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2017

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Rampedi, Motlatso (2017) Fertility intention and choice of method of contraception among young women (20-24 years old) in KwaZulu-Natal, South Africa, University of the Witwatersrand, Johannesburg, <https://hdl.handle.net/10539/24580>

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Fertility Intention and choice of Method of Contraception among young women (20-24 years old) in KwaZulu-Natal, South Africa

BY

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This Dissertation is submitted in partial fulfilment of the Master of Arts in Demography and Population Studies at the University of the Witwatersrand

Supervisor: Dr. Nicole DeWet

DECLARATION

I Motlatso Rampedi; hereby declare that this research report is my own work and has not been submitted before for any other degree or examination in any other university.

…….…….....

[Signature of candidate]

..……day of .....…20…...

[Date]

ACKNOWLEDGEMENTS

I wish to thank my Supervisor, Dr. Nicole DeWet for her endless effort in assisting me to produce this piece of work. Your guidance and encouragements in my time of panic has always been the motivation I needed to keep on trying my best.

I am also deeply grateful to various other supporters of the Demography department for their support and advice, more especially, Vesper Chisumpa. Thank you for always being patient in your teachings.

To my grandmother and best friend, Rephina Kwenaite, thank you for raising a soldier. Your love and prayers have sustained me throughout my academic journey.

To Sivuyile Godongwana, we have another one in the bag !!!

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CHAPTER 1

Introduction

1.1. Background

Over the past century, there has been global increase in the use of contraception. Worldwide, the contraceptive prevalence rate increased from 54% in 1990 to about 66% in 2011 (Biddlecom & Kantorova, 2013). However, in developing countries there has been a struggle to obtain universal contraceptive use. Contraceptive prevalence rates are lowest among countries in Sub-Saharan Africa, especially West and Central Africa with uptake rates of 17% and 23% respectively (United Nations, 2016). Factors contributing to the low use of contraception have been identified. Among these are level of education, age, religion and place of residence (Adewuyi & Ogunjuyigbe , 2003; Peert & Morojele, 2013).

Conversely, the Southern region of Africa including South Africa; Zimbabwe and Botswana has amongst the most progressive family planning programmes on the continent, bringing its contraceptive prevalence rate to 64% (UN, 2016). Over the past decade, South Africa has formulated reproductive health policies aimed at increasing, among others, the awareness, availability and access to contraception (Maharaj & Rogan, 2007). Among these efforts, the South African department of health launched the National Contraception and Fertility Planning Policy aimed at increasing the awareness and uptake of contraception (South African Department of Health, 2012). Inclusive in this policy is a country-wide distribution of condoms in schools, recreational centres and working environments (Mayosi, et al., 2012). Fertility contributed to an increase in contraceptive use among young women from 55% in 1998 to about 65% in 2015 (Alkema et al., 2013; UNFPA, 2015).

The use of contraception is closely associated with fertility (Oluwaseyi, 2013). In South Africa between 1970 and 1975, the Total Fertility Rate (TFR) was on average 5.5 children per woman. It declined to 3.3 between 1990 and 1995 and further down to 2.4 between 2010 and 2015 (United Nations, World Fertility Patterns , 2015). The decrease in fertility can be attributed to the increase in contraceptive use (Feyisetan & Casterline, 2000).

Despite the national increase in contraceptive use and a decline in TFR, South Africa continues to be challenged by the burden of unwanted and unintended pregnancies, especially, among young women age 15 to 24 (Seutlwadi, Peltzer, Mchunu, & Tutshana, 2012). An average of

65% of pregnancies occurring to young women (15-24) in South Africa are unintended (Seutlwadi, Peltzer, Mchunu, & Tutshana, 2012).

There is a range of negative social and mental health consequences associated with unwanted/unintended pregnancy among youth and young women. Commonly identified has been depression, substance abuse, lower educational attainment and increased sexual risk behavior (Christofides, et al., 2014).

The youth has been the central focus of many health promotion and preventative programmes. For example, one of the main objectives of the South African National Health Promotion and Strategy is to promote healthy lifestyle practices and address risky sexual behaviours among youth (Motsoaledi, 2015). However, young women are even more vulnerable to health challenges. Beyond an increased risk of unintended pregnancy, additional health threats for young women include HIV and AIDS, pregnancy related morbidity and mortality as well as unsafe abortions (Boonstra, 2007). On average, about 15% of women living with HIV and AIDS are between 15 to 24 years old (UNAIDS, 2016).

Contraceptive use has been one of the major strategies adopted globally and nationally to reduce unintended pregnancy and halt the spread of HIV and AIDS (Daly , Helling-Giese , Mati , & Hunter, 1994). Even so the pandemics of HIV/AIDS and unintended pregnancy are slowly declining. Over the years, there has been a growing body of evidence suggesting a link between use of contraception; HIV/AIDS and fertility intention. In the midst of the HIV pandemic which is highest in sub-Saharan Africa, South Africa continues to experience high levels (43%) of unintended pregnancy, indicating an increased vulnerability to the virus. In the context of the rapid spread of HIV/AIDS, it is even more important for women to have control over the limiting, timing and spacing of their childbearing (Marlow, Maman, Groves, & Moodley, 2012).

Fertility intention has been defined as the desire for a certain number of children at the end of a woman's childbearing years (15-49) (Vignolia & Rinesi, 2014). Fertility or pregnancy intention is, thereof, measured using information on whether a woman wants to get pregnant; delay childbearing or does not want to have any (more) children (Speizer, Irani, Barden-O'Fallon, & Levy, 2009). Unintended pregnancy is, identifiably, a consequence of an intention not met. To time, space or delay pregnancy women, worldwide, are encourage to make use of contraception (Daly , Helling-Giese , Mati , & Hunter, 1994). In line with the demographic transition theory, an increasing desire to want to postpone or stop childbearing can accelerate

the fertility transition; implying lower birth rates and a reduced population growth (Lulani, 2014). Provided that the theory of Planned Behaviour is correct in its assumption that intentions influence variations in behaviour, the decision to adopt a contraceptive behaviour should be informed by a woman's fertility intention (Ajzen, 1991).

