



**Factors associated with contraceptive use
among sexually active black women in South
Africa**

MD Ramoabi

 **orcid.org/0000-0000-0000-0000**

Mini-dissertation accepted in partial fulfilment of the requirements for the degree *Master of Social Science in Population and Sustainable Development* at the North-West University

Supervisor: Dr KE Mhele

Graduation: May 2022

Student number: 27246248

DECLARATION

I Malebo Daphney Ramoabi, student number 27246248, hereby declare that “Factors associated with contraceptive use among sexually active Black women in South Africa” is my work, which was supervised by Dr Karabo Mhele, and this is an original document, which has not been copied or submitted by other researchers, by way of reference I have acknowledged all the sources I used in this paper.

Ramoabi MD

November 2021

ACKNOWLEDGMENTS

First and foremost, I want to express my heartfelt thankfulness to my Lord and saviour, Jesus Christ. Never would I have made it this far and wouldn't be where I am today if it wasn't for his sufficient grace and mercy, I am forever grateful for his constant love he has for me. My academic journey didn't come as easy as it seems, but the Lord has been good to me.

Secondly, and most importantly I would like to acknowledge my rock', my "mom", Dipuo Rebecca Ramoabi. The support and love I get from my mom portray the love of God for me, she has been my support system from day one, thank you mom. I also like to thank my sister Dineo Marry Ramoabi, and my brother Katlego Edwin Ramoabi for supporting me academically, emotionally and financially throughout my academic journey, thank you.

I want to further like to give my appreciation to the father of my daughter Kamogelo Johannes Molokomme, for being there for me throughout this journey, thank you for encouraging and supporting me always. He is one person who always pushes me to work hard, he has been my strength through it all. When everyone didn't believe in me, he did. When I thought I couldn't make it, he told me I would indeed make it. Thank you.

I want to also like to acknowledge my supervisor Dr Karabo Mhele who has been like a father to me, Sir your support and encouragement pushed me to work harder, I am where I am now because you believed in me. Even when I thought I was not ready, you pushed me, helping me while being so encouraging, patient and kind to me throughout this process. Thank you Dr.

ABSTRACT

Contraception is an effective approach to family size control and has positive impact on maternal and child health. High contraceptive prevalence rate has been reported in South Africa, but the rate is lower among Black women than other racial groups. There is dearth of studies on the relationship between sociodemographic factors and contraceptive use among black women in South Africa. Therefore, this study was designed to determine the prevalence and identify predictors of contraceptive use among sexually active Black women in South Africa.

The study relied on cross-sectional data from the South African Demographic and Health Survey 2016 and focused on black South African women of reproductive age (n=8514). Contraception was measured with information on whether the respondents used any contraceptive method during their last sexual encounter prior to the data collection exercise for this study. Data were analysed using descriptive statistics, Chi-square test and binary logistics regression model ($\alpha = 0.05$).

The bivariate results of this study has revealed that independent variables such as current marital status, current age of women, highest educational level, province, sex of household head, birth in the past year, fertility preference and children ever born had all shown a statistically significant association on women's use of contemporary contraceptives, however, the results also revealed that there was no statistical significant between contraceptive use and some variables including type of place of residence and respondents working status.

Additionally, the multivariate results showed that six variables are the critical determinants of modern contraceptive use – current age of women but only those who are ages (25-29, 40-44 and 45-49), province but only (Eastern Cape, Free State, North West, Gauteng, and Limpopo), highest level of education but only at (secondary level and higher level), birth in the past year, current marital status but only for (women who were currently married and those living with a partner but not married), fertility preference but only for (women who reported to not wanting children anymore and those who were declared infecund), and children ever born.

From the results this study we can conclude that contraceptive use amongst Black women in South Africa is lower. It is therefore recommended that programmes and policy that aim to raise and promote awareness of family planning services in South Africa especially among Black women, should be introduced. Specific awareness must be tailored for specific aged

groups, with young people especially important here, given that the level of contraceptive use is lower among them.

Keywords: Contraception; Sexually Transmitted Diseases; Women; South Africa

Table of Contents

DECLARATION	i
ACKNOWLEDGMENTS	ii
ABSTRACT.....	iii
List of Abbreviations	vi
List of tables.....	vii
Chapter One	1
Introduction and Background of the study.....	1
1.1 Introduction	1
1.2 Problem Statement	3
1.3 Research Objectives	4
1.3.1 Main Objective	4
1.3.2 Specific Objectives	4
1.4 Research questions	4
1.5 Rationale of the study.....	4
1.6 Definitions of concepts.....	5
1.7 Organisation of the study	6
Chapter Two.....	7
Literature review and Theoretical framework	7
2.1 Introduction	7
2.2 Trends and levels of contraceptive use	7
2.3 Socio-economic and demographic factors associated with contraceptive use.....	9
2.3.1 Women’s level of education and knowledge.....	9
2.3.2 Women’s type of place of residence.....	10
2.3.3 Marital status	11
2.3.4 Age.....	12
2.3.5 Employment status	12
2.3.6 Number of surviving children.....	13
2.3.7 Births in the past year	14
2.3.8 Fertility preference	14
2.3.9 Sex of head of house.....	15
2.4 Consequences of non-use of contraceptives.....	16
2.4.1 Effect of non-use of contraceptives on health	16
2.4.2 Sexual and reproductive health problems.....	16
2.4.3 Economic and social impact.....	16

2.5 Benefits of contraception	17
2.6 Theoretical and conceptual framework	18
Chapter Three.....	21
Methodology of the study	21
3.1 Introduction	21
3.2 Study design	21
3.3 Sample design	21
3.4 Method of data collection.....	22
3.5 Study population	22
3.6 Variables.....	22
3.6.1 Dependent variable	22
3.6.2 Independent variables	22
3.7 Method of data analysis	23
3.7 Types of analysis.....	23
3.7.1 Univariate analysis	23
3.7.2 Bivariate analysis.....	23
3.7.3 Multivariate analysis.....	24
3.8 Limitations of the study.....	24
Chapter Four	25
Results.....	25
4.1 Introduction	25
4.2 Univariate results of background characteristics	25
4.3 Dependent variable.....	29
4.4 Type of contraceptives used.....	30
4.5 Contraceptive use by different socio-economic and demographic characteristics	30
4.6 Multivariate analysis: Binary logistic regression model	34
4.7 Summary	37
Chapter Five.....	38
Discussion, conclusion, and recommendations	38
5.1 Discussion of results.....	38
5.2 Conclusion.....	43
5.3 Recommendations	43
REFERENCES	45

List of Abbreviations

SADHS	South African Demographic and Health Survey
WHO	World Health Organisation
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
HIV/AIDS	Human Immuno-deficiency Virus/Acquired Immune Deficiency Syndrome
STI	Sexually Transmitted Infection
STD	Sexually Transmitted Diseases
FP	Family Planning
SDGs	Sustainable Development Goals
STATS SA	Statistics South Africa
NPC	National Population Commission
SPSS	Statistical Package for Social Sciences

List of tables

- | | |
|----------|---|
| Table 1 | Percentages of the distribution of study respondents by different socio-economic and demographic variables |
| Table 2 | Distribution of different contraceptive methods among those using some methods |
| Table 3 | Relationship between current contraceptive use and the selected socio-economic and demographic characteristics of women |
| Table 4 | Results of the Binary Logistic Regression of current use of modern contraceptives |
| Figure 1 | Conceptual framework |
| Figure 2 | Dependent variable (current use of any modern contraceptive methods) |

Chapter One

Introduction and Background of the study

1.1 Background Statement

Most sexually active women worldwide use contraceptives. According to the United Nations (2015), 64% of women between the ages 15-49 who were sexually active globally were using some form of contraception in 2015. Nonetheless, contraceptive use was lower among women in less developed countries, with a 40% prevalence rate. The worst rate of all was in Africa with only 33% (United Nations, 2015). Additionally, in 2014 a projected 225 million women in developing regions were not utilizing any method of contraception (Singh et al, 2014). In regions such as Oceania and Northern America, however, contraceptive use was much higher, ranging from 59% to 75% (UN, 2015). According to Peer (2013:2), contraception can simply be defined as a way of preventing pregnancy, either temporarily or permanently. The purpose is to limit and control the number of children the couple will want to have and plan the interval between pregnancies (World Health Organisation, 2018). Additionally, other preventive methods such as condoms for females and males also have the added benefit of protection from STIs and STDs. Secure and efficient use of contraceptives can also improve the reproductive health of women and has profound benefits for both women and society, as well as the reduction of infant mortality, maternal and morbidity.

In South Africa, the contraceptive prevalence of any method amongst sexually active women in ages 15-49 was 54.6% in 2016 and it increased to 64.6% in 2019 (United Nations, 2020), However, Chesrich et al, (2017) found out that contraceptive use is lower amongst Black women who used limited range of methods compared to other racial groups in South Africa.

According to Ahmed et al (2012:3), contraceptive non-use can increase maternal mortality, unplanned pregnancies, and number of abortions. In South Africa despite the increasing resources to reduce maternal mortality, there are some communities that are still facing the problem of maternal mortality. A study conducted at Natalspruit Hospital in Johannesburg South Africa, showed that in 2019 the ratio for maternal mortality was 382.08 women per 100 000 live births (Maswime and Uzabakiriho, 2019). Additionally, maternal mortality rates have been reported to be higher in non-industrialized countries than in industrialized countries. According to the WHO (2014), in 2013 almost 289 000 women globally died during gestation or childbearing, and among those mortality 62% happened in sub-Saharan Africa. Moreover, according to the World Health Organization, maternal mortality in underdeveloped countries

was 230 women per 100 000 live births in the same year, compared to 16 women per 100 000 live births in developed countries (2014).

According to Jackson et al (2015), unintended pregnancies rates are worryingly high in both developing and developed countries. In 2012, almost 4.7 million women of reproductive ages in Europe were projected to be at risk of unintended pregnancy and about half of the 6.3 million pregnancies in the United States were unplanned, despite the obtainability of a widespread variety of effective contraceptive methods, (Cleland et al, 2012:56). South Africa is also experiencing a high rate of unintended pregnancy among young people, which is accompanied by poor knowledge about contraception. Cleland et al, (2014:15), revealed that in 2013 teenage unintended pregnancies surpassed 99 000 pregnancies in South Africa.

In South Africa, contraceptive use has always shown different patterns among Blacks, Coloured, Indians and White women. Young unmarried Black women have been shown to have lower levels of contraceptive use compared to other racial groups. A study carried out by Shah et al, (2018:3) revealed that in 2017 contraceptive use prevalence varied by race in South Africa, ranging from 47.2% among Blacks, 52.4% among Coloureds, 61.1% among Indians and lastly 61.9% among whites.

Moreover, South Africa has had a history of racial discrimination and inequalities in standards of living, access to education, employment opportunities, health services, etc. Consequently, some of those inequalities are responsible for the lower contraceptive prevalence and use among Black women in South Africa. There is a need for equal and quality contraceptive service delivery among all racial groups in South Africa.

