

**AN INVESTIGATION OF FACTORS ASSOCIATED WITH LOW UTILIZATION OF
IMPLANON (LARC's) IN UGU DISTRICT, PROVINCE OF KWAZULU-NATAL,
SOUTH AFRICA**

By

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201415812



University of Fort Hare
Together in Excellence

**A DISSERTATION SUBMITTED TO UNIVERSITY OF FORT HARE, SOUTH
AFRICA IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTERS IN PUBLIC HEALTH**

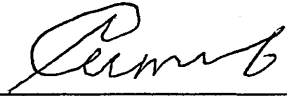
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SUBMITTED: JANUARY 2017

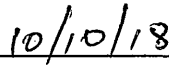
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DECLARATION AND COPYRIGHT

I, Maureen Zanele Nxumalo, hereby declare that this dissertation is the result of my work and I have acknowledged all other peoples' work contained in it. It is submitted for the 1st time to University of Fort Hare for the Master's Degree in Public Health and has never been previously submitted to any other University.



M.Z. Nxumalo



Date



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DEDICATION

I like to dedicate this work to my lovely children Siboniso Nxumalo, Zanele Nxumalo, Silindile Nxumalo and Zamokuhle Nxumalo for being my strongest pillars of strength and sources of inspiration. They kept asking me on the progress of my studies and always wished me journey mercies during travelling to the University to attend contact sessions. They believed in me no matter what, they remained my number one cheerleaders. I thank the Almighty for having them in my life. Finally I dedicate this dissertation to my late mother who raised me and friends who prayed and wished me well in pursuing my career.



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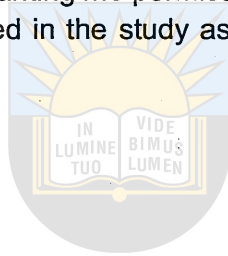
ACKNOWLEDGEMENTS

I would like to thank my creator for bestowing upon me the ability and competence to be able to complete this dissertation.

I would like to thank my late mother for bringing me up as well as educating me and my four children for being extremely supportive through prayers, words of encouragement and assisting me when needed such.

I would like to thank the Department of Health for believing in me and for giving me the opportunity to study this course and above all for providing funding for the course.

I would like to thank my supervisor Professor Jinabhai for all the unconditional support he has given me, your assistance is highly appreciated. Furthermore, my sincere gratitude to my workplace colleagues for words of encouragement and filling the gap whenever I was away from work attending contact session. I am very grateful to Ugu District Health Management team and respective health facilities and staff for granting me permission to conduct the study. Lastly, to all young women who voluntarily participated in the study as well as research assistants for their invaluable contributions.



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CERTIFICATION

This dissertation entitled "An investigation of Factors Associated with Low Utilization of Implanon (LARC's) in Ugu District, Province of KwaZulu Natal, South Africa" meets the regulation governing the award of the degree of Master's in public health of the University of Fort Hare and is approved for its contribution to scientific knowledge and literacy presentation.

Dr. J. J. J. J.



05//10/2018

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ABSTRACT

Background: Implanon (LARC's) is a single rod contraceptive implant that has been proven to be highly effective and very safe as only one pregnancy occurred in 1000 women over three years of usage. Women have however expressed different factors that are associated with its low utilization.

Aim: The study aimed to investigate the factors that were associated with low utilization of implanon (LARC's) among young women in Ugu District, in the Province of KwaZulu-Natal.

Setting: Three District Hospitals, one Regional Hospital and two Community Health Centres in the Ugu District, KZN Province.

Methodology: This study was a descriptive cross sectional study using the systematic random sampling where every third person in the queue was selected. The study was conducted at family planning clinics in the Ugu District. The self-administered questionnaire was used to collect the data among 150 young women from the ages of 18 to 35 years. This was done after obtaining the ethical clearance and letters of support from all institutions where the study was going to be conducted. The signed consent forms were obtained from the participants. The main outcome measured was the association of socio-demographic factors, myths, knowledge and effectiveness of provider counselling and low utilization of implanon (LARC's).

Results: The findings of the study showed that 24% of young women in the Ugu District used implanon as a contraceptive method. There was statistically a significant association between married young women and implanon use (chi squared value=5.11; $p=0.0238$; $df=1$). The association is such that married young women are more likely to use implanon, compared to unmarried young women (OR=2.8; 95% CI (1.12; 7.06) as well as all provider counselling factors. Factors such as age, educational level, employment status, knowledge and the myths were all not significantly associated with low utilization of implanon. The results also revealed that although the majority of participants had adequate knowledge of implanon (LARC's) this did not translate to increase in utilization.

Conclusion: The study concluded that socio-demographic factors like age, educational level, employment status including other factors like knowledge and myths had no influence in the low utilisation of implanon (LARC's) in the Ugu District. Moreover there was significant association between married young women, provider counselling and low utilisation of implanon.

Key words: Implanon (LARC's), utilization, unplanned pregnancy, myths, knowledge, family planning.

TABLE OF CONTENTS

DECLARATION AND COPYRIGHT.....	i
DEDICATION.....	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT.....	iv
LIST OF ABBREVIATIONS	viii
GLOSSARY	IX
CHAPTER ONE: INTRODUCTION OF THE STUDY	1
1.1 INTRODUCTION	1
1.2 RESEARCH PROBLEM	2
1.3 RESEARCH MAIN OBJECTIVE	3
1.3.1 Specific research objectives:.....	3
1.4 RESEARCH QUESTIONS.....	3
1.5 SIGNIFICANCE OF THE STUDY	3
1.6 SCOPE (DELIMITATIONS) OF THE STUDY	4
1.6.1 Limitations.....	4
1.7 OPERATIONAL DEFINITIONS OF KEY TERM CONCEPTS	4
1.7.1 Sub-dermal implants.....	4
1.7.2 Utilization of implanon	4
1.7.3 Young women	4
1.7.4 Unplanned pregnancy.....	5
1.8 DISSERTATION OUTLINE.....	5
CHAPTER TWO: LITERATURE REVIEW	6
2.1 INTRODUCTION	6
2.2 Global overview on contraceptives and its utilisation.....	6
2.3 Global unmet need for contraception.....	7
2.4 Overview of perceived benefits of contraception utilisation	7
2.5 Sub-dermal implants - implanon (LARC's).....	9
2.5.1 Advantages of implanon (LARC's):	9
2.5.2 Disadvantages	10
2.6 Sub Saharan countries perspective on low utilisation of implants (Implanon LARC's)	10
2.7 South African perspective on contraceptives.....	11
2.8 KwaZulu-Natal perspective on Implanon (LARC's) utilisation.....	12
2.9 SPECIFIC RESEARCH OBJECTIVES	12

2.9.1 Socio-Demographic factors associated with low utilisation of implanon (LARC's)	12
2.9.2 Myths and low utilisation of implanon	13
2.9.3 Knowledge on implanon	13
2.9.4 Effectiveness of provider counselling	14
2.10 CONCLUSION.....	16
CHAPTER THREE: RESEARCH DESIGN	17
3.1 INTRODUCTION	17
3.2 STUDY DESIGN.....	17
3.3 POPULATION	17
3.4 SAMPLE AND SAMPLING PROCEDURE	17
3.5 INCLUSION AND EXCLUSION CRITERIA	17
3.5.1 Exclusion criterion.....	17
3.6 RESEARCH INSTRUMENT OR TOOL	17
3.6.1 Questionnaire construction	18
3.6.2 Pilot study	18
3.6.3 Administration of questionnaires	18
3.6.4 Collection of questionnaires	18
3.7 DATA ANALYSIS.....	19
3.8 VALIDITY AND RELIABILITY	19
3.8.1 Validity	19
3.8.2 Reliability.....	19
3.9 DATA COLLECTION PROCEDURE	19
3.9.1 Limitations of the research	19
3.9.2 Elimination of bias.....	20
3.10 ETHICAL CONSIDERATIONS	20
3.10.1 Ensuring participants have given formal consent.....	20
3.10.2 Ensuring no harm comes to the participants.....	20
3.10.3 Ensuring confidentiality and anonymity	21
3.11 CONCLUSION.....	21
CHAPTER FOUR: RESULTS AND DISCUSSION	22
4.1 INTRODUCTION	22
4.1.1 Socio-demographic factors profile of the participants.....	22
4.1.2 Socio-demographic factors associated with utilization of Implanon (ALARC's).....	23
4.2 CURRENT UTILISATION OF IMPLANON (LARC'S)	24

4.3 MYTHS ABOUT IMPLANON (LARC'S)	25
4.3.1 Myths associated with utilization of Implanon (LARC's)	26
4.4 KNOWLEDGE ABOUT IMPLANON (LARC'S)	26
4.4 EFFECTIVENESS OF PROVIDER COUNSELLING	27
4.4.1 Provider counselling association and utilization of Implanon (LARC's)	28
4.5 DISCUSSION	28
4.5.1 Socio-demographic factors associated with utilization of Implanon (LARC's)	28
4.5.2 Myths associated with utilization of implanon (LARC's)	29
4.5.3 Knowledge association with utilization of implanon (LARC's):	29
4.5.4 Effectiveness of provider counselling and association with utilization of implanon (LARC's) ...	30
4.6 CONCLUSION	30
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	31
5.1 INTRODUCTION	31
5.2 RECOMMENDATIONS	31
5.3 AREAS FOR FUTURE RESEARCH	32
5.4 CONCLUSION	32
REFERENCES	33
APPENDIX A: CERTIFICATION	37
APPENDIX B: ZULU CONSENT FORM	38
APPENDIX C: ENGLISH CONSENT FORM	39
APPENDIX D: ZULU QUESTIONNAIRE - IMIBUZO YOCWANINGO	40
APPENDIX E: ENGLISH - QUESTIONNAIRE:	44
APPENDIX F: PERMISSION TO CONDUCT RESEARCH IN INSTITUTIONS	48

TABLES

Table 4.1.1: Socio-demographic profile of participants	23
Table 4.1.2: Chi-squared tests for association between implanon use and socio-demographic variables	24
Table 4.2.1: Current utilisation of implanon	24
Table 4.3.1: Questions on implanon	25
Table 4.3.2: Chi-squared tests for association between implanon use and myths	26
Table 4.4.1: Further questions on implanon	27
Table 4.4.2: Knowledge association with utilisation of Implanon (LARC's)	27
Table 4.5.1: Effectiveness of provider counselling	28
Table 4.5.2: Chi-squared tests for association between implanon use and counselling	28

LIST OF ABBREVIATIONS

CYPR	Couple year protection Rate
CPR	Contraceptive Prevalence Rate
FP	Family Planning
HC	Community Health Centre
HIV	Human Immunodeficiency Virus
IMR	Infant Mortality Rate
LARC's	Long Acting Reversible Contraceptives
MMR	Maternal Mortality Rate
MDG	Millennium Development Goals
MEC	Medical Eligibility Criteria
RH	Reproductive Health
RA	Research Assistants
SA	South Africa
SSA	Sub Saharan Africa
STI	Sexually Transmitted Infections
TOP	Termination of Pregnancy
UN	United Nations
WHO	World Health Organisation

GLOSSARY

Sub-dermal implants: This refers to a long-acting progestogen sub-dermal implant consisting of a single rod containing etonorgestrel (Implanon NXT used up to three years). An implant consists of a small plastic rod, about the size of a matchstick, which is placed just under the skin of the upper arm and which releases small amounts of progestogen into the body. The implants contain no oestrogen and so are therefore suitable for most women, including those that are breast-feeding and cannot, or do not wish to use oestrogen. A trained health care provider is required to insert and remove implants (National Contraception Clinical Guideline, 2012:32). In this study the concept will mean the implant inserted by a trained health provider under the arm to prevent pregnancy.

Long acting reversible contraceptives: These are contraceptive the methods that require administration less than once per cycle or a month (Department of Health, National Contraception Clinical Guideline, 2012:11). In the study this will mean implanon contraceptive which is effective for up to three years in preventing pregnancy.