Correctly so, in Sub-Saharan Africa, about 64% of women who did not want children reported using contraception (UN, 2015). In South Africa, the likelihood of using contraception is higher among women that have previously been pregnant compared to women who have never been pregnant (MacPhail, Pettifor, Pascoe, & Rees, 2007). Moreover, while it is common for unintended pregnancies to occur among women that are not using contraception, unintended pregnancies continue to occur even among women that are using contraception (Bradley, Croft, & Rutstein, 2013).

Despite increased use of contraception, the rate (65%) of unintended pregnancy in South Africa remains an area of public health concern (Ibisomi & Odimegwu, 2007). Thus, indicating a need for a deeper exploration into the practices involved in contraceptive use. As a result, while an intention to not have children or delay childbearing may be established and a contraceptive behaviour adopted, the effectiveness of a method of contraception has become an important determinant of how successful a woman can become in preventing or delaying pregnancy (Frost & Darroch, 2008). Method of contraception refers to all the different types of contraception used to prevent pregnancy. This includes oral contraceptive pills, implants, injectables, intrauterine devices (IUD) as well as male and female condoms. A distinction is often made between modern and traditional methods of contraception. Previously listed are what are accepted as modern methods of contraception to prevent pregnancy. Among others, traditional methods include the calendar and withdrawal method (WHO, 2016).

KwaZulu-Natal has been used as the study location in this study. Contraceptive prevalence in KwaZulu-Natal (KZN) has been reported as 76.8%, the highest in South Africa. Yet, KZN continues to experience a high burden of unwanted and unintended pregnancies among young women (62.2%) (Zungu, 2011; Thobejane, 2015). There are a range of social and economic problems that are associated with unintended pregnancy. These include unsafe abortions, late antenatal care, negative health effects for the newborn as well as maternal death (Yazdkhasti, Pourreza, Pirak, & Abdi, 2015). While the use of contraception is an important way in which young women can stop and/or space pregnancy, the disconnect between contraceptive use and

unintended pregnancy indicates the need for deeper exploration into contraceptive use by young women.

This study provides an investigation into the fertility intentions and methods of contraception used by all young women irrespective of their current motherhood status (i.e. women who have children and those that do not). The study aims to understand whether the fertility intentions of young women (20-24 years old) match their choice of contraceptive method (s).

1.2. Statement of the Problem

There has been an increase in the use of contraception among young women in South Africa. n 1998 contraceptive use was 55% and increased to 65% in 2015 (Alkema et al., 2013; UNFPA, 2015). Despite increased use of contraception coupled with programme and policy efforts to reduce teenage and unplanned pregnancies, unwanted and unintended pregnancies among young women in South Africa remains high at 65% and continues to pose as an area of public health concern (Seutlwadi, Mchunu, & Utshana, 2012).

The high occurrence of unwanted/unintended pregnancies is inconsistent with the high rate of contraceptive use. Research on pregnancy intention in South Africa has revealed that a significant proportion (65%) of pregnancies occurring to young women (15-24) are not intended (Seutlwadi, Mchunu, & Utshana, 2012). These women either would have wanted to delay their childbearing or did not want any (more) children.

The disconnect in the increase in use of contraception and high rate of unwanted and unintended pregnancy suggests a growing problem of inconsistent and non-effective use of contraceptive methods (Trussell, 2011). Evidently so, some young women in South Africa continue to show preference for traditional methods of contraception despite findings on their ineffectiveness (Mqhayi, et al., 2004). Adolescent girls in the Limpopo Province expressed trust in the effectiveness of traditional methods of contraception over modern methods because of the perceived negative side effects associated with modern methods of contraception (Wood & Jewkes, 2006).

Fertility intentions to either delay or space childbearing cannot be achieved so long as young women continue to use incorrect methods of contraception or use contraceptive methods incorrectly or inconsistently. When fertility intentions are not met, the consequences can be

severe. Unsafe abortion is a common consequence of unintended pregnancies which often results to long-term negative health outcomes including infertility and maternal death (Logan, Holcombe, Manlove, & Ryan, 2007). Unintended pregnancy, especially among younger women in developing countries such as South Africa, has also, led to late antenatal care treatment; increased infant mortality; increased infant illnesses and undernourished children (Gebremeskel, Dibaba, & Admassu, 2015).

To ensure women are successful in preventing pregnancy and in achieving their fertility intentions, reliance should not only be on increasing use but young women using contraception should select contraceptive methods that optimize effectiveness (Frost & Darroch, 2008). While research is aware of the role of contraception in delaying childbearing, what remains unknown is whether the fertility intentions of young women match their current type of contraception method. This study intends to determine the relationship between fertility intention and method of contraception among young women (20-24 years old years old) in KwaZulu-Natal, South Africa in an effort to inform young women on using correct and effective method(s) of contraception that are coherent with their fertility intentions.

Justification of the Study

South Africa has among the highest HIV prevalence rates (18%) in the world and the highest HIV incidence rate (16%) in the sub-Saharan region (UNAIDS, 2016). Particularly, affecting young women 15-24. Despite an increase in contraceptive use, South Africa continues to experience high rates of unintended pregnancies and HIV infections (UNFPA, 2015). An increasing amount of unintended pregnancies are also occurring among women using contraception. To avoid unintended pregnancy and HIV/AIDS women need to be in control of the timing and spacing of their births (Marlow, Maman, Groves, & Moodley, 2012). However, beyond increasing access and use of contraception, young women should make use of contraceptive methods that are effective in order to avoid contraception failure and, ultimately, unintended pregnancies.

A large body of literature has found a correlation between contraceptive use and unintended pregnancy. However, few studies have explored the reasons to why unintended pregnancies continue to occur among women that use contraception in South Africa. This study will contribute to existing literature in reproductive health in that it aims to show the importance of the choice of contraception in spacing and/or delaying pregnancy. When young women are

conscious about their fertility intentions and use the correct methods of contraception that match these goals, there will be fewer cases of, among others, unintended pregnancies and abortions. As such, understanding the fertility intentions of young women will help direct them towards the correct methods of contraception that match their fertility intentions (McCoy, et al., 2014).

