or inaccuracy with the tool that was used. Questionnaires are a quick way of obtaining data from a large group of people, and respondents enjoy a high degree of freedom in completing the questionnaires. Questionnaires are less expensive in terms of time and money and are also the easiest way to test for reliability and validity (Brink, van der Walt and van Rensburg, 2012). The researcher modified readily available perception questionnaires, which were designed based on Health Belief Model, which makes it more reliable, because it has been used before. The questionnaire was developed in English; however the researcher was aware that the population speaks isiZulu, so the questions were translated into Zulu.

3.3.4.1. Content of the structured questionnaire

The questionnaire consists of five sections containing mostly closed-ended questions.

Section A: Demographic data

Questions were in regard to the respondent's age, marital status, and level of education, employment status, religion, occupation and previous method of contraception. The purpose of including this information was to identify whether there was a relationship between the demographic data of Implanon® users with perceived barriers or enablers.

Section B: Individual perceptions

This section consisted of importance of contraceptive, perceived threat of falling pregnant, perceived susceptibility and perceived benefits. The respondents will have to rate the importance of contraceptive and specify their perceptions to threat, susceptibility and benefits.

Section C: Modifying factors

This section consisted of interpersonal variables and situational variables. Therefore respondent had to specify how did they acquire about Implanon® and which healthcare professional were the most in contact with using Implanon®.

Section D: Likelihood of contraception behaviour

This section comprises the items perceived barriers and cues to the action. The respondent had to specify their perceived barriers and what health practitioners do to improve the knowledge gap.

3.3.5. Validity

According to Botma et al. (2010) validity indicates whether the conclusions of the study are justified based on the design and interpretation. This is indicative of the degree to which an instrument precisely measures what is supposed to (Brink, van der Walt and van Rensburg 2012). An instrument must be valid in terms of content, face, construct and criterion (Brink, Van der Walt and Van Rensburg 2012). In order for validity to be achieved in this study, the instrument was submitted to supervisor and statistician for scrupulous checking in terms of its ability to measure the concepts being examined.

The contest validity of the instrument is summarised in the table below:

Study Objective	**Content validity Objectives**	**Conceptual framework**	**Questions**
1.to explore and describe experiences and perceptions of women using Implanon at a selected primary healthcare facility in KwaZulu Natal	To identify participants demographic data and the importance of contraceptives in relation to women perceptions	Socio-demographic variables includes age, marital status, religion, level of education, occupation, previous methods contraceptive	Section A: Q1 – Q6 Section B: Q1 – Q4
	To describe the perceive threat and susceptibility of Implanon® contraceptive device as perceived by women in	Individual perception which perceived threat and suscept	Section B: Q5 – Q7

	a selected health care facility		
	To explore perceptual awareness and user satisfaction with Implanon® contraceptive	Individual perception: perceiv Benefits	Section B: Q8 – Q11
	To analyze women's perceptions, knowledge and support from partners with use of this contraceptive methods as perceived by women	Modifying factors including: th interpersonal variable (partne friends, parents as well as situational variables (magazir books, pamphlets)	Section C:Q1 – Q4
	To explore and determine barriers and support from professionals among users in a selected healthcare facility in Kwazulu-Natal	Likelihood to action specific tc perceived barriers, cues to ac and self-efficacy	Section D:Q1 – Q4
2. To develop relevant intervention tool to be used by healthcare workers	To identify effective intervention strategies inorder to develop a tool to be used by healthcare workers	Indivual perceptions, modifyir factors and experiences of ac	Section A - SectionD

3.3.6. Reliability

Reliability refers to the instrument's ability to yield the same result when repeatedly administered under varying conditions (Botma, et al. 2010). To ensure reliability, a pilot study will be conducted on two respondents using the questionnaire designed for this proposed study prior to conducting the main data collection.

3.3.7. Pilot study

According to Brink, Van der Walt and Van Rensburg (2012) a pilot study is a small scale study conducted prior to a main study, on a limited number of participants from the population at hand, to determine feasibility of the actual study. The pilot study marks an important stage in the development of and subsequent testing and evaluation of the research instrument prior to commencing the study (Polit and Beck, 2008). In this study, a pilot study was done with two participants prior to data collection. The results of the pilot study will not be included in the main study. However, changes in the research design and instrument may be made based on pilot study results, if the need avails. This was done to test the efficacy of the instrument, along with any difficulties it might impose on the participants. The aim of the trial run was to get information for improving the project.

3.3.8. Data analysis

Data analysis entails categorising, ordering, manipulating and summarising data, and describing it in meaningful terms (Brink, Van der Walt and Van Rensburg. 2012). In this study, data will be analysed manually, and participant's response will be quoted. The participants will be given numerical codes, which will also be used in analysis. The results obtained would be presented using tables, charts and graphs. The data will be presented and analysed on the research report, with help of statistician, and with guidance of a research supervisor.

3.4. PHASE 2: QUALITATIVE APPROACH

According to Polit & Beck (2004), qualitative research emphasises the dynamic, holistic and individual aspects of the human experience, and attempts to capture those experiences in their entirety, within the context of those experiencing them. This research design is based on exploring issues, understanding phenomena, and answering question by analysing and

making sense of unstructured data. In this study, phenomena related to Implanon® will be explored.

The researcher found qualitative approach as to be appropriate design for this study, because it was conducted in a real life situation, without the manipulation of subjects, and aims to explore and describe experience with Implanon® contraceptive methods.

3.4.1. Target population

The target population for Phase 2 of this study were all clients at the clinic who had inserted Implanon® in the past six weeks, attending the clinic for follow up and individuals who had removed Implanon® for other various problem whether three years had elapsed or not. Respondents who had participated in Phase 1 were also included in Phase 2, but were resampled such that it would be every 4th person who had participated the 1st phase of the study.

3.4.2. Sample

In this approach the researcher adopted purposive sampling where by participants were selected based on their first hand experienced shown in the quantitative approach. The Purposive sampling is a procedure that involves the selection of persons who represent the desired population, and was used in this study. In qualitative research, individuals are selected to participate in the research based on their first-hand experience of the phenomenon of interest. In this study, the selected participants were clients that the researcher found present at the time of data collection to represent the study population. However, the sample size was determined by the saturation of the data. This implies that the researcher was interviewing the participants until the data was saturated. In this study, there were seven participants that were used in the qualitative part of the study, whereby those who have in-depth knowledge about particular about Implanon or those that shows interest to share their experiences were requested to participate in the second section. The participants were all women visiting the clinic for review of Implanon®, available at the time of data collection and those that have discontinued from Implanon®. The sample size is not predetermined. The required sample size depended on when saturation of data was reached,

until no new data emerged, but previously collected data were repeatedly reintroduced into the study (Burns and Grove 2003).

3.4.3. Data collection

According to Burns and Grove (2005), data collection is the precise and systematic gathering of information relevant to the research purpose or the specific objectives, question of the study. In the qualitative approach, data collection took place in the real life situations, and the researcher was seen as the main instrument for data collection (Brink, Van der Walt and Van Rensburg, 2012). In this study, separate data collection was through interviews that lasted between 15 minutes each.

Burns and Grove (2003) assert that in qualitative research, text is considered a rich source of data. Data was collected from every fourth respondent that participated in data collection for Phase 1 that meets the recruitment criteria. Data was collected until saturation occurs.

The data collection of this approach was performed conveniently, where all requested respondents were asked to participate voluntarily for open interviews by a researcher. The interview was recorded on the audiotapes, upon agreement with respondent.

The already used participants from the quantitative research were asked to participate in the section two of qualitative study. The same consultation room used in the first session was also used for second section. Interviews were conducted by the researcher in both sections. Immediately after participation, each 4th respondent was told that she qualifies for a second session of this study. This 4th respondent was asked to prepare herself to speak out openly about every experience she had with the implant. The audiotape was set up before interview begins. The researcher was making notes while the respondent expressed her experience and view with the implant. Clients were asked for clarity on their responses whenever it's wasn't clear and understood.

3.4.4. Instrumentation

Data will be collected using a self-designed interview guide. The interview guide will contain semi-structured questions, which were developed based on study research questions and objectives. Questions were relevant for this study, as it's more free-flowing, with the

researcher probing where necessary so as to obtain more clarity and in-depth information (Brink, Van der Walt and Van Rensburg 2012). According to Brink, Van der Walt and Van Rensburg (2012), semi-structured interviews are appropriate for qualitative exploratory research for which a researcher has limited knowledge about the topic. A semi-structured interview is an interview method that contains both structured and unstructured interviews, and therefore, both closed and open questions will be used. It has the advantage of both interviews being used in order to be consistent with all participants. Thus, the researcher had a set of pre-planned core questions for guidance. Interviewing refers to structured and unstructured verbal communication between the researcher and the participants, whereby information is presented to the researcher. Interviewing is more flexible that allows the researcher to explore a greater depth of meaning than can be obtained with other techniques (Burns and Groove, 2003). The main interview question for this study would be "what is your experience with the use of Implanon® contraceptive?" explain broadly. The interview guide was developed in English; however, the researcher was aware that the population speaks isiZulu, into which the interview guide was translated.

3.5. TRUSTWORTHINESS

In this study, trustworthiness was ensured by following a certain criteria: credibility, transferability, dependability and conformability (Polit and Beck, 2012).

The following were used to ensure trustworthiness or validity of data:

3. 5.1. Credibility

Credibility is demonstrated when the participants recognise findings as their own experiences (Streubert, Speziale and Carpenter, 2003). Credibility was enhanced by selecting participants using inconvenient sampling. To ensure credibility, the researcher made sure that those participants were identified and described correctly. Credibility was ensured by interviewing all the participants and making notes during each interview. This was also ensured by using audiotape to record the interviews after obtaining consent from participants. However, the researcher was probing during an interview, until data saturation was reached. The audiotape was repeated over and over again during transcription of the information, to make sure that information was thorough and correct. After the transcription of the information, the report was

shared with the participants to ensure that the correct information was recorded. The participants confirmed the information. Therefore, themes were generated from the information obtained.

3.5.2. Transferability

Transferability refers to the probability that the study findings have meaning for others in similar circumstances. In this study, the researcher ensured the trustworthiness of the findings by exposing the study to a colleague for constructive criticism, and by sharing the findings with all healthcare practitioners who did not participate in the study. Transferability was also ensured by thorough description of research setting, participants in the study, and the research processes.

3. 5.3. Dependability

Dependability is another criterion used to measure trustworthiness in qualitative research. Dependability was met through security of the findings (Streubert Speziale and Carpenter 2003). In this study, data collection was performed on participants who have used Implanon® for more than six weeks. These women recruited clearly understand implanon to be able to share their experiences and perceptions. An audit trail was maintained by ensuring that raw information that was collected from each participant was kept safe for future reference. In this study, supervisors took responsibility for examining the data, findings, interpretations and recommendations, in order to attest to the fact that they are supported by data. Notes which were written during an interview, record tape, consent forms and all other used information were kept safe in a locked safe.

3. 5.4. Confirmability

Confirmability is a neutral criterion for measuring the trustworthiness of qualitative research (Polit et al., 2001). If the study demonstrates credibility and fit, the study can also be said to possess confirmability. The issue of confirmability was based on the characteristics of data being dependable. Bias was eliminated on the interpretation of data by the researcher, where raw data was confirmed by the use of direct quotes from the raw data to eliminate subjectivity. Supervisors also analysed the interpreted data theme and responses identified by the

researcher. There were no major discrepancies identified in the data analysed. In this study, the researcher performed an audit on the research process under the supervision of the supervisors.

3.6. RESEARCH SETTING

The setting for the study was a selected community health care facility located in UMgungundlovu District of KwaZulu-Natal. UMgungundlovu district ---at the East Boom Community Healthcare Centre.

Most of the clients who are seen at this community healthcare centre are from middle-income class, and the majority is well educated. The clients who use these community healthcare centres generally come for minor and alignment consultation, integrated management of childhood illness, family planning, chronic illness, as well as other primary healthcare services. The data collection will be done in the family planning department with the focus on Implanon® users, who will be there for follow up consultation, and any other clients ready available at the clinic meeting the requirements.

3.7. INCLUSION CRITERIA

These are the traits that the elements of the study must possess in order to be eligible to be part of the target population (Burns and Grove, 2005). The inclusion criteria:

- Female clients
- Clients at the aged of fifteen years and forty five
- All clients present at the clinic who has inserted Implanon® for more than six weeks, or those that has removed Implanon®, including those that have removed the implant before its duration and those that removed it in due time (after three years has lapsed).
- Clients with both HIV status, either negative or positive

3.8. EXCLUSION CRITERIA

These are the characteristics which do not meet the eligibility criteria of the target population (Burns and Grove, 2005). Exclusion criteria for:

- Mental healthcare users
- Pediatric and geriatric clients
- Pregnant women
- Male clients
- Clients in the emergency departments, labour wards and antenatal wards
- Female clients that have inserted Implanon® for less than six weeks.

3.9. ETHICAL CONSIDERATION

Ethics in research is defined as the morally correct thing to do in conducting, disseminating and implementing the results of the systematic investigation. This is an important aspect of the research which needs to be included in the research study (Polit and Beck, 2008). The ethical measures in this study include: consent, confidentiality and privacy, anonymity, the principle of beneficence, and the right to withdraw from the study.

3.9.1. Consent

Ethical approval to conduct the study was obtained from the University of KwaZulu-Natal Nursing Department and to University of KwaZulu-Natal Ethical Approval Committee. Consent was obtained from the department of health, as well as the institutions at which the study was conducted and from the participants prior to the administration of the instruments. In this study, the researcher ensured that informed consent was obtained from all the participants, and ethical approval letter from all relevant institution was attained prior to data collection.

Naidoo (2012) argued that minors are permissible to consent even without parental or guardianship consent being obtained. This is also indicated in the South African ethical guidelines of good practice guidelines as it is stated that older adolescents are allowed to participate in minimal risk research with independent consent. Therefore in this study, consent was obtained autonomously on the minor respondents above 15 years.

3.9.2. Confidentiality and anonymity

The anonymity of participants or institution was protected by ensuring it impossible to link aspects of data to a specific person or institution. However, confidentiality and anonymity will be guaranteed by making sure that the data obtained were used in such a way that none other than the researcher knows the source (LoBiondo-Wood and Harber 2002). In this study, no names were attached to the information obtained, but codes were used.

3.9.3. Privacy

Privacy refers to agreements between persons that limit the access of others to private information. In this study, the researcher maintained privacy including personal information coming from the participants. This might be in the form of feelings, beliefs or attitudes, and opinions. Data was protected from reach of unauthorised persons and no names were linked with the data. Retrieved data were also kept safe in a locked cupboard, and tapes were destroyed on completion of the study (Burns and Grooves, 2001).