Utilization of implanon: Utilization is making use of (Collin's English Dictionary). In this study utilization of implanon will mean the use of implanon by young women in the Ugu District.

Young women: Any young usually unmarried woman of refinement (Dictionary.com). This study will refer to women between the ages of 18 and 35 years, who are using contraceptive methods.

Unplanned pregnancy: The unplanned pregnancies are those that are reported to have been unwanted for whatever reason. They occurred when no children or more children were desired or they occurred earlier than desired. The unplanned pregnancies mainly result from engaging in vaginal sexual activity without the use of contraception, or due to the incorrect use of contraceptive methods. However, they may arise from the failure of the contraception method even when used correctly to prevent pregnancy (Santelli, Morrow, Anderson & Lindberg 2003). In this study, this will mean pregnant young women who have not planned for or wanted to be pregnant, and who did not otherwise use contraception.

CHAPTER ONE: INTRODUCTION OF THE STUDY

1.1 INTRODUCTION

The implanon (LARC's) is a single rod implant contraceptive method which has a potential to reduce unplanned or unwanted pregnancies and their associated morbidity and mortality among young women of reproductive age. The contraception prevalence has increased throughout the most of the world, following the global expansion of contraceptive information, services and contraception technologies. The leading causes of death, disease and disability accounting for approximately 80% of the global burden of disease in women of reproductive age, are pregnancy and childbirth (KZN Provincial 5 Point Contraceptive Strategy 2011-2016 p 3). The number of reproductive aged women in Sub-Saharan Africa is projected to increase rapidly; by at least 65% to 353 million women in 2030 hence the investments in reproductive health and rights need to be accelerated in order to meet the demands of a much larger number of women of reproductive age (United Nations, 2014).

Long acting reversible contraceptive methods remain effective in prevention of unplanned pregnancies particularly in countries like South Africa where there is high prevalence of HIV/AIDS. The rate of unplanned pregnancies among young and unmarried women remains very high, including vulnerable groups (such as adolescents and women with HIV/AIDS). According to the National Committee for Confidential Enquiry into Maternal Deaths (2011) Fifth Report on the Confidential Enquiries into Maternal Deaths in South Africa, the institutional maternal mortality ratio is 176.22/100 000 births and in KZN Province it is 192.31/100 000. In the Ugu District the institutional maternal mortality ratio is 109.2/100 000 births (DHIS). This had contributed to South Africa not achieving the Millennium Development Goals (MGD 5 & 6), coupled with this was the growing number of young women accessing Termination of Pregnancy services (TOP) repeatedly. The implanon is a long acting reversible contraceptive method (LARC's) which continues to be effective for three years (Health, 2012). In South Africa, it was launched in February 2014 by the National Minister of Health with the objective of increasing the choice of contraceptives already available, although it has been available and used in other countries (Sehoai, 2014). According to the World Health Organization in their publication Family Planning: A Global Handbook for providers (2011:110), the implanon (long acting reversible contraceptives) are proven to be highly effective (99%) and safe. They also have additional benefits as only one pregnancy occurred in 1000 women over 3 years of usage. The low utilization of implanon (long acting reversible contraceptive) remained a concern in the Ugu District despite the elevated rates of unplanned pregnancies and its benefits of preventing these pregnancies being globally acclaimed.

Unplanned pregnancies among young unmarried women are a major public health problem in South Africa where more than one-third of South African women fell pregnant for the first time before the age of nineteen. The South African National Department of Health (2012) has recognised the importance of providing contraceptives and family planning in all health institutions free of charge. This requires that women have access to safe and effective methods of fertility control and

that contraceptives become everyone's responsibility. Family planning could continue to assist in saving lives of women and children, thus preventing maternal and child mortalities. The huge burden of disease placed on South Africa's health system by the HIV/ AIDS epidemic had not only overshadowed family planning services, but had also required attention to be paid to provision of appropriate contraception to those infected and affected by HIV (KZN Provincial 5 Point Contraceptive Strategy 2011-2016 p 3).

A highly effective contraception to prevent unplanned pregnancy was essential for women's health especially in the Ugu District where the maternal mortality rate and HIV/AIDS prevalence rates remained very high. The current maternal mortality in facility ratio in the Ugu District is at 161.2 per 100 000 births and the couple year protection rate (CYPR) was 41.9 (Massyn, Day, Peer, Padarath, Baron & English 2014). Long-Acting Reversible Contraceptives (LARC's) offered most benefits including privacy, convenience and efficacy. The implants gave women freedom to control their reproductive health.

According to The Times (2015), about 521,896 women were using implanon in South Africa. Little was known about factors associated with the low utilisation of implanon (LARC's) among young women, and what drove this population to adopt or reject this form of birth contraceptive. The previous studies that had been conducted in other countries like Australia, UK, Switzerland, United States of America, and also the Sub-Saharan countries of Nigeria and Ethiopia confirmed that the utilization of implanon was very low with high early discontinuation rates due to irregular bleeding tendencies as the major cause. Few studies had been conducted in South Africa since the introduction of the implanon in February 2014 and no known study had been conducted on factors associated with low utilisation of implanon (LARC's) among young women in Ugu District since its launch.

Understanding these factors may provide information for patient counselling and education as well as potential improvements on the utilization of implanon (LARC's). It was therefore in view of these consequences that this study against sought to investigate factors associated with low utilization of implanon (LARC's) among young women in the Ugu District.

1.2 RESEARCH PROBLEM

The low utilization of implanon (long acting reversible contraceptive) among young women in the Ugu District remained a major health challenge despite its proven potential and effectiveness in preventing unplanned pregnancies. Implanon continued to be effective for up to three years (Department of Health, 2012). The Ugu District statistics showed that the total number of implants that were removed from the first of April 2014 to the first of March 2015 was 1074 out of 2045 (DHIS 2014/15). One of the priorities of KZN Department of Health was to revive the interest in the family planning programme and to increase the contraceptive prevalence (KZN Provincial 5 Point Contraceptive Strategy 2011-2016 p, 2).

Various studies had been conducted on the utilisation of implanon in both developed and developing countries, but little had been done in South Africa. No study had yet

been conducted in the Ugu District on factors associated with the low utilization of implanon (LARC's) among young women. In seeking to reduce the number of unplanned pregnancies, the researcher found it imperative to investigate reasons for this low utilisation of implanon (LARC's) among young women in the Ugu District in order to inform policy and future planning.

1.3 RESEARCH MAIN OBJECTIVE

The purpose of this study was to investigate factors associated with the low utilization of implanon (LARC's) among young women in Ugu Health District of KZN Province.

1.3.1 Specific research objectives:

- Identify socio-demographic factors associated with low utilization of implanon (LARC's) among young women in the Ugu District of KZN Province.
- Identify the myths associated with low utilization of implanon (LARC's).
- Establish knowledge on implanon among young women in Ugu District.
- Determine the effectiveness of provider counselling in utilization of implanon (LARC's) among young women in the Ugu District.
- Make recommendations to health authorities on strategies that could improve the utilization of implanon (Long acting reversible contraceptives) among young women in Ugu District.

1.4 RESEARCH QUESTIONS

- What is the association between socio-demographic factors and the low utilization of implanon (LARC's) among young women in the Ugu District?
- What are the myths associated with low utilisation of implanon (LARC's) among young women in the Ugu District?
- What is the knowledge on implanon (LARC's) among young women in the Ugu District?
- What is the effectiveness of provider counselling on low utilization of implanon (LARC's) among young women in the Ugu District?

1.5 SIGNIFICANCE OF THE STUDY

This study would identify the factors associated with the low utilization of implanon (long acting reversible contraceptives) in relation to high number of unplanned pregnancies among young women in the Ugu District, despite its potential to prevent it. Since the introduction of this contraceptive method the utilization has been very low. This in turn exposed large numbers of vulnerable young women to obstetric and social complications that contribute to the present high maternal and child mortality in the Ugu District.

This study should increase the body of knowledge about how implanon (long acting reversible contraceptive) was used and what are the factors for its low use by young women in the Ugu District. The knowledge of these factors associated with the low utilization will assist in developing intervention strategies to enhance use of implanon among young women up to three years, thus preventing unplanned and unwanted pregnancies and complications associated with them.

These findings would also assist the Department of Health to review its policies and use the information for future planning in order to improve its utilization among young women.

1.6 SCOPE (DELIMITATIONS) OF THE STUDY

This study would form a baseline in the Ugu District since no similar study has been conducted in this area. The study was conducted and restricted to Family Planning Clinics within the Ugu District and all young women between ages of 18 and 35 years, residing in the Ugu District.

1.6.1 Limitations

The study was to be conducted in the Ugu District. The results therefore will not be generalizable to the Province of KZN. Only young women who visited the Family Planning clinics during the period of the study will be selected to participate.

1.7 OPERATIONAL DEFINITIONS OF KEY TERM CONCEPTS

Understanding the terms and concepts that relates to subject matter is an essential element in unpacking the research, including its findings. The researcher therefore provided clear definitions and descriptions of concepts that were going to be used frequently in the study.

1.7.1 Sub-dermal implants

This refers to a long-acting progestogen sub-dermal implant consisting of a single rod containing etonorgestrel (Implanon NXT used up to three years). An implant consists of a small plastic rod, about the size of a matchstick, which is placed just under the skin of the upper arm and which releases small amounts of progestogen into the body. The implants contain no oestrogen and so are therefore suitable for most women, including those that are breast-feeding and cannot, or do not wish to use oestrogen. A trained health care provider is required to insert and remove implants (National Contraception Clinical Guideline, 2012:32). In this study the concept will mean the implant inserted by a trained health provider under the arm to prevent pregnancy.

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1.7.4 Unplanned pregnancy

Unplanned pregnancies are those that are reported to have been unwanted for whatever reason. They occurred when no children or more children were desired or they occurred earlier than desired. Unplanned pregnancies mainly result from engaging in vaginal sexual activity without the use of contraception, or due to the incorrect use of contraceptive methods. However, they may arise from the failure of the contraception method even when used correctly to prevent pregnancy (Santelli *et al.* 2003). In this study, this will mean pregnant young women who have not planned for or wanted to be pregnant, and who did not otherwise use contraception.

1.8 DISSERTATION OUTLINE

This research study is comprised of five chapters that are arranged chronologically as follows:

CHAPTER ONE:

An introduction to the topic that was being researched was provided, which included the research problem, research main objectives, specific research objectives, research questions, significance of the study, delimitations and limitations of the study, operational definitions of key terms of concepts and the dissertation outline.

CHAPTER TWO:

The literature was reviewed in this chapter and provided an in depth analysis and evaluation of existing knowledge pertaining to each of the research problems that this research attempted to study.

CHAPTER THREE:

The summary of the theory and concepts that surrounded research methodology was provided and the methodology used in this study explained including the reasons for conducting the study. The research strategies, target population, sampling, research instrument, pilot study, administration and collection of the questionnaire, data analysis, reliability and validity, limitations of the study and elimination of bias were also discussed in this chapter.

CHAPTER FOUR:

Included in this chapter was data analysis, results, discussion and interpretation of research findings. The use of simple statistical methods was applied to calculate the results which were depicted in tables and graphs. In essence, chapter four analysed and summarised all the findings of the research study.

CHAPTER 5:

In this chapter the conclusions of the research study were presented, where main findings were summarised and recommendations of the study were shared with the Provincial Department of Health and the Ugu District Management teams with a purpose of improving utilization of implanon (LARC's) among young women. The scope for future research was also mentioned.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

According to Dawidowicz (2010:6), a literature review is an examination of scholarly and research based information on a specific topic and its aim is therefore to create a complete and accurate representation of the knowledge theory that is available. Literature review might guide in designing the study so that investigators can obtain an answer to their research question and may provide information for preparing a research report (Johnson & Christensen, 2011). Literature review provides the background towards the established problem in the research. It is a process of familiarising individuals with information available on the topic and placing it in the context of the determined objectives. Literature review might guide in designing the study so that investigators can obtain an answer to their research question and may provide information for preparing a research report (Johnson & Christensen, 2011).