In the context of high rates of unintended pregnancy, this study will allow policy makers to understand the importance of the choice of contraceptive methods used by young women, and thereof ensure the availability of different methods of contraception at health centres. Furthermore, it will show the need for policy makers to focus on devising programmes that promote and educate women on the use of correct methods of contraception. More importantly, the study will benefit young women as they will understand the importance of choosing correct and effective methods of contraception that match their fertility goals.

More than reducing the incidence of HIV/AIDS and decreasing the rate of unintended pregnancy, when fertility intentions are met health challenges affecting young women including unsafe abortions; pregnancy related morbidity and mortality can be averted (Marlow, Maman, Groves, & Moodley, 2012). The study is important in that it aims to offer yet another solution that can be incorporated into policy to decrease the high rates of unintended pregnancies occurring among young women by understanding the relationship between fertility intention and choice of contraceptive method.

1.3. Research Question

What is the relationship between fertility intention and method of contraception among young women 20-24 years old years old in KwaZulu-Natal, South Africa?

1.3.1. Sub Questions

1. What is the prevalence of different types of contraceptive methods among young women (20-24 years old years old) in KwaZulu-Natal, South Africa?
2. What are the fertility intentions of young women 20-24 years old in KwaZulu-Natal, South Africa?

3. What is the relationship between fertility intention (number of children wanted in lifetime) and type of contraception method among young women (20-24 years old) in KwaZulu-Natal, South Africa?

1.5 Research Objective

To determine the relationship between fertility intention (number of children wanted in lifetime)and method of contraception among young women (20-24 years old) in KwaZulu-Natal, South Africa.

1.5.1 Specific Objectives

1. To examine the prevalence of different types of contraceptive methods among young women (20-24 years old) in KwaZulu-Natal, South Africa.
2. To investigate the fertility intentions of young women (20-24 years old) in KwaZulu-Natal, South Africa.
3. To determine the relationship between fertility intention (number of children wanted in lifetime) and type of contraceptive method used by young women (20-24 years old) in KwaZulu-Natal, South Africa.

CHAPTER 2

2.1. Literature Review

2.1.1 Contraceptive Use

A large number of studies have shown that contraceptive use can postpone conception. Contraception can allow women to make informed decisions and design their desired family through having control over the timing and spacing of their pregnancies (Warniment & Hansen, 2012 (Sonfield, Hasstedt, Kavanaugh, & Anderson, 2013).

Across the Sub-Saharan region, many countries continue to have high fertility rates (TFR) as a result of poor use of contraception. In Nigeria, it has been found that low use of contraception is among the factors sustaining the high rates of fertility (Feyisetan & Bankole, 2002). Malawi has also been described as a high fertility country as a result of its low use of contraception (Chintsanya, Madise, & Bailey, 2015).

The sub-Saharan region has amongst the lowest prevalence of contraceptive use in the world. However, considerable progress has been made in increasing the use of contraception. In fact, some research found that between 2008 and 2012, contraceptive use increased from 20% to 27% in Eastern Africa and from 54% to 58% in Southern Africa (Singh & Darroch, 2012). The increased use of contraception has, however, led to a slight decline in fertility, considering that fertility levels in the region continue to hover around 5.4 children per woman (United Nations, World Contraceptive Use , 2016).

Studies have found that low levels of fertility in the southern region of Africa are, predominantly, as a result of an increase in contraceptive use. For instance, over the past decades the decrease in Namibia's fertility rate has been associated with the increased trend in the use of contraception that gained momentum in 1992 (Indongo & Pasvakawambwa, 2012). Similarly, in Lesotho, the decline in TFR from 5.8 to 3.3 (between 1977 and 2014) has been attributed to the increase in contraceptive knowledge and prevalence (Tsoamathe, 2003).

2.1.2 Contraceptive use among young women

The use of contraception among young women in Sub-Saharan Africa remains considerably low. In Ghana, the prevalence for modern contraception is as low as 17% (Korboe & Williams,

2012). In South Africa, contraceptive prevalence among young people (15-24) has been reported to be about 52.2% (Seutlwadi, 2012). Identifiably, almost 50% of young people are not using contraception. Various studies have investigated the reasons for the low uptake of contraception among young adults. To mention a few, poverty, lack of access to health centres, fear of side-effects and attitudes of healthcare providers have had an impact on the contraceptive seeking behaviour of young women (Indongo, 2008).

Contraceptive non-use has been associated with a range of adverse consequences including unintended pregnancy, STIs and HIV/AIDS. Globally, almost half of all HIV infections are among young women (15-24) (UNICEF, 2016). A study in South Africa found that 26% of the total HIV infections in the country occur among young women between 15 and 24 (Dellar, Dlamini, & Karim, 2015). Furthermore, an estimated 14 million unintended pregnancies occur every year among women aged 15–24 years in sub-Saharan Africa (Sekandi, Nsubuga, Sempeera, & Makumbi, 2016). A study in South Africa found that young women aged 15-19 years were more likely to have unintended pregnancy (87%) when compared to the 20-24 year olds (66%) (Odimegwu & Obisomi, 2007). Similarly, more recent research in Tanzania also found that women (15 – 24) had the highest risk of unplanned pregnancy (Calvert, et al., 2013). It is therefore evident that young women aged 15 -24 years old are an important key population in the southern African setting.

2.1.3 Unintended Pregnancy and Contraceptive Effectiveness

The role of contraception in delaying conception is well researched. However, emerging studies continue to report on the persistent high rates of unintended pregnancies, especially among women below age 25. A study in Kenya revealed that nearly 50% of unmarried women aged 15-19 report their pregnancies as mistimed or unwanted (Ikamari, Chimaroake, & Ochako, 2013). In South Africa, the dilemma is similar with nearly 65% of pregnancies among young women 15-24 reported to be either unintended or premarital (Seutlwadi, 2012)

Adding to this dilemma is the realization that unintended pregnancies are not only as a result of lack of contraceptive use but also as a consequence of failure of contraceptive method used (Blac, Gupta, Rassi, & Kubba, 2010). Identifiably, in developing countries, more than half of unintended pregnancies have occurred to women who conceived while using contraception (Bradley, Croft, & Rutstein, 2013). Women in these countries are, thus, not consistently using contraception, making use of incorrect methods of contraception or using less effective methods to preventing pregnancy.