1.2 Problem Statement

According to Chersich et al (2017), despite Black Africans accounting for 77% of the population, 61% of Black Africans are poor, and the 58% contraceptive prevalence rate is less than that of other racial groupings, with Whites having an 80% prevalence rate, Indians 78%, and Coloureds 69%. Moreover, despite the implementation of many intervention programs in the country, unwanted pregnancy remains high, given the large frequency of unwanted pregnancies in South Africa, there is still a need for contraception. For instance, a study carried out in Kwazulu-Natal South Africa has shown that in 2017, 84% of all pregnancies that occurred in that year were unintended (Firoza et al, 2017). Additionally, the highest rate was found to be among Black women. According to Hlongwa (2018), in 2013 alone, adolescent,

and teenage unintended pregnancies exceeded 99,000 pregnancies in South Africa. Consequently, this can suggest that Black women have the lowest level of contraceptive use amongst all racial groups.

Level of fertility differs according to racial groups in South Africa, with Black women having the highest level 2.82 followed by the coloured with 2.57, those two population groups remain the highest compared to that of white and Indians population groups who reproduce below replacement with TFR of 1.70 and 1.85 respectively (Statistics SA, 2011). Additionally, age at first birth has direct effect on fertility, women who gives birth at an older age are expected to have high level of contraceptive use compared to those who gave birth younger. According to Chersich et al, (2017), use of contraceptive is lower among Black women who used a limited variety of methods compared to other racial groups in South Africa. In South Africa although in most of the public health sector contraceptive services are free, women with low socio-economic factors are still not using those services. For instance, there are communities these services although free are not existing being in the rural areas.

1.3 Research Objectives

1.3.1 Main Objective

The main objective of this study is to examine factors influencing the current contraceptive use among Black women in South Africa.

1.3.2 Specific Objectives

The specific objectives of this study are:

- * To determine the prevalence of contraceptive use among Black women in South Africa.
- *To investigate factors associated with contraceptive use among Black women in South Africa.
- * To identify the sociodemographic predictors of contraceptive use among Black women in South Africa.

1.4 Research questions

The aim of this study is to answer the following research questions:

- What is the prevalence of contraceptive use amongst Black women in South Africa?
- What are the determinants of contraceptive use among Black women in South Africa?

- What is the effect of not using contraceptives among Black Women in South Africa?
- What are the benefits of using contraceptives?

1.5 Rationale of the study

The reason for this research is to improve awareness and expand existing knowledge of factors influencing contraceptive use amongst women in South Africa particularly Black women. This study is motivated by the need to highlight the reality that most South African women particularly Black women, have not yet fully achieved satisfactory control over their reproduction. Understanding and knowing factors influencing with contraceptive use amongst Black women in South Africa is very significant, as it will not only benefit the individuals affected but the society at large.

Addressing the unmet need for contraceptives among Black women will lead to greater access to health care services, which will provide access of modern contraceptives and the advancement of women's rights through employment and educational opportunities. Moreover, recognizing the factors that influence contraceptive use amongst Black women can help highlight the extent of the problem. The results from this study can further assist the government of South Africa to come up with policies that will address these issues and be able to help those who are much in need of modern contraceptives particularly Black women in rural areas.

Additionally, the fundamental reason for this study is influenced by the aim to highlight the fact that many South African Black women remain as an underserved population group with regards to quality and availability of contraception. The goal of this study is to illustrate the depth of the problem by looking at the demographic and socioeconomic characteristics that influence the usage of modern contraceptives among Black women in South Africa.

1.6 Definitions of concepts

Contraception

Contraception can simply be defined as the deliberate prevention of pregnancy, either temporarily or permanently (Peer, 2013:2).

Unplanned pregnancy

Unplanned pregnancy is referred to as a pregnancy that occurs sooner than the woman wanted it, or pregnancy that is unwanted that occurs when the woman did not want or plan to have a baby (Mosher et al, 2012).

Fertility

Fertility is simply defined as the total number of live births per woman. Fertility is the ability to conceive and bear children (Kara & Maharaj, 2015).

Contraceptive prevalence

Contraceptive prevalence is referred to the proportion of women who are currently using any method of contraception amongst sexually active women between the ages (15-49).

Contraceptive prevalence use

Contraceptive prevalence use is simply defined as “the proportion of women who are sexually active between the ages (15-49) who use contraceptive method at any given time (Sexual and Reproductive Health Topics, 2020).

1.7 Organisation of the study

The current study is arranged into five chapters. The first chapter gives background information about contraceptive use among women, the problem statement, rationale of the study, objectives of the study, research questions and definitions of concepts. The second chapter provides a review of literature on trends and levels of contraceptive use, socio-economic and demographic factors associated with contraceptive women. This chapter further looks at the consequences of lower or non-use of contraception among women, benefits of contraceptive use and lastly the theoretical and conceptual framework of the study. Chapter three describes the study design, data source, sampling design, sampling method and data analysis. Chapter four presents result of the study and chapter five provides a discussion of the finding of this study, limitations, conclusion, and recommendations.

Chapter Two

Literature review and Theoretical framework

2.1 Introduction

This chapter includes a review of the literature on the factors that influence women's contraceptive use. The first section of this chapter will cover trends and levels of contraceptive usage, followed by a section on demographic and socioeconomic characteristics linked with contraceptive use among sexually active women. Following that, the effects of not using contraceptives will be examined. Finally, utilizing Andersen's Behavioural Model of Health Care Service Use (1968), a conceptual and theoretical framework will be addressed.

2.2 Trends and levels of contraceptive use

Contraceptive use has increased substantially worldwide, with prevalence rate of contraceptive use almost doubling from 36% in 1970 to 64% in 2015, (UN, 2015). Most sexually active women worldwide have reported to be using contraceptives. However, there is a variation in the use of contraceptives between the developed and developing countries. According to United Nations (2015), in developed regions 70% of sexually active women used methods of contraceptive, while 60% of women in developing countries did. The above findings indicate that although contraceptive use managed to increase worldwide, however, contraception is used at a lower rate in the non-industrialized countries compared to industrialized countries.

In the least developing countries, the need for family planning remains a challenge. In 2018, sub-Saharan Africa reported only a 31.5% contraceptive prevalence rate, while Eastern Asia and Latin America had the highest reported contraceptive prevalence rate of 81.1% and 74.3% respectively (Elflein, 2020). According to the UN (2015), in 2015, the world's unmet contraceptive need was 22% greater in less developed nations, with Sub-Saharan Africa having the largest unmet need at 24%, more than double the global average. Moreover, every year, more than 14 million unintended pregnancies happen in Sub-Saharan Africa, with about half of those pregnancies happening among young women. (UN, 2015). Additionally, 13% of those pregnancies resulted in abortions, and 16% resulted in miscarriages.

Moreover, in 2015, 12% of sexually active women of reproductive ages were predicted to have an unmet need for contraception worldwide. Given that Sub-Saharan Africa has the highest fertility rate in the world, it is reasonable to conclude that contraceptive use is low. However, in sub-Saharan Africa, the contraceptive prevalence rate varies in different countries with South

Africa having the highest contraceptive prevalence rate and Somalia having the lowest prevalence rate. According to World Health Organisation (2015), The South African government has fulfilled its commitments to the Sustainable Development Goals (SDGs), which seek to provide widespread access to sexual and reproductive health to all sexually active women by 2030.

South Africa has been reported as the country with the highest levels of contraceptive use prevalence among all the sub-Saharan Africa countries. In South Africa the use of contraceptive among sexually active women between the ages (15-49) who used contraceptive methods has increased gradually from 26% between 2002 and 2003 to 37% between 2013 and 2014, (Massyn et al, 2014). However, despite the accomplishments made in the country in reducing fertility by increasing contraceptive prevalence rate, there is still significant racial disparities in both fertility and contraceptive use. According to Chersich et al (2017), despite accounting for 77% of the population, 61% of Black Africans are poor, and the 58% contraceptive prevalence rate is less than that of other racial groupings, with Whites having an 80% prevalence rate, Indians 78%, and Coloureds 69%.

Although South Africa has improved contraceptive uptakes from the past until now, there are still high rates of abortion because of undesirable and unplanned pregnancies, which further post a serious public health concern in the country. According to Hlongwa (2018), in 2013 alone, adolescent, and teenage unintended pregnancies exceeded 99,000 pregnancies in South Africa. This situation is even made worse by the relatively high HIV/AIDS infection rate in the country, especially among adolescents who engage in unprotected sex. With an estimated 7.7 million people living with HIV in 2018, South Africa has the highest HIV prevalence in the world (United Nations AIDS Programme, 2019).

Moreover, a research project by Jane et al (2019), revealed that in 2019, South Africa's contraceptive prevalence rate among women who are using any contraceptive methods was 64.6%. However, although there is a high contraceptive prevalence rate in the country, there are still issues such as fair access, supply of contraceptive services, and women's ability to use any method of contraception correctly and consistently, particularly amongst Black women in South Africa (Cleland et al 2012).

2.3 Determinants of contraceptive use

2.3.1 Women's level of education and knowledge

Education is one of the key factors, which can increase one's knowledge on available contraceptive methods. Education is also able to enable individuals to make more wiser decisions and efficiently use contraception more. According to Munakampe et al, (2018:13), many studies have shown that knowledge of reproduction functions is poor particularly amongst the young people who are less educated and there is significant confusion and misperception regarding contraception. Furthermore, according to SADHS (2016:95), the use of any contraceptives methods increases with rising level of education, with 44% among women of reproductive ages having no education to 62% amongst women having more than secondary level of education.

The overall number of years in school has been discovered to influence women's contraceptive use. In South Africa the overall means number of years of attending school in 2016 was 10.5 years, with Black women spending less years in schooling with 8,3 years, while White women spending more years in schools, 11.4 years of education on average (STATS SA, 2016). Additionally, in developed countries, the level of education has remained higher when compared to developing countries. In developed countries, adults have an average of 12 years of schooling, while in developing countries adults have 6.5 years of schooling.

According to Pazol et al (2016), in developed or industrialized countries contraceptive education interventions has led to increased knowledge of available contraceptive methods and the use of contraceptives more effectively. In contrast, despite the availability of a wide range of very effective contraceptive methods, nearly half of the 6.3 million pregnancies in the United States are unplanned. (Cleland et al, 2012:56).

Furthermore, many studies have recognized the association between women's education and the use of contraceptives. For example, a study conducted in 29 countries with the sub-Saharan Africa has shown that with individual factors, the higher prevalence of modern contraceptive use was found among those with higher level of education (41.8%) (Ahinkorah et al, 2021). In South Africa, according to South African Statistics (2011), the high level of fertility amongst Black women relative to women in other racial groups could reflect low educational attainment in this group.