This chapter first covered the global overview on contraceptives in general, the global unmet need for contraception, overview on perceived benefits of contraceptives utilisation as well as overview on implanon (LARC's) as a contraceptive, including its advantages and disadvantages. Furthermore a review of the existing literature on low utilization of implanon as a long acting reversible contraception was done. demographic factors associated with utilization and the effectiveness Literature was reviewed on association between socio-demographic factors and low utilisation of implanon (LARC's), the myths associated with low utilization, knowledge on implanon (LARC's) and the effectiveness of provider counselling in utilization of implanon (LARC's). Lastly recommendations were made on strategies to improve the utilisation of implanon (LARC's) among young women in the Ugu District.

2.2 Global overview on contraceptives and its utilisation

Contraceptive use has increased in many parts of the world, especially in Asia and Latin America, but continues to be low in sub-Saharan Africa. Globally, use of modern contraception has risen slightly, from 54% in 1990 to 57.4% in 2014. Regionally, the proportion of women aged 15–49 reporting use of a modern contraceptive method has risen minimally or plateaued between 2008 and 2014. In Africa it went from 23.6% to 27.6%, in Asia it has risen slightly from 60.9% to 61.6%, and in Latin America and the Caribbean it rose slightly from 66.7% to 67.0%. Use of contraception by men makes up a relatively small subset of the above prevalence rates. The modern contraceptive methods for men are limited to male condoms and sterilization (vasectomy) (WHO Media Centre, 2015).

An estimated 225 million women in developing countries would like to delay or stop childbearing but are not using any method of contraception. Some family planning methods, such as condoms, help prevent the transmission of HIV and other sexually transmitted infections. Family planning / contraception reduce the need for abortion, especially unsafe abortion. Family planning reinforces people's rights to determine the number and spacing of their children. By preventing unintended pregnancy, family planning /contraception prevents deaths of mothers and children. Family planning

allows people to attain their desired number of children and determine the spacing of pregnancies. It is achieved through use of contraceptive methods and the treatment of infertility (This fact sheet focuses on contraception) (WHO, Media Centre 2015).

Young women currently comprise a larger proportion of the world's population, including low and middle income countries. Unplanned or unwanted pregnancy among adolescents is a worldwide public health issue and unplanned pregnancies among younger women, unsafe abortions may become the recourse. Two thirds of unsafe abortions occur among women between 15 and 30 years old, and almost 14% of unsafe abortions in developing countries occur among women 20 years or younger (WHO, 2005). Long acting reversible contraceptives are highly effective with pregnancy rates less than one percent per year and high rates of patient satisfaction and continuation (ACOG, 2012; WHO/RHR, 2011). With very few exceptions long acting reversible contraceptives have been proven safe for use by all women after menarche, including young women (Chanda-Mouli, McCarraher, Phillips, Williamson, & Hainsworth, 2014). The World Health Organisation (WHO) developed a set of medical eligibility for contraceptives use (WHO MEC) in an attempt to update and standardise the safe provision of modern contraceptive method. According to WHO's (2010) Medical Eligibility Criteria (MEC) for contraceptive use, adolescents (those ages 10 to 19) can have more sporadic patterns of intercourse which may make non-daily methods such as long acting reversible contraceptives "more appropriate" for this group. These implants are also ranked category 1 for nulliparous and parous women, postpartum and post abortion women and women with high risk or confirmed infection. According to Jacobstein and Stanley (2013), noted that implant users of all ages have high rates of user satisfaction (79%) and continuation of (around 84%) at one year use. Adolescents are strong candidates for implants as they are less likely to have certain medical conditions that preclude them from using implants.

2.3 Global unmet need for contraception

The following emanate from the limited choice of methods, limited access to contraception, particularly among young people, poorer segments of populations, or unmarried people, fear or experience of side-effects, cultural or religious opposition, poor quality of available services, users and providers bias gender based barriers.

The unmet need for contraception remains too high. This inequity is fuelled by both a growing population, and a shortage of family planning services. In Africa, 23.2% of women of reproductive age have an unmet need for modern contraception. In Asia, and Latin America and the Caribbean – regions with relatively high contraceptive prevalence – the levels of unmet need are 10.9 % and 10.4%, respectively (World Contraceptive Reports 2013, UNDESA).

2.4 Overview of perceived benefits of contraception utilisation

- Promotion of family planning – and ensuring access to preferred contraceptive methods for women and couples – is essential to securing the well-being and autonomy of women, while supporting the health and development of communities.

- Preventing pregnancy-related health risks in women: A woman's ability to choose if and when to become pregnant has a direct impact on her health and well-being. Family planning allows spacing of pregnancies and can delay pregnancies in young women at increased risk of health problems and death from early childbearing. It prevents unintended pregnancies, including those of older women who face increased risks related to pregnancy. Family planning enables women who wish to limit the size of their families to do so. Evidence suggests that women who have more than 4 children are at increased risk of maternal mortality.
- By reducing rates of unintended pregnancies, family planning also reduces the need for unsafe abortion.
- Family planning can prevent closely spaced and ill-timed pregnancies and births, which contribute to some of the world's highest infant mortality rates. Infants of mothers who die as a result of giving birth also have a greater risk of death and poor health.
- Family planning reduces the risk of unintended pregnancies among women living with HIV, resulting in fewer infected babies and orphans. In addition, male and female condoms provide dual protection against unintended pregnancies and against STIs including HIV.
- Empowering people and enhancing education: Family planning enables people to make informed choices about their sexual and reproductive health. Family planning represents an opportunity for women to pursue additional education and participate in public life, including paid employment in non-family organizations. Additionally, having smaller families allows parents to invest more in each child. Children with fewer siblings tend to stay in school longer than those with many siblings.
- Reducing adolescent pregnancies: Pregnant adolescents are more likely to have preterm or low birth-weight babies. Babies born to adolescents have higher rates of neonatal mortality. Many adolescent girls who become pregnant have to leave school. This has long-term implications for them as individuals, their families and communities.
- Slowing population growth: Family planning is important to slowing unsustainable population growth and the resulting negative impacts on the economy, environment, and national and regional development efforts.

Who provides family planning / contraceptives? It is important that family planning is widely available and easily accessible through midwives and other trained health workers to anyone who is sexually active, including adolescents. Midwives are trained to provide (where authorised) locally available and culturally acceptable contraceptive methods. Other trained health workers, for example community health workers, also provide counselling and some family planning methods, for example pills and condoms. For methods such as sterilization, women and men need to be referred to a clinician (DOH National Contraception Clinical Guidelines, 2012).

2.5 Sub-dermal implants - implanon (LARC's)

Long acting sub-dermal implants are proven to be highly effective and safe, and also have some additional non-contraceptive benefits. Systems consisting of single rods etonorgestrel (ImplanonNXT used for 3 years and two rods levonorgestrel (Jadelle and Sino-plant used for 5 and 4 years respectively) are available and used in many countries. The single rod implant consists of small rod, about the size of a matchstick, place under the skin of the upper arm that releases small amounts of progestogen into the body. Implants contain no oestrogen and are therefore suitable for most women, including those who are breastfeeding or cannot or do not wish to use oestrogen. Implants have shown to be most effective form of contraception with extremely low failure rates and high continuation rates. Despite high initial costs they have proved to be cost effective compared with pills and injection at one year (DOH National Contraception Clinical Guidelines, 2012)

The implanon is the type of implant that is a long acting, reversible form of contraceptive method which contains etonogestrel, a hormone that prevents ovulation (the release of an egg from an ovary). Etonogestrel also causes changes in your cervical mucus and uterine lining, making it harder for sperm to reach the uterus and harder for a fertilized egg to attach to the uterus.

The implanon implant is used as contraception to prevent pregnancy. The medicine is contained in a small plastic rod that is implanted into the skin of the upper arm by a trained health provider after a very minor surgical procedure under local anaesthesia. The medicine is released slowly into the body. The rod can remain in place and provide continuous contraception for up to three years. The implants are excellent choice to achieve any reproductive intention to delay a first pregnancy, space a subsequent birth, or end childbearing. According to World Health Organisation's (WHO's) Medical Eligibility Criteria for Contraceptive and Family Planning: A Global Handbook for Providers, (2011) the implants are safe and suitable for all women, including women who are of any age, (including adolescents), have never been pregnant or have never had children, are living with HIV, have just had an abortion, or are breastfeeding.

2.5.1 Advantages of implanon (LARC's):

- Constant blood levels of hormone, much lower dose than progestogen-only injectable contraceptives.
- Implanon (LARC's) provides extremely effective birth control for three years by suppressing ovulation for the duration of use.
- Rapid return to fertility following removal.
- Efficacy greater than male or female sterilization. Minimal effect on bone mineral density and minimal metabolic effects with no effect on blood pressure.
- Safe to use while breastfeeding.
- Does not require interruption of foreplay or intercourse.
- Can be used by women who should not take oestrogen. Reduces cramps and pain at ovulation.
- Implanon can be used by smokers over age 35 (Health-wise staff, June 2011)

2.5.2 Disadvantages

- Unpredictable and irregular menstrual bleeding.
- Must be inserted and removed by a trained health professional.
- May cause menstrual periods to stop or be very light.
- Does not protect against sexually transmitted diseases or HIV. May cause headaches (Healthwise staff, June 2011).

2.6 Sub Saharan countries perspective on low utilisation of implants (Implanon LARC's)

In Sub-Saharan Africa gender roles play a vital role in family planning decision. Women participation in domestic decision making is increasingly being recognised as affecting their ability to make reproductive decisions and concluded that 'urban-rural differences' of lifestyle means favour having more children than urban areas. Therefore, the value of the children depended on the place of residence. In urban areas the value of having children was seen in terms of cost (Mosha, Ruben & Kakoko, 2013). Several studies have found that women have little control over family planning issues. The empowerment of women, as shown in their employment, socio-economic status and educational levels as well as their marital relationships is very important factor to consider in the low utilisation of family planning methods. Some studies have shown a correlation between these factors. This was the same conclusion reached by Steyn and Kluge (2010), who found that long-acting, reversible contraceptive was largely underutilised, despite being more cost effective and having a potential to reduce unplanned pregnancies.

In contrast to these findings Bachorik, Friedman, Fox, Nucci, Horowitz and Diaz (2012), although he supported other studies that implants were highly underutilised, less than 0.7% in the United Kingdom, concluded that age, race and education could not be associated with the low utilisation of implanon. (Mosha, *et al.* 2013) suggested that empowerment of women through level of education is very important in taking decisions to decrease fertility levels. In contrast a study conducted by Jacobstein and Stanley (2013) revealed that Ethiopia, Rwanda, Malawi, and Tanzania have recently achieved notable increases in their modern method contraceptives prevalence rate (CPR) including for implants. In only five to six years, the implants use doubled in Malawi, quadrupled in Tanzania, and rose more than 15-fold in Rwanda and 17-fold in Ethiopia. Implants have become the second most popular method in Ethiopia and the third most popular method in Rwanda. One of every seven married women using modern contraception in Rwanda and one in every eight in Ethiopia relies on an implant for her contraception protection. The contraceptive prevalence rate (CPR) for implants in Rwanda is 6.3% among currently married women, 5.9% among sexually active unmarried women, and 6.4% among rural women. These are the highest rates in Sub-Saharan Africa and among the highest in the world.

Another study that was conducted by Anguzu, Tweheyo, Sekandi, Zalwango, Muhumuza, Tusiime and Serwadda, 2014. Knowledge and attitudes towards use of long acting reversible effects revealed a relatively low level of current use of LARC's

among women attending clinics in Lubaga, Kampala. Knowledge of site administration of implants, previous use, and women's attitude about the important role of male partners in their choice of contraceptives was associated with current use of LARC's. Strategies to strengthen client education may be integrated within reproductive health programmes in Lubaga division in order to dispel possible myths about LARC's.