The effectiveness of contraceptive methods is fundamental to preventing unwanted pregnancies (Hatcher, et al., 2009). Some research has shown that Intrauterine devices (IUDs) and contraceptive implants or pills are highly effective when used correctly to prevent unwanted pregnancy (Peipert, Madden, Allsworth, & Secura, 2012). To substantiate this, another study further revealed that less effective methods of contraception which have been prone to contraception failure have, among others, been condoms and traditional methods (i.e. withdrawal method) (Kost, Singh, Vaughan, Trussell, & Bankole, 2008).

In both developed and developing countries, the underutilization of effective methods of contraception has been a significant contributor to the high rates of unintended pregnancy (Peipert, Madden, Allsworth, & Secura, 2012). In fact, another study found that in countries where more effective methods of contraception such as IUDs and implants were used, the rate of unintended pregnancy was significantly lower (Bajos, Leridon, Goulard, Oustry, & Job-Spira, 2003). Even so, some existing literature on contraceptive use and unintended pregnancy have revealed that common factors associated with the choice of contraceptive method used include partner influences, experiences and attitudes towards specific methods as well as a women's childbearing goals (Frost & Darroch, 2008).

2.1.4 Fertility Intention and Contraceptive Use

Fertility intention is an important factor for understanding the uptake of contraception and the phenomenon of unwanted and unintended pregnancy. It is a useful measurement to understand whether a woman wants to get pregnant; delay childbearing or does not want to have any (more) children (Speizer, Irani, Barden-O'Fallon, & Levy, 2009). Some research found that in developing countries there has been an increase in the desire for small families and the need to space childbearing (Darroch & Singh, 2013). While many studies have focused on the timing to (next) birth, the spacing component of fertility intentions is not well researched (Bankole & Westoff, 1995). A study on attitudes to childbearing carried out in sub-Saharan Africa revealed that across the region, women have a desire to space their childbearing and have longer intervals between their births (Lulani, 2014). In line with the demographic transition theory, increasing the spacing in childbearing can fuel the fertility transition because a delay in child birth would decrease birth rates and; ultimately; reduce population growth (Lulani, 2014).

In marital unions, the proportion of women who want to stop childbearing has increased substantially across the sub-Saharan region. In Ghana, the proportion increased from 23% in 1988 to 36% in 2008 and in Uganda from 19% to 41% between 1988 and 2008 (GDHS 2008;

UDHS 2006). The likelihood of using contraception among married couples is higher when women want to stop childbearing and lower when women want to have more children (Bankole & Audam, 2011).

Even so research has identified gender differences in fertility preferences and intentions. Men generally have a desire to have more children than women and, thus, exert influence on their partners' uptake of contraception (Bankole & Audam, 2011). A study in Sudan revealed that the decision towards contraceptive use and the type of contraceptive method was made by men (Khalifa, 1988). In Nigeria, men who wanted to space their pregnancies or wanted no more children were more likely to use contraception as compared to those that wanted a child or another child in the next two years (Oluwaseyi, 2013).

Research has indicated that among young and unmarried women, fertility intention and preference is subject to change over time. A study in Morocco showed that the fertility intentions of approximately two-thirds of women changed every two to three years (Bankole & Westoff, 1998) Evidence from a study in Ghana again revealed that women's preferences for wanting a child or for the desired timing of the next child changed in more than one third of the multiple survey waves (Kodzi , Casterline, & Aglobitse , 2010). Some research has suggested that the change in fertility intention and preference is because while a woman may be certain of wanting another child, she may not be certain of the timing of the next intended birth. Alternatively, while she may be certain of the timing of the next child, she may not be certain of the exact number of children she plans to have over her lifetime (Sennott & Yeatman , 2012).