3.9.4. Right to withdraw

The researcher gave participants permission to withdraw from the study without being prejudiced. Their rights were explained to them prior to engagement in the research, before the interview period. The participants were informed throughout the study about voluntary nature at any stage.

3.9.5. Principle of beneficence

This principle upholds the aversion to harm, comprising broad dimensions, such as freedom from harm and exploitation, as well as the researcher's duty to evaluate the risk or benefit ratio.

3.10. DATA MANAGEMENT

The retrieved data was safely stored away in a safe, which was locked, and to which no one will have access besides the researcher and the supervisor of the study. The questions from the interview guide were each coded; these codes were then used for analysis.

3.11. STUDY LIMITATIONS

The study was conducted in one community healthcare clinic found in Pietermaritzburg at KwaZulu-Natal. Therefore, the research findings cannot be generalised to all community healthcare clinics in this Province. Furthermore, the small sample size was also a possible limitation.

3.12. CONCLUSION

The research design and method, population and sampling, ethical considerations, data collection approach and instrument, data analysis, ethical consideration and trustworthiness of the research data were described.

CHAPTER 4

RESEARCH RESULTS AND RESEARCH MANUSCRIPT

4.1. Introduction

This chapter focuses on the significance of research findings and analysis. In both approach used in this study (quantitative and qualitative) data was analysed broadly. From the quantitative perspective, data was analysed using computer software known as Statistical Package for Social Sciences (SPSS) Version 24, to give numerical values to responses, while on the qualitative approach, data was analysed manually, according to Tesch's data analysis. The study findings of quantitative data will be presented through tables and graphs, while qualitative data findings will be presented using direct quotations.

In this study, the researcher used a Health Belief Model as a conceptual framework, and the study objectives, to guide presentation of findings. The data collected enabled the researcher to explore women's perception and experiences with use of the Implanon® contraceptive method. The statistical information was derived from a sample of 55 respondents, who completed questionnaire in a quantitative approach. The percentages were calculated on the number of responses of each item (valid percent), not on the total number of questionnaires received. There were seven participants in the quantitative approach, which was analysed separately.

The qualitative data was analysed according to Tesch's eight steps of data analysis. The eight steps adopted are further explained in qualitative data analysis below. Therefore, analysis was performed manually by the study researcher.

The coding system was used to analyse data that can be regarded as a central objective of content analysis. The researcher adopted open coding so as to develop the classification system for analysing the interviews, as described below.

Step 1: Identifying and isolating data segments. The first step in developing the coding system is to analyse texts involved by examining each transcript to classify segments of data that contained a single concept. A concept is described as words that are grouped together into conceptual clusters. Before isolating the data segments, the researcher read the transcripts a number of times. The literature suggests that reading and rereading the text helps to familiarise oneself with the data, and facilitates the identification of concepts emerging from the data (Wellington, 2000).

Step 2: Grouping concepts into categories and subcategories. The classification of categories and subcategories into which concepts are clustered to form the coding system is an important step in the process of open coding, because the categories and subcategories represent major ideas emerging from the data (McMillan & Schumacher, 2010). Clustering concepts together into a smaller number of groups allows researchers to better visualise the major themes emerging from the data, and to better handle large numbers of concepts. Each category and subcategory was then named and defined according to the central idea it embodied.

Step 3: Assigning codes to categories. Once the category system had been validated, the researcher assigned codes to the factors, categories, and sub-categories. As Miles and Huberman (1994) explain, the codes are used only for the convenience of the researcher, to save time and effort, and are generally not used in reporting. The system of codes assigned

to categories was also presented for face validation, to check whether the validator agreed with the naming of codes and the allocation of codes to categories. Miles and Huberman (1994), point out that coding is an iterative process, often involving many cycles of analysis, which was confirmed in this study.

Since the study adopted two approaches, both quantitative and qualitative approaches, the presentation of results are presented separately.

4.2. Quantitative Approach

In this approach, the findings are presented as descriptive statistics, in the form of tables and graphs. Various categories and sub-categories are presented under this section. The following research questions are presented:

- How do women using Implanon® perceive this method of contraception in a selected primary health care clinic in KwaZulu-Natal? :
  - What are the perceived barriers to using Implanon® as a method of contraception?
  - What are the perceived enablers in using Implanon® as a method of contraception?

In the health belief model, these issues are addressed, where individual perceptions, likelihood to action, self-efficacy, and interpersonal and situational variables are discussed so as to meet the objective of exploring experiences and perception.

4.2.1. **Socio-demographic variables**

The socio-demographic variables covered in this study were age, marital status, religion, occupation, and level of education. In the data analysis, with some assistance from a statistician, descriptive statistics were applied. These were findings evidenced as follows.

4.2.1.1. Age

The study target was 55 women at the age of 15 to 40 years old. The age groupings were made into categories 15 to 20, 21 to 30, 31 to 39 and greater than 40 years old. According to the study findings, a majority of the women that participated were between the ages of 21 to 30 (52.7%), followed by women between the age of 31 to 39 (34.5%), then 15 to 20 years (9.1%), and lastly women above 40 years (3.6%). The age groups among the respondents are in a table below:

Table 4.2.1.1 Age range

Age ranges	**Frequency**	**Percentage**
15 to 20 years	5	9.1%
21 to 30 years	29	52.7%
31 to 39 years	19	34.5%
Greater than 40 years	2	3.6%

4.2.1.2. Marital status

The majority of the respondents 40 (72.7%) were not married, whereas 12 (21.8%) were married, two (3.6%) was divorced, and one widowed (1.8%). This is evidenced in a graph below:

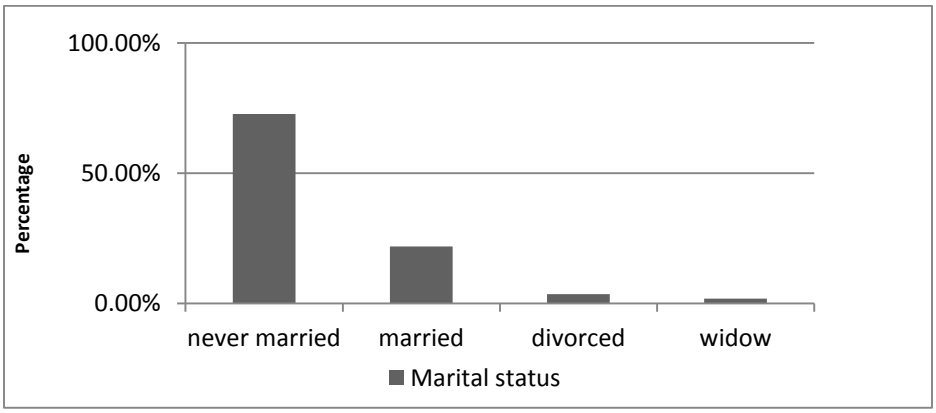


Figure 4.2.1.2 Marital status

4.2.1.3. Religion

The results shows that greatest percentage of the respondents 34 (61.8%) were Christians, less than half 19 (34.5%) were of African traditional religion, and thereafter, one (1.8%) was Muslims and one (1.8%) was Hindu. Therefore none were under the religion Judaism. The results were as follows:

Table: 4.2.1.2. Religion

Religion	Frequency	Percentage
Christians	34	61.8%
Hindu	1	1.8%

Muslims	1	1.8%
African tradition	19	34.5%

4.2.1.4. Occupation

Significantly majority of respondents were part time/ self-employed 23 (41.8%), then less than two thirds 13 (23.6%) were unemployed, followed by 12 (21.8%), who were permanently employed, and lastly, seven were currently studying (12.7%). This is shown in a graph below:

Figure: 4.2.1.4. Occupation

4.2.1.4. Level of education

According to the results out of 55 participants, about half (23 or 41.8%) completed Matric, just less than two thirds (15 or 27.3%) attended secondary school, while 8 attended college or university 8 (14.5%), then seven (12.7%) completed college or varsity, and the lowest number (2) were those that attended primary school (3.6%). This is illustrated in the table below.

Table 4.2.1.4 Level of education for respondents

Level of education	Frequency	Percentage
Attended primary	2	3.6%
Attended secondary	15	27.3%
Completed matric	23	41.8%
Attended college/ varsity	8	14.5%
Completed college/ varsity	7	12.7%

4.2.2 Previous contraceptive use by respondents

The results showed evidenced of women's previous contraceptive methods, where more than a half were those using barrier methods (30 or 54.5%), less than a quarter (11 or 20.0%) were using a vaginal ring, followed by 10 (18.2%) who were using contraceptive pills, and the lowest of 4 (7.3%) using contraceptive injections. The results are as follows:

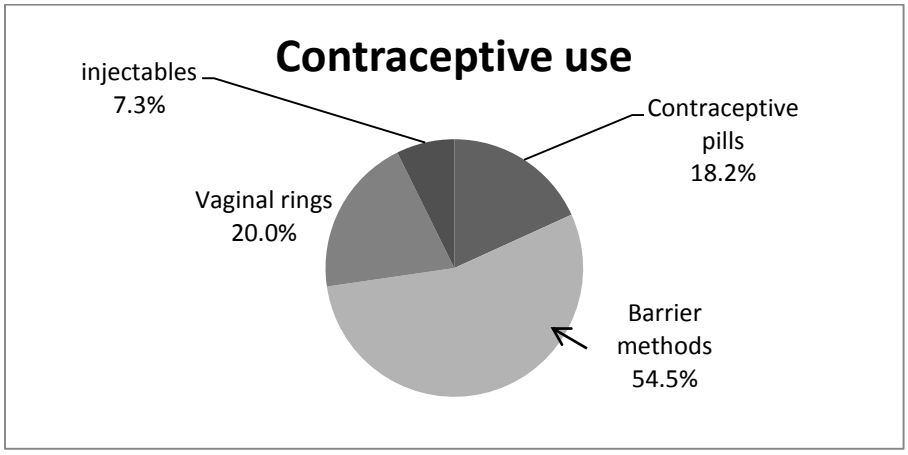


Figure 4.2.2 Previous contraceptive use

Individual perceptions

4.2.3.1. Importance of contraceptive

The results indicated that most respondents agreed that contraceptives are very important to them with 54 (98.2%), then one (1.8%) responded that it is partially important. There was no respondent that said Implanon® is not important to them. Results are illustrated below.

Table: 4.2.3.1. Importance of contraceptives

Importance	Frequency	Percentage
Very important	54	98.2%
Partial important	1	1.8%

4.2.4. Continuation with Implanon®

More than the half of respondents were still using the implant 28 (50.9%), whereas almost half were not using the implant 27 (49.1%) from the respondents. The results are shown below.

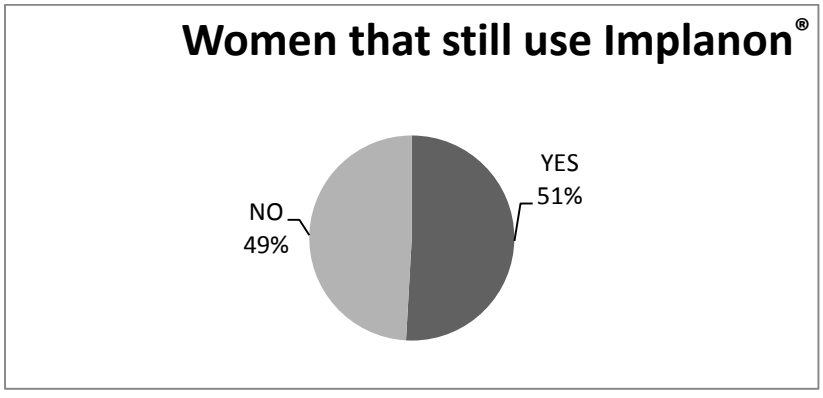


Figure 4.5 Continuation

4.6. Duration of use of Implanon®

The results showed that majority of respondents have used the implant for more than four months were 49 (89.8%), whereas less than a half of the quarter had used the implant for three months (4 or 7.5%) and the lowest was 3 (5.7%), who had used the implant for four months. The table below shows the results:

Table: 4.6 Duration of Implanon® use

Duration	Frequency	Percentage
3 months	3	6.0%
4 months	2	4.3%
More than 4 months	49	89.7%

4.8. Reasons for discontinuation of Implanon®

In 4.6 above, respondents were asked if they still use Implanon® 27 (49.1%) responded in the negative, and then this question was made a follow-up question to ascertain their reasons for discontinuation. Just less than a third (19 or 34.5%) responded that the reason for stopping was due to side effects, similarly 19 (34.5%) had other reasons for removing the implant, then one (1.8%) responded that they wanted a child. The graph below shows the results.

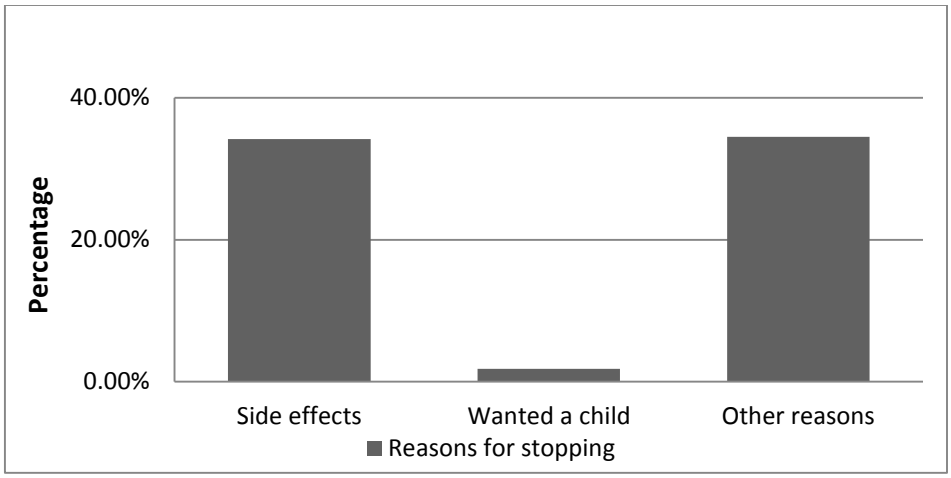


Figure: 4.8.1. Reasons for discontinuation of Implanon®

4.8.1. Side effects

The results show that side effects are highly a reason for removal of Implanon® among the respondent by 34.5% which is 19 respondents. It was found from the result that out of 19 respondents, a majority 10 (18.2%) were between 21 to 30 years of age, followed by eight (14.5%) that were within the age of 31 to 39 years, and lastly one was between 31 to 39 years (1.8%).

The analysis also shows great difference with marital status, where married women 14 (25.5%) also stopped using Implanon® due to side effects, whereas there were five never married women (5%). This is shown in the table below:

Table 4.8.1 Reasons for discontinuing Implanon® by marital status

Marital status	**Percentage**
Never married	25.5%
Married	5%

4.8.2. Wanting a child

In this category, there were fewer respondents that removed or stopped using Implanon® who wanted a child, there was one (1.8%) respondent between the age of 15 to 20 years and that respondent is from an African traditional religion.