2.3.2 Women's type of place of residence

Contraceptive use and prevalence rate differ by the type of place of residence worldwide. Inequalities in contraceptive prevalence rates between urban and rural areas mostly affect the poor and rural women those the majority of whom are black women. According to Jennifer et al (2016) rural-urban differences in adolescent childbearing, reflect the same differences in associated sexual and contraceptive behaviour. Several studies have found women in rural areas are almost certainly to have higher rates of sexual activity and non-use of contraceptive compared to urban areas (Kate, 2015).

A study conducted by Peer (2013:3), indicates that gender inequality is also one of the factors associated lower contraceptives use amongst women in the rural areas of South Africa. Many rural communities are male-dominated, and men are regarded as heads of the households who are entitled to make major decisions when it comes to women using contraception. This has been reported to have a negative consequence on the general usage of contraception by women. Additionally, according to Peer, (2013) inequalities in contraceptive prevalence rate affect the poor more particularly Black women in rural areas.

South Africa's rural communities have lower rates of contraception use and that is because of inadequate access to health services, which may hinder women from having access to contraceptives. According to Mkhwanazi (2014), most women in rural areas are experiencing problems when it comes to accessing contraceptives because public sectors for contraceptive services is limited particularly for the poor and Black women in rural areas. For instance, there are rural places in which there are no clinics or a hospital, travelling from one place to another is the only way to have access to medical facilities, and transport costs might be a challenge for many women, thus discouraging women to use contraceptives. In general, urbanisation is associated with greater contraceptive use, because of advantages in accessibility, availability, and various methods of contraceptives.

Countries such as United State have also shown the impact of limited access to contraceptives in rural areas. According to Martin et al, (2015:1), United States is experiencing the problem of teenage pregnancy, it was reported that 273 105 sexually active women among the ages of 15-19 gave birth in 2013. Increased teenage pregnancies in the United States was mainly influenced by a lack of effective contraception in rural areas. Accessibility, affordability, and acceptability were seen to discourage women in rural areas from using medical services.

Furthermore, 71% of rural adolescents used contraception after their first sexual encounter, compared to 81% of urban adolescents (National Survey of Family Growth, 2011),

2.3.3 Marital status

Women's marital status influences sexual and reproductive matters. According to Shree (2017:6) marriage is related with the non-use of contraceptive methods. Some of the reasons for this are factors such as desire to have children within a marriage arrangement, gender inequality and cultural norms within the marriage. This could imply that majority of unmarried women are expected to use contraceptives as opposed to those who are married.

Additionally, a study by Lasong et al (2019), has shown that the use of contraceptive amongst the married women in Zambia is 43% lower than that of unmarried women. Moreover, power imbalance that occurs within marriages is one of the reasons why married women do not use contraception. Power inequality is reported to be more pronounced in a marriage setting, for it is evident that men have more power than women have when it comes to decision making including that of reproduction.

According to Prata et al (2013), a survey conducted in sub-Saharan Africa has showed that the use of contraceptive is generally greater amongst sexually active non-married women aged 19-49 than those currently married. In contrast, countries such as Latin America have observed a different pattern were women who were not married reported limited sexual activity, which led to even lower contraceptive use (Prata et al, 2013). This means that there are differences in contraceptive use patterns amongst married and non-married women in developing and industrialized countries.

In South Africa, prevalence rate of contraceptives for women who were married was 54% and 64% for those not married, (SADHS, 2016). However, South Africa experiences many reproductive health problems including a higher rate of unmet needs among unmarried women compared to married women, which is evident in higher percentages of unintended pregnancies, and higher rate of teenage pregnancies (Haffejee et al, 2017:3). Additionally, unmarried women in South Africa used contraception at a lower rate than married women, falling from 68% in 1998 to 64% in 2016, and unexpected pregnancies were found to be common among single and divorced adults (SADHS, 2016).

2.3.4 Age

According to Chersich (2017:311), estimates of the proportion of women between 15-49 years who are using any contraceptives have increased gradually from 26.3% in 2002 and 2003 to 37.3% in 2013 and 2014 in South Africa. However, the use of contraceptive is found to be lower amongst adolescents aged 15-25, related to older women aged those 26-49 in developing countries. As a result, South Africa is facing challenges including high rate of unintended pregnancies especially adolescent pregnancy, and a larger widespread HIV epidemic where most adolescents' women are affected, (SADHS, 2016).

Some of the reasons why young people have lower probability than older women to use contraceptives includes fear of judgement, side effects, knowledge about contraceptives, stereotypes towards contraceptives and health concerns. According to Mjwara and Maharaj (2018), in South Africa, adolescents were most likely to use contraception after having their first child. This might have been influenced by some of those reasons like fear of judgement of using contraceptives at a younger age, also the well-known side effects of contraceptive use, those include weight gain, future chances of infertility and others.

While some developed, countries have experienced different situations. Studies conducted in countries in Europe and Canada have reported a faster increase in contraceptive use among adolescents aged 15-24 compared to older women (WHO, 2012). Additionally, amongst United States teenagers and young adults between the ages 15-19 birth rates managed to reach a historical low at 22.3 per 1000 women in 2015. Adolescent pregnancies have decreased mostly because adolescents were becoming more current contraceptive users in developed countries (Jacqueline, 2017).

2.3.5 Employment status

Employment of women is one of the risk factors for using contraceptives. Employment goes hand in hand with education since educated women are expected to have more knowledge about contraception. According to a study by Daniel et al (2013) the agricultural industry alone provides work for the fortunate few rural settlers in South Africa, which is marked by high rates of illiteracy and unemployment. This industry also employs people in a variety of positions, although the rate of employment opportunities is often low. Lack of employment opportunities result in lower use of contraceptives, particularly amongst Black women who lives in rural areas.

In South Africa, it has been established that communication with a partner about the use of condom, education, and being employed are all strongly linked to contraceptive use. Similarly, in Bangladesh, a study by Ahmed et al (2012), revealed that the use of contraceptives was found to be higher amongst women who were employed (at 67%) compared to unemployed women. For example, women who are not employed depend greatly on their working partners, so if a man wants many children and claims he will support them, unemployed women are more likely to submit and have those children, compared to women who are working and less dependent on their partners.

Contraception use among working women was linked to women's current age, religion, educational attainment, and the surviving children. The employment status of women can have a greater influence when it comes to fertility. For instance, women who are working have less time to have more children compared to those who are not working and staying at home, therefore most employed women would opt for contraceptives. Moreover, employed women have reported having more authority when it comes to decisions making about reproduction, they can make decisions on spacing of children and the total number of children they would desire compared to women not working and are depending on their partners for income and other necessities

2.3.6 Number of surviving children

The total number of surviving children has an influence on contraceptive use. Literature showing the influence of contraceptive use on child survival often used the length of previous birth spacing as a reason of increasing contraceptive practices. According to Seutlwadi (2012), it is commonly believed that contraceptives' use enables women to lengthen birth intervals and helps them with spacing between two successive births.

It is argued that women with many surviving children are expected to use contraception than women who have less children. A study by Wang et al (2017) has revealed that in all country's contraceptives use is found to be lowest amongst women with few children or without children and highest amongst those with three or more children. This has been evident in places like Honduras and Dominican Republic whereby prevalence of contraceptives among women with more than three children is 50% points higher than among women with no children.

2.3.7 Births in the past year

There is a relationship between births in the past year and contraceptive use. According to a study conducted by Hossain et al (2018) in Bangladesh, women who had one or more children in the previous year were more likely to use contraception than women who did not have children in that year. Additionally, in South Africa, around 80% of women who had one or more children were not driven or planned to have more children and were instead urged to use contraception (Harries et al, 2019.).

According to the World Health Organisation (2011), preceding pregnancy was linked to contraception use, suggesting that women who had a child in the previous year were expected to use contraception than women who had never had a child. In contrast to these findings, Seutlwadi (2012) found that women who have ever been pregnant or men who have made someone pregnant are three times less likely to utilize contraception. Furthermore, even though 34.5% of men and 79.1% of women said they had unplanned pregnancies, they were not interested in utilizing contraceptives, according to this study.

2.3.8 Fertility preference

The sub-Saharan Africa fertility rates remain higher than other developing countries. As a result, although there is a demand for smaller family size, most couples are still having many children. The high rates of contraceptive use and unintended pregnancies indicate this. In sub-Saharan Africa, more than 20% of 15–19-year-olds and 60% 20–24-year-olds are estimated to be in marital union and in most part of the region, girls are traditionally expected to give birth immediately after marriage and continue to do so uncontrolled for cultural, religious, gender, and other factors (Digitale et al, 2017). In addition, the number of unmet contraceptive needs in Sub-Saharan Africa increased from 31 million in 2008 to 36 million in 2012. (United Nations, 2012).

According to Dingeta (2019), one in third of married young women had unmet needs for contraception in sub-Saharan Africa, about half of young married women reported unmet need for contraception. Moreover, unintended pregnancies among married young women account for about half of all unintended pregnancies among reproductive age women.

2.3.9 Sex of head of house

The sex of the head of the house influences the overall contraceptives use. Cultural values, attitudes, and norms have a considerable impact on reproductive decision-making in every

home. In most African countries households in which males are head of the house tend to have more children. Cultural beliefs maintain that men are head of the household and women must submit to men. According to Routray et al (2017:37) in South Africa, cultural values regarding having children and the use of the various methods of contraception remain important to most of the racial and cultural groups in the country, more particularly among Black Africans.

According to Routray et al (2017) Patriarchy is a major aspect of many communities around the world, particularly in Africa. Men have major power in decision-making when it comes to reproduction decisions. Historically, women have been the primary target of sexual and reproductive health interventions (Chersich et al, 2017). According to Sewpaul, (2014), in most situations, women have demanded the agreement of their partners before making decisions such as participating in sexual and reproductive health programs, even though this strategy has excluded males in concerns of sexual and reproductive health. The main reason influencing patriarchy is cultural values, beliefs, and norms. According to Lanham et al (2014), men have a significant impact on reproductive health, particularly in communities where traditional norms are still upheld (Lanham et al, 2014).

2.5 Benefits of contraception

According to WHO (2014) in developing countries about 218 million unplanned pregnancies were prevented with the use of contraceptives in 2012. Additionally, in the same year, 55 million unintended births, 138 million abortions, 25 million miscarriages, and 118 000 maternal mortalities were also prevented because of contraceptive use. The use of contraceptives does not only benefit individuals but also society at large, contributing to the development of the country. Women's access to contraceptive methods is critical for their health and development, as well as the health and development of the community.

It is estimated that nearly 20 million risky abortions occur every year in the world, resulting in 67 000 deaths annually, and most of those death take place in developing countries (World Health Organization, 2014). Increased use of contraceptives methods can help avoid many of those deaths by limiting the number of unplanned pregnancies that is accompanied by high risk of pregnancy difficulties and unsafe abortions. Contraception also enables the spacing of pregnancies, as well as the delaying of pregnancies in young women who are at a higher risk of health problems and death from early childbearing, and the prevention of pregnancies in older women who are at a higher risk of health problems and death from childbearing.