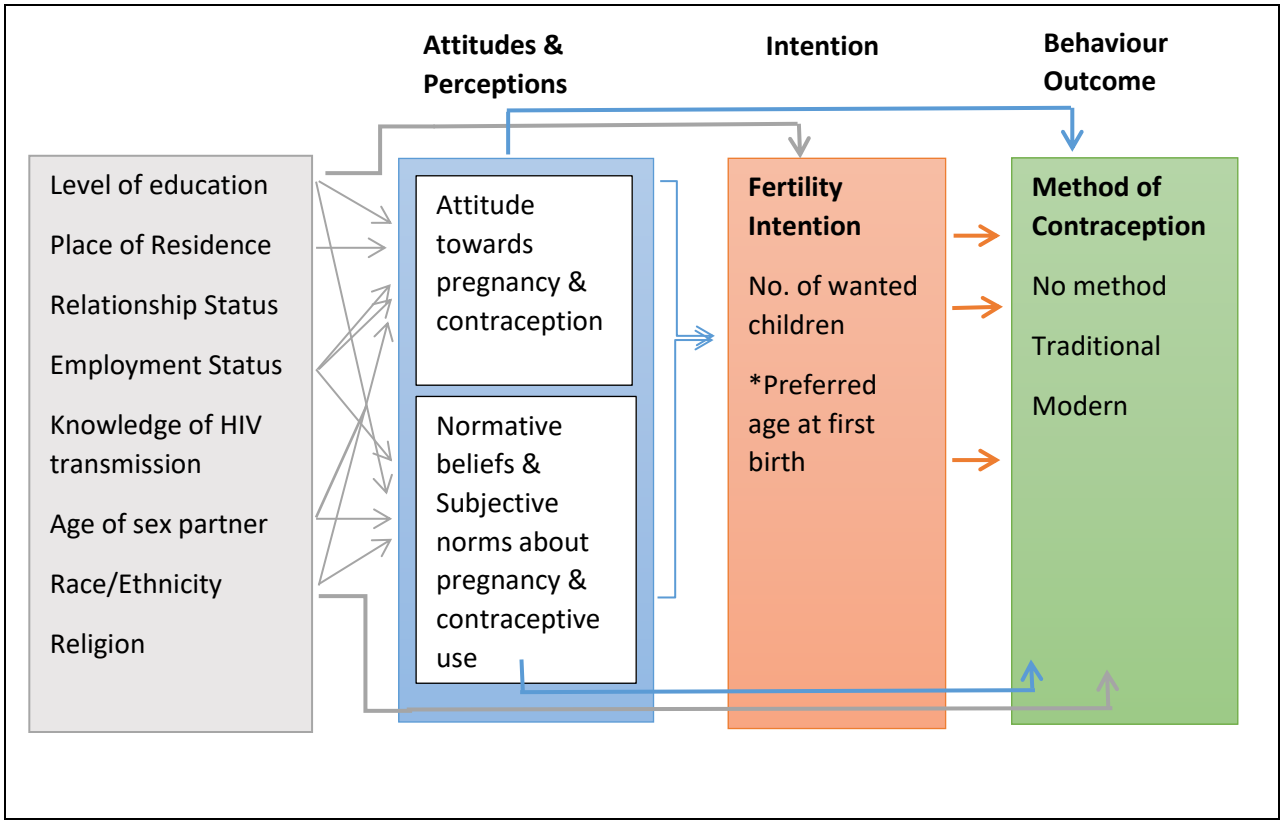
In a longitudinal study in Bangladesh it was concluded that the desire for children was a significant predictor of subsequent use of contraception (Shah, Shah, & Radovanovic, 1998). As such, fertility intention is among the important predictors of contraceptive use and behaviour (Bankole & Westoff, The consistency and validity of reproductive attitudes:evidence from Morocco, 1998). It is even more important for women and their partners to make use of effective contraception in order to achieve their childbearing goals and prevent unintended pregnancies (Darroch & Singh, 2013). As such, this study aims to find out whether the fertility intentions of young women in South Africa indeed inform their choice of contraceptive method.

2.2 Theoretical Framework

This study aims to assess the association between fertility intention and choice of contraceptive method among young women (20-24 years old) in KwaZulu-Natal, South Africa. It relies on the Theory of Planned Behaviour (TPB) to describe the association between intentions and behaviours. According to the theory, intentions are the product of attitudes and normative evaluations and, as a result, influence variations in behaviour (Ajzen, 1991). The theory proposes that an individual's behaviour is determined by his/her intention to perform the behaviour and, in turn, the behaviour is as a result of his/her intentions. The theory has been applied in various study disciplines including psychology and reproductive health. A study on condom used TPB to determine condom use behaviour among college students. The study found that behaviour intention was positively associated with condom use (Asare, 2013). TPB is a useful way to understand how we can change the behaviour of people. In the context of high rates of unintended pregnancy and HIV/AIDS in South Africa, it is essential that young women adopt contraceptive behaviours that will protect them from HIV and pregnancy. For example, it is important for young women who want to delay pregnancy to use the correct methods of contraception consistently (Frost & Darroch, 2008). In this study, the use of contraception is taken as a form of behaviour pattern that is informed by a woman's fertility intentions. Even so, there are several other factors that have been identified as significant predictors of contraceptive use. Among these have been, level of education; knowledge of HIV transmission; age of sex partner; religion; place of residence and relationship status (Odimegwu, Ojo, & Siyangande, 1997).

2.3 Conceptual Framework

Figure 1: Fertility Intention and Factors associated with contraception (Ajzen, 1991)



*Not included in study because study is inclusive of women who have had children

Source: Author's own modification based on the Theory of Planned Behaviour.

Conceptual framework shows that socio-economic variables have a direct influence on women's attitudes towards contraception. Socio-economic variables also have a direct impact on normative and subjective norms that pre-exist in societies about pregnancy and contraceptive use. In previous studies, socio-economic variables (used as control variables in this study) have also had a direct impact on fertility intention and contraceptive use. For example, educated women have been found to prolong the interval between births (Caldwell & Caldwell, 2003). As based on the Theory of Planned behaviour, attitudes and social normative perceptions about fertility and contraception in turn have an influence on pregnancy intention and women's intentions to make use of contraception. As a result, the behaviour outcome of contraceptive use is often informed by women's fertility intentions.

CHAPTER 3

3.1 Methodology

In this chapter, the methodology for the study is discussed. The data source and study population are identified. The sample and questionnaire design are also discussed. Details of the analysis plan are provided and data management is highlighted. After providing a description of the variables in the study, the chapter concludes with a discussion of the limitations in the study.

3.2 Data Source

The study makes use of secondary data from the Transition to Adulthood in the context of HIV/AIDS 1999-2002 Survey. The data was collected by Development Research Africa (DRA) between 1999 and 2002. A repeat cross-sectional study that constituted two rounds of data collection was involved. The first wave of the data collection occurred in 1999 followed by the second in 2001. The first wave of data collection included a representative sample of 1,974 households. At wave 1 (1999), adolescents and young adults aged 14-22 were selected for individual interviews. At wave 2 (2001), the bracket increased to individual interviews with adolescents and young adults age 14-24 because they were all two years older at this time (Population Council, DRA Development, University of Natal, & Tulane University, 2002).

The individual interview questions in both waves were similar. The interviews were both grounded on a wide range of topics including sexual and reproductive health issues, contraceptive behaviour, pregnancy and childbearing experiences. A repeat cross-sectional study was performed as the primary objective of wave 2 was to capture data from the original cross-sectional study sample collected at wave 1 (1999). However, to account for the change in age of the adolescents and young adults from 1999 to 2001, this research will analyse the results from both waves of data collected between in 1999 and 2001 (Population Council, DRA Development, University of Natal, & Tulane University, 2002). As such, the two data sets (wave 1 and wave 2) have been pooled to obtain a single data set for analysis.