4.8.3. Other reasons

The results of the analysis have shown that some remove Implanon® due to other reasons not specified, that was 18 (32.7%) respondents. Respondents were also given the option to specify their reasons that causes them to stop the implant. Among the reasons mentioned were side effects, again stated as a major reason for stopping. The side effects specified were memory loss and dizziness especially later in the day. Another respondent she removed the implant because she fell pregnant. Lastly, others removed the implant because their 3 years duration has been reached.

4.9. Experiences with side effects

study show that out of 55 respondents to the question on what are experiences with side effects of Implanon®, a majority reported that they had two or more side effects (32 or 56.4%), less than one eighth (6 or 10.9%) had other side effects that are not mentioned on the list, followed by three (5.5%) that experience menstrual bleeding. Similarly, three (5.5%) complained about weight gain, two reported loss of sex drive (3.6%), another two (3.6%) had no response, one had insomnia (1.8%), and one experienced moods (1.8%). Amongst those that reported other side effects that were not mentioned (6 or 10.9%), it was dizziness, body

chills, body pains, headache, memory loss, weight loss, and pregnancy, interrupted menstrual periods, no menstrual period, vomiting and sweating.

Table 4.9(a) Experiences with side effects of Implanon®

Side effects	Frequency	Percentage
No response	2	3.6%
Weight gain	3	5.5%
Menstrual bleeding	3	5.5%
Insomnia	1	1.8%
Moods	1	1.8%
Loss of sex drive	2	3.6%
Other side effects	6	10.9%
2 or more side effects above	31	56.4%

Among the 55 respondents, 31 (56.4%) had two or more side effects from the above-mentioned side effects. However, these are the results illustrated below, showing the number of responses in each side effect. The percentage was calculated manually, because some respondents selected more than two side effects. In this case, the option of two or more side effects had to be created, as SPSS 24 doesn't support entering of two options in one question. For this reason, statisticians assisted in the manual calculation of the following:

Table 4.9(b) Responses to those respondents with two or more side effects

Side effects	Number of responses	Percentage
Weight gain	13	23.6%
Menstrual bleeding	23	41.8%
Mood changes	06	10.9%
Acne	14	25.4%
Insomnia	06	10.9%
Loss of sex drive	17	30.9%
Pains/ redness on the site of insertion	02	3.6%

4.9.1. Weight gain (age and religion)

Amongst the women that participated in this study, some complained about weight gain those were women of 21 to 30 years that was three (5.5%). Other respondents had no issue with weight gain. This side effect was not noted with other age group. However, in these three (5.5%) that complained with weight gain, two (3.6%) were never married and one 1.8% was married.

The results also show that two (3.6%) of the respondents were Christians and one (1.8%) was a Muslim. However, there were two (3.6%) respondents that also complained about weight gain among those that had two or more side effects. It was not easy to determine their age group, religion or occupation, as well as other factors, using SPSS version 24 for evaluation of study results.

4.9.2. Menstrual bleeding (age and religion)

The study results show menstrual bleeding to be three (5.5%), whereas to those with two or more side effects, it was 43.4 percent. This provides significant evidence showing that women experience menstrual bleeding when using Implanon®. The result also shows that two (3.6%) of women were between the age of 21 to 30 years and one (1.8%) of women was older than 40 years. It was also evidenced that most women that had menstrual bleeding were from Hindu and African traditional religions. It was also evidenced that one (1.8%) attended primary school, and two (3.6%) completed matric.

4.9.3. Acne

In study analysis, evidence shows that 25.4% of women from those with two or more side effects experience acne while using Implanon®. Among these women, these side effects were mostly noted in women at the age of 15 to 20, and 21 to 39, and results were noted amongst those women who were never married, and those from an African traditional religion.

4.9.4. Insomnia

The results indicate that 10.9% of women from those who had two more side effects experienced insomnia; whereas one (1.8%) of respondents also had problems with sleeping at night.

4.9.5. Loss of sex drive

Only 30.9% had loss their sex drive in this study.

4.10. Perceived susceptibility with the Implanon®

The results show how 55 respondents perceive their susceptibility to Implanon®, specifically the risks associated with implants. Amongst them, 43 (78.2%) disagree that it is safe to have unprotected sex when using Implanon® while 7 (12.7%) agreed and 5 (9.1%) were not sure. However, in the study it also found out that out of 55 respondents, 28 (50.9%) disagree that it is extremely likely that the person may have side effects, risks or illness when using Implanon®, while 18 (32.7%) were not sure, and 9 (16.4%) agreed with the statement. The results also show that some women think Implanon® can also go missing in their body, 24 (43.6%) disagree, while 21 (38.2%) responded that they were not sure, and 10 (18.2%) agreed. It was also found from the results that 34 (61.8%) disagree that having a foreign body within their body scares them or causes them discomfort, while 18 (32.7%) agree, 3 (5.4%) were not sure with the statement. The table below shows the results.

Table 4.10: Perceived susceptibility with the implant

Statement	Agree	Disagree	Not sure
▪ It is safe to have unprotected sex when using Implanon®.	**12.7%**	**78.2%**	**9.1%**
▪ It is extremely likely that a person may have side effects, potential risks, or illness when using Implanon®.	**16.4%**	**50.9%**	**32.7%**
▪ Sometimes Implanon® devices can go missing in the body.	**18.2%**	**43.6%**	**38.2%**
▪ Having a foreign body inside me scares and discomforts me.	**32.7%**	**61.8%**	**5.4%**

4.11. Perceived severity of using Implanon®

The results also indicate that the majority, that is 25 (45.5%), disagree that having Implanon® can be life threatening when it becomes lost and moves inside of you, while 16 (29.1%) agree and 14 (25.4%) were not sure. Among the respondents, 30 (54.5%) disagree that when using Implanon® you can become critically ill and weak, or even develop other lifelong medical diseases, while 15 (27.3%) were not sure, and 10 (18.2%) agreed. The results are shown below.

Table 4.11. Respondents perceived severity of using Implanon®

Perceived severity of the problem

Statement	Agree	Disagree	Not sure
▪ When having Implanon® device, it can be life-threatening when it migrates.	29.1%	45.5%	25.4%
▪ When you become critically ill and weak or even develop other lifelong medical diseases.	18.2%	54.5%	27.3%

4.13. Perceived benefits of using Implanon

4.13.1 Advantages of using Implanon from respondents

The study analysis indicated that just more than half of respondents 32 (58.2%) used Implanon® due the fact that it is long lasting, 11 (20.0%) use the implant because it was recommended by other people, nine (16.4%) responded that it requires no follow up, while

two (3.6%) use it as it has fewer side effects and one (1.8%) responded that it was a reason other than that mentioned. The results are illustrated below.

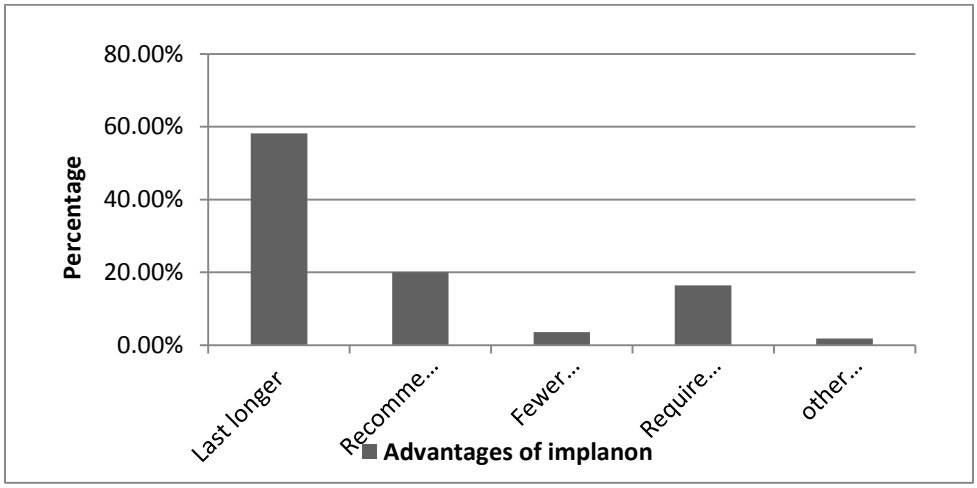


Figure 4.13.1 Advantages of using the implant from the respondent

4.13.2. Satisfaction with Implanon®

The results of the study indicates that less than the half 23 (41.8%) are not satisfied with using Implanon®, whereas 16 (29.1%) are satisfied with the implant, and 16 (29.1%) are extremely satisfied with the use of the implant.

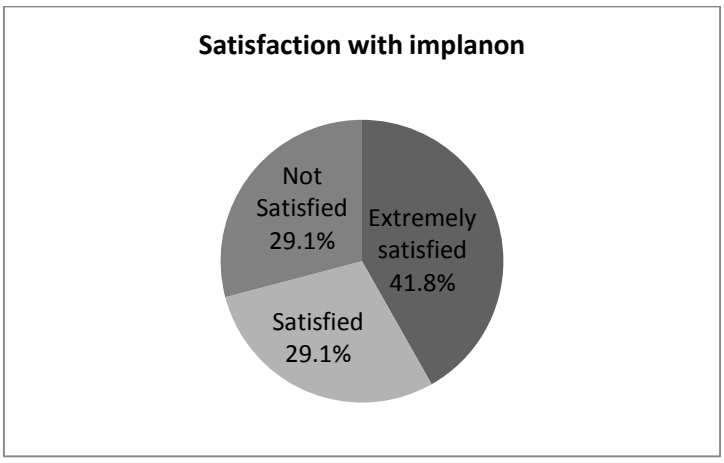


Figure 4.13.2: Satisfaction with Implanon® by respondents

4.13.3 Use Implanon® for three years

(Will you use the implant for three years?)

The use of Implanon® among the users varies from person to person, majority 56.4% said yes they would use the implant for three years, while less than two thirds 19 (34.5%) said that they wouldn't, and five (9.1%) that said they might use the implant for the period of three years. The findings were as follows:

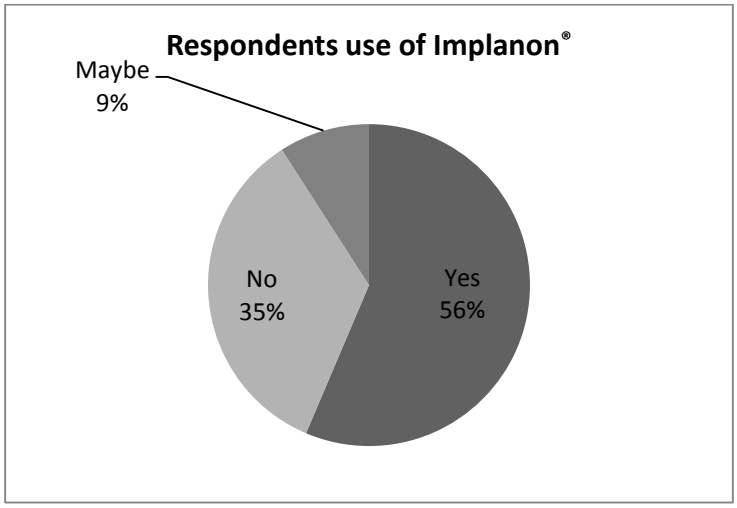


Figure 4.13.3 Respondents use of Implanon® contraceptive

4.13.4. Duration of Implanon® in the body according to respondents

The majority of the respondents (47 or 85.5%) responded that it works for the period of three years, while less than a quarter (6 or 10.9%) that think Implanon® works for two years, and 2 (3.6%) were not aware how long it lasts in the body. The study results were illustrated below:

Table 4.13.4 Duration of Implanon® in the body

Duration	Frequency	Percentage
2 years	6	10.9%
3 years	26	85.5%
Don't know it	2	3.6%

4.14. Modifying factors

4.14.1 Acquire with the new Implanon®

Analysis shows that the half of the respondents (28 or 50.9%) were informed at the clinic by health care professionals, posters and pamphlets, two thirds of the respondents 16 (29.1%) found out from peers which are friends, partner, and neighbours, whereas seven (12.7%) were informed through media (radio/ television/ newspaper/ social network/ internet). Lastly, three (5.6%) found out about the implant at work, from other colleague or occupational health nurses. None found out at school from educators and from school health teams. The results are as below:

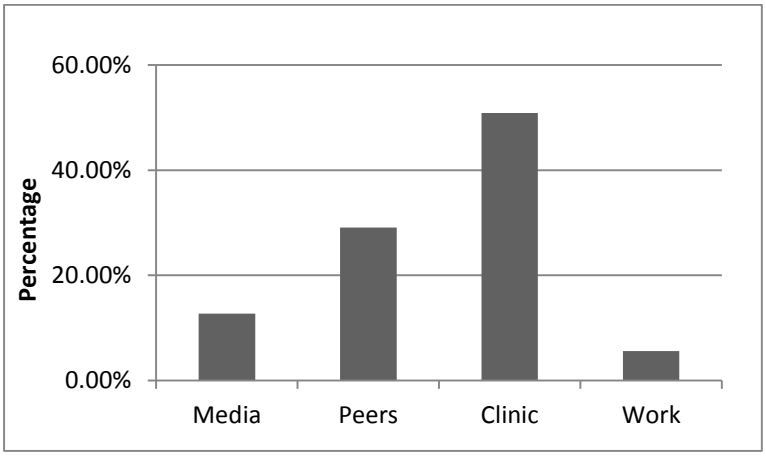


Figure 4.14.1: How did respondents find out about this new contraceptive?

4.14.2. Refer someone to use Implanon®

The results indicate that two thirds (42 or 76.4%) affirmed that they could refer other women to using Implanon®, whereas (13 or 23.6%) noted that they could not refer anyone to use this new implant. The study results are illustrated below:

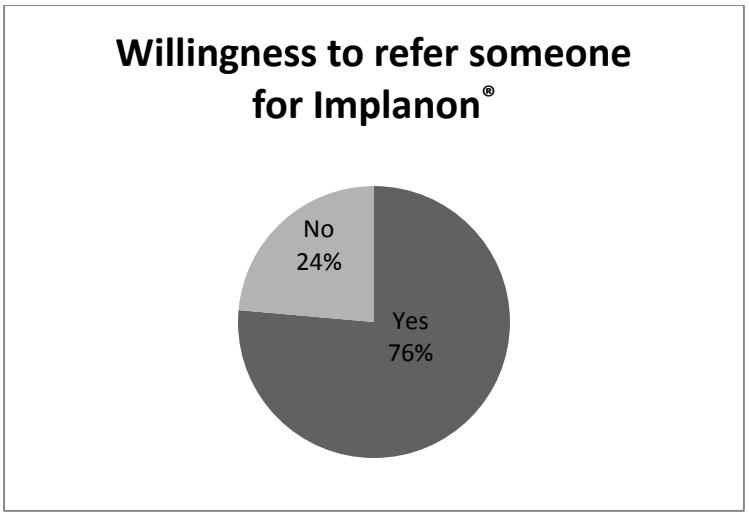


Figure 4.14.1: How did respondents find out about this new contraceptive?