2.7 South African perspective on contraceptives

The contraceptive services are rendered according to the Constitution of South Africa and other related rights, based on agreed documents, for example Batho Pele Principles, the Patient's Rights Charter and Sexual and Reproductive choices. Contraception is one of the powerful public health tools for any country. Providing women with access to safe and effective contraception is a critical element of women's health. Enabling women to make their choices about their fertility is empowering and offers women better economic and social opportunities. Birth spacing also improves the opportunities for children to thrive physically and emotionally. According to the National Contraception and Fertility Policy and Service Delivery Guidelines DOH, (2012) about one third of young South African women are HIV positive, and contraception provision and fertility advice must take this into account.

Similarly two thirds of South Africa's young women are HIV negative but are at risk to of HIV infection, therefore, their counselling and choices need to take issues related to risk and prevention into consideration. Contraception is one of the World Health Organisation's four strategic pillars for the prevention of mother to child transmission of HIV and it is supported in the National Strategic Plan on HIV, STIs and TB 2012-2016. Contraception has an enormous potential to contribute to South Africa's achieving Millennium Development Goals, particularly MDGs 4 and 5. It is also an important part of the strategy to ensure successful implementation of African Union's Campaign for the Accelerated Reduction of Maternal, Neonatal, and Child Mortality in Africa (CARMMA), to which South Africa is a signatory. The findings on a study conducted in South Africa by Seutlwadi, Peltzer, Mchunu and Tutshana (2012) concluded that the use of contraceptives is still low and was substantiated by the high rate of unwanted pregnancies reported, highlighting that more vigorous, effective and meticulous means of promoting contraceptive use needed to be explored, enabling youth to take control of their reproductive health and make informed decisions.

In another study conducted by Lebesse, Maputle, Ramathuba and Khoza (2013), it was revealed that adolescents lacked knowledge and commitment about contraceptive practices. This also showed that friends contributed to access to sexuality information. The conclusions from Credé, Hoke, Constant, Green, Moodley, and Harries (2012, 12:197), noted how the high rates of unintended pregnancies in the sample of HIV positive women suggest that the WHO's strategy of preventing unintended pregnancies amongst HIV positive women to minimise vertical transmission of HIV must be reinforced. Long-acting and permanent methods could fill an important gap in family planning services in South Africa, with women's stated fertility preferences indicating a strong desire to either not have a future pregnancy or to wait several years before the birth of their next child. Given the high contraceptive

prevalence recorded in the target population, half of whom were PMTCT participants, the challenge in providing services lies not in encouraging timely postpartum family planning uptake; rather, it lies in encouraging consideration of an expanded range of contraceptive options, including LAPM.

2.8 KwaZulu-Natal perspective on Implanon (LARC's) utilisation

There were no results or findings on any study previously conducted specific to the research topic on low utilization of implanon (LARC's). It may be assumed that age, low level of education, residency (as the study targeted young women who resided in the Ugu District only) were responsible for the low utilization of Implanon. Some studies that were conducted in other parts of the country have shown a correlation between these factors hence the interest of investigating factors associated with low utilization of implanon (LARC's) among young women in the Ugu District.

2.9 SPECIFIC RESEARCH OBJECTIVES

2.9.1 Socio-Demographic factors associated with low utilisation of implanon (LARC's)

According to a study conducted in United States by Winner, Peipert, Zhao, Buckel, Madden, Allsworth and Secura (2012), participants using implants as a contraceptive were most likely to be older and better educated and yet those who had unplanned pregnancies were younger, less educated, and were more likely to be Black and they were more likely to rely on public assistance or to report difficulty paying for basic expenses. They were also more likely to have a history of unplanned pregnancies and abortions or sexually transmitted infection. Another study conducted in California discovered that many young women, including teenagers, were ideal candidates for contraceptive implants because they desire a method that is discreet, effective, preserves fertility, inexpensive, is long lasting, and is user friendly. Unfortunately, only about 3% of adolescents using contraception choose implants (Meckstroth & Darney, 2001). In contrast to these findings Bachorik *et al.* (2012) although he supported other studies that implants were highly underutilised, less than 0.7% in the United Kingdom, concluded that age, race and education could not be associated with the low utilization of implants.

Mahumud, Hossain, Sarker, Hossain, Saw and Khan (2015) in their study revealed showed that contraceptive discontinuation rates among poorer less educated women from rural areas were higher than among their better-educated counterparts from the rural areas. Since this was associated with unexpected pregnancies, the increasing number of children would create additional burden to the already limited financial resources of the family. Based on their findings, specific measures to disseminate information on family planning and provide effective options of contraception should be targeted at young married women from poor families in the rural areas. They concluded that providing better opportunities for general education and employment opportunities may also reduce the rate of contraceptive discontinuation indirectly, by improving the economic background of these women and their families.

2.9.2 Myths and low utilisation of implanon

Several studies affirmed that the side effects as myths following insertion of implants are the major cause of low utilization resulting in early discontinuation within the first year. Irregularity in bleeding was the main side effect across all studies that were conducted. A study conducted in Nigeria showed that the most troublesome side effect leading to discontinuation of implanon was disruption of the menstrual cycle which led to discontinuation amongst its acceptors thus affecting utilization (Aisien & Enosolease, 2010). According to findings from a study by Gebremichael, Haile, Dessie, Birhane, Alemayehu and Yebyo (2014) the main reason women did not accept long-acting, reversible contraception was fear of side effect and fear of infertility after use. Another study conducted in Switzerland which followed up 991 women with implants found that 24% of women removed implanon prematurely because of side-effects leading to discontinuation, were mainly bleeding disturbances (Bitzer, Tschudin, Alder & Swiss Implanon Study Group, 2004). The findings in a study conducted in Australia revealed that the side effects were an important reason for discontinuation of long-acting, reversible contraceptive (Lewis, Doherty, Hickey & Skinner, 2010).

In contrast, a UK study showed that the long acting reversible contraceptives have higher continuation and satisfaction rates at one year than non- long acting reversible contraceptive methods (Cea Soriano, Wallander, Andersson, Filonenko & García Rodríguez, 2014). According to Bahamondes, Petta, Diaz, Espejo-Arce and Monteiro-Dantas (2003), the number of users of implants are still very low, especially in developing countries. Anguzu, Tweheyo, Sekandi, Zalwango, Muhumuza, Tusiime and Serwadda (2014), in their study concluded that there was a great need to strengthen client education about LARC to dispel possible myths and to consider integrating male partner's decision making in contraceptive choices for women.

According to Jacobstein and Stanley (2013) the side effects of the implant are most often irregular bleeding, though some women reported more serious side effects, such as irregular bleeding, weight gain, change in appetite and sex drive, depression, scarring on skin, nausea, nervousness, pain at site of implant, and headache. The woman concluded: 'I really liked the implant but I was never warned of the position I could now be in. I am awaiting a plastic surgeon to have a go, but to be honest don't hold out much help. If anyone had warned me that my fertility could have been at risk before I had this procedure I would have stayed on the pill,' she said.

2.9.3 Knowledge on implanon

Results from a study conducted in New York City by Bachoric, Friedman, Fox, Nucci, Horowitz and Diaz (2014), found that awareness of implants in the study population was very low accounting to about 60%. Another study that was conducted by Anguzu *et al.*, (2014) in Lubaga division, Kampala district Uganda revealed that knowledge of site administration of implants was associated with current use of LARC's. Lebesse *et al.*, (2013) concluded that ineffective education could influence the onset of sexuality and could have a negative impact on contraceptive use and practice. For many

adolescents it was taboo to discuss sexuality with parents and partners, and many of participants could not initiate a conversation about contraceptives with their parents which clearly indicated that adolescents in villages lacked knowledge and commitment to contraceptive practices

In another study conducted by Alemayehu, Belachew, and Tilahun, (2012) concluded that, a significant amount of the participants had low knowledge on contraceptive particularly LARC's. More than half (53.6%) of married women had negative attitude towards practicing of LARC's. Positive knowledge of LARC's, which was shown by women who had two and above pregnancies and women who do not want to have additional child were significantly associated. Information and educational communication should focus on alleviating factors that hinder women from practicing of LARC's. Knowledge of peers' good experience with a LARC fosters, but fear of pain and needle restrains use of these methods. These findings were supported by a study conducted by Pathak, Kahlon, Ahluwalia, Sharma and Bhardwaj, (2012) which revealed that, despite reliability and long-term use being an important advantage, fear of pain and needles makes LARCs less appealing to young people. Current LARCs meet some, but not all expectations of adolescents and young women.

They revealed that there was strong evidence demonstrating a link between contraceptive knowledge and young adults' behaviour, combined with findings about young adults' disturbingly low levels of knowledge, suggested that new educational strategies are urgently needed. Their findings further recommended that providers would need appropriate training and support to ensure that this does not become a missed opportunity.

In another study, according to Frost, Lindberg and Finer (2012), young adults' low levels of knowledge about contraceptives may partially reflect the strong emphasis on abstinence-until-marriage sex education that prevailed during the last decade, when this generation was in middle or high school. A shift to more comprehensive sex education curriculum that includes medically accurate information about contraception has the potential to contribute to increased knowledge among future generations. In the meantime, young adults, who often have a long window of exposure to the risk of unintended pregnancy and limited opportunities for ongoing sex education, need alternative educational support, including "booster" sex education sessions.

2.9.4 Effectiveness of provider counselling

A study conducted in South Africa in Cape Town, found that the main issue with implanon is the change in bleeding patterns, which is responsible for women discontinuing unless counselled intensively (Patel, 2014). According to Stanback, Steiner, Dorflinger, Solo and Cates Jr (2015) using WHO tiered-effectiveness model found that clinicians could become too directive even coercive. WHO guidance excerpted below

"Individuals have the right to be fully informed by appropriately trained personnel. Health-care providers have the responsibility to convey accurate, clear information, using language and methods that can be readily understood by the client, together

with proper non-coercive counselling in order to facilitate full, free and informed decision making. The information provided to people so that they can make informed choice about contraception should emphasise the advantages and disadvantages, the health benefits, risks and side-effects and should enable comparison of various contraceptive methods. Censoring, withholding or intentionally misrepresenting information about contraception can put health and basic human rights in jeopardy". (Bahamondes *et al.*, 2008) implants contraceptives could be considered inexpensive however the number of women who discontinue prematurely is high thus the cost may be correspondingly high, therefore counselling is crucial to inform potential users about possible side effects.

According to a study by Jacobstein and Stanley (2013) thoughtful counselling, including comprehensive information and anticipatory guidance about side effects, is critical to ensuring informed contraceptive choice and quality service provision.

The results from another study conducted by Rasmussen (2011) point to contraceptive understanding as a critical, formidable barrier to unintended pregnancy prevention among urban young adults. Gaps in contraceptive understanding had real consequences for participants' relationships, well-being and risk of pregnancy. It is important that health care providers, as gatekeepers to most contraceptive methods, assess and address their clients' and their own perceptions and misperceptions about contraceptives and fertility. Such efforts might be bolstered by presenting information on effectiveness, side effects and user requirements through narratives and experience-sharing approaches relevant to clients. Perhaps most importantly, providers should not minimise the concerns and beliefs that clients have about contraception, even if they seem unfounded based on providers' own criteria for evidence. Health care providers and health educators are just two sources of information about contraceptives competing among other powerful influences like friends, family, media and what young adults themselves experience or witness first-hand in others.

According to Barden-O'Fallon, Speizer, Calix and Rodriguez (2011), counselling about side effects may have little effect on discontinuation when side effects are experienced, because other social and personal influences that are not easily measured come into play. Overall, in an environment of high method discontinuation, results suggest that programmes focus their efforts on maintaining contraceptive coverage and ensuring that women know about and have access to available options if they choose to discontinue.