3.3 Study Location

South Africa comprises of 9 provinces. Inclusive of this is Kwazulu-Natal, the biggest and most populous province in the country. The province has 10 districts and 1 Metropolitan region. For the study, two administrative areas within the province were selected, the Mtunzini

Magisterial District and the Durban Metropolitan area. These areas were purposely selected to ensure youth from urban, transitional and rural regions were represented.

3.4 Study Design

The study is a cross sectional quantitative study given that; questions pertaining fertility intention and method of contraception were asked at the same point in time (Population Council, DRA Development, University of Natal, & Tulane University, 2002).**3.5 Study Population**

To obtain the study population, datasets from wave 1 and 2 of the study survey were pooled. Thus, obtaining a study population of 8 370 adolescent males and females (14-24) in Kwazulu-Natal, South Africa.

3.6 Study Sample

To select the survey sample, 118 Census Enumeration Areas (CEAs) were chosen from a sampling frame consisting of all CEAs in the two districts using a systematic-random sampling procedure with probability-proportional-to size. Thereafter, households with at least one resident aged 14-24 years old were chosen using a modified stratified, multi-stage cluster sampling approach often referred to as the segmentation method (Turner et al. 1996).

The inclusion criteria for this study is females aged 20-24 years old. Males are removed from the sample because unwanted and teenage pregnancy is a problem that directly affects females (Mothiba & Maputle, 2012). The study further restricts the study sample to young women (20-24 years old) because between 15 to 19 years, younger girls are still in school and dependent on their parents or caregivers. As such may not have the agency or confidence to access and make use of contraception and, thus, make informed decisions about their fertility intentions (Glinski, Sexton, & Petroni, 2014). Furthermore, only women who have had sexual intercourse or are sexually active are included in the study because women that are not sexually active would not have a need to use contraception. Both women that have previously been pregnant and those that have never been pregnant but are sexually active are kept in the study.

3.7 Sample Size

After a sample restriction was made to ensure the validity of the study findings, a weighted study sample of 1,020 sexually active young women (20-24 years old) was used for analysis. The sample size was inclusive of only black young women as over 90% of the sampled population were black.

3.8 Questionnaire Design

Two individual questionnaires were used in the survey. The first was administered to an adult in the household or the head of the household. This questionnaire was used to collect information on, among others, the background characteristics of the household; usual residents; assets; expenditures as well as knowledge towards selected adolescent sexual and reproductive health issues. The second individual questionnaire was administered to all adolescents (14-24) identified in both the first and second wave. Although similar to the previous one, the questionnaire administered to adolescents in the second wave collected information on a wider range of topics including education, sexual and reproductive health issues, pregnancy and contraceptive behavior (Data First, 2015). The two questionnaires administered at both waves are important in this study because data from both wave 1 and 2 are pooled together to obtain a single dataset. As such the variables analysed in this study are from both waves.

3.9 Study Variables

3.9.1 Dependent Variable

The dependent/outcome variable in this study is method of contraception.

The variable was created using questions on adolescent's current use of contraception which gave options of a binary response of either Yes or No. As well as using questions on the type of contraceptive method used. The method options for the type of contraception method used included the pill; intrauterine device (IUD); Injectable/Depovera; condom; withdrawal method and laxatives. *(refer to table 1).* Initially, the intention was to show the relationship between fertility intention and the above methods of contraception. However, the number of cases under each method were too small. The next option was to categorize the methods as 'barrier methods, chemical methods, surgical methods, male controlled and female controlled methods'. However, it was observed that thus further reduced the number of cases. For example, condom was the only option falling under barrier methods and IUD the only option falling under surgical method etc. This study, thereof, became interested in young women that use no

method of contraception and those using either traditional or modern methods of contraception. The negative response category ('No') to the question on contraceptive use was used to create the category 'no method'. The variable on 'type of contraceptive method' was recoded so as to create two categories namely: modern and traditional methods. As such the dependent variable comprises of three categories: No method; Modern method and Traditional method. The decision to have the three categories was made so as to ensure that, at least some of the categories (no method & modern methods) maintain a minimum number of cases for the regression in the multinomial regression.

3.9.2 Independent Variables

The main independent variable in this study is fertility intention. Two indicators were initially identified to measure fertility intention. This included women's (1) preferred number of children and (2) preferred age at first birth. However, this study is inclusive of both women who have been pregnant and those that have never been pregnant. As such, women who had previously been pregnant would, necessarily, not have a preferred age at first birth. As a result, fertility intention in this study is measured using the variable on 'number of preferred children *(refer to table .1).*

The total fertility rate (TFR) in South Africa is on average (2.7) or three children per woman(Lehohla, 2011). As such the variable on 'preferred number of children in lifetime' was recoded such that it captures women that wanted 1-2 children (and those wanting 3 or more The use of the category 1-2 and above 3 is so as to account for women that want to have less than three children (below TFR) and those intending to have three or more children (equal or above TFR).

Table 1: Variables Definition as according to the Transition to Adulthood 1999-2002 Survey

Study Variable	**Variable Name**	**Variable Category from survey**	**Recoded Variable Name/Category**
Dependent Variable	Contraceptive Use Contraceptive method used	1.Yes 2. No 1.Pill 2.IUD 3.Injectable/Depro-Provera 4.Condom 9.Withdraw method 10.Laxatives	Method of Contraception 1.No method (2) 2.Modern (1-4) 3.Traditional (9-10)
Main independent variable	Number of preferred children in lifetime	1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	Fertility Intention 1. 1-2 children (1-2) 2. 3+ children (3-10)
Control variables	Knowledge of HIV transmission: HIV can be transmitted through sexual intercourse	0.No 1.Yes	1.No 2.Yes
	Religion	1.Catholic 2.Protestant 3.Zionist 4.Ushembe 5. None	1.None (5) 2.Catholic (1) 3.Other Christian (3-4)
	Relationship Status	1.Married 2.Living together 3.Single 4.Steady boy/girlfriend	1.Single (3) 2.Steady partner (1,2,4)
	Age of sex partner	12-38	1.Younger (≤19) 2.Same age (20-24) 3.Older (25-38

	Place of residence	1.Urban area, formal housing 2.Informal/squatter settlement in urban area 3.Commercial farm 4.Other rural areas/non-commercial farm	1.Urban (1-2) 2.Rural (3-4)
	Level of education	1.Secondary 2.Post-secondary 3.Has matric 4.Dropped out	1.Secondary 2.Tertiary 3.Has matric 4.Dropped out
	Employment Status	1.Employed in past 12 months 2.Not employed in past 12 months	1.Employed 2.Unemployed 3.Still in school

As shown in *table 1* above, the control variables in this study include knowledge of HIV transmission, religion, relationship status, age of sex partner, place of residence, level of education and employment status.