4.14.3. Who can use Implanon®?

The study results showed that only one third of respondents (27 or 90.0%) replied that anyone can insert Implanon® according to their knowledge, while less than a quarter of respondents (4 or 7.3%) assumed that only young women with no children can insert the implant, and one (1.8%) replied that only women within the bearing age meeting eligibility criteria can use it. This is shown in the table below:

Table 4.14.3 Who can use the implant?

Responses	Frequency	Percentage
▪ Anyone willing	50	90.0%
▪ Only young women with no children	4	7.3%
▪ Women within the bearing age meeting eligibility	1	1.8%

4.15. Healthcare practitioner available to assist

The findings indicates that when women arrived at a given healthcare facility, that the majority (50 or 90.9%) replied that nurses were closely available to assist, while four (7.3%) said doctors were the healthcare provider that assisted them, and one (1.8%) said that other healthcare providers assisted them.

Table 4.15 Healthcare practitioner was of assistance

Health care provider	Frequency	Percentage
▪ Nurse	50	90.9%
▪ Doctor	4	7.3%
▪ Other health care workers	1	1.8%

4.16. Partner's knowledge with Implanon®

Analysis shows that the majority 38 (69.1%) affirmed that partners know that they are using Implanon® and 17 (30.9%) responded that their partners didn't know they were using the Implanon®. The results are illustrated below:

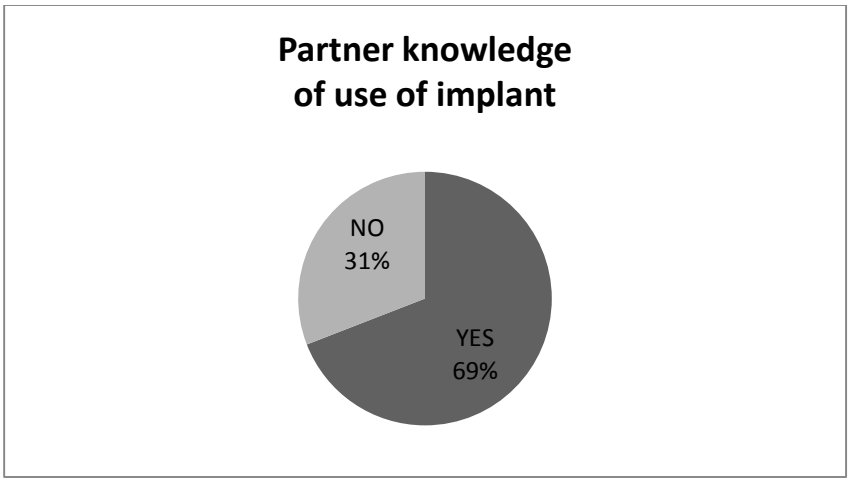


Figure 4.16 Partner Knowledge

4.17. Likelihood of action

The study results shows that one third of the respondents (48 or 87.3%) replied in the affirmative that they understood Implanon® because healthcare providers were there to assist, while seven (12.7%) replied that they had no help from health providers. It was also found that 45 (81.8%) were able to ask and get answers about this contraceptive implants from the healthcare providers, while nine (16.4%) were not able to ask and get relevant answers, and one (1.8%) replied that he wasn't sure.

Among 55 respondents, just over half (34 or 61.8%) were aware that it common to have side effects for the first three months after receiving the implant, while less than a half (18 or 32.7%) responded that they were not aware of any, and three (5.5%) were not sure. More than a half (32 or 58.2%) affirmed that they experienced barriers or issues that might cause them to stop using Implanon®, while less than two thirds (20 or 36.4%) responded that they had none, and three (5.5%) expressed that they were not sure. It was also evidenced that more than two thirds (30 or 54.5%) affirmed that they had thought to discontinue using

Implanon® in favour of another contraceptive, while just less than half 23 (41.8%) said they didn't think of changing, and a minimum of three (3.6%) were not sure. The table below shows the results:

Table 4.17 Likelihood to take action by respondents

Statement	Yes	No	Not sure
▪ Did the health practitioner help you to understand Implanon®?	**87.3%**	**12.7%**	**----**
▪ Were you able to ask and get answers about this contraceptive?	**81.8%**	**16.4%**	**1.8%**
▪ Was it explained to you that it is common to experience side effects within the first three months after Implanon® insertion?	**61.8%**	**32.7%**	**5.5%**
▪ Do you have any barriers or issues that might cause you to stop using Implanon®?	**58.2%**	**36.4%**	**5.5%**
▪ Have you ever thought to change in using Implanon® to other contraceptives?	**54.5%**	**41.8%**	**3.6%**

4.2. Qualitative data analysis

Qualitative data analysis refers to the process of making sense from research participant's views and opinions of situations, corresponding patterns, themes categories and regular similarities (Cohen et al., 2007). Creswell (2013) has argued that data analysis is both inductive and deductive, and establishes patterns or themes. However, a deductive method

will be used in this study. This involves reducing the raw information, identifying significant patterns, and constructing a framework for communicating the essence of what the data shows.

Tesch's method of eight steps in data analysis was adopted in further developing these themes, where the researcher was guided by a theoretical framework, research objective and questions of this study. The following were investigated in order to answer the research questions:

- Experiences of women using Implanon®
- Perceived barriers to the use of Implanon®
- Perceived enablers to the use of Implanon®

The following covers the theoretical framework guiding the study:

- Cues of action
- efficacy

4.2.1. Process of data analysis

The following details the process of how data analysis was undertaken in this study. Qualitative data was analysed according to Tesch's eight steps in data analysis; the researcher carefully read through all the transcriptions, making notes of ideas that came to mind. The researcher selected one interview, and read it to try to extract meaning from the information, writing down thoughts that would come to mind. After going through the transcripts, the researcher arranged the similar topics in groups, by forming columns labeled: major topics; unique topics; and leftovers, respectively. The researcher then abbreviated the topics as codes, and wrote the codes next to the appropriate segment of the text. The

researcher then observed the organisation of data in order to check if new categories or codes emerged. The researcher found the most descriptive wording for the topics and converted them into categories. The aim was to reduce the total list of categories by grouping topics together that relate to one another. Lines drawn between the categories indicated the interrelationship of categories. A final decision was then made on the abbreviation of each category, and the codes were arranged alphabetically. The data material belonging to each category was put together in one place, and preliminary analysis performed. Recoding of the data was done as necessary, constituting the analysis of data.

All the audiotapes were transcribed and translated, where necessary into English by one of the university translators in the department of Zulu language. The transcription and translation was further checked by the researcher who is a fluent isiZulu speaker. Analysis had five different stages, namely: (1) familiarisation with the material; (2) formulation of emergent themes; (3) coding of different themes; (4) charting, cutting, pasting and rearrangement of data under different themes; and (5) interpretation and explanation of findings.

4.2.2. Experiences with use of Implanon® contraceptive and perceived barriers

Experiences can either be positive or negative among the participants. These were participant's responses with Implanon®. The main question to this interview was; what was your experience with use of Implanon® as from you inserted it? There were positive and negative experience found from their responses. The participant's responses were categorised and sub-categorised into themes which are as follows:

4.2.2.1. Positive experiences by participants and perceived enablers in using Implanon®

Good experiences were also reported by respondents. Most of them were satisfied with Implanon®, while some complemented the positive staff attitude and assistance with nurses. Some people were extremely happy with the implant, while others were unhappy, showing the subjective nature of the individual's body. For some it was highly effective, was a negative experience.

Theme 1: Satisfied with the use of Implanon®

Amongst the participants that were interviewed, only three were still happy and satisfied with this method of contraception. They showed that they had good experience of the implant. This is how they responded (all citations verbatim):

> *"I only came to the clinic because of side effects besides that, I was happy with having the implants on my body."*
>
> *"I had a very good experience with Implanon® beside menstrual period. I still want to use it even now."*
>
> *"With me I can advise others to use the implant. It works very well and I had a good experience with it."*

Theme 2: Positive staff attitude

Some women were extremely pleased with nurse's attitude and assistance when they visited the health care clinics for help. This is how they responded (all citations verbatim):

"Nurses were very helpful to me, they explained everything before Implanon® was inserted, and when I returned, and they were willing to help. I am happy."

Staff attitude I saw to anyone on that day."

4.2.2.2. Negative experiences by participants

The Some participants also had a negative experience while they were using the implant, showing that Implanon® has advantages and disadvantages. It works differently with people; some have both positive and negative experiences.

Theme 1: Negative side effects with Implanon®

In most cases, participants reported negative or adverse effects that were commonly evidenced. Below are some of the common adverse reaction they reported.

Sub-theme 1.1: Menstrual bleeding/periods

Most participants complained about heavy menstrual bleeding or disturbed patterns of menstrual periods. This is how they responded (all citations verbatim):

"I was on menstrual periods for six months continuously, through this new injection on my arm… and my weight dropped too much, as from then."

"In a day I changed maybe four to five sanitary pads, when I had heavy menstrual bleeding…"

Sub-theme 1.2: Recurrent treatment of menstrual periods/bleeding

It was also similar to most participants responded that they returned to the clinic with the same problem of menstrual period/intermittent bleeding. Some participants reported that bleeding usually stops for a while after taking treatment from the clinic. This is how they responded (all citations verbatim):

> *"I had menstrual bleeding for the past four months continuously, then last month it stopped after taking tablets from the clinic, and it started again."*
>
> *"I was up and down to the clinic but they couldn't help me… I was given contraceptive pills, they told me to drink yellow pills not red ones which I had to take once or twice a day"*
>
> *"At another clinic they said discharge has nothing to do with the implant. But where I inserted the implant they said it's common to have a discharge or headache"*

Sub-theme 1.3: Loss of body weight

Some participants were very concern and worried with the loss of their body weight. It was reportedly of concern to the healthcare practitioners when they visited the clinic for assistance. This is how they responded (all citations verbatim):

> *"…when I came to the clinic another male nurse checked my weight and he also noted that it has dropped too much and he advised me to go and try to remove it at the hospital…"*
>
> *"It was very painful and sad to be bleeding and losing weight every time, but when you seek help you don't get it…"*

Sub-theme 1.4: Headache and pains

It was also found that some participants had headache and body pains or unexplained pains in their body, which they believe was due to the use of the implant. As they reported, before they haven't had this problem, where only stated after they started using the implant. This is how they responded (all citations verbatim):

> *"….I had headache, loss of weight, pains on my shoulders after having continuous menstrual bleeding for about a month."*
>
> *lastly subsequent menstrual periods. But they only gave me tablets for heavy bleeding and headache."*

Sub-theme 1.5: Memory loss & disturbance

There were few participants that were found to have this problem. This is how they responded (all citations verbatim):

> *"…this injection can make you forget things easily, you just become insane, for I was forgetting where I kept my money most of the time."*
>
> *"...I wasn't aware until another girl from my church told me that with her, she was forgetting the names of her colleagues at work. I have heard many reporting the same problem that the injection cause you to forget things while it inside you."*

Sub-theme 1.6: Insomnia

It was found that some participants complained that they could not sleep at night. Some reported that this happened when they were experiencing other side effects, and for some it

happened without any clear reference as a cause. This is how they responded (all citations verbatim):

"…at night I couldn't sleep at all."

"I also had loss of weight, memory loss; sweating and I couldn't sleep well."

Sub-theme 1.7: Loss of pleasure for sex

In some cases women complained that after having the implant they wanted no sexual contact or had no desire for sex. Even in such case that they had sex, in most cases, they wanted no sexual contact. This is how they responded (all citations verbatim):

"…I had no pleasure for sex at all ever since…"

"Most of the times I had no pleasure to have sex it also started when I was using the implant."

Theme 2: Management of side effects

In some participants, they had to visit more than one health facility to attend to their side effects. They receive treatment from the clinic, but side effects subsided for a short period and would come back. When they returned, they would get the same treatment over and over again. This is how they responded (all citations verbatim):

"I decided to visit the clinic regarding this menstrual period problem, and I was told it will go away after time, it's just a side effect."

"When I had all this problem, I went to other clinic, where they told me they can't take it out; I should go to Eastern Cape where I got this implant. Again, some other day I

went back, another nurse gave me contraceptive tablets to stop vaginal bleeding…they told me to go to another clinic if I want to remove it."

"I came back to the clinic to remove the implant, and then they refuse to remove it from me. They told me about the procedure they have to follow. They gave me tablets then I went back again than they told me I have urgently came back I should allow treatment to work first until they remove it after three years."

"I went up and down trying to remove it, every clinic referring me to another. I learnt lesson by then, I decided to remain patiently until the solution."

Theme 3: Staff attitude

Some participants also tried repeatedly to seek help to remove the implant, but they couldn't get the help they required. Instead, healthcare practitioners told them about the procedure that they would have to follow. Some were not happy with the way they responded to them as they complained. This is how they responded (all citations verbatim):

"…I came to the clinic to remove the implant, then they refused to remove it from me, they told me about the procedure they have to follow."

"Nurses told me that we wasting government money for this implant, it's very expensive, if you go to private it's too expensive. You'll be taking advantage over short period you have had it."

"…they book three per day for removal then whenever we come for bookings on our due time we get very far dates."

Theme 4: Lack of support

Implanon users reveal that there were not educated or counselled about the implant, so that why they end up want to remove the Implanon® too soon before it term. This is how they responded (all citations verbatim):

> *"I had an abortion in 2014, when a nurse called us, all those that were there, to use new implant. She didn't explain to us how it work and other information we were supposed to know."*

> *"Another thing happened, I got it very late that only HIV negative women are free to insert Implanon® but it was not explained initially to me."*

"If it was wrong for me to use antibiotics and other medication they should have told me before, because I didn't know what was not allowed to take or not."