A study by Singh and Darroch (2012), has revealed that contraceptive use not only decreases diseases such as HIV and other sexual transmitted diseases, but also decreases the likelihood of unplanned pregnancies amongst HIV positive women, leading to fewer infected new-born and orphans. Moreover, female, and male condoms can offer protection against unplanned pregnancies and against STIs such as HIV. Another advantage of contraception is that it allows people to have their actual number of children and allowing them to control the spacing of their children.

According to the World Health Organization (2012), contraception prevents about 577 000 unintended pregnancies amongst HIV-positive women in Sub-Saharan Africa each year. Furthermore, contraceptive use can help women gain empowerment by allowing them to make better decisions about their sexual and reproductive health, as well as provide opportunities such as better education and employment. Further, contraceptive use reduces teenage and adolescent pregnancies and slowing population growth.

2.6 Theoretical and conceptual framework

2.6.1 Theoretical framework

Andersen's Behavioural Model of Health Care Service Use served as a theoretical framework for this study, to understand the factors that influencing contraceptive use among sexually active Black women in South Africa. Anderson's behavioural model of health service usage (1968) was developed in the 1960s to explain how families use health services. The model has undergone several revisions over time and has therefore changed its unit of analysis from families to individuals and expanded to cover the broader contextual level of the external environment and health care system (Andersen & Davidson 2001). This mode explains individual behaviour in the use of contraceptive methods, which is the focus of this study.

The use of health care services is the result of three sets of personality traits, according to the Andersen Behavioural Model: predisposing, enabling, and need factors. Age, education, the number of living children, and births in the previous year are all predisposing variables. Enabling factors are those that determine an individual's ability and expertise to address his or her health needs in the absence of medical facilities and personnel.

According to the model enabling factors are personal and communal. These can include the health care system, income, employment, and spousal communication (sex of head of the house) and community factors like residence. The immediate reasons an individual chooses to

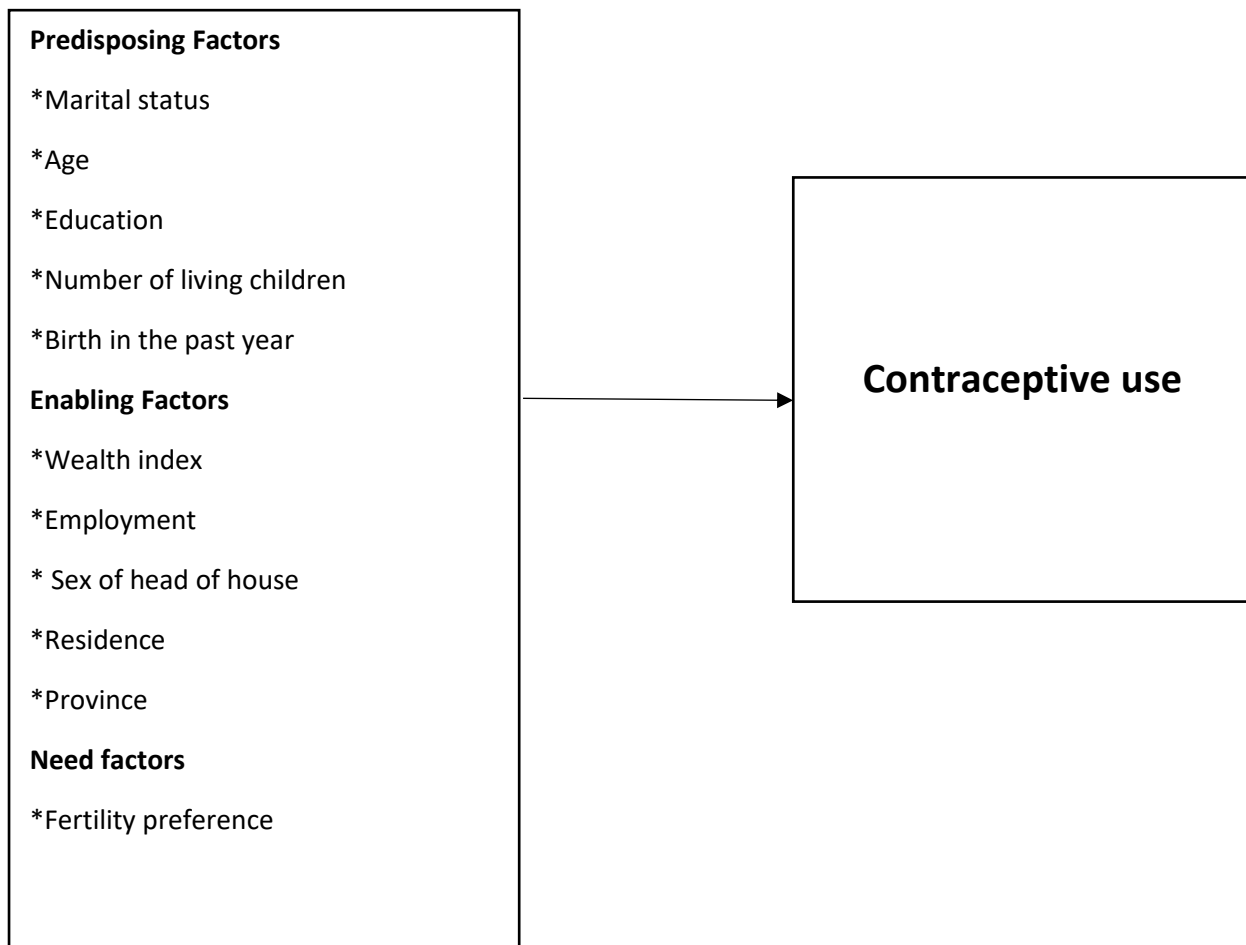
use a health-care service are known as need-based factors. These needs include perceived need, which can be increased or decreased by health education, and evaluated need, which is a professional assessment of a person's health status and need for medical treatment.

When it comes to the relationship between women's current age and contraceptive use, older women are shown to have a higher prevalence of contraceptive use than younger women. Women's marital status is also linked to their current contraceptive use; married women are more likely than unmarried women to use less contraception because most women want to have children within their marriage. Contraceptive use has been linked to a woman's degree of education, with the use of contraceptives increasing as her level of education rises.

Employment and income are both known to be risk factors for contraception use. When compared to unemployed women, employed women who generate an income are more likely to use contraception. Contraceptive use is positively associated with the total number of live children; women with no children are less likely to use contraception than those with three or more children. The sort of environment in which women live (whether urban or rural) is also linked to contraceptive use. In comparison to women in metropolitan regions, women in rural areas are less likely to utilize contraception. Access to and availability of contraception in rural regions may be one of the reasons for this.

Figure 1. Conceptual framework

Adapting Andersen's Behavioural Model



The diagram presented in figure 1, shows the relationship between factors (predisposing, enabling and need factors) which are women's demographic and social characteristics, predicting health care service utilization and contraceptive use. Both demographic and social characteristics of women of reproductive age were found to be related with the use of health care services and contraceptives use.

Chapter Three

Methodology of the study

3.1 Introduction

The chapter provides a detailed methodology of the study that has produced the essential data used for analysis. It is organised into five sections. The first section describes the study design, the second section describes the data source, and the third section describes the sampling design. Section four describes the method of data collection. Lastly, section five describes the method of data analysis, how data will be analysed.

3.2 Study design

This is a South African quantitative cross-sectional study that investigates the factors that influence black women's contraception use. The 2016 South African Demographic and Health Survey will provide the data for this investigation. SDHS 2016 is the source for this information. Statistics South Africa performed the South Africa Demographic and Health Survey 2016 in partnership with the South African Medical Research Council at the request of the National Department of Health (SAMRC).

3.3 Sample design

The Statistics Master Sample Frame (MSF) was established using Census 2011 enumeration areas as the sample frame for the SADHS 2016. (EAs). Small neighbouring EAs were pooled together to establish new PSUs, and huge EAs were split into several PSUs in the MSF. Each PSU's geographic type (urban, traditional, or rural) and expected number of residential dwelling units (DUs) are listed in the frame. Stats SA employs the DUs sampling convention. In each one DU, there may be one or more households; recent surveys have indicated an average of 1.03 households per DU.

The survey comprised of 15 292 households of which 13 288 were occupied. Of the occupied households, 11 083 were successfully interviewed, yielding a response rate of 83%. Out of 9 878 households that were interviewed, 8 514 women between the ages 15-49 were selected for the interview, yielding a response rate of 86%.

3.4 Method of data collection

To collect information, questionnaires were employed. Questionnaires were changed from the standard Demographic and Health Survey questionnaires in the DHS Program to address demographic and health challenges in South Africa. All eligible women aged 15 to 49 years old in all South African provinces were asked to complete an individual questionnaire. Eligible women aged 15 to 49 were asked questions on their background factors such as age, education, and media exposure, birth history and child mortality, awareness, and usage of family planning methods, and so on in every household.

3.5 Study population

The total number of women in the SADHS 2016 data is 8514 but the final number was 3450 after excluding women of other racial groups, those that were not sexually active, and those that were using ineffective methods.

3.6 Variables

3.6.1 Dependent variable

The dependent variable in this study is contraceptive use among Black women measured as whether the respondent is currently using any modern method of contraception. The question asked to the respondent was: “Are you or your partner currently using any modern method of contraception”. The variables were combined into two outcomes – “using” for people who are indicated to be using a method (coded 1) and “not using” for those who did not use any method (coded 0).

3.6.2 Independent variables

The socioeconomic and demographic features of respondents are examples of independent variables, also known as explanatory variables. For this study, the independent variables include Ages groups – v013 (15-19, 20-24, 25-29, 30-34, 35-39, 40-44 and 45-49). Type of place of residence –v025 (rural and urban areas). Province – v024. Level of education – v106, (no education, primary level, secondary level, and tertiary level). Marital status – v501 (never married, married, living together, divorced/separated, and widowed). Sex of household head – v151. Employment status –v714, (working and not working). Number of living children –v218. Fertility preference – v602. Birth in the past year –v209. Province – v024. Wealth index– v190. Sex of head of house – v151.

3.7 Method of data analysis

According to Marshall and Rossman (1999:150), data analysis is the process of giving a significant amount of data order, structure, and significance. Data, which will be used for this study, is analysed using a computer program for statistical analysis, the program used is known as statistical package for social science (SPSS) version 26 software. The frequencies procedure was be used to produce a summary of the total number of respondents for each categorical independent variable. Cross tabulations will be used to analyse relationships between variables, while the Chi-Square test will also be used to determine whether the differences are statistically significant. The binary logistics regression was used to examine the relationship between more than two variables at once. Data was analysed through three types of analyses, which are, univariate analysis, bivariate and multivariate analysis using the binary logistics regression.

3.7 Types of analysis

3.7.1 Univariate analysis

The univariate analysis in this study is going to look at the distribution of each socio-economic and demographic characteristics of the respondent. The univariate analysis will present the result using frequency distribution and percentages.