The variable; Knowledge of HIV transmission has two categories. Namely, women that acknowledged that HIV can be transmitted through sex and, therefore, answered 'Yes" and those that believed that HIV could not be transmitted through sex and, thus, responded 'No'.

The variable religion is recoded such that it captures the most dominant religious groups in South Africa (Coertzen, 2014). As such the variable was made to include Catholics and Other Christians. Specifically, the categories: 'Protestant'; 'Zionists' and 'Ishembe' are combined under one category renamed: "Other Christian". This is because all these religions affiliations subscribe to (some) aspect of Christianity. The variable 'None' is kept as is.

The variable relationship status was categorized such that those who were in some form of union (i.e. married; living together or had steady boy/girlfriend) were recoded 'have steady partner' while those that were single were kept as single. The study acknowledges that married and living together are conceptually different. Individually the categories "married" and "living

together" had a small number of cases. In this study, the variables are categorized together to obtain a larger sample within the category "steady boy/girlfriend".

With regards to age of sex partner, the sampled young women had sex partners whose age varied from 12 to 38. The variable was recoded such that to identify women who had the same age as their sex partner(s), which is 20-24 years old; women who whose sex partners were older (i.e. above 24 years old) and women who had sex partners that were younger in age (i.e. below the age group of 20-24 years old).

Place of residence was recoded such that the variable categories: 'Urban, formal housing', and 'Informal/squatter settlement in urban area' becomes one category named "Urban" and the categories 'Commercial Farm' and 'Other rural area (non-commercial farm)' are recoded by combining them into one category called "Rural".

The variable, level of education had two categories namely secondary and post-secondary. This is because the study sampled young women between 20-24 years old whom; at these ages; are either pursing secondary or tertiary education. However, because of a low sample number of women in this variable, women that had completed matric or dropped out of school were included as categories to increase the sample.

Lastly, the variable employment status was renamed such that those that 'were not employed in the past 12 months' are termed: Unemployed and those that have been 'employed in the past 12 months' are renamed: Employed. Again because of a low sample number in this category, those that were neither employed or unemployed were accounted for as being 'in school'.

3.10 Hypothesis

H_0 (Null): There is no association between fertility intention and method of contraception.

H_1 (Alternative): There is an association between fertility intention and method of contraception

Significance level: α=0.05 / 0.01 / 0.001

3.11 Data Analysis

The analysis of the data is conducted using version 13 of the STATA statistical software. A confidence interval of 95% is set with a significant level of 5%. Three levels of analysis are

conducted in this study to attain the study objectives. The analysis performed is based on pooled data from the 1999 & 2001 Transition to Adulthood in the context of HIV/AIDS survey.

Objective one: To examine the prevalence of different types of contraceptive methods among young women (20-24 years old) in KwaZulu-Natal, South Africa. Descriptive analysis is provided to show the frequency distribution of the different methods of contraception used by young women (20-24 years old) in KwaZulu-Natal, South Africa.

Objective two: To investigate the fertility intention of young women (20-24 years old) in KwaZulu-Natal, South Africa. Descriptive analysis is provided to show the frequency distribution of the fertility intention of young women (20-24 years old) in KwaZulu-Natal, South Africa.

Objective three: To determine the relationship between fertility intention and type of contraceptive method among young women (20-24 years old) in KwaZulu-Natal, South Africa. A bivariate analysis using Chi2 statistics is performed to show a descriptive relationship between fertility intention and method of contraception. A multinomial logistic regression is thereafter performed to examine the statistical; adjusted and unadjusted; relationship between fertility intention and method of contraception. The control variables shown in *table 1* above have been controlled for in the adjusted model. Multinomial logistic regression is used because the outcome variable has three categories namely: no method, modern methods and traditional methods. The model equation for multinomial logistic regression is:

$$\Pr(Y_i = 1) = \frac{e^{\boldsymbol{\beta}_1 \cdot \mathbf{X}_i}}{\sum_{k=1}^{K} e^{\boldsymbol{\beta}_k \cdot \mathbf{X}_i}}$$

$$\Pr(Y_i = 2) = \frac{e^{\boldsymbol{\beta}_2 \cdot \mathbf{X}_i}}{\sum_{k=1}^{K} e^{\boldsymbol{\beta}_k \cdot \mathbf{X}_i}}$$

$$\cdots\cdots$$

$$\Pr(Y_i = K) = \frac{e^{\boldsymbol{\beta}_K \cdot \mathbf{X}_i}}{\sum_{k=1}^{K} e^{\boldsymbol{\beta}_k \cdot \mathbf{X}_i}}$$