Theme 5: Misconceptions and rumours from clients

It was found that there were various rumours and misconceptions spread amongst the women using the implant. Some participants were told by their peers that it is possible to fall pregnant while using the implant. This is how they responded (all citations verbatim):

> *"My friend told me that it possible to be pregnant while using the implant, since they are other people that she knows that fell pregnant while using the implant. Is it possible to happen, really…?"*

> *"Yesterday, another friend of mine that told me that it possible to fall pregnant while using the implant. Then I asked her, how come I am not pregnant, because I am also using the implant, she responded that it depends with people."*

Theme 6: Spouse/partner disapproval and violence against women

Amongst the participants it was reported that some women experienced some violence and disapproval from using Implanon®. It was found that women were forced to remove the implant, and razors or needles were used in trying to remove the implant from them. This is how they responded (all citations verbatim):

> *"My husband was fine when I firstly told him I am using the implant, suddenly he changed and told me that he won't continue with lobola negotiations until I remove the implant. I then promised him to go to the clinic."*

> *"My partner didn't want me to use the implant, until he tried to remove it using razor, to cut a small opening and he then used a needle to remove the implant. When the blood was coming out, I told him to stop because it might be dangerous and risky to remove it. I was so disappointed when I got a very far booking in August."*

Theme 7: dissatisfaction with Implanon®

Most participants interviewed in this study reported they had dissatisfaction with Implanon®. The common reasons for their dissatisfaction were due to side effects, failure and other potential risk suspected by users. This is how they responded (all citations verbatim):

> *"I won't use it again, I don't think it will be good for me… I am not satisfied at all with the implant due to menstrual bleeding that are continuously. I won't use it again; I don't think it will be good for me."*

> *"It works different with people some are not happy some are happy, just like myself. It a matter of choice, a person must choose what works for her."*

"At the beginning of the year 2016, I felt so sick at all times. I experienced fever, coughing, vomiting after eating and dizziness. So I came to the clinic with problem until other nurse, sister at the clinic suggested that I check urine, then I checked I found out I am pregnant. I was then checked and I found out I am pregnant. I was surprised because I was using the implant. I will never use Implanon®, because I fell pregnant. Hence [although] *I was told that I won't get pregnant for the period of three years, this disappointed me badly."*

4.2.2.3. Conclusion

In this chapter, a detailed review of research results was presented revealing the perceptions and experiences of women using Implanon® as a new contraceptive device. Overall, the perspectives of the women suggest that better measures should be taken to deal with side effects, as in most cases, women stop using Implanon® due to side effects, otherwise they use Implanon® because its last longer, and most are extremely satisfied with the use of Implanon®. Most respondents are extremely satisfied with assistance they get from health care facilities. It was found that most women heard about Implanon® from their peers and from clinics. Among the issues that they had was side effects, commonly menstrual bleeding, weight gain, acne, and loss of sex drive.

CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter focuses on discussion of the study results, summary of the study results, and proposed recommendations. However, the discussion of the results will be guided by study objectives, where the findings from respondent's questionnaires as developed from health belief model, as well as themes generated from responses given by participants. The recommendations were proposed based on the findings discussed.

5.2. Discussion

The discussion in this research is based on the study objectives, which were addressed in the first chapter of this research. Therefore, this section is addressed according to various sections as each objective. The study objectives were:

i.) to explore and describe the experiences and perceptions of women using Implanon® at a selected primary healthcare Facility in KwaZulu-Natal; and

ii.) to develop relevant intervention tools to be used by healthcare workers.

This study adapted mixed method design, in which perceptions were addressed, with quantitative research, guided by health belief model, and experiences were further addressed in the qualitative research. Therefore the discussion will also be done separately, so as to address perception and experiences.

5.2.1. Perceptions of women using Implanon® as contraceptive method

The health belief model was used in this section to find the perceptions of women using Implanon® contraceptive method. However, the discussion was addressed in those sections that showed serious impact and significance.

The study targeted women using Implanon® from 15 to 49 years of age, including those that have terminated the use of the implant. Maja (2007) also indicate that age related issues can be a factor that impact the contraceptive practices. The study finding shows that a majority of women that use Implanon® were between the ages of 21 to 30 with the

percentage of 52.7 percent. Similarly, the results found by MacPhil et al. (2007) on the prevalence use of contraceptive by young people between the ages of 15 to 24 years, where the results indicated that the usage of contraceptives in young people were 52.2 percent. This can be linked with the findings shown by UNFPA (2012), stating that South African girls and women between 15 to 49 years of age use contraceptives at a higher rate of 60%, compared to Sub-Saharan countries with an average of 20 percent. In contrast, this results shows that most women that took initiative to attempt this new contraceptive were between 21 to 30 years. However, the young adolescents using the implant were low in number (9.1%). According to Maja and Ehlers (2004), it was found that adolescent mothers have failed to use freely available services. Moreover, a qualitative study conducted in Limpopo Province about contraceptives shows that 60% of girls were not utilising healthcare services, where it was found that health workers denied them access to contraceptives, perceiving them as too young to be engaging in sexual intercourse (Ramuthuba et al., 2012). There might be other reasons for low uptake of this contraceptive method in young adolescents. It was also evidenced that a majority were using Implanon® because it lasted longer than other options, supported by results of 58.2 percent. However, this shows that young women prefer long lasting contraceptive methods over short-term acting methods, because this doesn't require them to visit the clinic subsequently. These findings are supported by the study conducted by Mastor et al. (2011), which revealed that women use Implanon® because it is effective for long periods, and doesn't require any compliance from their partners.

Another similar findings were those of by Seutlwadi et al. (2012), which showed that 89.1% of sexually active young women preferred using barrier method (condoms), with only 57.6% preferring injectable contraceptives. In this study, previous contraceptive use by respondents showed that more than half of respondents were using barrier methods (54.5%), followed by 18.2% using contraceptive pills, 20.0% using vaginal rings, and 7.3% using injectables. The findings positively show that young women have a strong preference for the barrier method (condoms) as their primarily contraceptive. However, this was a positive result, since the implant itself cannot prevent the spread of sexually transmitted infections and HIV/AIDS. It also indicates that some women have the knowledge and understanding that not all contraceptive methods can prevent the

spread of sexually transmitted infections, instead preventing pregnancy alone. This was evidenced by 78.2% of women that responded that it is not safe to have sexual intercourse without using barrier protection. The findings founded by South African Demographic and Health Survey indicated that about 97% of sexually active women in South Africa have knowledge of contraceptive methods.

5.3.1. Discontinuation of implant

The study findings also show that 49.1% discontinued using Implanon®, whereas 50.9% were still continuing to use the implant. The major reasons for discontinuation indicated were side effects (34.5%), where menstrual bleeding (41.8%) was found to be a the predominant factor for discontinuation, followed by loss of sex drive, with 30.9%, and 25.4% acne. Among the respondents, menstrual bleeding was the most common side effects experienced by women, and even amongst those that were still using the implant it was found that they were required to seek medical assistance from the clinic regularly. The World Health Organization also showed that the continuation rate was very low in developed countries, there were 55.4% women that continued to use Implanon® in the first two years after insertion and 47.5% were also those using Norplant® within a two-year duration in developing countries. Bleeding disturbances and amenorrhea were the most significant side effects leading to premature discontinuation of these methods (Bahamondes, 2008). These findings were similar those found in study conducted by Glasier (2001), where it was reported that menstrual disturbance is the most common reason for discontinuation, with headache, acne, weight gain, and desired for pregnancy as the other reasons for removal. Another cohort included in a multicenter efficacy and safety study of the Implanon® contraceptive implant by Craxatto et al. (1999) evidenced that 31% of women discontinue Implanon® due to bleeding problems within two years of use. A South African study also support this finding, namely that the change in bleeding patterns is the main issue for removing the Implanon® implant, where without adequate counselling, women may discontinue the implant.

5.3.2. Satisfaction with Implanon®

The study results shows the discrepancy and contradiction between the two approaches, as in the quantitative data respondents 41.8% were not satisfied whereas in the qualitative approach majority were extremely and strongly not satisfied with the implant. In addition 29.1% were extremely satisfied and another 29.1% were also satisfied which shows a significant disagreement between the two results. However some respondents were satisfied with the Implanon nevertheless they had experiences of side effects. The satisfaction can differ between respondents, due to their personal experience with the implant. The main contributing factor to a lack of satisfaction may be the side effects respondents reported while they were using the implant. However, satisfaction can be linked with continuation rate, which was noted to be 50.9% in the study results. If a woman is satisfied, she can mostly continue to use the implant until three years is reached, but other women can be prevented to remove the implant even though they may not be satisfied. The findings also show that more than a half 56.4% was willing to continue use Implanon® for three years, where 34.5% disagree with continuation, while 9.1% was not sure. Similar findings by Zheng et al. (1999) reveal that the cumulative continuation rates for Implanon® and Norplant® were high, and no significant differences were observed in the continuation rates. However, we may assume from the findings that women were continuing to use the Implanon® at a higher rate, because they were more likely to be satisfied with the implant. This is contrary to what was found by Funk et al. (2005), where it was found that women who discontinued using Implanon® were the highest in number within the first eight months, whereas prolonged bleeding episodes were greatest with figures of 36% and 14%, thereafter decreasing to 14% and 7%, respectively.

2.5.3. Women discovery with implant

The study findings also revealed that women found out about Implanon® from their clinic, with a figure more than a half (50.9%), whereas less than a third of women found out from their peers (29.1%), some found out from media (12.7%) and some found out at work (5.5%). This result clearly shows that health facility plays a critical role in informing clients about family planning services, and in disseminating information with

regards to this new contraceptive device. Furthermore, it was revealed that nurses were more significantly involved in assisting clients to know and understand this contraceptive device, 90.9% of which were nurses, 7.3% were doctors, and 1.8% of which were other healthcare workers. However, Schrader and Schrader (2001) have stated that it is the role of the nurse practitioner to educate the clients on contraceptives. It was further revealed by Black et al. (2013) that healthcare nurses were familiar with medical eligibility criteria of the World Health Organization that ought to be used when screening for contraceptive use. By way of contrast, Sevil et al. (2004) reported that healthcare providers were not familiar with emergency contraception, and feared disseminating information about emergency contraceptives, as they would encourage youth into having unprotected sexual intercourse. This shows that some healthcare providers were not aware of all contraceptive methods.

The study findings also show that 87.5% of respondents were informed with all relevant information when they came for insertion, where 81.8% also agreed that they were able to ask questions and they received answers in a way that they could understand. The National Contraception Policy and Service Delivery Guideline (2012) shows that healthcare providers are provided with training and capacity-building to ensure they have sufficient knowledge, attitude, and skills to provide holistic quality contraceptive and fertility planning services. Other findings revealed that primary healthcare providers play a critical role in influencing women's uptake of contraceptive services (Department of Health, 2001). Adversely, the findings further revealed that there is a considerable amount of misinformation about contraception among the providers and the gaps in knowledge are common amongst the older providers and family medicine providers (Dehlendof et al. 2010).

5.4. Experiences of women using Implanon® as contraceptive method

Experiences of women using Implanon® were obtained separately in the qualitative approach. The study sample included seven participants, where every fourth participant was randomly selected for participation in the qualitative approach. In the previous chapter, data was presented under various themes and subthemes that were commonly arising in the analysis of the data.

5.4.1 Side effects and management of side effects with Implanon®

The findings reveal that most women commonly had side effects while they were using Implanon® as a contraceptive device. The side effects experienced varied between individuals, among these side effects that were commonly reported were vaginal bleeding/period disturbances, loss of body weight, headaches and pains, memory loss or disturbances, insomnia, and loss of sex drive. The most common side effects reported were menstrual bleeding, or periods, in most cases. The study participants reported that whenever they reached the clinic with menstrual bleeding or periods, they were given contraceptive pills, which only provided temporary relief from the symptoms. A descriptive study conducted on healthcare provider communicator style and patient comprehension of oral contraceptive use, was discussed that there was poor instruction from the practitioners of oral contraceptive pill, which contributed to a lack of understanding by the patient, where the patient had poor recall or lack of motivation, tied to failure. However, it was stated that patient noncompliance and/or dissatisfaction may result not from healthcare providers' lack of knowledge or expertise, nor from their failure to provide accurate and complete information, but from the manner in which the information is presented (Schrader and Schrader, 2001). Similarly, a randomised controlled trial of treatment options for troublesome uterine bleeding in Implanon® users conducted by Weisberg et al. (2009), it was found that 97% of women stopped bleeding within eight days after starting treatment, even when treatment adjustments were undertaken. The perceptions of bleeding patterns on women were changed and improved after the use of mifepristone and a doxycycline prescription. However, the study findings also revealed that there was no improvement in subsequent bleeding patterns. This shows that menstrual bleeding is a common problem for all women that use the implant, and a significant challenge that can be modified through treatment. Again, treatment also works over a short period, where the problem is solved temporarily. There is then the need for long lasting treatment so as to tackle the effect cause by Implanon® over a period of three years. Conversely, a qualitative study conducted by Spies et al. (2010) found that women were concerned with potential side effects as well as problems stemming from the use of new contraceptives. However they required more information about long-acting reversible contraceptives related to

side effects, how they work, their length of use, and how they might affect their fertility. The literature showed that women were more concerned with the side effects they might experience while using contraceptives. At the initial phase, when screening and counselling is provided, women are not adequately educated about the side effects, resorting to discontinuing the implant before it duration lapses. This is linked with a findings presented by Patel (2014), where it was revealed that within the first three months after insertion of Implanon®, it is common to experience side effects, but adversely, women who experience bleeding patterns and other adverse effects discontinue the implant, as they were not adequately counselled.

Other side effects reported were not considered severe enough to remove the implant before its intended duration. However this side effects were not common amongst all participants, and can be controlled and managed through adjustments with lifestyle; also requires proper history taking so as to identify other related causes that contribute to experiencing them. Similarly, Ojule et al. (2012) conducted a study on experiences with Implanon® in South Nigeria, where it was found that the most prevalent side effects experienced were vaginal spotting (60%), menorrhagia (13.3%) and inter-menstrual bleeding (13.3%). Despite the fact that there were other side effects reported, but the bleeding disturbances contributed to 51.8% participants to change from Implanon® to other contraceptives. This evidence therefore shows that a majority of the women can patiently continue to use the implant if they experience no changes with bleeding patterns. Other side effects are therefore regarded as modifiable. Conversely, most side effects were found to be experienced continuously, without disappearing, though clients were informed that this common within the first three months. Landry, Wei and Fast (2008) emphasis the importance of contraceptive counselling, and the provision of initial and continuing contraceptive care. Effective counselling and screening can actually improve contraceptive continuation, even though there may be side effects that clients experience.

5.4.2. Staff response, attitude to clients and lack of provision of support in clients

It was found that some participants were not satisfied with the manner in which healthcare practitioners respond whenever they visit the clinic subsequently with side

effects, and when they request removal of the implant. It was reported that healthcare practitioners were chasing clients away, telling them that they were wasting government money, and that this implant was very expensive to be removed anyhow. Clients were repeatedly told that there is a specific procedure that has to be followed before actual removal of the implant. Women were also not pleased with the dates that were given when they had to come for removal, which could not accommodate urgency. Schrader and Schrader (2001) reported that patient noncompliance and/or dissatisfaction may be the result caused by healthcare provider's lack of knowledge or expertise, nor from their failure to provide accurate and complete information, but from the manner in which the information is presented. Consequently, the healthcare provider is in a position of power that can intimidate or frighten the patient, and result in a less than optimal communication exchange (Schrader and Schrader, 2001). The Department of Health (2001) revealed that there were frequent reports from contraceptive clients about negative attitudes and rudeness of service provider services, and these are also regarded as not being youth friendly.