In another study by Chandra-Mouli, McCarraher, Phillips, Williamson and Hainsworth (2014), the findings and conclusions showed that evidence of the benefits of curriculum-based comprehensive sexuality education is strong. The most successful sexuality education programmes provide accurate and age-appropriate information and in addition, develop life skills and provide support to deal with thoughts, feelings and experiences that accompany sexual maturity such as (e.g. falling in love and refusing unwanted sex). They are also linked to contraceptive provision and services

Although policies requiring sexuality education for adolescents are in place in many countries, they are poorly implemented, if at all.

2.10 CONCLUSION

This chapter reviewed relevant literature to gain a better and in depth understanding of factors associated with low utilization of implanon (LARC's). According to findings from the selected literature review, it can be concluded that there are many factors that may be associated with low utilization of implanon among young women that led to unplanned pregnancies namely: socio-demographic factors, myths, knowledge and effectiveness of provider counselling.



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CHAPTER THREE: RESEARCH DESIGN

3.1 INTRODUCTION

This chapter provides an overview of the research design and methodology that guided this study. The purpose of the study was to investigate the factors associated with low utilization of implanon (LARC's) among young women in the Ugu District. The key research questions for the study were examined along with factors like, socio-demographic, myths, knowledge, provider counselling and their association with low utilization of implanon.

3.2 STUDY DESIGN

A quantitative descriptive cross sectional research design was used for the study. The study participants were selected using systematic random sampling of every third element selected in the queue among young women who attended family planning clinics in six (6) health institutions in the Ugu District. This study was concerned with testing the assumptions that certain factors are associated with low utilization of implanon (LARC's) among young women in the Ugu District.

3.3 POPULATION

The target population was defined as the entire group of people in the entire Ugu District that are of interest to the researcher and for this study. They were considered to be young women between ages of 18 and 35 years. Their entire population number translated to 70081. They all attended family planning clinics in four hospitals and two Community Health Centres within the Ugu District. The sample size for this study consisted of 150 young women of child bearing age attending family planning clinic between ages of 18 and 35 years.

3.4 SAMPLE AND SAMPLING PROCEDURE

For this research, systematic or interval random sampling was used by selecting every third element in the queue attending family planning clinic.

3.5 INCLUSION AND EXCLUSION CRITERIA

The criterion for inclusion in the study was designed as following:

Young women between the ages of 18 to 35 years using a contraceptive method and residing in the Ugu District and had to consent and to participate voluntarily in the study, conducted in all the hospitals and Community health Centres in the Ugu District.

3.5.1 Exclusion criterion

Young women below age of 18 and above 35 were excluded from the study as well as those that were not residing in the Ugu District. All young women not using any contraceptive method were also excluded. Those who refused to participate or give consent were excluded from the study including those who participated in the pilot study.

3.6 RESEARCH INSTRUMENT OR TOOL

In this study the research instrument used for data collection was a simple self-administered questionnaire attached as Appendix B. Respondents were expected to

read the consent form and if accepted, to read the survey questions and choose their preferred answer by recording it in the absence of the researcher. This method was selected due to its advantages as given below:

3.6.1 Questionnaire construction

The questionnaire that was designed, piloted and subsequently used, contained specific investigative questions to each research objective for which data was to be gathered. The questionnaire was available in English and isiZulu languages as the sample population for the study was predominantly African with isiZulu being the dominant language. The questionnaires were in the form of rating questions using a rating scale. The five point Likert-scale was used as part of the questionnaire in which each respondent was asked to rate the questions from strongly agree to strongly disagree. For other questions, the respondents were asked yes or no questions which also used a rating scale.

The questionnaire was made up of five sections:

Section A: Socio-demographic data.

Section B: Contraceptive history

Section C: Myths on Implanon

Section D: Knowledge on implanon

Section E: Effectiveness of provider counselling



3.6.2 Pilot study

A pilot study was conducted with a sample of ten (10) respondents from the selected sample and their input revealed no flaws in the questionnaire design, thus the questionnaire was rolled out to the sample population.

3.6.3 Administration of questionnaires

The questionnaires were taken by the researcher and researcher assistants to all four hospitals and two Community Health Centres in one day and hand delivered to the operational managers at the family planning clinics, who were consulted prior to this date regarding the method of administering the questionnaires. The researcher went through the questionnaires with the operational managers and clarified any concerns arising from misunderstanding. The research assistants were recruited and trained on the aim of the study and the meaning of the questions. They were also taught on how to complete the questionnaires as well as how to provide assistance to participants when a need arises. One research assistant remained in each site to help with distribution to participants as every third element in the queue was selected to participate after which they were given consent forms to sign. The family planning clinics offer services daily.

3.6.4 Collection of questionnaires

The questionnaires were translated into the local languages from English to isiZulu. The questionnaires were collected by the research assistants from the participants and operational managers on a daily basis for two days and stored safely with the

researcher. The time frame given to respondents was approximately 10-15 minutes and all respondents complied with this requirement. Out of the 150 questionnaires administered, 140 questionnaires were received back and all of them were fully completed with no omissions or unanswered questions. The response rate was thus 93.3% which indicates a low chance of a significant non response bias.

3.7 DATA ANALYSIS

After the research questionnaires were collected from the participants, the data was organised and analysed via a series of steps referred to as data analyses. Data Due to the questions being closed-ended, the coding was simple to do and included the use of the Likert Scale, data was entered manually onto Excel spreadsheet. All questionnaires received for this study were coded before inputting into an SPSS software package version 22.0. After that the data was analysed and interpretation was done using statistics through descriptive analysis followed by inferential analysis. The descriptive statistics utilised in this study included frequency distributions and percentages in the form of tables and figures.

3.8 VALIDITY AND RELIABILITY

3.8.1 Validity

To achieve content validity, the questionnaire included a variety of questions on socio-demographic factors that may be associated with low utilisation of implanon (LARC's), myths, knowledge as well as the effectiveness of provider counselling. The questions were based on information gathered during the literature review phase to ensure that they were representative of the factors that may be associated with low utilisation of implanon (LARC's). The research assistants were available for queries regarding completing the questionnaire but had no personal involvement in the filling out of questionnaires.

- Questionnaires were explained to the operational manager and the research assistants were then responsible for the distribution and administration thereof and the collection and return of the questionnaires to the researcher.
- To establish external validity of the research questionnaire in terms of suitability, utility, and clarity, a pilot test was conducted. Ten participants were selected to participate in a pilot study to review the questionnaire for clarity, wording, and length.

3.8.2 Reliability

Data was analysed using the SPSS version 22 in order to answer the research questions and to achieve research objectives. This ensured that descriptive and inferential statistics was produced by using Chi-squared tests to determine the association between implanon utilisation and variables.

3.9 DATA COLLECTION PROCEDURE

3.9.1 Limitations of the research

There are various delimitations to this research. One of the methodological shortcomings of this research is that systematic probability and purposive sampling

taking every third element in the queue at the family planning clinic was used in order to collect the data. Since the probability that a person would be chosen is unknown, it cannot be claimed that the sample is representative of the larger population. Therefore the non-representative nature of the sample means that the results could not be generalised to the general population of all young women from ages of 18 to 35 years attending family planning clinics.

There were two limitations to this study. The first limitation was the time constraints placed on the questionnaire administration phase. This was due to the ethical clearance certificate from the University of Fort Hare taking much longer than initially anticipated as well as the time frame set for submission of the approved dissertation in order to meet the requirements for graduation.

3.9.2 Elimination of bias

Due to non-probability purposive sampling being used, the possibility of bias is inherently large. The researcher tried to remain as objective as possible. Respondents were to remain anonymous to prevent bias in analysing the research findings. Furthermore, the respondents were of one gender which were all females and excluded males as they do not use implanon as a contraceptive but may contribute indirectly to the low utilization.

3.10 ETHICAL CONSIDERATIONS

This section will thus provide a summary of the various ethical considerations that this research had to adhere to.

The permission to conduct the study was obtained as follows:

- The Chief Executive officer of Murchison Hospital, Chief Executive officer of Port Shepstone Regional Hospital, Chief Executive officer GJ Crookes Hospital, Acting Chief Executive officer of St Andrews Hospital and Chief Executive Officers of Gamalakhe Community Health centre and Acting Chief Executive officer of Turton Community Health Centre supported the study (Appendix C) as the intended results were to be beneficial to the whole District.
- Permission was then obtained from University of Fort Hare on approval of the Research Proposal and Ethical Clearance Certificate Application (Appendix D).
- Permission was then obtained from the Ugu District Department of Health District Manager. (Appendix E).
- Final approval and permission was then granted by the Department of Health: Health Research and Knowledge Management Committee (Appendix F).

3.10.1 Ensuring participants have given formal consent

The participants were informed of the nature of the research study via a consent form (Appendix A) which was attached to the research questionnaire (Appendix B).

3.10.2 Ensuring no harm comes to the participants

No harm was placed on any of the participants as the questionnaire did not require the participant to append any of their personal details. The researcher further ensured that

the information collected was in no way provided to any unauthorised person thus further ensuring that no harm came to the participants.

3.10.3 Ensuring confidentiality and anonymity

The researcher ensured that the identity of all the participants were protected in that the questionnaire did not require the participants to append any of their personal details and the researcher ensured that the information collected was stored securely and no unauthorised person had access to this information thus ensuring that the information was kept confidential and the participant was protected.

3.11 CONCLUSION

In this chapter, the research design and methodology for the study has been explained in detail which included an overview of the research strategy, research instrument, target population and sampling strategy. The data collection process as well as the data analysis was discussed. The chapter ended with the limitations and delimitations of the study, eliminations of bias and ethical considerations. The next chapter presents the results, discussion and interpretation of findings of the study.



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CHAPTER FOUR: RESULTS AND DISCUSSION

4.1 INTRODUCTION

This chapter presents the research findings from the study undertaken through the quantitative analysis of the participant's responses in the questionnaire through the use of the Statistical Package for Social Science (SPSS) version 22.0. The results are organised under the following headings: socio-demographic factors of the respondents, contraceptive use, knowledge on Implanon, myths about Implanon (LARC's), and effectiveness of provider counselling. The results of each question were initially stated and interpreted, followed by a discussion and linkage to the theory presented in chapter two, under literature review. Each question's response has been presented in the form of tables thus enabling the researcher to easily identify and discuss the areas of most importance. Questions in this study were close ended. A total of 150 (N=150) participants successfully completed the questionnaires except for last question on effectiveness of provider counselling which was relevant to only those who were using Implanon (LARC's) hence the (N = 36).

4.1.1 Socio-demographic factors profile of the participants

The socio-demographic profiles of the participants are indicated in Table 4.1 below. The age of the respondents ranged from 18 to 35 years. All respondents were females attended family planning clinics (n150 =100%). The majority of the participants were between the ages of 26 and 30 years (n 52; 34.6%), the majority were single (n= 126; 84%). Most of the participants had a secondary education (n 88; 58.6%) with only (n2=1.3%) without education. unemployed (n 95; 63.3%). Almost two thirds of the participants were unemployed and all resided in the Ugu District (n150=100%).

Table 4.1.1: Socio-demographic profile of participants

Frequency (n %)	Variables
Age group (years)	
18-21	26 (17.3)
22-25	38 (25.3)
26-30	52 (34.6)
31-35	34 (22.6)
Marital status	
Married	24 (16)
Single	126 (84)
Educational level	
None	2 (1.3)
Primary	6 (4)
Secondary	88 (58.6)
Tertiary	54 (36)
Employment status	
Employed	55 (36.6)
Unemployed	95 (63.3)
District of residence	
Ugu	150 (100)

4.1.2 Socio-demographic factors associated with utilization of Implanon (ALARC's)

The significant association between married women and implanon use was significant ($\text{Chisq}=5.11$; $\text{df}=1$; $p=0.0238$). To determine the strength and direction of association, the odds ratio corresponding to this association were calculated and it was found to be 2.8 with a 95% confidence interval of (1.12 ; 7.06). This means that those in married category 1 are 2.8 times as likely to use implanon as those unmarried in category 2. For the rest of the socio-demographic variables, no significant associations with implanon use were detected. All the p-value associated with those other values is greater than the significance level of 5%.