3.7.2 Bivariate analysis

According to Rammel (1976:12) bivariate analysis involves simultaneously analysing two variables at the same time to determine if there is an association between the two variables. The goal of this section is to see if there is a link between socioeconomic (independent) variables and contraceptive use (dependent variable), which is measured by whether respondents (women aged 15 to 49) are currently taking any sort of contraception. The Chi-Square test will be used to determine the statistical significance of the relationship between each socioeconomic and demographic factor and contraceptive use among Black women in bivariate analysis.

$$X^2 = \sum_{i=1}^n \frac{(O_i - E_i)^2}{E_i}$$

The analysis will be performed through the cross-tabulations techniques, at a 95% confidence interval and a 0.05% level of significance.

3.7.3 Multivariate analysis

The study's major determinants of contraceptive use amongst Black women aged 15 to 49 in South Africa were investigated in this section. Variables, which will be found to be statistically significantly associated with contraceptive use amongst Black women at the bivariate analysis, are further investigated using binary logistic regression. When the dependent variable is categorical or nominal, logistic regression is utilized. The influence of several independent factors presented simultaneously to predict membership in one of the two dependent variable categories is determined using binary logistic regression.

3.8 Limitations of the study

The study is found to have some limitations and should be interpreted while being cautious about those limitations. Firstly, the data is based on a cross-sectional methodology, which may have influenced the findings because some women may have ceased using contraceptives shortly after the surveys. Second, the study cannot be utilized to infer causality because the data is based on a cross-sectional design. Finally, the study relied on individual self-reported data that could have influenced social desirability bias. Finally, sampling differences between surveys may alter the rate of contemporary contraceptive use comparability.

Chapter Four

Results

4.1 Introduction

This chapter presents the study's findings, which include univariate, bivariate, and multivariate analyses that indicate the association between contraceptive use and selected socioeconomic and demographic factors of Black women aged 15 to 49 in South Africa. The following is a list of the discoveries in this chapter: Table 1 shows the background characteristics in frequency, Table 2 shows the method distribution by preference, and Table 3 shows the bivariate analysis that looks at the relationship between contraceptive use (defined as current use of any modern contraceptive method) and selected independent variables. Using multivariate regression analysis, Table 4 reveals characteristics linked with contemporary contraception use.

4.2 Univariate results of background characteristics

Table 1 displays the descriptive (frequency) analysis of the respondents' socioeconomic and demographic variables. The results show that the majority (20.8%) of respondents were between the ages of 30-34, with women aged 15-19 having the lowest number of respondents with only (6.5%). Regarding type of place of residence, the result shows that 68.1% of respondents resided in urban areas while 31.9% resided in rural areas. In terms of the current marital status results have shown that majority of respondents (42.4%) were never married while (32.5%) were married, (22.2%) were living with a partner, and only (0.7%) were divorced.

In relation to highest level of education results revealed that the highest percentage (76.1%) of women had a secondary level of education compared to 2.0% who had no education. Furthermore, (63.2%) of women were currently not working and only (36.8%) were currently working. The highest percentage (92.3%) of women did not give birth in the past year and only (7.7%) did so. In terms of fertility preference, (45.9%) of the respondents did not want to have any more children while (45.5%) wanted to have another child. In terms of wealth index, most women (44.0%) came from the households categorised as poor compared to (32.0%) of those who were rich and (24.0%) of those who were in the middle.

In addition, (54.8%) of the respondents came from households headed by males compared to (45.2%) from households headed by females. The majority (36.5%) of the respondents were from Gauteng province, followed by (15.0%) from Kwazulu-Natal, (9.9%) from Eastern Cape, (9.2%) from Mpumalanga, (8.8%) from North-West, (8.7%) from Limpopo, (5.9%) from Western Cape, while Free State and Northern Cape had the least number of respondents contributing (5.0%) and (1.1%) respectively. Looking at children ever born, the results showed that the highest (54.9%) was among women who reported having two or more children, followed by (28.7%) among those who had one child and lastly (16.4%) women who had no children.

Table 1: % distribution of study respondents by different socio-economic and demographic variables

Characteristics	Frequency (N)	Percentage (%)
Age groups		
15-19	225	6.5
20-24	610	17.7
25-29	718	20.8
30-34	718	20.8
35-39	519	15.1
40-44	373	10.8
45-49	287	8.3
Type of place of residence		
Urban	2348	68.1
Rural	1102	31.9
Current marital status		
Never married	1463	42.6
Married	1086	31.5
Living with partner	765	22.2
Widowed	58	1.7
Divorced	24	0.7
Not living together	55	1.6
Highest educational level		
No education	68	2.0
Primary level	355	10.3
Secondary level	2625	76.1
Higher level	402	11.7
Respondent currently working		
No	2181	63.2
Yes	1269	36.8
Birth in the past year		
No - did not give birth	3183	92.3
Yes – gave birth	267	7.7
Fertility preference		
Have another	1571	45.5
Undecided	217	6.3
No more	1584	45.9
Declared infecund	77	2.2
Wealth index		
Poor	1518	44.0
Middle	828	24.0
Rich	1104	32.0

Table 1 Continued

Characteristics	Frequency (N)	Percentage (%)
Sex of household head		
Male	1889	54.8
Female	1561	45.2
Province		
Western Cape	203	5.9
Eastern Cape	340	9.9
Northern Cape	38	1.1
Free State	171	5.0
Kwazulu-Natal	519	15.0
North West	303	8.8
Gauteng	1258	36.5
Mpumalanga	317	9.2
Limpopo	301	8.7
Children ever born		
0	566	16.4
1	990	28.7
2+	1894	54.9
Total	3450	100

Source: DHS South Africa 2016

4.3 Dependent variable

Figure 2: Dependent variable (current use of modern contraceptive methods)

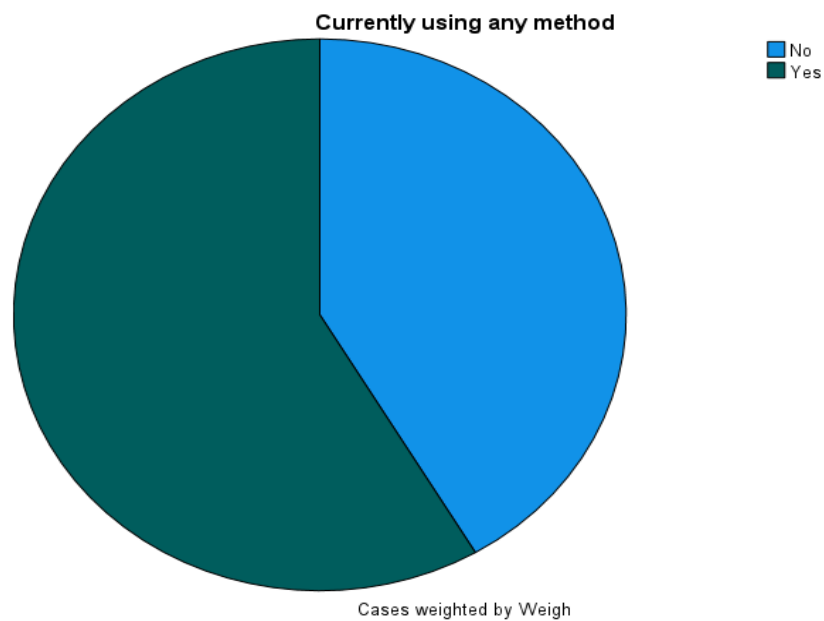


Figure 2 presents the dependent variable of this study, measured as Black women’s current contraceptive use of any modern contraceptive methods in South Africa. The study interviewed 3450 Black women between ages 15-49 who were sexually active. The results have shown that out of 3450 Black women who were interviewed 1432 (41.5%) of them were currently not using any modern contraceptive method while 2018 (58.5%) of them were using.

Table 2: Distribution of different contraceptive methods among those using some methods

Current contraceptive method	Freq	Percent	Cum
Not using	1432	41.5	41.5
Pill	263	7.6	49.1
IUD	37	1.1	50.2
Injection	660	19.1	69.3
Male condom	610	17.7	87.0
Implants/Norplant	150	4.3	91.3
Female condom	4	0.1	91.5
Emergency contraceptive	1	0.0	91.5
Other modern methods	3	0.1	91.6
Injection 2 months	291	8.4	100.0
Total	2018	100.0	

4.4 Type of contraceptives used

Table 2 above shows that highest percentage 41.5% of women reported not using any method, 19.1% of females reported that they were using injection, 17.7% of females reported that their partners were using condoms, 8.4% of females reported that they were using injection for 2 months, 7.6% of women reported that they were using pills, 4.3% of females reported that they were using implants, 1.1% of women reported that they were using IUD, 0.1% of females reported that they were using female condoms, 0.1% of females reported that they were using other modern methods.

4.5 Contraceptive use by different socio-economic and demographic characteristics

Table 3 below shows the findings of the study using the chi-square assessing whether there is a significant association between current contraceptive use and the selected socio-economic and demographic variables. The results were tested at 0.005 level of significance. Current contraceptive use was statistically and significantly associated with the age of participants ($p < 0.001$). Contraceptive use was highest (67.5%) among those in age groups 25-29, followed by (61.2%) among women aged 35-39, and the least number of users were those in age group 40-44 and 45-49 with (45.5%) and (36.8%) respectively. With regards to type of place of residence the findings showed that the highest number of women who reported current use of contraceptives (58.6%) was found amongst women in rural areas compared to (58.4%) of those who resided in urban areas. However, the differences were not statistically significant ($p > 0.05$).

Contraceptive use was significantly associated with the level of education a woman has attained. Most women (60%) who reported current use of contraceptives possessed an education, followed at higher level, followed by (59.9%) among those with secondary level of education, followed by (49.3%) among women with primary level and lastly (41.2%) among women with no education. These results can confirm that the higher the level of education a woman receives the more chances of contraceptive use.

In relation to different provinces in South Africa the report has shown that most women (68.0%) who declared using contraceptives were from Western Cape, followed by Kwa Zulu-Natal at 63.8% while Gauteng, North-West and Eastern Cape had 57% of respondents using some method respectively. The province with the least percentage of women using contraceptives were Free State and Limpopo with only 49.7% and 52.5% using some methods

respectively. The relationship between current use and province of residence was statistically significant ($p < 0.05$).

When looking at women's working status, the results showed that there were no significant differences between women who were working and contraceptive use ($p > 0.05$). The results indicated that (58.3%) of women who were not working were using some contraceptive method, compared to (58.9%) of those who reported currently working and were using a method. With regards to the sex of household head, fewer women (56%) residing in household led by males reported using some contraceptives method while most women (61.5%) of women using a method were under a female headed household and the difference was statistically significant ($p < 0.05$).

In relation to birth in the past year, the results showed that there was a significant association between those who gave birth last year and those who did not. Contraceptive use was highest (72%) amongst women who gave birth in the past year compared to only (57%) of those who did not give birth. In terms of current marital status results revealed that majority of women (64.9%) had never married and have reported highest rate of contraceptive use compared to (53.2%) among married women and the findings were statistically significant ($p < 0.05$).