However, in this study, participants also stated that they were not well counselled and educated about the implant, since they were just called unexpectedly to insert the implant without further clarity ensuring that they know this new contraceptive method. Other participants reported that they were not sure about treatment contraindications, since they were not informed that HIV-positive clients on treatment shouldn't insert the implant. This action from staff is contrary to what is specific by National Contraception Policy and Service Delivery Guidelines (2012), where it is specified that the provider should listen carefully to client's needs, develop open, interactive communication, and use appropriate language and materials. For this reason, she ought to help the client to choose an appropriate contraceptive method, that is, a method that is medically safe and takes into account the risks of exposure to sexually transmitted infections (Department of Health 2001). Wood and Jewkes (2006) also argued that healthcare practitioners show a negative attitude when rendering family planning services to teenagers. It was further evidenced that nurses stigmatise teenagers for their sexuality, treating them harshly and even showing an unwillingness to support them in using contraceptives. Bednash et al. (2009) have argued that besides challenges arising with

staff, there is a huge need for more staff or healthcare practitioners to cover the shortage of healthcare providers in family planning departments.

5.4.3 Misconceptions and rumours about the implant

The study findings revealed that they were negative rumours and misconception about the implant shared by peers and clients while they visited the clinic. It was found that some clients were told by their peers that it is possible to fall pregnant while using the implant, and that therefore, some clients still feel insecure using Implanon®, as they think there are possibilities of them falling pregnant. This spread of rumours can also cause clients to want to discontinue using Implanon® suddenly. However, the spread of rumors and misconception is common with women using contraceptives. The National Contraception and Fertility Planning Policy and Service Delivery Guidelines (2014) state that the main challenges with adolescent with regards to using contraception were peer pressure to be sexually active, or to conceive and demonstrate their fertility, inaccurate ideas about reproduction and conception, and negative and judgmental healthcare provider attitudes towards teenagers, who are sexually active, and clinics which are not open after school.

Subsequently, there are many factors which can contraindicate Implanon® use, such as epilepsy, tuberculosis, and antiretroviral drugs, poor screening, and other lifestyle factors, such as substance abuse and alcohol consumption (Organon Laboratories Limited, 2009). Therefore it can happen that clients were not informed initially when they were introduced to the implant, with other causes that could lead to pregnancy while using Implanon®. Patni et al. (2006) found that Implanon® failure was due to potent enzyme inducers known to have deleterious effects resulting in intrauterine or ectopic pregnancy. The effects of pregnancy were directly related to drug interference of anti-epileptics drugs (phenytoin, phenobarbital), antibiotics (rifampicin), antifungal drugs, protease inhibitors (efiverenz, nevirapine). Woolrych and Hill (2005) conducted a study to identify common reason for unintended pregnancy on Implanon® users. The study findings showed 218 cases of unintended pregnancy, where 45 had insufficient data to assess the reason for contraceptives failure, and 46 women were determined to have been already pregnant before Implanon® insertion. There were 127 cases that were

remaining; some where there was a failure to insert the implant in 84 women. The other 19 cases were linked to incorrect timing of insertion, three cases were due to expulsion of Implanon® and there were eight cases of interaction with hepatic enzyme-inducing medicines. A remaining 13 cases were product/method failures; where Implanon® was known to be still in place, and there was no other explanation for contraceptive failure. The World Health Organization also compared the effect of Implanon®, Norplant® and Jadella®, where it was found that these methods were highly effective and there were only a few pregnancies reported in women when following up. It was also revealed that during the period between the introduction of Implanon® in 1998 and March 2007, a total of 1688 pregnancies were reported, resulting in an overall post-marketing Pearl index of 0.024. Most of the pregnancies were attributable to three causes, which were failure to insert the implant, insertion of the implant in women who were already pregnant, or insertion after the recommended first few days of the cycle and concomitant use of hepatic enzyme inducing antiepileptic drugs. This literature clearly support that Implanon® cannot fail to work effectively in the body. If ever pregnancy happens, it can be due to the many other factors mentioned in the literature.

5.4.4. Disapproval from partner or husband

The study findings report that some participants were treated violently or harshly by their husbands at home when they discovered that their wives were using this implant. It was reported that other participant was pressured to remove the implant, because her husband told her that he wouldn't continue paying lobola at home until she bears a child for him. Despite the situation she had at home, when she visits the clinic she was given a deferred booking date for the removal, causing her anxiety and concern. Another situation found was when other participant reported that her husband tried to remove her the implant with a razor and needle. This was clearly showing that women experienced potential violence and lack of support at home. In the first analysis it was evidenced that 69.1% of women stated that they had informed their partners or husband as to their use of the implant, while 30.9% also responded that their partners were not aware they were using it. Peel and Moreje (2013) have meanwhile argued that South African society, particularly in rural areas, is still male-dominated, and that women feel

pressure to prove their fertility. Kamal and Lim (2010) revealed that a husband's approval of family planning is taken as a pivotal determinant of women's contraceptive use.

Williams et al. (2008) reported that women experience limited autonomy, mobility and power related to household and fertility decision-making. The autonomy described by women is subversive and nested within a framework where they are not able to make overt decisions about their bodies, often manifested by covert contraceptives. According to one of the participants, some husbands feel that a wife should always listen to them and obey them. Soldan (2004) states that men dominate decision-making regarding family size and their partner's use contraceptive methods, among a variety of traditions. It was found that men attempt to prevent women from using contraceptives. It was also evidenced that certain men even fight against women in trying to prevent them from visiting the clinic for family planning. In some instances, men destroy clinic cards or contraceptives received from the clinic. This action was due to some men wanting to prove their fertility as the result of their actions (Williamson, Parkes, Wight, Petticrew and Hart, 2009).

5.4. Recommendations

These recommendations are proposed as interventions that will assist to improve standards in the service provision of the Implanon® contraceptive device. These interventions were made based on the study findings in this research investigation.

Client

- The women should be counselled and evaluated on their knowledge, attitude and concerns regarding Implanon
- All cultural and religious issues must be adhered to when offering Implanon contraceptives in women as to increase adherence rate
- Every women is legally allowed to removed Implanon when they feel insecure and at risk with their life. No person should be forced to continue using the implant at any point. In order to avoid early discontinuation proper counselling

and evaluations of clients issues should be considered and managed accordingly

- Barrier method should be emphasized to on daily basis where ever clients attend the client. The point that Implanon does not protect you from HIV/AIDS should be stressed to women

Support System (Spouse/partners/society)

- To address barriers in reference to cultures Indunas, Amakhosi, traditional healers and other leaders in the community must be used in the service delivery to encourage the use of Implanon. The religious clients must be encourage to use the implant through their Pastors, priests and relevant religious leaders available in our community
- The need for spousal support should be explored broadly, where clients must be encouraged to bring their partners when coming for contraceptives so as to create the awareness and support from spouse. Women should be advised to come with their partners at the initially phase when choosing the contraceptives.
- Proper investigation must be perform on spousal perceptions, misconception and attitude to Implanon contraceptive. This will assist to identify issues or matters arising with Implanon.
- An awareness campaign should also be forwarded by coordinators concerned to increase awareness and knowledge about the implant. School health teams, community health workers, nurses, and other members ought to work to achieve awareness in libraries, schools, as well as in churches and the community more broadly

National Department of health

- A great deal to prevent an adverse outcome of Implanon® use among women. This investigation found that most of the issues arising with Implanon® could have be prevented if proper screening and counselling were performed, such as proper history taking, and performing investigations required in screening and

educating. Additionally, women should be counseled about side effects to be expected initially, and should be informed about possible treatment for correcting these side effects.

- Healthcare practitioners and staff should always support those women coming to clinic subsequent with side effects. Staff must show empathy, and be non-judgmental, harboring no negative attitude toward clients. It is a role of a nurse to listen attentively, be a user friendly communicator to clients, and demonstrate strategic ways to solve all issues raised by clients. No clients should leave the health facility without receiving sufficient assistance.
- The national health government should seek strategies that will stop uncontrollable side effects in contrast with Expanded Drug List, such as menstrual bleeding in clients. There should be a hierarchy when dealing with bleeding issues, where the first line option should be a general treatment, and second line should be intense treatment, and failing that, the implant should be removed, especially with constant heavy bleeding that doesn't subside. The issue could arise if a client could end up staying at home, while bleeding profusely, as she may be avoiding the hostility she faces from healthcare practitioners.
- Schedule booking for removal should not be extended too far, particularly in cases where clients are having negative experiences and have valid reasons to urgently decide to change. At the very least, clients should be free to remove the implant on a day at their own discretion, without facing any pressure to continue to use the implant.
- All healthcare providers, especially nurses working in primary healthcare facilities, should receive in-service training on the use of Implanon®. Thus, so as to adopt a 'one-stop shop' strategy, where the client should receive all relevant help they came for in the clinic in one consultation room, and from only one healthcare provider. This will also allow staff to work as a team when dealing with various conditions, and in solving side effects or issues brought forward by clients.

- Effective screening tools should be in place and develop specifically for Implanon® that will allow healthcare practitioners to easily adopt and understand all the requirements needed for this implant.
- Body weight should be strictly monitored for all clients that insert the implant and even in subsequent visits when they come with side effects, it should be compared with previous one.
- It is essential at the initial phase before Implanon® insertion that clients are asked to specify all medication they are taking, and be further educated as to which medications hold contraindications with the Implanon® contraceptive method.
- It is imperative that research investigation be conducted broadly to explore Implanon® as a contraceptive method, involving a greater number of health facilities and clients. Investigation should involve healthcare providers so as to identify issues and experiences they might have regarding this new contraceptive method.

CHAPTER 6

SCREENING TOOL AND ALGORITHM

6.1. Introduction

This chapter focuses on the screening tool developed based on the study findings. This chapter further responds to Objective 2, that is, to develop relevant intervention tool to be used by healthcare workers. The intervention tool will assist in screening all clients that want to use the implant, and will assist to exclude possible risks and adverse outcomes and further ensure that medical eligibility criteria is met. The well-trained healthcare practitioners will be able to screen and counsel the client appropriately.

6.2. Purpose of the screening tool and algorithm

The screening tool aims to reduce potential problems and adverse events that can be brought about by ineffective screening and history taking from clients. Therefore, this tool will guide healthcare practitioners when obtaining history in preparing for the insertion of Implanon®, and further assist with the screening of possible risks that need to be excluded when using the implant. Algorithms serve as a step-by-step guide when using the screening tool.

6.3. Description of the screening tool

As a screening tool, Implanon® was developed based on the finding obtained in this research. The tool comprises five sections, as follows: Section A: ***general history***; Section B: ***vital parameters***, Section C: ***individual perception***, Section D: ***current symptoms or experiences***, Section E: **general physical examination.**

The information on the developed screening tool is explained below.

Section A: Presents personal details of the client that want the implant to be inserted. This includes facility name, where the implant is inserted by client; full particulars of the client including name and surname; age of the client; outpatient number and telephone number, or cellphone number that can be used for contact.

Section B: Presents general history of the client. This comprises of allergies; parity and date of insertion; propose date of removal; chronic/medical treatment and previous contraceptive used.

Section C: Presents vital parameters obtained from the client. This includes blood pressure; pulse; temperature; weight; height; body mass index; pregnancy test; urinalysis; and date of last menstrual period.

Section D: Presents individual perceptions. This includes sub-questions about importance of family planning; and asks questions such as 'are you well informed about the Implanon®?'; 'does having foreign body inserted scares you?'

Section E: Presents the current symptoms or illnesses that the client could have. This includes abnormal PV bleeding recently, current on treatment for HIV/TB/epilepsy, current acne or skin conditions, experience of weight gain or loss, and recent engagement in unprotected sex.

Section F: Includes general physical examination of the client. This section requires healthcare practitioners to assess and examine the client, and note any abnormalities on the space provided in the tool.

SECTION ON GENERAL HISTORY

Allergies: Obtain history of any allergies the client might have. Insertion should not be undertaken if the client is allergic to progestin. Insert the implant if other allergies are not related to the implant hence otherwise.

Parity: It is important to know if the women have children at home. A healthcare practitioner should note the birth spacing between each child.

Date of insertion and proposed date of removal: the current date the client of insertion is written. The proposed date of removal should be a date three years from insertion, on the same month and same date on the third year the implant was removed.

Chronic/medical treatment: all medicines and their uses that are taken by the client should be noted in a space provided. Do not insert the implant if the client is

taking any of this medication. This includes barbiturates, bosentan, carbamazepine, felbamate, griseofulvin, oxcarbamazepine, phenytoin, rifampicin, St. John's wort, lopiramate and HIV medication. The medication mentioned can cause possible effects in the use of Implanon® device in clients.

Previous contraceptive used: specify previous contraceptives the client has been using before requiring this subdermal implant. Note the type of contraceptive and the follow-up date given when the client had the last contraceptive.

SECTION B: VITAL PARAMETERS

Blood pressure, pulse and temperature: vital parameters are baseline investigations on the client's condition. The client should be checked for these parameters before insertion. In cases where any of these parameters are abnormal, the cause for abnormalities should be specified and corrected before the client is inserted Implanon®.

Weight, height and body mass index: the weight should always be obtained as a reference if the client comes back in future complaining about the implant causing weight gain and loss. Severely overweight clients should not insert the implant unless otherwise advised by the medical doctor. Underweight clients should be screened for possible causes that could cause loss of weight, unless the client is underweight by nature.

Pregnancy test and urinalysis: the pregnancy test and urinalysis it should be checked for all clients. Do not insert the implant if pregnancy test is positive or suspect pregnancy. Refer the client for antenatal care. Urinalysis should be checked for possible abnormalities, such as any presence of bilirubin, which suggests kidney problem, where keytones may indicate diabetic ketoacidosis, a potentially life-threatening condition. Blood means bleeding issues, while proteins indicate kidney problems. In life threatening situations, do not insert the implant.

Date of the last normal menstrual period: specify when the last normal menstrual period was experienced by the client. Consider other possible situations that could

cause the client not to have normal menstrual period, and ensure urine is tested for pregnancy.

SECTION C: INDIVIDUAL PERCEPTION

C1: ***Do you think family planning is important?***

C2*: Are you well informed about Implanon®?*

C1 and C2: If **YES** to any, proceed to insert, but if the client responded **NO** then provide counselling, and educate the client about the importance of the implant. Therefore ask if the client wants to insert the implant, and prepare for insertion.

C3: ***Does the foreign body scares or discomfort you?***

If the answer is **YES,** counsel the client about any misconception or thoughts she might have and inform her that the feeling of discomfort disappear after a time. But if response was **NO,** proceed to insert the implant.