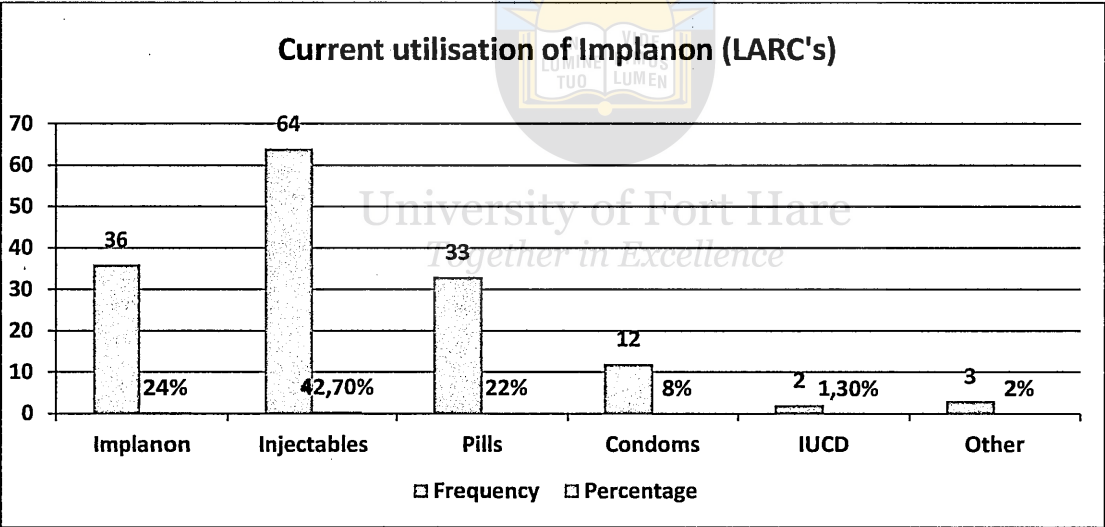
Table 4.1.2: Chi-squared tests for association between implanon use and socio-demographic variables

Variable	Chisq	df	p-value
Marital status	4.93	3	0.1772
Married	5.11	1	0.0238
Educational level	5.48	3	0.1396
Employment status	1.03	1	0.3108

4.2 CURRENT UTILISATION OF IMPLANON (LARC’S)

The most common contraceptive that was reported to be used were injectables (n64=42.7%) followed by implanon (n36=24%). Pills were (n33=22%), condoms (12=8%). A very small minority used IUCD (n2=1.3% and other methods accounted for (n3=2%).

Table 4.2.1: Current utilisation of implanon



4.3 MYTHS ABOUT IMPLANON (LARC'S)

The majority of participants concurred that using implants will cause harmful changes to menstrual bleeding (n116=77%) closely followed by those who believed that insertion of implanon is painful (n110=73%) whilst only (n34=23) and (n40=27) concurred with above statements respectively. Many of the participants did not concur with the myth that Implanon can cause weight gain (n92=61%) and majority also did not concur that using Implanon causes illness or problems such as cancer (n114=76%).

Table 4.3.1: Questions on implanon

Factor	SA	A	D	SD
	n(%)	n(%)	n(%)	n(%)
Insertion of implanon is painful	78(52)	32(21)	23(15)	17(12)
Implants can travel from the insertion site to other parts of the body	69(46)	34(23)	40(27)	7(4)
Using Implants will cause harmful changes to menstrual bleeding	95(63)	21(14)	22(15)	12(8)
Implanon causes illness or problems such as cancer	10(7)	26(17)	71(47)	43(29)
Implanon can cause weight gain	20(14)	38(25)	44(29)	48(32)
Implants interrupt pregnancy by causing abortion	32(21)	41(28)	11(7)	66(44)

S=strongly agree; A=Agree; D=Disagree; SD=strongly disagree

4.3.1 Myths associated with utilization of Implanon (LARC's)

On the associations between implanon use and myths, it turned out all the myths variables had no significant association with implanon use. Noted also was that for all the myths variables the chi-squared statistics are small, which means the difference between the observed frequencies and those expected when the myths variables are independent of implanon use is very small in all cases. This means, implanon use has got nothing to do with mythical beliefs of the participants. Besides small values of the chi-squared statistic the p-values were found to be large, greater than the significance level of 5%.

These tests, test the null hypothesis that implanon use is independent of mythical beliefs of participants. For all the five myths variables, this null hypothesis is not rejected. This means at a 5% level of significance, there is no evidence of any significant association between myths and implanon use.

Table 4.3.2: Chi-squared tests for association between implanon use and myths

Variable	Chisq	df	p-value
Myth1	0.02	1	0.8842
Myth2	0.51	1	0.4751
Myth3	0.89	1	0.3463
Myth4	0.07	1	0.7878
Myth5	0.89	1	0.3457
Myth6	2.02	1	0.155

4.4 KNOWLEDGE ABOUT IMPLANON (LARC'S)

The majority of the participants had adequate knowledge on implanon (LARC's) as they concurred that implanon is good for young women (n107=70%) followed by those who agreed that implanon is effective in preventing unplanned pregnancy (n95=63%). Another majority did not concur with the statement that "unplanned pregnancy makes me feel good about myself" (n121=81%) and (n116=77%) did not concur with statement that "I will rather be pregnant than using implanon". About two thirds of participants had very limited knowledge when asked if "Unplanned pregnancy makes me feel good about myself" (n 56= 37%) as well as those who responded "I will rather be pregnant than using implanon" which translated to (n62=41%). In summary this means that one third of the participants in this in this age group have insufficient knowledge.

Table 4.4.1: Further questions on implanon

Factor	SA	A	D	DK	SD
	n(%)	n(%)	n(%)	n(%)	n(%)
1. Implanon is effective in preventing unplanned pregnancy.	38(25)	57(38)	18(12)	33(22)	4(3)
2. Unplanned pregnancy makes me feel good about myself	13(9)	8(5)	56(37)	8(5)	65(43)
3. I will rather be pregnant than using long acting Implanon	10(7)	15(10)	62(41)	9(6)	54(36)
4. Implanon is good for young women	49(33)	58(37)	8(5)	30(20)	8(5)
5. Received adequate information on implanon	41(27)	59(39)	31(21)	9(6)	10(7)

SA=strongly agree, A= agree, D= disagree, DK= don't know, SD= strongly disagree.

Table 4.4.2: Knowledge association with utilisation of Implanon (LARC's)

The study revealed that there is no significant association between implanon and its utilization from know 1 to know 5. Although the majority of the participants in the Ugu District had adequate knowledge on implanon, that did not translate to its utilisation

Variable	Chisq	df	p-value
Know1	2.08	4	0.721
Know2	3.77	4	0.4381
Know3	4.68	4	0.3222
Know4	0.85	4	0.9318
Know5	3.92	4	0.4166

4.4 EFFECTIVENESS OF PROVIDER COUNSELLING

The majority of the participants were not counselled on how Implanon works which translated to (n 94=63%) whilst those that were counselled on side effects were (n77=51%). The majority of the participants (n111=74%) were counselled on procedure of insertion and removal whilst (n116= 77%) mentioned that they were not counselled on when follow up was needed as well as what to do when experiencing problems which accounted to (n 81=54%).

Table 4.5.1: Effectiveness of provider counselling

Factor	YES	NO
	n(%)	n(%)
Counselling on how implanon method works	56(37)	94(63)
Anticipated side effects of implanon	73(49)	77(51)
Procedure of insertion and removal	111(74)	30(26)
What to do when experiencing problems	69(46)	81(54)
When follow up is needed	34(23)	116(77)

4.4.1 Provider counselling association and utilization of Implanon (LARC's)

Implanon use was tested for association with counselling variables using the chi-squared test and the results are presented in the table below. The results show very large chi-squared statistic values of at least 128.9 and very small p-values of less than 0.0001. This shows that there is a very high association between implanon use and counselling.

Table 4.5.2: Chi-squared tests for association between implanon use and counselling

Variable	Chisq	df	p-value
Counsel1	134.88	2	<0.0001
Counsel2	133.96	2	<0.0001
Counsel3	133.99	2	<0.0001
Counsel4	133.92	2	<0.0001
Counsel5	128.9	2	<0.0001

4.5 DISCUSSION

The study aimed to investigate the factors associated with low utilization of implanon (LARC'S) among young women in the Ugu District. These factors were categorised as socio-demographic, myths, knowledge and effectiveness of provider counselling.

4.5.1 Socio-demographic factors associated with utilization of Implanon (LARC's)

The socio-demographic variables tested for associations with implanon use included age, marital status, educational level and employment status. The chi-squared test for independence was used to test for significance of associations. The results of this study indicated that there was significant association between married young women

and implanon use, was significant as ($\text{Chisq}=5.11$; $\text{df}=1$; $p=0.0238$). To determine the strength and direction of association, the odds ratio corresponding to this association were calculated and it was found to be 2.8 with a 95% confidence interval of (1.12 ; 7.06). This means that those married young women are 2.8 times likely to use implanon than the unmarried young women in the Ugu District. There was no significant association among young women and the rest of the socio-demographic like age, educational level, and employment status were detected.

This finding was almost similar with the study results obtained (16) that although globally use of implants was below 1%, women who were married or in union, evidence suggested that implants use was rising. The results of this study further indicated that among the rest of the socio-demographic variables, no significant associations with implanon use were detected. All the p-value associated with those other values is greater than the significance level of 5%. This is consistent with a study that was conducted in United Kingdom (3) found out that although implants were highly underutilised, (less than 0.7%) age, race and education could not be associated with the low utilization of implanon.

4.5.2 Myths associated with utilization of implanon (LARC's)

On the associations between implanon use and myths, it turned out all the myths variables had no significant association with implanon use. Note that for all the myths variables the chi-squared statistics are small, which means the difference between the observed frequencies and those expected when the myths variables are independent of implanon use is very small in all cases. This means, implanon use has got nothing to do with beliefs of the participants. Besides small values of the chi-squared statistic the p-values were found to be large, greater than the significance level of 5%.

These tests, test the null hypothesis of that implanon use is independent of mythical beliefs of participants. For all the five myths variables, this null hypothesis is not rejected. This means at a 5% level of significance, there is no evidence of any significant association between myths and implanon use.

4.5.3 Knowledge association with utilization of implanon (LARC's):

In this study it was observed that the majority of the participants in the Ugu District had adequate knowledge on implanon but that did not translate to its utilisation. According to the findings it was conclusive that there was no significant association between implanon and its utilization from all knowledge variables. This is supported by previous studies done in Nigeria (1) where only 7% of the women had used implanon despite good knowledge on the contraceptives. These findings are also similar to a study done in Uganda (34) which revealed that women were more knowledgeable about implants especially married couples as much as their knowledge did not translate to increased utilization.

4.5.4 Effectiveness of provider counselling and association with utilization of implanon (LARC's)

Implanon use was tested for association with counselling variables using the chi-squared test and the results are presented in the table below. The results showed very large chi-squared statistic values of at least 128.9 and very small p-values of less than 0.0001. This study revealed that there was a very high association between implanon use and counselling. These findings are consistent with previous studies (16) which concluded that an empowered client is central to the provision and receipt of quality family planning services through thoughtful counselling supported by (6) contraceptive understanding as a critical, formidable barrier to unintended pregnancy prevention among urban young adults.

4.6 CONCLUSION

This study revealed that low utilization of implanon in the Ugu District was association with unmarried young women and provider counselling which showed that the unmarried young women were less likely to use implanon as a LARC's than married women. There is significant association of implanon use by married women. The study further revealed that the provider counselling was ineffective. It further concluded that myths and knowledge were not associated with low utilization of implanon. The findings of the study further concluded that although the participants had adequate knowledge about implanon, that knowledge did not translate to the increase in utilization of implanon (LARC's).