The findings revealed that contraceptive use was significantly associated with fertility preference of women, for women who reported to be using modern contraceptives, the highest percentage reporting use (65.9%) was among women who declared that they did not want children any more compared to (54.2%) of those who wanted more children. The lowest use (15%) was among women who declared infecund.

Furthermore, looking at wealth index, majority of women (59.2%) was among women who were from rich households and were currently using contraceptives, compared to (58.7%) among women who reported using some contraceptives and were from poor households. However, the differences were not statistically significant ($p > 0.05$). When looking at total number of children ever born highest (60.1%) was among women who reported having more than two children and were using some contraceptive method, compared to (13.4%) of those who reported not having any children and were using contraceptives. And the results were statistically significant ($p < 0.005$).

Table 3: Relationship between current contraceptive use and the selected socio-economic and demographic characteristics of women

	Currently using any modern contraceptive methods %			
Characteristics	No using (%)	Using (%)	Total	X ²
Age				
15-19	41.3	58.7	225	110.272* P=0.000
20-24	39.5	60.5	610	
25-29	32.5	67.5	718	
30-34	38.9	61.1	718	
35-39	38.8	61.2	519	
40-44	54.4	45.6	373	
45-49	63.2	36.8	287	
Type of place of residence				
Rural	41.4	58.6	1102	0.007* P=0.933
Urban	41.6	58.4	2348	
Highest educational level				
No education	58.8	41.2	68	23.379* P=0.000
Primary	50.7	49.3	355	
Secondary	40.1	59.9	2624	
Higher	40.0	60.0	402	
Province				
Western Cape	32.0	68.0	203	25.353* P=0.001
Eastern Cape	42.4	57.6	340	
Northern Cape	44.7	55.3	38	
Free State	50.3	49.7	171	
Kwazulu-Natal	36.2	63.8	519	
North West	42.6	57.4	303	
Gauteng	42.8	57.2	1258	
Mpumalanga	39.1	60.9	317	
Limpopo	47.5	52.5	301	
Currently working				
No	41.7	58.3	2181	0.735* P=0.115
Yes	41.1	58.9	1269	
Sex of household head				
Male	44.0	56.0	1889	10.729* P=0.001
Female	38.5	61.5	1561	
Birth in the past year				
No birth – did not give birth	42.7	57.3	3183	21.547* P=0.000
Yes – gave birth	28.1	71.9	267	

Table 3 Continued

Currently using any modern contraceptive method %				
Characteristics	No % (N)	Yes % (N)	Total	X²
Current marital status				
Never married	35.1	64.9	1463	45.783* P=0.000
Married	46.8	53.2	1086	
Living with partner	45.5	54.5	765	
Widowed	50.0	50.0	58	
Divorced	54.2	45.8	24	
Separated	40.0	60.0	55	
Fertility preference				
Have another	45.8	54.2	1571	113.952* P=0.000
Undecided	50.0	50.0	217	
No more	34.1	65.9	1584	
Declared infecund	84.6	15.4	77	
Wealth index				
Poor	41.3	58.7	1518	2.805* P=0.246
Middle	42.9	57.1	828	
Rich	40.8	59.2	1104	
Children ever born				
0	20.7	13.4	566	59.805* P=0.000
1	31.8	26.5	990	
2+	47.5	60.1	1894	

Source: DHS South Africa 2016

4.6 Multivariate analysis: Binary logistic regression model

Table 4 gives a summary of binary logistic regression results showing the odds of using a method by different socio-economic variables. The multivariate analysis revealed that in terms of current age, women aged 20-24, 25-29, 30-34 and 35-39 were 1.056, 1.515, 1.125 and 1.101 times more likely to use modern contraceptives than those aged 15-19 respectively, while women aged 40-44 and 45-49 years were 0.565 and 0.356 times less likely to use contraceptives than those aged 15-19 respectively. However, only ages 25-29, 40-44 and 45-49 were statistically significant.

Looking at the different provinces, the results revealed that women from all other provinces were less likely to have used a method when compared to Western Cape. Furthermore, the provinces of Limpopo, Gauteng and Free State were highly significant ($p < 0.005$) compared to others. However, Northern Cape, KwaZulu Natal and Mpumalanga were not statistically significant, suggesting the contraceptive use was not different from the reference province.

In terms of type of place of residence women who reside in urban areas were 1.084 times more likely to have used a contraceptive than those who reside in rural areas, but the results were not statistically significant. Regarding highest level of education, the odds of using a method increased with the level of education. Women who attained primary level, secondary level and higher level were 1.336, 1.725 and 1.802 times more likely to have used contraceptives than those who had no education respectively, however the results were marginally statistically significant ($p > 0.05$).

Regarding the sex of the head of the household women who were coming from households headed by females were 1.023 times more likely to use modern contraceptives compared to those headed by males; however, the results were not statistically significant. Furthermore, looking at women's wealth index, women who came from a rich household wealth index were 1.030 times more likely to report using contraceptive method than those who reported coming from a poor household. And women who reported to be in the middle were 0.944 times less likely to use contraceptives compared to those who were poor.

Moreover, the report also revealed that women who gave birth in the past year were 1.506 times more likely to be using a contraceptive method than those who did not give birth in the past year and the results were highly significant. Regarding current marital status, women who reported being married or living with a partner were significantly more likely to be using a

method, while other categories of marital status were not statistically significant, widowed, divorced, and separated were, 0.663, 0.675, 0.897, 0.528 and 0.858 times less likely to use.

In terms of fertility preference, women who were declared infecund and those who were undecided were as to whether they wanted another child were 0.887 and 0.283 times less likely to use contraceptives than women who reported to be wanting another child. Women who reported not wanting any more children were 2.258 times more likely to use contraceptives than those who wanted to have another child. However, only women who did not want more children and those who declared infecund were statistically significant ($p < 0.005$).

The multivariate results further revealed that women who reported currently working were 1.092 times more likely to use modern contraceptives than those who were not working. However, the results were not statistically significant ($p > 0.05$). Looking at children ever born the results shows that women who reported not having any children and those who had only one child were 0.513 and 0.658 less likely to use contraceptives than those who had more than two children. And the results were statistically significant ($p < 0.005$).

Table 4: Results of the Binary Logistic Regression of current use of modern contraceptives

Currently using contraceptives				
Variables	Sig	Odds ratio	95%CI	
			Lower	Upper
Age				
15-19 ^(R)		1.000		
20-24	0.704	1.056	0.769	1.474
25-29	0.013*	1.515	1.091	2.105
30-34	0.497	1.124	0.802	1.575
35-39	0.593	1.101	0.773	1.569
40-44	0.003***	0.565	0.385	0.828
45-49	0.000***	0.356	0.234	0.54
Province				
Western Cape ^(R)		1.000		
Eastern Cape	0.016*	0.615	0.414	0.913
Northern Cape	0.127	0.561	0.264	1.177
Free State	0.001***	0.487	0.312	0.758
Kwazulu-Natal	0.159	0.763	0.523	1.112
North West	0.020*	0.619	0.412	0.929
Gauteng	0.004***	0.615	0.442	0.854
Mpumalanga	0.094	0.709	0.475	1.060
Limpopo	0.002***	0.525	0.345	0.797
Type of place of residence				
Urban ^(R)		1.000		
Rural	0.436	1.084	0.884	1.329
Highest level of education				
No education ^(R)		1.000		
Primary	0.310	1.336	0.764	2.336
Secondary	0.043*	1.725	1.018	2.923
Higher	0.043*	1.802	1.019	3.189
Sex of household head				
Male ^(R)		1.000		
Female	0.803	1.023	0.856	1.222
Wealth index				
Poor ^(R)		1.000		
Middle	0.547	0.944	0.783	1.138
Rich	0.771	1.030	0.845	1.254
Birth in the past year				
No birth ^(R)		1.000		
Birth	0.007***	1.506	1.119	2.027

Table 4 Continued

Currently using contraceptives				
Variables	Sig	Odds ratio	95%CI	
			Lower	Upper
Current marital status				
Never married ^(R)		1.000		
Married	0.000***	0.663	0.536	0.821
Living with partner	0.001***	0.675	0.541	0.843
Widowed	0.714	0.897	0.500	1.608
Divorced	0.136	0.528	0.228	1.224
Separated	0.613	0.858	0.475	1.552
Fertility preference				
Have another ^(R)		1.000		
Undecided	0.426	0.887	0.661	1.191
No more	0.000***	2.258	1.914	2.664
Declared infecund	0.000***	0.283	0.124	0.457
Respondent currently working				
No ^(R)		1.000		
Yes	0.276	1.092	0.932	1.281
Children ever born				
0 ^(R)		1.000		
1	0.000***	0.513	0.424	0.620
2+	0.000***	0.658	0.563	0.770

Note: P-values *=P≤0.005; **p≤0.01; *p<0.05 (R)= Reference category**

4.7 Summary

The study's findings were given in this chapter. The study population's profile, as well as the relationship between current modern contraception use among sexually active Black women in South Africa and several socioeconomic and demographic characteristics, are among the findings. The results have revealed that the probability of Black women using modern contraceptives increases with higher level of education, never married women, younger women, rich women, women who gave birth in the past year, working women and women that are headed by females. Furthermore, the multivariate results have revealed that women who are currently working, never married, rich, women with high level of education, those with many children and young women were important predictors of modern contraceptive use.

Chapter Five

Discussion, conclusion, and recommendations

5.1 Discussion of results

This chapter presents the discussion of results, based on the data analyzed in this study. The multivariate results showed that six variables were determinants of modern contraceptive use – current age of women but only those who are ages (25-29, 40-44 and 45-49), province but only (Eastern Cape, Free State, North West, Gauteng, and Limpopo), highest level of education but only at (secondary level and higher level), birth in the past year, current marital status but only for (women who were married and those living with a partner), fertility preference but only for (women who reported to not wanting children any more and those who were declared infecund), and children ever born. Moreover, this chapter will also cover possible recommendations for this study, and lastly this chapter will present the conclusion of this study.

The results found that 58.5% of Black women in South Africa were using some form of modern contraceptives. The rate of contraceptive use in South Africa differs by racial groups with Black women being the most disadvantaged group.

Some of the possible reasons for using contraceptives is that the use of contraceptive allows people to control the number and spacing of their children. Additionally, use of contraception prevents adolescent pregnancy and pregnancy-related health risk. The outcomes are consistent with the study from the World Health Organisation (2018), which has stated that spacing of births is very important. Infant death rates are 45% higher when births are separated by less than two years than when births are separated by more than two years (World Health Organization study, 2018).

Another reason for contraceptive use is that it can reduce unsustainable population growth, maternal mortality, and morbidity by preventing ill-timed pregnancies and birth. Kavanaugh et al (2013), found similar results which reasoned that the use of contraceptive can possibly slow down unsustainable population growth and reduce maternal mortality and morbidity. For example, if there are many women using contraceptives this means less children will be born, while maternal mortality and morbidity will be reduced.