SECTION D: CURRENT SYMPTOMS/ EXPERIENCE

D1: ***Have you experienced abnormal PV bleeding recently?***

If **YES** do not insert the implant, because there is even higher possibility of the client experiencing severe vaginal bleeding. Rather solve the bleeding issues according to protocol, and advise the client to come back once bleeding is either under control or absent. If bleeding is normal, confirm and continue to insert the implant. If response is **NO**, proceed with insertion

D2: ***Are you currently on treatment for HIV/TB/epilepsy?***

If the response is **YES,** do not insert the implant, since such treatment are contraindicated for Implanon® use. If **NO,** proceed to insert the implant.

D3: ***Do you currently have acne or any skin conditions?***

If **YES,** inform the client about possible chances of having the skin condition and allow the client to decide for insertion. If **NO,** proceed with insertion.

D4: ***Are you experiencing unusual weight gain or loss?***

If **YES,** counsel the client about side effects of gaining or losing weight and educate about strategies to control weight. Insert the implant after client decision. If **NO,** proceed with insertion.

D5: ***Have you recently engaged in unprotected sex recently?***

If **YES,** refer for HIV counselling and testing, check the pregnancy test as verification. Educate about the importance of using protection even after insertion of Implanon® and insert the implant. If **NO,** insert the implant.

SECTION E: GENERAL PHYSICAL EXAMINATION

Examine the client comprehensively in a head-to-toe examination. Specify abnormalities if any were noted. Plan to solve abnormalities and refer where required.

Implanon Contraceptive screening Tool AND Risk Questionnaire

FACILITY NAME_____

FULL NAME:	**AGE:**
OUT PATIENT NUMBER:	**TELEPHONE NUMBER:**

A. **GENERAL HISTORY**	
Allergies	Parity:
Date of insertion:	Propose date of removal:
Chronic/Medical treatment:	Previous contraceptive used:

B. **VITAL PARAMETERS**		
Blood Pressure:	Pulse:	Temperature:
Weight:	Height:	Body Mass Index:
Pregnancy Test _____ Urinalysis _____	Date of Last Normal Menstrual Period: _____	

C.		
D. **Current symptoms/experiences(Tick √)**		
D1. Have you experienced abnormal PV bleeding recently?		
D2. Are currently on treatment for HIV/TB/epilepsy?		
D3. Do you currently have acne or any skin conditions?		
D4. Are you experiencing unusual weight gain or loss?		
D5. Have you recently engaged in unprotected sex recently?		

E. GENERAL PHYSICAL EXAMINATION:
(NOTE ABNORMAL FINDINGS)

Adapted from Organon Laboratories Limited (2009)

PATIENT CONSENT FORM

I understand the Patient Labelling for Implanon®. I have discussed Implanon® with my healthcare provider who answered all my questions. I understand that there are benefits as well as risks from using Implanon®. I understand that there are other birth control methods and that each has its own benefits and risks.

I also understand that this Patient Consent Form is important. I understand that I need to sign this form to show that I am making an informed and careful decision to use Implanon®, and that I have read and understand the following points.

- Implanon® helps to keep me from getting pregnant.
- No contraceptive method is 100% effective, including Implanon®.
- Implanon® is made of a hormone mixed in a plastic rod.
- It is important to have Implanon® inserted at the right time of my menstrual cycle.
- After Implanon® is inserted, I should check that it is in place by gently pressing my fingertips over the skin in my arm where Implanon® was inserted. I should be able to feel the small rod.
- Implanon® must be removed at the end of 3 years. Implanon® can be removed sooner if I want.
- If I have trouble finding a healthcare provider to remove Implanon®, I can call (877) 467-5266 for help.
- Implanon® is placed under the skin of my arm during a procedure done in my healthcare provider's office. There is a slight risk of getting a scar or an infection from this procedure.
- Removal is usually a small office procedure. However, removal may be difficult. Rarely, Implanon® cannot be found when it is time to remove it. Special procedures, including surgery in the hospital, may be needed. Difficult removals may cause pain and scarring and may result in damage to nerves and blood vessels. If Implanon® cannot be found, its effects may continue.
- Most women have changes in their menstrual bleeding while using Implanon®. I also will likely have changes in my menstrual bleeding while using Implanon®. My bleeding may be irregular, lighter or heavier, or my bleeding may completely stop. If I think I am pregnant, I should see my healthcare provider as soon as possible.
- I understand the warning signs for problems with Implanon®. I should seek medical attention if any warning signs appear.
- I should tell all my healthcare providers that I am using Implanon®.
- I need to have a medical check-up regularly and at any time I am having problems.
- Implanon does not protect me from HIV infection (AIDS) or any other sexually transmitted disease.

After learning about Implanon®, I choose to use Implanon®.

(Name of Healthcare Provider)

_____ _____

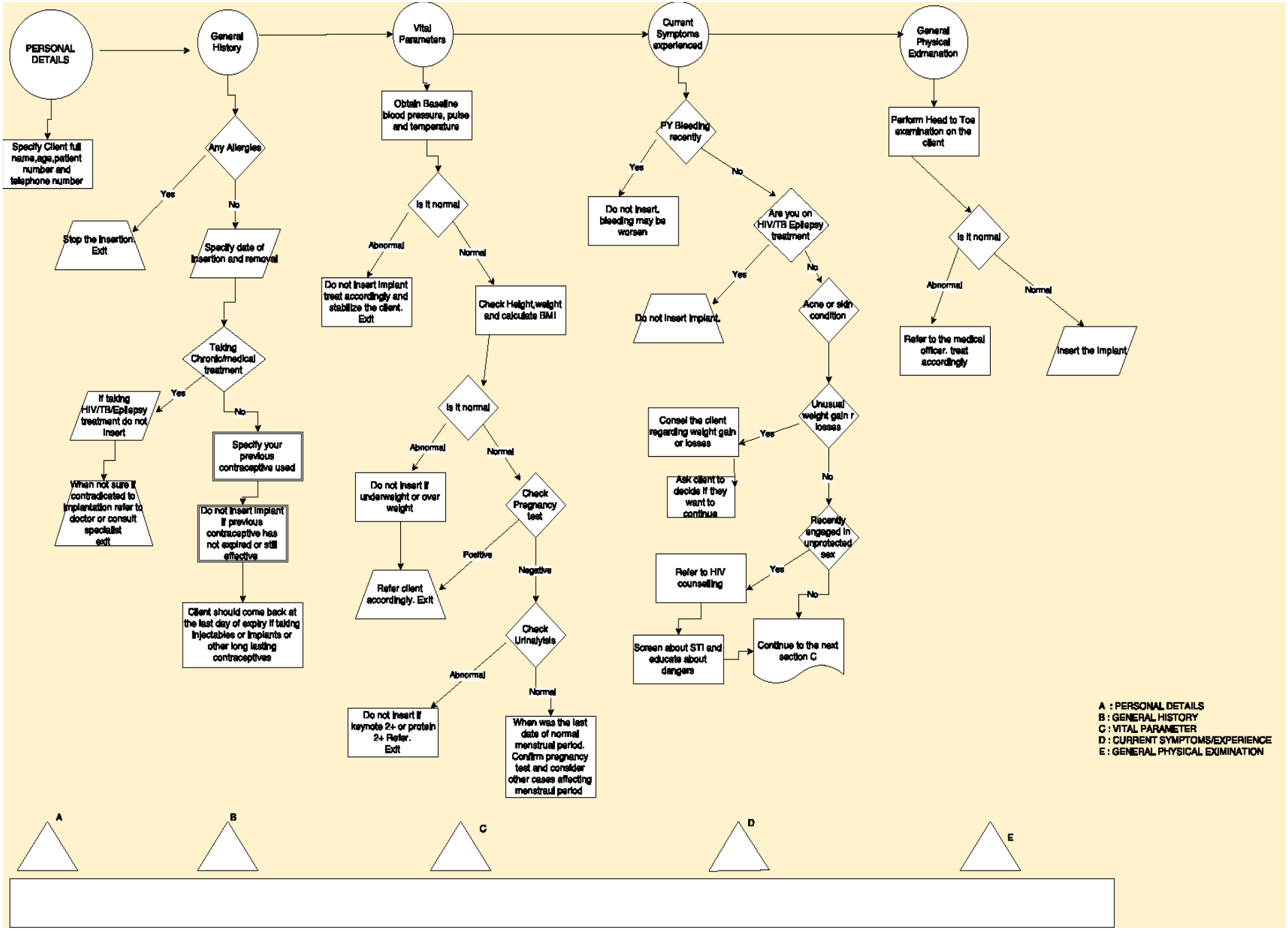
(Patient Signature) (Date)

WITNESSED BY:

The patient above has signed this consent in my presence after I counselled her and answered her questions.

_____ _____

(Healthcare Provider Signature) (Date)


PERSONAL DETAILS
General History
Vital Parameters
Current Symptoms experienced
General Physical Exmanation
Specify Client full name,age,patient number and telephone number
Any Allergies
Yes
No
Stop the Insertion. Exit
Specify date of insertion and removal
Taking Chronic/medical treatment
Yes
No
If taking HIV/TB/Epilepsy treatment do not Insert
When not sure if contradicated to implantation refer to doctor or consult specialist exit
Specify your previous contraceptive used
Do not Insert Implant if previous contraceptive has not expired or still effective
Client should come back at the last day of expiry if taking Injectables or Implants or other long lasting contraceptives
Obtain Baseline blood pressure, pulse and temperature
Is it normal
Abnormal
Normal
Do not Insert Implant treat accordingly and stabilize the client. Exit
Check Height,weight and calculate BMI
Is it normal
Abnormal
Normal
Do not Insert if underweight or over weight
Refer client accordingly. Exit
Check Pregnancy test
Positive
Negative
Check Urinalysis
Abnormal
Normal
Do not Insert if kaynote 2+ or protain 2+ Refer. Exit
When was the last date of normal menstrual period. Confirm pregnancy test and consider other cases affecting menstraul period
PY Bleeding recently
Yes
No
Do not Insert, bleeding may be worsen
Are you on HIV/TB Epilepsy treatment
Yes
No
Do not Insert Implant.
Acne or skin condition
Unusual weight gain r losses
Yes
No
Consel the client regarding weight gain or losses
Ask client to decide if they want to continue
Recently engaged in unprotected sex
Yes
No
Refer to HIV counselling
Screen about STI and educate about dangers
Continue to the next section C
Perform Head to Toe examination on the client
Is it normal
Abnormal
Normal
Refer to the medical officer. treat accordingly
Insert the Implant
A : PERSONAL DETAILS
B : GENERAL HISTORY
C : VITAL PARAMETER
D : CURRENT SYMPTOMS/EXPERIENCE
E : GENERAL PHYSICAL EXIMINATION
A
B
C
D
E

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Appendix A

Questionnaire for Participants

Section A: Demographic data

N.B: Please tick the appropriate box of your choice

1. Age

1.2. 15 – 20	1.3. 21 – 30	1.4. 31 - 39	1.5. ≥ 40

2. Marital status

2.1.Never married	2.2.Married	2.3.Divorced	2.4.Widow

3. Religion

3.1.Christian	3.2.Hindu	3.3.Muslim	3.4.Judaism	3.5.African religion	3.6. Other, SPECIFY?

4. Level of Education

4.1.Attended Primary School	
4.2. Attended Secondary School	
4.3. Completed Matric (Grade 12)	
4.4. Attended College/ Varsity	
4.5. Completed College/ Varsity	

5. Occupational status

5.1. Unemployed	5.2. Part job / self employed	5.3. Permanent employed	5.4. Currently a Student

6. Previous method of contraception

6.2.	Contraceptive pills		6.5. Barrier methods (condoms)	
6.3.	Intrauterine device		6.6. Vaginal rings	
6.4.	Contraceptive injectable		6.7. Sterilization	
6.5.	Abstinence		6.5 Other, specify?.....	

Section B: individual perceptions

N.B: Please tick the most relevant answer to the questions

Importance of contraceptive

1. **How important is using contraceptives to you?**

1.1.	Very important	
1.2.	Partial important	
1.3.	Not important	

2. **Are you still using implanon?**

2.1.Yes	
2.2. No	

3. **How long have you had implanon device?**

3.1.	6-8 weeks	
3.2.	3 months	
3.3.	4 months	
3.4.	More than 4 months	

4. ***If you answered NO to question 2 above*: what was the reason for stopping to use implanon?**

4.1.	I had side effects or other health problems	
4.2.	I wanted a child / pregnancy	
4.3.	I was advised to remove it by other people	
4.4.	Other reason not mentioned, Specify?.....	

Perceived susceptibility when using implanon contraceptive

3. Which of the following side affects you have experienced?

3.1. Weight gain	
3.2. Menstrual bleeding	
3.3. Mood changes	
3.4. Acne	
3.5. Insomnia	
3.6. loss of sex drive	
3.7. pains or redness on the site of insertion	
3.8. Other side effects, which are not mention	

Statement	Agree	Disagree	Not sure
4. It is safe to have unprotected sex when using implanon contraceptive			
5. It is extremely likely that a person may have side effects, potential risks, or illness when using implanon?			
6. Sometimes implanon device can go missing in the body			
7. Having a foreign body inside me, scare and discomfort me			

Perceived severity of the problem

8. Statement	Agree	Disagree	Not sure
8.1. When having implanon device, it can be life-threatening when it becomes lost and moves inside of you			
8.2. When you become critically ill and weak or even develop other lifelong medical diseases			

Perceived benefits of using implanon

9. Why did you choose Implanon?

8.1. Last longer than the other methods	
8.2. Recommended by someone	
8.3. Has few side effects or risks	
8.4. Does not require subsequent visits	

8.5. For other reasons that are not mentioned above	

9. How will you rate your satisfaction with Implanon so far?

9.1. Not satisfied	
9.2. Satisfied	
9.3. Extreme satisfied	

10. Do you think you will use implanon for the period of 3 years, unless you want a child?

10.1. Yes	
10.2. No	
10.3. Maybe, I am not sure yet	

11. How long does Implanon works in the body?

11.1. One year	
11.2. Three years	
11.3. I don't know	

Section C: Modifying factors

N.B: Please tick the one relevant answer to the questions below

1. **How did you discover about the new Implant (implanon)?**

1.1. Media (radio/ television/ newspaper /social network/ internet)	
1.2. Peers (friends/ partner/ neighbours)	
1.3. Clinic (Health practitioner/ clinic pamphlet/ posters)	
1.4. School (Teacher/ School health teams)	
1.5. Work (colleague/ Occupational nurse)	

2. Would you refer someone to use Implanon?

2.1.	Yes	
2.2.	No	

3. Who is allowed to insert Implanon from below?

3.1.	Anyone willing	
3.2.	Only young women with no children	
3.3.	Women within the bearing age meeting eligibility	

4. Which health care practitioner was available to help you to use implanon?

4.1. Nurse	
4.2. Doctor	
4.3. other health care workers	

5. Does your partner know you are using implanon?

Yes	
No	

Section D: Likelihood of action

N.B: Please tick one relevant answer from the questions below

Statement	**Yes**	**No**	**Not sure**
1. Did the health practitioner help you to understand implanon?			
2. Were you able to ask and get answers about this contraceptive?			
3. Was it explained to you that it is common to experience side effects within the first 3 months after implanon insertion?			
4. Do you have any barriers or issues that might cause you to stop using implanon?			