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CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The aim of the study was to investigate factors associated with low utilization of implanon (LARC's) among young women in the Ugu District. This chapter, firstly, summarises the findings of the study, from both the literature review as well as the research study that was conducted. Secondly, the researcher made every effort to evaluate the linkage between findings from the literature and the study and thus offered recommendations to the management of the District Management team. Lastly, the identified areas for further research were outlined. The conclusions and recommendations presented in this chapter were linked to the research objectives and research questions.

5.2 RECOMMENDATIONS

Objective four of this research study aimed to recommend a range of effective and efficient strategies to increase utilization of implanon LARC's among young women in the Ugu District. Based on objective four in chapter two as well as the research findings as discussed in chapters four and five, the following recommendations have been selected. These recommended strategies need to be employed by the management of District in order for low utilization of implanon (LARC's) among young women in the Ugu District to be addressed successfully:

1. Increase opportunities for hands on training and experience on Implanon (LARC's) insertion and removal techniques including extension of training to other cadres e.g. Enrolled nurses because without adequate availability and distribution of skilled, motivated and enabled providers there can be little provision of implanon LARC's.
2. Engage policy makers to devote resources to the provision of family planning services through continuous education and technical training and increasing the numbers of trained health providers.
3. Providing adequate IEC material and intensify marketing strategies on implanon (LARC's) in all facilities.
4. Address misinformation and dispel myths about implanon (LARC's) among young women through intensifying health education on LARC's including and creating more awareness.
5. Importance of an individualised approach to contraceptive counselling and supporting young women who have selected implanon as their contraception of choice. This is important as changes in menstrual patterns irregular, infrequent, or no bleeding while not harmful are expected with the use of implanon.
6. Close monitoring and follow up of implanon (LARC's) users should be made to increase continuation rate including making it clear that although the client does not need to come back, she can and should return at any time whether for advice, reassurance, treatment of side effects or even removal. This will be discussed during counselling on the method hence the importance of effective

provider counselling. The clients must be given return dates for follow up visits irrespective of complaints.

7. Health providers should give appropriate pre-insertion counselling based on the manual to the clients by placing greater emphasis on side effects.
8. Community workshops could be provided by collaborating with different sectors through Operation Sukuma Sakhe programme in the community such as churches, non-governmental organisations, other departments and parents to empower young women about sexuality and contraception. This will in turn enhance community participation.
9. More information on human sexuality, conception and contraception should be made available early at Primary school level to eliminate misconceptions about contraception.
10. Increase opportunities for hands on training and experience on implanon (LARC's) insertion and removal techniques including extension of training to other cadres e.g. Enrolled nurses because without adequate availability and distribution of skilled, motivated and enabled providers there can be little provision of implanon LARC's.

5.3 AREAS FOR FUTURE RESEARCH

- There is not much research of this nature conducted in KwaZulu-Natal and in Ugu District in particular, thus the need for more research of this nature is critical.
- A future study to investigate if there are any changes in hormonal content levels from second year as most of participants removed implanon after the first year due to intolerable bleeding as a side effect.
- A study of this nature should be done at clinic level, thus accessing a larger population and sample as it is at the Primary Health Care facilities where the majority access reproductive health services.

5.4 CONCLUSION

The aim of the study was to investigate the factors associated with low utilization of implanon LARC's among young women in the Ugu District, Province of KwaZulu-Natal. The low utilization of implanon LARC's is a serious concern as it has a potential to prevent unplanned pregnancy and this study has provided an in-depth analysis of this challenge. This study revealed that are various factors associated with low utilisation of implanon like variable unmarried young women were less likely to use implanon as LARC's as compared to married young women under socio-demographic factors who participated in the study, and provider counselling which according to the study results was ineffective. There was a significant association between married young women and utilization of implanon in the Ugu District. Unexpected from the results was the fact that myths were not associated with low utilization of implanon. The study further revealed that majority of participants had adequate knowledge about the implanon as a LARC's which however did not translate to increase utilization. Various strategies were discussed, and a range of effective and efficient strategies were recommended as well including areas for future research. This study will thus allow the management of the Ugu District to utilize these findings to improve on the

various policies and procedures to increase utilization of implanon (LARC's) among young women in the Ugu District and to be able to reduce unplanned pregnancies which will lead to improvement of maternal and child morbidity and mortality. The aim of this study has been fulfilled by achieving the stated objectives and answering all the research questions.

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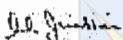
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APPENDIX A: CERTIFICATION

CERTIFICATION

This thesis "An Investigation of the factors associated with low utilization of Implanon (LARC's) in Ugu District, Province of Kwa-Zulu Natal, South Africa" meets the regulation governing the award of the degree of Masters In Public of the University of Fort Hare and is approved for its contribution to scientific knowledge and literary presentation.

PROF JINABHAI

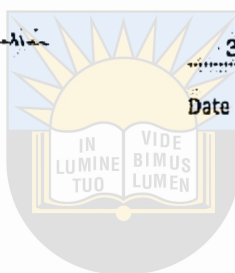


3 OCTOBER 2018

Supervisor:

PROF JINABHAI

Date



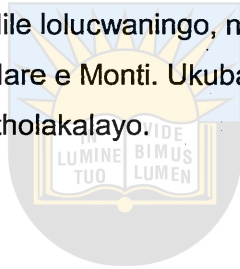
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APPENDIX B: ZULU CONSENT FORM

Isivumelwana sokubamba iqhaza kucwaningo

Mina----- ngiyavuma ukubamba iqhaza kucwaningo " Imbangela yokwehla kwezinga lokusetshenziswa kwe – implanon njengohlobo olusha lokuhlela umndeni kwabesifazane esifundazweni soGu KwaZulu-Natali.

Ngiyifundile incwadi echazayo kabanzi ngalolucwaningo futhi ngiyaqonda ukuthi luphathelene nokufunda kuphela ngenhloso yokuthola ulwazi olungeziwe njengemigomo yoqeqesho lwe Masters. Ngiqinisekisiwe ukuthi ngeke idalulwe imininingwane yami uma seluphelile lolucwaningo, njengoba nemiphumela iyohanjiswa eNyuvesi yase Fort Hare e Monti. Ukubamba iqhaza akuphoqiwe uyazinikela, futhi akukho nzuzo etholakalayo.



Sayina.....

Ufakazi.....

Ufakazi.....

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APPENDIX C: ENGLISH CONSENT FORM

WRITTEN INFORMED CONSENT FOR RESEARCH PROJECT

I, voluntarily agree to participate in a research project of a descriptive study: Factors associated with utilisation of Implanon (LARCs) among young women in Ugu District – KZN Province.

I understand what the project is about, as it was explained to me by the researcher and I understand that I incur no risk by participating.

I have a right to withdraw or to refrain from answering a question if I feel like doing so.

Confidentiality of the information given is ensured by anonymity and only the researcher and the supervisor will have access to the data.

I understand that there are no anticipated risks in the study.

Contact details are provided for further questions about the research project.

Contact details: Maureen Zanele Nxumalo
Cell: 0834698141

Participants:

Signature..... Date.....

Researcher's:

Signature..... Date: 2015/04/01

APPENDIX D: ZULU QUESTIONNAIRE - IMIBUZO YOCWANINGO

SECTION A. IMIBUZO NGAWWE

FAKA ISIPHAMBANO KOVUMELANA NAKO

1. Uneminyaka emingakhi

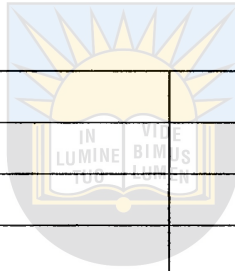
--

2. Ushadile

Yebo	
Cha	

3. Ibanga lemfundo

Alikho	
Primary	
Secondary	
Tertiary	



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4. Uyasebenza

Yebo	
Cha	

5. Uhlala oGwini

Yebo	
Cha	

SECTION B. Ezokuhlela umndeni

6. Uyahlela?

Yebo	
Cha	

7. Usebenzisa yiphi inhlobo yokuhlela umndeni kezi ezilandelayo

Implanon	
----------	--

Umjovo	
Amaphilisi	
Amakhondomu	
Iluphu	
Okunye	

8. Wake wakhulelwa

Yebo	
Cha	

9. Uhlela nge Implanon

Yes	
No	

10. Ungamqguqguzela umngani wakho ukuthi ayisebenzise?

Yebo	
Cha	

Section C

11. Izinkoleloze nge-Implanon

Uyavumelana nalezizitatimende ezilandelayo

	Inkoleloze	Vumelana kakhulu	Vumelana	Angivumelani	Angivumelani kakhulu
1	Kubuhlungu ukufaka I Implanon				
2	I implanon ingahamba emzimbeni wonke				
3	I mplanon ingenze ushintsho esikhathini				
4	I Implanon ingabangela umdlavuza				

5	Implanon ingenza ngikhuluphale				
6	Implanon ingenza kuphuphume isisu				

SECTION D

12. Uyavumelana yini nezitatimende ezilandelayo?

1	Implanon is iyakuvimbela ukukhulelwa okungahleliwe	Vumelana kakhulu Vumelana Angazi Angivumelani Angivumelani kakhulu	
2	Kuyangithokozisa ngingahlelile	Vumelana kakhulu Vumelana Angazi Angivumelani Angivumelani kakhulu	
3	Ngiqoma ukukhulelwa kunokusebezisa I - implanon	Vumelana kakhulu Vumelana Angazi Angivumelani Angivumelani kakhulu	
4	Implanon ibalungele abesifazane abasebancane	Vumelana kakhulu Vumelana Angazi Angivumelani Angivumelani kakhulu	
5	Wake wathola noma yiluphi ulwazi nge-implanon	Vumelana kakhulu Vumelana Angazi	

		Angivumelani Angivumelani kakhulu	
--	--	--------------------------------------	--

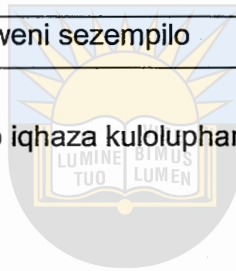
SECTION E

13. Ukwalulekwa abezempilo nge-Implanon

Watshelwa ngalezizitatimende ezilandelayo?

No	Isitatimende	Yes	No
1	Ukwalulekwa ngosebenza kwe Implanon		
2	Ngezinto ezingase zingahambi ngendlela elidelekile		
3	Indlela yokuyifaka I Implanon		
4	Yikuphi okufanele ukwenze uma unezinkinga		
5	Ubuyela nini esikhungweni sezempilo		

Ngiyabonga ngokubamba kwakho iqhaza kuloluphando.



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APPENDIX E: ENGLISH - QUESTIONNAIRE:

SECTION A. SOCIO-DEMOGRAPHIC DATA

TICK THE RELEVANT BOX BELOW:

1. How old are you (age)?

--

2. Married

Yes	
No	

3. Education level

None	
Primary	
Secondary	
Tertiary	

4. Employed

Yes	
No	

5. Reside in Ugu District

Yes	
No	

SECTION B. CONTRACEPTIVE HISTORY

6. Use of family planning method

Yes	
No	

7. Method of contraceptive being used

Implanon (LARC's)	
Injectables	

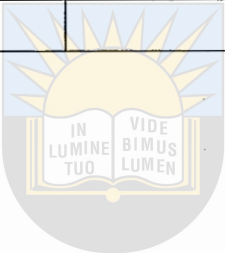
Pills	
Condoms	
IUCD	
Other	

8. Have you ever been pregnant?

Yes	
No	

9. Use of implanon (LARC's)

Yes	
No	



10. Would you recommend implanon to a friend?

Yes	
No	

Section C

11. Myths on implanon (LARC's)

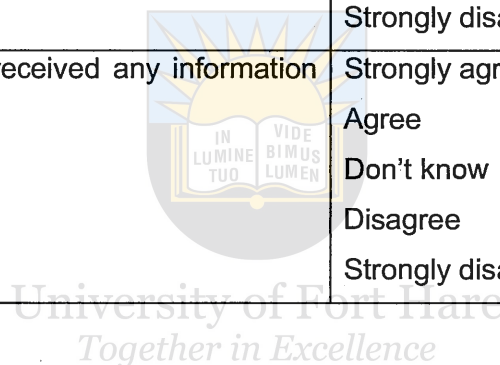
No	Myth	SA Strongly agree	A Agree	D Disagree	SD Strongly disagree
1.	Insertion of Implanon is painful				
2.	Implants can travel from the insertion site to other parts of the body				
3.	Using implants will cause harmful changes to menstrual bleeding				
4.	Implanon causes illness or problems such as cancer				
5.	Implanon can cause weight gain				
6.	Implants interrupt pregnancy by causing abortion				

SECTION D

12. Do you strongly agree, agree, disagree, don't know or strongly disagree with the following statement

1	Implanon is effective in preventing unplanned pregnancy	Strongly agree Agree Don't know Disagree Strongly disagree	
2	Unplanned pregnancy makes me feel good about myself	Strongly agree Agree Don't know	

		Disagree Strongly disagree	
3	I will rather be pregnant than using long acting implants	Strongly agree Agree Don't know Disagree Strongly disagree	
4	Implanon is good for young women	Strongly agree Agree Don't know Disagree Strongly disagree	
5	Have you ever received any information on implanon	Strongly agree Agree Don't know Disagree Strongly disagree	



SECTION E

13. Effectiveness of provider counselling

Question targeted only those that were using Implanon as a contraceptive method.