Among those using a method, there was more reliance on non-permanent method, especially injection as a method of birth control, some of the reasons why majority of women prefer injection method is that the injection is effective in preventing pregnancy, it is convenient and

private, and the injection is temporary one can get pregnant soon after stop using it. According to Adetunji (2011), in Sub-Saharan Africa, injections are increasingly becoming the main method of contraception amongst married women. According to a United Nations estimates from 2011, the percentage of married women who used injectables in 2009 was 6.8% almost double the global average 3.5%.

Female condoms are one of the methods which are less likely to be used. Female condoms account for only 0.8% of condoms provided by donor countries, according to Kavanaugh and Anderson (2013). Some of the reasons for this lower use of female condoms is low availability and accessibility. For example, despite widespread awareness of the female condom in places such as Cameroon, a sample of 88.5% of women and 75% men only 8% and 9% respectively said they had ever used one (Sobze et al, 2016).

The bivariate results of this study showed that there is a statistical relationship between the current age of women and contraceptive use. The findings also revealed that older women significantly less likely to have used any contraceptive methods. The results showed that the chances of women using modern contraceptives was found amongst women in the age group in the middle 25-29 with (61.2%) of them reporting to be using contraceptives, compared to (36.8%) of those aged 45-49 years who also reported using contraceptives.

In terms of highest educational level, the bivariate analysis showed that there is a statistical association between women's attained level of education and contraceptive use. The findings revealed that (60%) of women who had higher level of education (tertiary) reported to be using some form of modern contraceptives in comparison to (49.3%) of those with primary level and (41.2%) of those who had no education and were using contraceptives. Furthermore, the bivariate analysis has revealed that women, whether they gave birth in the past year or whether they did not, were related with the use of modern contraceptives. The findings have shown that majority (71.9%) of women who had birth in the past year reported using contraceptives in comparison to (57.3%) of those who reported using but did not have birth in the past year.

With regards to different provinces the bivariate results have shown that women who come from different provinces are significantly associated with contraceptive use. The results have shown that the majority (68%) of women who were from Western Cape were using contraceptives compared to (49.7%) of those who were from Free State and using contraceptives. Looking at women's current marital status the bivariate findings has shown that there is an association between the marital status of women and the use of contraceptives. The

results have shown that (64.9%) of women who reported to have never been married were using some modern contraceptives in comparison to (53.2%) of married women who also reported to be using contraceptives. One of the reasons why married women are not using contraceptives is the social convention in terms of which married women are expected to have children once they are married.

In relation to the sex of the head of the household and contraceptive use, the bivariate analysis has showed that there is a statistical association between the sex of the head of the household and modern contraceptive use. The results revealed that (61.5%) of women from female headed households were using some form of modern contraceptives in comparison to (56%) of women who are under male headed households. The results are consistent with the existing literature of Yadav et al (2017), which argued that cultural norms and opposition by husband is one of the reasons for lower use of contraceptives. For example, women who are controlled by their partners have no say in their reproductive health decisions thus use contraceptives less.

In terms of fertility preference, the bivariate analysis have revealed that there is a statistical relationship between women's fertility preference and contraceptive use. The results have shown that highest (65.9%) of women who stated that they did not want children anymore were using modern contraceptives compared to (54.2%) of those who were using some contraceptives but wanted to have another child. In terms of children ever born the bivariate findings have shown that there is a statistical association between women's total number of children ever born and the use of modern contraceptives. The results have revealed that majority (60.1%) of women who reported to be using contraceptives had more than two children in comparison to only (13.1%) of those who were using contraceptives but had no child.

Although the bivariate analysis of this study have revealed that independent variables such as current age of women, highest educational level, province, sex of household head, birth in the past year, current marital status, fertility preference and children ever born had all shown some significant statistical association on women's use of modern contraceptives, the results also revealed that there was no statistical relationship between contraceptive use and some variables including the type of place of residence and respondents working status.

The multivariate findings revealed that women aged 25-29 were more likely to use modern contraceptives compares to women aged 15-19; for women aged 40-44 and 45-49 the results

showed that they were 0.565 and 0.356 respectively less likely to use contraceptives compared to women ages 15-19. Some of the possible reasons this is the case is because most young women are probably still in schools or working, and thus yet not ready to have children, which can lead to a greater use of contraceptives, whether the situation is different for older women who are not still at schools, and are expected to be married, not working, and expected to have children. Women of later reproductive age have a reduced rate of contraceptive use, according to a study by Allen et al (2013), since they may have medical issues that make some contraceptive methods inappropriate, and others may be experiencing perimenopausal symptoms.

In relation to different provinces, the multivariate results showed that, compared to women in Western Cape, the odds of women using modern contraceptives was lower in all other provinces. Women from provinces like Free State, Eastern Cape, North West, Gauteng, and Limpopo had the least odds of using a method. Those findings are consistent with finding by Chersich (2017), which revealed that contraceptive use was high in Western Cape compared to other provinces in South Africa. Moreover, study by Jacobs and Makaudze (2012), also found out that women from provinces that are more rural were not expected to use contraceptives than those from provinces which are more urban. The reasons for this might well be that women in rural areas have challenges such as lack of health care services, limited access, and availability of contraceptives that women in rural areas do not have.

The results have revealed that the probability of using modern contraceptives increases with the level of education. The possible reason is that educated women have more access to information about contraceptives than those who are not educated. Women are exposed to reproductive health information through education, which encourages them to make wiser and more educated decisions regarding their reproductive health and the various methods available to them (Takelab et al, 2015).

Furthermore, regarding birth in the past year the results of this study reflected that the chances of using modern contraceptives was much higher for women who gave birth in the past year compared to women who did not give birth in the past year. These findings are in line with study by MacPhail et al (2017), which argues that women who recently given birth are expected to use contraceptives to space births and to control number of the children born than would be so with those who had not given birth. One of the possible reasons this could be the case is because

of women who recently gave birth would want to take time to raise their new-born instead of rushing to have another child.

In relation to current marital status the results have revealed that the chances of using modern contraceptives is lower for women who are married and those who live with a partner respectively compared to women who never married. These findings are in line with the study which was constructed by Shree et al (2017), which argued that some of the reasons contributing to contraceptive non-use amongst married women is twofold; the first being that the majority of women desire to have children within a marriage setting, and the second being the power imbalance which exist within marriages and which allow the husband to decide on issues such as contraception and number of children. Thus, married women are not expected to use contraceptives in comparison to unmarried women.

Regarding fertility preference the results have revealed that the probability of women using modern contraceptives was much higher for women who reported not wanting children anymore compared to those who wanted to have another child. A contrary position, however, is to be found in a study by Bongaarts (2014), who argued that the high frequency of unwanted pregnancies in Sub-Saharan Africa could be because a quarter (25%) of sexually active women who expressed a wish to postponement and limit childbearing were not utilizing an effective means of contraception.

In terms of children ever born the multivariate results have shown that chances of using modern contraceptives was less likely for women who had one child and those who had more than two children compared to women who had no children. These findings are consistent with existing literature from the study conducted by Ahmed et al (2012), which argues that the number of surviving children was found to play a major influence in contraceptive use, with women with more than two children are expected to use contraceptives than women without children, according to the study.

5.2 Conclusion

In conclusion, contraceptive use amongst Black women in South Africa is lower compared to other racial groups such as Whites, Indians, and coloureds. South Africa is one of the countries with the highest level of HIV and AIDS, particularly among Black people. This study has shown that independent variables including current age of women, province, highest level of education, sex of household head, birth in the past year, current marital status, fertility preference and total number of children ever born were significantly associated with modern contraceptive use at the bivariate analysis.

Moreover, the binary logistics analysis showed that current age of women but only those who are ages (25-29, 40-44 and 45-49), province but only (Eastern Cape, Free State, North West, Gauteng, and Limpopo), highest level of education but only at (secondary level and higher level), birth in the past year, current marital status but only for (women who were married and those living with a partner), fertility preference but only for (women who reported to not wanting children anymore and those who were declared infecund), and children ever born were significant predictors of modern contraceptive use among Black women in South Africa.

5.3 Recommendations

The findings highlight the need to increase the availability and accessibility of modern contraceptives use more especially amongst Black women in South Africa. There is a need for programmes and policy that aims to raise and promote awareness on family planning services in South Africa especially among Black women. Specific awareness must be tailored for specific aged groups, with a particular focus on young people especially among Black Women given that the level of contraceptive use is lower among them.

The study found out that educational level was positively related with contraceptive use. The study therefore recommends that higher level of education should be encouraged among young people. Because education increases one's knowledge about their sexuality, fertility and information about different available contraceptive methods and women can make better and informed decision regarding their reproduction.

Moreover, the study revealed that permanent method such as laparoscopy and hysteroscopy were not being used by all the women who were interviewed therefore this study recommend that more information should be provided regarding the available permanent contraceptive

methods. This will further increase information and knowledge on other available contraceptive methods (permanent methods).

REFERENCES

- Adetunji, J. 2011. Raising popularity of injectable contraceptives in sub-Saharan Africa: *African Population Studies*, 25(2):16-20.
- Ahinkorah, B.O., Budu, E., Aboagye, R.G. *Badu, E. Abaglo, E. Adu, C. Aderoju, Y. G., and Archer, A.G.* 2021. Factors associated with modern contraceptive use among women with no fertility intention in sub-Saharan Africa: evidence from cross-sectional surveys of 29 countries. *Contracept Reprod Med* 6, 22 (2021). <https://doi.org/10.1186/s40834-021-00165-6>
- Ahmed, S. Qingfeng, L. and Tsui, A.O. 2012. Maternal deaths averted by contraceptive use: an analysis of 172 countries.
- Amin, R., Jamir, C., and Robert, B. 1992. ‘Socioeconomic Differentials in Contraceptive Use and Desire for More Children in Greater Freetown, Sierra Leone’. *International Family Planning Perspectives*, 18(1):24.
- Bertrand, J.T., Bauni, E.K., and Lesthaeghe, R.J. 2009. Factors affecting contraceptive use in Sub-Saharan Africa - Commission on Behavioural and Social Sciences and Education.
- Blackstone, S.R. 2020. Women’s empowerment, household status and contraception use in Ghana. Available online: Biosoc Sci. doi:10.1017/S0021932016000377 [[PubMed](#)]
- Bongaarts J. The impact of family planning programs on unmet need and demand for contraception. *Stud Fam Plan.* 2014;45(2):247–62.
- Casterline, J.B., A.E. Perez, and A.E. Biddlecom. 1997. Factors underlying unmet need in the Philippines. *Journal of Studies in Family Planning*, 28(3):17.
- Chersich, M. F., Wabiri, K., Risher, O., Shisana, D., Celentano, T., Rehle, M., Evans, T., and Rees, H. 2017. “Contraception Coverage and Methods Used among Women in South Africa: A National Household Survey.” *South African Medical Journal*, 107(4):30.
- Cleland, J., Agustin, C.A., Peterson, H., Ross, J., and Tsui, A. 2012. Contraception and health. *Lancet Journal*, 15(6):14.
- Cleland, J., Harbison, S., and Shah, I.H. 2014. Unmet need for contraception: Issues and challenges. <https://doi.org/10.1111/j.1728-4465.2014.00380.x> . Date of access 05 April 2014.