5. Have you ever thought to change in using implanon to other contraceptives?			

Thank you!!!!! FOR YOUR PARTICIPATION!!!! GOD BLESS YOU!!!

Qualitative Interview guide Part B

Section A: Demographic data

N.B: Please tick the appropriate box of your choice

1. Age

1.2. 15 – 20	1.3. 21 – 30	1.4. 31 - 39	1.5. ≥ 40

2. Marital status

2.1.Never married	2.2.Married	2.3.Divorced	2.4.Widow

3. Religion

3.1.Christian	3.2.Hindu	3.3.Muslim	3.4.Judaism	3.5.African religion	3.6. Other, SPECIFY?

4. Level of Education

4.1.Attended Primary School	
4.2. Attended Secondary School	
4.3. Completed Matric (Grade 12)	
4.4. Attended College/ Varsity	
4.5. Completed College/ Varsity	

5. Occupational status

5.1. Unemployed	5.2. Part job / self employed	5.3. Permanent employed	5.4. Currently a Student

SECTION B:

1. **What is your experience with the use of implanon contraceptive?**
2. **What side effects did you experience? Explain how you experience them? For how long?**

Thank you!!!!! FOR YOUR PARTICIPATION!!!! GOD BLESS YOU!!!

Appendix B

Consent form to participate in study

Title: Exploring women's experiences and perceptions on the use of implanon as a contraceptive method in selected primary health care facilities in KwaZulu-Natal

Agreement statement for participants

I hereby agree to participate in the study as informed by the researcher and I also confirm this statement as my agreement to take part in this study.

I have also understood the relevant information regarding this study. All relevant information has been read out clearly to me as they appear on the information letter. This information includes the nature, conduct, benefits and risks of this study.

I am aware that my personal details including my sex, age, date of birth, initials and diagnosis will be use anonymously and confidential by researcher in this study.

In this study research, I agree that the information provided by me can be utilized by the researcher usefully.

I understand that I may withdraw my consent and participation in the study freely at any stage.

I have had enough opportunity to ask questions and I am also satisfied with all responses given to me. At my own free will, I declare myself prepared to participate in the study.

I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant	Date	Time	Signature

I, _____, hereby confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____	_____	_____
Full Name of Researcher	Date	Signature

Appendix C:Letter of information for participants

Research Title: **exploring women's experiences and perceptions on the use of implanon as a contraceptive method in selected primary health care facilities in KwaZulu-Natal**

Researcher: Mgobhozi Lucky Nhlanhla (Student)

Supervisor: XXXXX

Co-Supervisor: Prof. XXXX

Brief Introduction of the Study:

The new contraceptive device, IMPLANON has been introduced in South Africa. This preventive measure was launched in 2014 under the national family planning campaign portfolio. It was available to all public healthcare facilities across the country by mid-2014 and was then effectively implemented nationally. Implanon target was to every women meeting eligibility criteria staying in both rural and urban areas. This sub-dermal contraception implant was set to improve sexual reproductive health services and to reduce teen pregnancies, maternal mortality, HIV transmission and that of other sexually transmitted infections, improving child survival and further contributes to economic growth and reduce poverty. However, the researcher has taken an initiative for explore experiences and perceptions associated with Implanon to women within the bearing age.

The purpose of the study

The purpose of this study is to determine the experiences and perceptions of Implanon users in public sector primary health care clinic in the Umgungundlovu region with

regards to Implanon contraceptive method. This further include problems experienced and participant knowledge with this knew contraception

Outline of the Procedures: The study researchers will use questionnaire with structured questions as an instrument tool for collecting information to all participants. You are requested to take a questionnaire after signing consent form, and filling it with appropriate answers within 15 to 20 minutes. Then you will post it in a box which will be provided to you by the assistant researcher. We promise to keep your identity confidential by not using your name in the questionnaires and the information given will be kept confidential. If ever you have any questions or clarification during the time you are answering the questions, feel free to ask the assistant researcher.

Risks or Discomforts: There are no risks associated in participating in this research study.

Benefits: Although the research study will not benefit you directly now, it will be helpful in the future since it will explore the matters relating Implanon contraceptive device and further improve healthcare delivery by highlighting critical issues with this new contraceptive method.

Reason/s why the Participant May Be Withdrawn from the Study: You can feel free to withdraw at any stage during time of participation in this study, without any penalties or questions.

Remuneration: You will receive no remunerations.

Costs of the Study: You are not expected to cover any cost for any reasons in this study.
Confidentiality: All data collected will be definitely private and confidential as possible and it will be shredded there after the study is finished. It will be used only for the purpose of this research study.

Persons to Contact for Queries:

University of KwaZulu-Natal Research Committee: 031 2604 709

Head of Department Prof. Mnchunu: 031 2601 421

Research Supervisor-XXXX 031 2602 255

Researcher – Mr. L.N Mgobhozi: 072 6799 940

Appendix D: Letter of Request to conduct the study

P. O Box 700

Stanger

4450

20 June 2016

East Boom Community Health Centre

P.O Box 4018

Willowton

Pietermaritzburg

3209

Dear: Mrs. D.L Naidoo

Re-Permission to conduct research study in East Boom Community Health Centre

I am Mr. Mgobhozi Lucky, currently a student at University of KwaZulu-Natal. I am doing Full Research Master degree in nursing field. My research title: exploring women's experiences and perceptions on the use of implanon as a contraceptive method in selected primary health care facilities in KwaZulu-Natal. The aim of the study is to describe experiences and perceptions of women using Implanon Contraceptives devices.

I hereby request your permission to collect data at your institution. This research will focus only to implanon users specifically, who will be conveniently present at family planning department. I would like to conduct short interviews to users of implanon, atleast to women who have had implanon for 6 weeks or more. I hereby make a promise to cooperate with all policies that abide with researchers.

With due respect, I intend to commence data collection on the 23th, 24th, 25th, 26th and 27th of August 2016. Please find the attached copy of ethical clearance certificate from

University of KwaZulu-Natal and Research Ethics Approval Committee from Department of Health Head Office.

I hope my request will receive your attention and consideration.

Yours sincerely

Mr Mgobhozi Lucky (0726799940)

Appendix: Letter of Permission

The Research Team

330 Langalibalele Street

Natalia Building

Pietermaritzburg

3200

12 September 2015

The Research Team

RE: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I am currently registered as a Masters student at the University of Kwazulunatal in the Discipline Health Sciences under Nursing Department. I hereby request your permission to conduct a research project at UMgungundlovu Districts.

The proposed title of my research is: ‘exploring women's experiences and perceptions on the use of implanon as a contraceptive method in selected primary health care facilities in KwaZulu-Natal’. The aim of the study is to describe and explore the women’s perceptions and experiences of Implanon users in selected primary health care facilities at KwaZulu-Natal and propose relevant interventions or recommendations based on the study findings.

The target population will be women who have inserted implanon for 6 weeks or those who have removed the implant. The primary health care facilities chosen in these two districts are as follows: UMgungundlovu District: East Boom clinic

I am looking forward towards your positive response

.....	……	…….
(Mr) Mgobhozi L.N.	XXXXXXXXXXXXX	(Prof)XXXXXXXX.
Masters student	Supervisor	Co-Supervisor
Cell no: 072 6799 940	Tell: 031-260 1541	Tell: 031 -260 1421

Appendix: letter of Permission

The District Manager

UMgungundlovu Health District

Pietermaritzburg

3201

14 September 2015

Dear Madam

RE: REQUEST FOR PERMISSION TO CONDUCT A STUDY

I am currently registered as a Masters student at the University of Kwazulunatal in the Discipline Health Sciences under Nursing Department. I hereby request your permission to conduct a research project at East Boom CHC.

The proposed title of my research is: ‘exploring women's experiences and perceptions on the use of implanon as a contraceptive method in selected primary health care facilities in KwaZulu-Natal’. The aim of the study is to describe and explore the women’s perceptions and experiences of Implanon users in selected primary health care facilities at KwaZulu-Natal and propose relevant interventions or recommendations based on the study findings. In-depth interviews will be conducted to collect data to women who have inserted implanon for more than 6 week and those who have removed the implant.

My research proposal has been attached for your knowledge with this research project. Your support and permission to conduct the study at your facility will be highly appreciated.

Yours sincerely

.....	……	…….
(Mr) Mgobhozi L.N.	XXXXXXX.	(Prof) XXXXXX.
Masters student	Supervisor	Co-Supervisor
Cell no: 072 6799 940	Tell: 031-260 1541	Tell: 031 -260 1421

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

DIRECTORATE:
Health Research & Knowledge Management

Physical Address: 330 Langalibalele Street, Pietermaritzburg
Postal Address: Private Bag X9051
Tel: 033 395 2805/ 3189/ 3123 Fax: 033 394 3782
Email:
www.kznhealth.gov.za

HRKM Ref: 442/16
NHRD Ref: KZ 2016RP27 504

Date: 21 December 2016 Dear
Mr L. Mgobhozi

Approval of research

1 . The research proposal titled 'Exploring women's experiences and perceptions on the use of Implanon as a contraceptive method in selected primary health care facilities in KwaZulu-Natal' was reviewed by the KwaZulu-Natal Department of Health.

The proposal is hereby approved for research to be undertaken at East Boom CHC.

2. You are requested to take note of the following:
   a. Make the necessary arrangement with the identified facility before commencing with your research project since the letter of support from the health facility was not submitted.
   b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.

3. Your final report must be posted to HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG PIETERMARITZBURG, 3200 and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely

Dr E Lut e
Chairperson, Health Research Committee

Date: 22/12/16.

Fighting Disease, Fighting Poverty. Giving Hope

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

DISTRICT MANAGERS OFFICE

Enquiries: Mrs. N. M. Zuma-Mkhonza 03
February 2017

TO: MR L MGOBHOZI
SCHOOL OF NURSING AND PUBLIC HEALTH UKZN

Dear Mr Mgobhozi

RE: EXPLORING WOMEN'S EXPERIENCES AND PERCEPTIONS ON THE USE OF IMPLANON AS A CONTRACEPTIVE METHOD IN SELECTED PRIMARY HEALTH CARE FACILITIES IN KWAZULU-NATAL

I have pleasure in informing you that support and permission have been granted to you by the District Office to conduct a research in EXPLORING WOMEN'S EXPERIENCES AND PERCEPTIONS ON THE USE OF IMPLANON AS A CONTRACEPTIVE METHOD IN SELECTED PRIMARY HEAL TH CARE FACILITIES IN KWAZULU.NA TAL

PLEASE NOTE THE FOLLOWING

1 . Please ensure that you adhere to all policies, procedures, protocols and guidelines of the Department of Health with regards to this research.

2. This research will only commence once this office has received the full ethics approval has been received and the confirmation from the Provincial Health Research Committee in the KZN Department.

3. Please ensure that this office is informed before you commence your research .4, The

District Office will not provide any resources for this research.

5. You witl be expected to provide feedback on your findings to the District Office.

Thank you,

UNIVERSITY OF KWAZULU-NAT
INYUVESI YAKWAZULU-NA

KWAZULU-NATAI
YAKWAZUW„NATAU

MRS N.M. ZUMA - MKHONZA
DISTRICT DIRECTOR
UMGUNGUNDLOVU HEALTH DISTRICT

ISIFUNDAZWE SAKWAZULU NATAL
EZEMPILO OFFICIAL
Umnyango Wezempilo. Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope

2017 -02- 17

DEPARTMENT OF HEALTH
EAST BOOM COMMUNITY
HEALTH CENTER
PROVINCE OF KWAZULU- NATAL

Approved

CEO

06 February 2017

Mr LN Mgobhozi (215079133)
Discipline of Nursing
School of Nursing and Public Health Medicine
Iwandlenhlaka@ mail.com

Protocol: Exploring women's experiences and perceptions on the use of implanon as a contraceptive method in selected primary health care facilities in KwaZulu-Natal.
Degree: M Nursing BREC reference number: BE604/16

EXPEDITED APPLICATION

A sub-committee of the Biomedical Research Ethics Committee has considered and noted your application received on 09 November 2016.

The study was provisionally approved pending appropriate responses to queries raised. Your response received on 02 February 2017 to BREC letter dated 26 January 2017 have been noted by a subcommittee of the Biomedical Research Ethics Committee. The conditions have now been met and the study is given full approval and may begin as from 06 February 2017.

This approval is valid for one year from 06 February 2017. To ensure uninterrupted approval of this study beyond the approval expiry date, an application for recertification must be submitted to BREC on the appropriate BREC form 2-3 months before the expiry date.

Any amendments to this study, unless urgently required to ensure safety of participants, must be approved by BREC prior to implementation.

Your acceptance of this approval denotes your compliance with South African National Research Ethics Guidelines (201 5), South African National Good Clinical Practice Guidelines (2006) (if applicable) and with UKZN BREC ethics requirements as contained in the UKZN BREC Terms of Reference and Standard Operating Procedures, alt available at htt : / [research.ukzn.ac.za/ResearchEthics/Biomedicat•Research-Ethics.as x.

BREC is registered with the South African National Health Research Ethics Council (REC-290408-009). BREC has US Office for Human Research Protections (OHRP) Federal-wide Assurance (FWA 678).

The sub-committee's decision witl be RATIFIED by a full Committee at its next meeting taking place on 14 March 2017.

We wish you well with this study. We would appreciate receiving copies of all publications arising out of this study.

Yours sincerely

Professor Joyce Tsoka-Gwegweni
Chair: Biomedical Research Ethics Committee

cc supervisor: mbejep@dkzn.ac.za cc
postgraduate administrator:

Biomedical Research Ethics Committee Professor J
Tsoka-Gwegweni (Chair)
Westville Campus, Govan Mbeki Bui'ding
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Telephone: +27 (O) 31 260 2486 Facsimile: *27 (O) 31 260 4609 Email: brec@ukzq.êc.za

GENEVIEVE WOOD **EDITING**

CERTIFICATE

P.O. BOX 511 WITS 2050

0616387159

LANGUAGE EDITING SERVICES

Date: 2017/6/27

This serves to confirm that the document entitled:

EXPLORING WOMEN'S EXPERIENCES AND PERCEPTIONS ON THE USE OF IMPLANON AS

A CONTRACEPTIVE METHOD IN A SELECTED PRIMARY HEALTH CARE FACILITY IN

KWAZULU-NATAL

has been language edited on behalf of its author

Lucky Nhlanhla Mgobhozi.

Genevieve Wood

PhD candidate