Were you given information on the following?

No	FACTOR	Yes	No
1.	Counselling on how Implanon works		
2..	Anticipated side effects		
3.	Procedure of insertion and removal		
4.	What to do when experiencing problems		
5.	When follow up is needed		

Thank you for participating

APPENDIX F: PERMISSION TO CONDUCT RESEARCH IN INSTITUTIONS

	health Department: Health PROVINCE OF KWAZULU-NATAL
GAMALAKHE CHC GAMALAKHE COMMUNITY HEALTH CENTRE	

Dear Ms MZ Nxumalo

21 July 2016

Re: Permission from the institution to conduct research "FACTORS ASSOCIATED WITH THE LOW UTILISATION OF IMPLANON (LARCs) AMONG YOUNG WOMEN IN THE UGU DISTRICT OF KWAZULU-NATAL, SOUTH AFRICA" at Gamalakhe Health Centre.

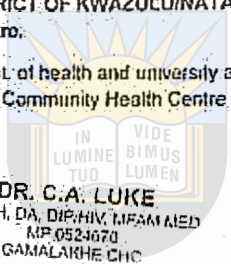
Subject to the appropriate ethical, Dept. of health and university approval the institution is agreeable for Gamalakhe Community Health Centre to be a site for your research.

Yours Faithfully

Dr. C.A. Luke: 

(CHC Manager)

DR. C.A. LUKE
MBCH, DA, DIP/HIV, MFAM MED
MP 0524670
GAMALAKHE CHC



University of Fort Hare
Together in Excellence

**Enquiries: Mrs. NO Gwexe
Telephone Ext: 6070**

09 June 2016

**Ms. MZ Nxumalo
Chief Executive Officer
Murchison Hospital**

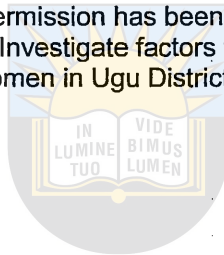
Re: PERMISSION TO CONDUCT RESEARCH IN TURTON CHC

Dear Ms. Nxumalo

I have pleasure in informing you that permission has been granted to you by Turton Community Health Centre to conduct research on "Investigate factors that are associated with low utilization of implanon (LARC's) among young women in Ugu District – Province of KwaZulu-Natal".

I hope you will find this in order

Thanking you



University of Fort Hare
Together in Excellence

**Mrs. NO Gwexe (Acting CEO)
NURSING MANAGER
TURON COMMUNITY HEALTH CENTRE**



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

PORT SHEPSTONE REGIONAL HOSPITAL



INTERNAL MEMO

Date: 13 May 2016	
To: All Port Shepstone Hospital staff	From: DR. DIAMINI
Subject: ACTING MEDICAL MANAGER AND CEO	

Dear Colleagues

Please be advised that Dr. P.B. Diamini acting CEO/Medical Manager will be on study leave from 18 May 2016 to 03 June 2016.

Dr. Panajotovic will be acting as Medical Manager and Mrs. T.G. Mkhiza (Deputy Nursing Manager) will be acting as CEO until her return.

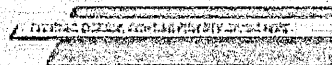
Thank you

Kind Regards

P.B. Diamini



health
Department:
Health
PROVINCE OF KWAZULU-NATAL



DR. P.B. DIAMINI
CHIEF EXECUTIVE OFFICER (ACTING)
PORT SHEPSTONE REGIONAL HOSPITAL
033 6866700
033 6421511
033 414 2261
mailto:port@kznhealth.gov.za
www.kznhealth.gov.za

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health

Department:

Health

PROVINCE OF KWAZULU-NATAL

Reference: GJC/HM9/2/3
Enquiries: Mrs SP Nyawo
Telephone: (039)9787081
10th June 2016

Ms M Nxumalo
University of Fort Hare/Murchison Hospital

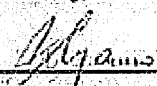
Permission to conduct research :Factors associated with low utilization of
implanon(long acting reversible contraceptives) among women in Ugu District of
Kwa Zulu Natal .

I have pleasure in informing you that permission has been granted to you by GJ Crookes
Hospital to conduct research on the above mentioned topic.

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 the research .
2. The research will only commence once this office has received confirmation from
the Provincial Health Research Committee in the KZN Department of Health .
3. Please ensure this office is informed before you commence your research .
4. GJ Crookes Hospital will not provide any resources for the research .
5. You will be expected to provide feedback on your findings to GJ Crookes Hospital .

Thanking You


Mrs SP Nyawo
Chief Executive Officer

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health

Department:
Health
PROVINCE OF KWAZULU-NATAL

DIRECTORATE:



03/06/2016

Miss Maureen Nxumalo
University of Fort Hare

Re: Permission conduct research at Murchison hospital

Your request for permission to conduct research on "Factors associated with low utilization of Implanon (Long Acting Reversible Contraceptives) among young women in the Ugu district of KwaZulu/Natal, South Africa" at Murchison hospital was duly approved on May 31, 2016 and it is hereby acknowledged.

The permission to conduct this research at Murchison hospital as set out in your research proposal is hereby granted.

Ensure that you strictly abide by the condition of the initial approval and that you treat any patient's or other information from the institution as confidential in accordance with best ethical research practices.

The institution reserves the right to terminate this approval / permission if ethical standards (including confidentiality in dealing with patients' information) is threatened or compromised.

Yours faithfully:

Dr Orduli Dabili

Medical manager

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APPENDIX D: APPROVED ETHICAL CLEARANCE FORM FROM FORT HARE UNIVERSITY



University of Fort Hare
Together in Excellence

ETHICAL CLEARANCE CERTIFICATE REC-270710-028-RA Level 01

Certificate Reference Number: JIN041SNXU01

Project title: Factors associated with low utilization of Implanon (LARCs) among young women in Ugu District, KwaZulu Natal Province.

Nature of Project: Masters

Principal Researcher: Maureen Zanele Nxumalo

Supervisor: Prof N Jinabhai

Co-supervisor: N/A

On behalf of the University of Fort Hare's Research Ethics Committee (UREC) I hereby give ethical approval in respect of the undertakings contained in the above-mentioned project and research instrument(s). Should any other instruments be used, these require separate authorization. The Researcher may therefore commence with the research as from the date of this certificate, using the reference number indicated above.

Please note that the UREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the document
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

The Principal Researcher must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

Special conditions: Research that includes children as per the official regulations of the act must take the following into account:

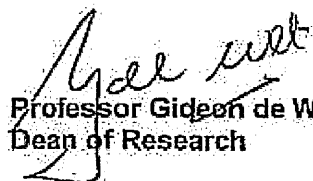
Note: The UREC is aware of the provisions of s71 of the National Health Act 61 of 2003 and that matters pertaining to obtaining the Minister's consent are under discussion and remain unresolved. Nonetheless, as was decided at a meeting between the National Health Research Ethics Committee and stakeholders on 6 June 2013, university ethics committees may continue to grant ethical clearance for research involving children without the Minister's consent, provided that the prescripts of the previous rules have been met. This certificate is granted in terms of this agreement.

The UREC retains the right to

- Withdraw or amend this Ethical Clearance Certificate if
 - Any unethical principal or practices are revealed or suspected
 - Relevant information has been withheld or misrepresented
 - Regulatory changes of whatsoever nature so require
 - The conditions contained in the Certificate have not been adhered to
- Request access to any information or data at any time during the course or after completion of the project.
- In addition to the need to comply with the highest level of ethical conduct principle investigators must report back annually as an evaluation and monitoring mechanism on the progress being made by the research. Such a report must be sent to the Dean of Research's office

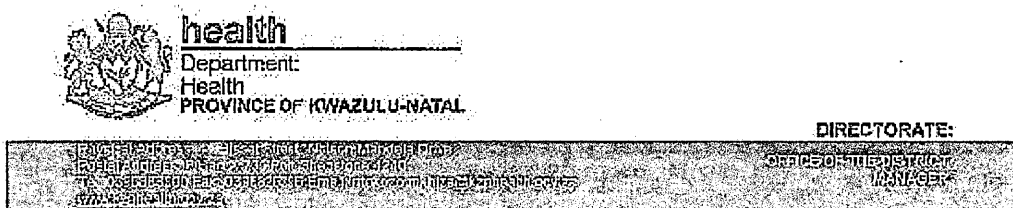
The Ethics Committee wished you well in your research.

Yours sincerely


Professor Gideon de Wet
Dean of Research

11 April 2016

APPENDIX E: PERMISSION TO CONDUCT RESEARCH STUDY (DISTRICT)



Enquires : Mrs N.C Mkhize

Date: 26/05/2016

To :
Ms MZ Nxumalo
Chief Executive Officer
Murchison Hospital

PERMISSION TO CONDUCT RESEARCH IN UGU DISTRICT

Dear Ms Nxumalo:

I have pleasure in informing you that permission has been granted to you by Ugu District Office to conduct research on "Investigate factors that are associated with low utilization of implantation (LARC's) among young women in Ugu District – Province of KwaZulu-Natal."

Please note the following:

- Please ensure that you adhere to all the policies, procedures, protocols and guidelines of the Department of Health.
- This Research will only commence once this office has received full approval and confirmation from the Health Research and Knowledge Management Committee in the KZN Department of Health.
- Please ensure that this Office is informed before you commence with your research.
- The District Office/ Facility will not provide any resources for this research.
- You will be expected to provide feedback on your findings to the District Office/ Facility.

Thank You


Mrs N.C Mkhize
Ugu District Manager

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health

Department
Health
PROVINCE OF KWAZULU-NATAL

DIRECTORATE:

HEALTH RESEARCH AND KNOWLEDGE
MANAGEMENT
10-102, PRIVATE BAG X9051,
PIETERMARITZBURG, 3200
Email: hrkm@kznhealth.gov.za
Tel: 033 395 2805

033 395 2805
033 395 2805

HRKM Ref: 152/16
NIIRD Ref: KZ_2016RP21_385

Date: 31 May 2016
Dear Ms M. Nyamato
University of Fort Hare/Murchison Hospital.

Approval of research:

1. The research proposal titled 'Factors associated with low utilization of implantable (Long Acting Reversible Contraceptives) among young women in the Ugu District of KwaZulu-Natal, South Africa' was reviewed by the KwaZulu-Natal Department of Health.

The proposal is hereby approved for research to be undertaken at Port Shepstone, GJ Crookes Murchison and St Andrews Hospital, Tlokoeng and Gamalethe 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.
 - 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 X9051, 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,

[Signature]

Dr E Lutge

Chairperson Health Research Committee

Date: 03/06/16

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