CSA, ICF, Euthopian Demographic and Health Survey 2016. Addis Ababa, Euthopia: Euthopiam Central Statistics Agency and ICF International; 2017.

Daniel, T.K. Donald, J., Matthew, M., and Eva, F. 2013. "Racial differences in occupational status and income in South Africa." *Journal of Demography*, 33(1):1.

Digitale, J. Psaki, S. Soler-Hampejsek, E. Mensch, B.S. 2017. Correlates of contraceptive use and health facility choice among young women in Malawi. *Ann Am Acad Pol Soc Sci*, 699(1):93-124.

Firoza, D., Mavranouzouli, I., and McGinn, E. 2017. Unintended pregnancy in sub-Saharan Africa: magnitude of the problem and potential role of contraceptive implants to alleviate it.

Haffejee, F., O'Connor, L., Govender, N., Reddy, P., Sibiyi, M.N., Ghuman, S., Ngxongo, T., and Borg, D. 2017. Factors associated with unintended pregnancy among women attending a public health facility in KwaZulu-Natal, South Africa. Date of access: 05 November 2017.

Hossain, M.B. Ababneh, F. and Shaw, J.H. 2018. Identifying factors influencing contraceptive use in Bangladesh: evidence from BDHS 2014 data. *Public Health Journal*, 18(9):10-15.

Jacobs P, and Makaudze E. Understanding rural livelihoods in the west coast district. *South Africa Development*. 2012;29(4):574–87.

Jane, H. Constant, D. Wright, V. Morroni, C. Muller, A. and Colvin, C. 2019. Amultidimensional approach to inform family planning needs, preferences and behaviours amongst women in South Africa through body mapping. *Reproductive health*.

Jennifer, T., Cynthia, B., Carol, E., Kaufman, H., and Paul, H. 2016. "The spread of primary schooling in sub-Saharan Africa: Implications for fertility change." *Population and Development Review*, 26(3):4.

Kara, R. and Maharaj, P. 2015. Childbearing among young people in South Africa: Findings from the National Income Dynamics Study. *South African Journal of Demography*, 16(1):58-80.

Kate, S.H. Prevalence and correlates of contraceptive use among female adolescents in Ghana. *BMC Women's Health*. 2015;15(1):60.

Kavanaugh, M.L. and Anderson, R.M. 2013. Contraception and beyond: the health benefits of service provided at family planning centers. New York: Guttmacher institute;2013.

Lanham, M.R., Wilcher, E.T., Montgomery, R., Pool, S., Schuler, R. Lenzi, B., and Friedland, T. 2014. “Engaging Male Partners in Women's Microbicide Use: Evidence from Clinical Trials and Implications for Future Research and Microbicide Introduction.” *Journal of the International AIDS Society*, 17(2):19.

Lasong, J., Zhang, Y., and Gebremedhin, S.A. 2019. Determinants of modern contraceptive use among married women of reproductive age: a cross-sectional study in rural Zambia. Date of access 21 May 2020.

MacPhail C, Pettifor, A.E. Pascoe, S. and Rees, H.V. 2007. Contraception use and pregnancy among 15–24-year-old South African women: a nationally representative cross-sectional survey. *BMC Med*.

Marshall, T. and Rossman, V. 1999. *Contraceptive Method Choice in Indonesia and Sri Lanka*”: The Population Council, New York, USA.

Martin, B.E. and Hamilton, M.J. 2015. Births reports: Final Data for 2013 Natal Vital Stat Report, 64 (2015): 1.

Massyn, G., R. Hussain, A., Bankole, T., and Singh, S. 2014. Women with an unmet need for contraception in developing countries and their reasons for not using a method, Occasional Report, New York: Guttmacher Institute, No. 37.

Maswime, S. and Uzabakiriho, B. 2019. Causes of maternal death at Natalspruit Hospital, Johannesburg, South Africa. *South African Medical Journal*, 101(6):142.

Matthews, L.T., Moore, L., Crankshaw, T.L., Milford, C., Mosery, F.N., and Greener, R. 2014. South Africans with recent pregnancy rarely know partner’s HIV serostatus: implications for serodiscordant couple’s interventions. *Journal of BMC Public Health*, 14(1):84.

Megan, E. 2013. Contraceptive use by 15-year-old students at their last sexual intercourse results from 24 countries, *Journal of Pediatrics & Adolescent Medicine*, 8(16):1.

Mjwara, N., and Maharaj, P. 2018. “Becoming a Mother: Perspectives and Experiences of Young Women in a South African Township.” *Journal of Culture, Health & Sexuality*, 20(2):12.

- Mkhwanazi, N. 2014. Twenty years of democracy and the politics of reproduction in South Africa. *Journal of African Identities*, 12(3):26.
- Moreira, O.V., Ajayi, A.I., Moyaki, M.G., Goon, D.T., Avramovic, G., and Lambert, J. 2019. High rate of unplanned pregnancy in the context of integrated family planning and HIV care services in South Africa. *BMC Health Services Res.* Date of access: 18 June 2020.
- Mosher, S., Jackson, D., Lombard, C., Dinh, T.H., Puren, A. and Sherman, G. 2012. Missed opportunities along the prevention of mother-to-child transmission services cascade in South Africa: uptake, determinants, and attributable risk. Date of access 10 July 2015.
- Munakampe, M.N., Zulu, J.M., and Michelo, C. 2018. Contraceptive and abortion knowledge, attitude, and practices among adolescents from low and middle-income countries: a systematic review. National Academy Press <http://books.nap.edu/catalog.php> Accessed 02 November 2019.
- National Institute of Population Research and Training, Mitra and Associates: Bangladesh Demographic and Health Survey, 2011. Preliminary Report. Dhaka, Bangladesh and Calverton, Maryland, USA. 2012.
- National Population Commission. 2004. National policy on population for sustainable development. Abuja: NPC; 2004. [[Google Scholar](#)]
- Pazol, K. Zapata, L.B. Tregear, S. J. Smith, N.M. and Gavin, L.E. 2016. Impact of Contraceptive Knowledge and Decision Making.
- Peer. 2013. Factors associated with contraceptive use in rural area in Western Cape Province. *The South African Medical Journal*, 103(6):5.
- Rammel, R, J. 1976. Understanding correlation: Department of political science university of Hawaii 1976.
- Routray, P.B., Torondel, T., Clasen, V., and Schmidt, W.P. 2017. “Women's Role in Sanitation Decision Making in Rural Coastal Odisha, India.” *Journal of Plos One*, 12(5):2.
- SADHS: South African Demographic and Health Survey 2016: Key Indicator Report. In. www.statssa.gov.za: Statistics South Africa; 2016.

Schwartz, S.R., Rees, H., Mehta, S., Venter, W.D.F, Taha, T.E, and Black, V. 2012. High incidence of unplanned pregnancy after antiretroviral therapy initiation: findings from a prospective cohort study in South Africa. Date of Access: 20 June 2012.

Seutlwadi, T. 2012. Contraceptive use and associated factors among South African youth (18-24): A population-based survey. *South African Journal of Obstetrics and Gynaecology*, 18(2):11.

Sewpaul, V. 2014. "A Structural Social Justice Approach to Family Policy: A Critique of the Draft South African Family Policy." *Journal of Social Work*, 41(4):3.

Shireen, J. 1995. How increased contraceptive use has reduced maternal mortality. *Maternal Child Health Journal*, 14(6):8.

Shree, V., Prasad, R., Kumar, S., Sinha, S., and Choudhary, S.K. 2017. Factors for non-acceptance of contraceptive methods amongst married women of reproductive age group in rural Patna. *International Journal of Community Medical Public Health*, 4(6):7.

Singh, S., Darroch, J.E., and Ashford, L.S. 2014. *The Costs and Benefits of Investing in Sexual and Reproductive Health 2014*, New York: Guttmacher Institute.

Skouby, S.O. 2014. Contraceptive use and behavior in the 21st century: a comprehensive study across European countries. *European Journal of Contraceptive Reproductive Health Care*, 4(9):7.

Sobze, M.S. Fokam, J. Onohiol, J. Iballa, B.S. Djeunang, B. and Russo, G. 2016. Poor acceptability of female condom by Cameroonians: an unmet programmatic agenda for HIV prevention. *Ig Santita Pubbl*, 72(3):191-201.

South African Department of Health. 1998. Annual Report. Pretoria: Government Printers

STATS SA: Statistics in Brief: The People of South Africa Population Census, 1996. Pretoria: Statistical Central Service.

Tariku, D. Oljira, L. Alemayehu, W. and Berhane, Y. 2019. Unmet need for contraception among young married women in Eastern Ethiopia. *Journal of Contraception*, 15(3):16-20.

Tekelab, T. Melka, A.S. and Wirtu D. 2012. Predictors of modern contraceptive methods use among married women of reproductive age groups in Western Ethiopia: a community based cross-sectional study. *BMC Womens Health*. 2015;15(1):52.

UNAIDS AIDSinfo (accessed August 2019)

United Nations Population Fund: State of the world population 2011. The Cairo consensus at ten: population, reproductive health, and the global effort to end poverty. 2011, New York: UNFPA

United Nations, 2012. Adolescent fertility since the international development on population and development (ICPD) in Cairo. http://www.un.org/en/development/desa/population/publications/pdf/fertility/Report_A

United Nations. 2015. Department of Economic and Social Affairs. Population Division. 2016 World Contraceptive Use 2015 from <http://www.un.org/en/development/desa/population/publications/dataset/contraception/wcu2015.shtml>. Date of access 27 2016.

Wang, W. Staveteig, S. Winter, R. and Allen, C. 2017. Women's marital status, contraceptive use, and unmet need in sub-Saharan Africa, Latin America, and the Caribbean, DHS comparative report no 44. Rockville, Maryland, USA: IFC.

World Health Organisation, 2014. Adolescent Pregnancy: Fact Sheet. <http://www.who.int/mediacentre/factsheets/fs364/en/> Date of access: 17 March 2014.

World Health Organization 2011. Adolescent Pregnancy. Geneva: WHO, 2011. http://www.who.int/making_pregnancy_safer/topics/adolescent_pregnancy/en/index.html. Date of access 14 December 2011.

World Health Organization 2018. Family Planning and Contraception. Available online: <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>. Date of access 01 April 2020.

Yadav, K. Agarwal, M. Singh, J.V. and Singh VK. 2017. Determinants of non-use of family planning methods by young married women (15-24 years) living in urban slums of Uttar Pradesh. *Indian Journal Community Health*, 29(1):55–66.