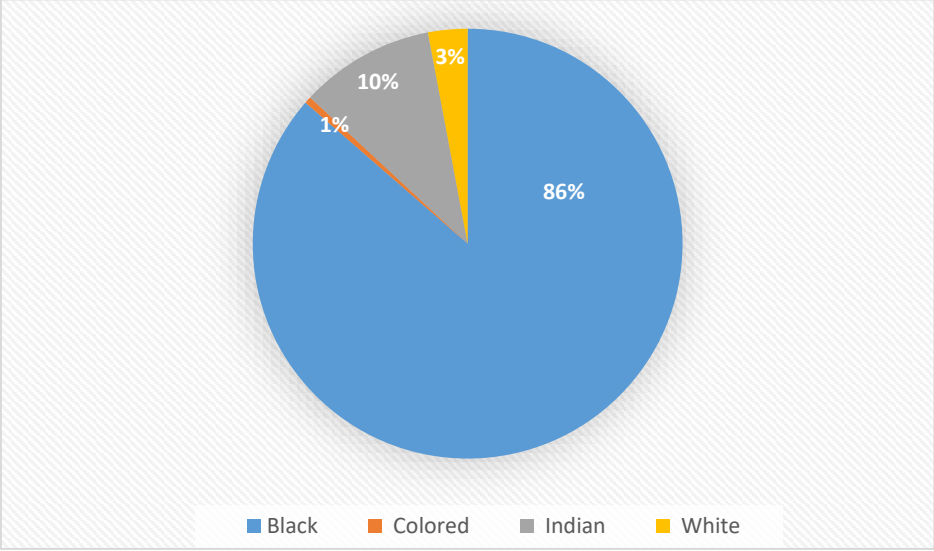
CHAPTER 4

4.1 Results

This chapter presents the results from the analysis. . It begins with descriptive statistics of the sample used in the study and further provides descriptive analysis of the outcome variable, choice of method of contraception. Thereafter, using bivariate analysis, the possible relationship between the respondents' demographic and socio-economic characteristics and fertility intention is examined. For this analysis a cross-tabulation chi2 distribution of the association between method of contraception and fertility intention is presented. Lastly, the statistical relationship between method of contraception and fertility intentions is examined through a multivariate analysis. The analysis makes use of a multinomial logistic regression which examines both the adjusted and unadjusted association between method of contraception and fertility intention is presented. The adjusted model presented here account for the control variables used in the study.

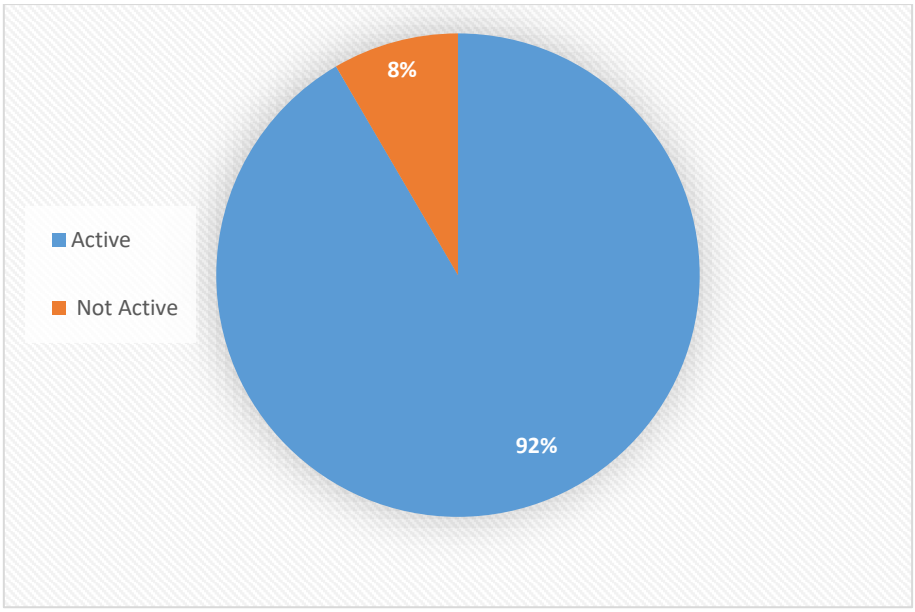
A total sample of 1289 young women 20-24 years old years old was obtained for this study. However, the sample was restricted by race and sexual activity. Thus, reducing the sample to 1020 sexually active young women 20-24 years old years old.

Figure 2: Percentage distribution of the racial diversity of young women 20-24 years old years old in the sample



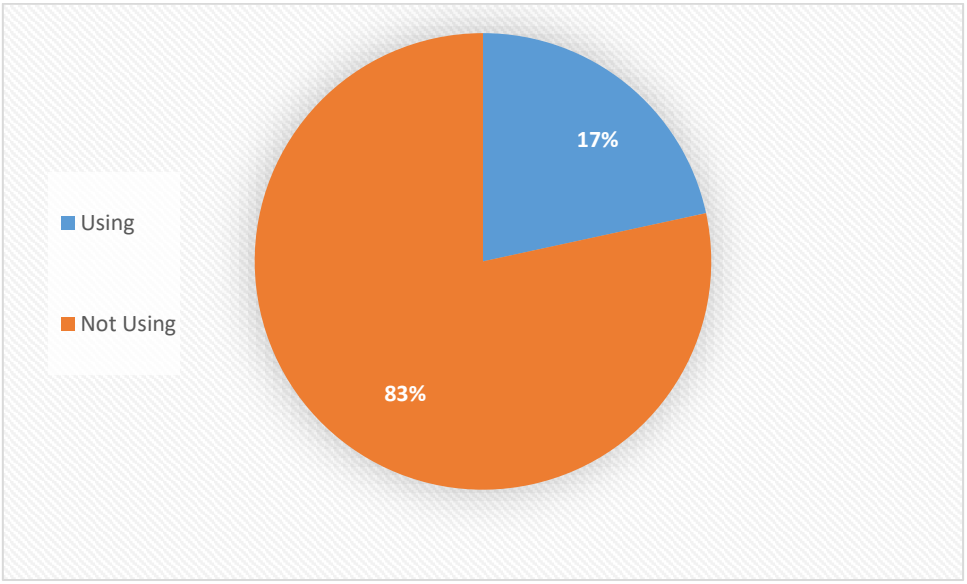
From 1,289 young women aged 20-24 years old years old, the majority are black. On average 1,113 (86.3%) are black, 130 (10.1%) Indian, 38 (2.9%) White and only 6 (0.5%) coloured.

Figure 3: Percentage distribution of sexually active young women 20-24 years old years old in the sample



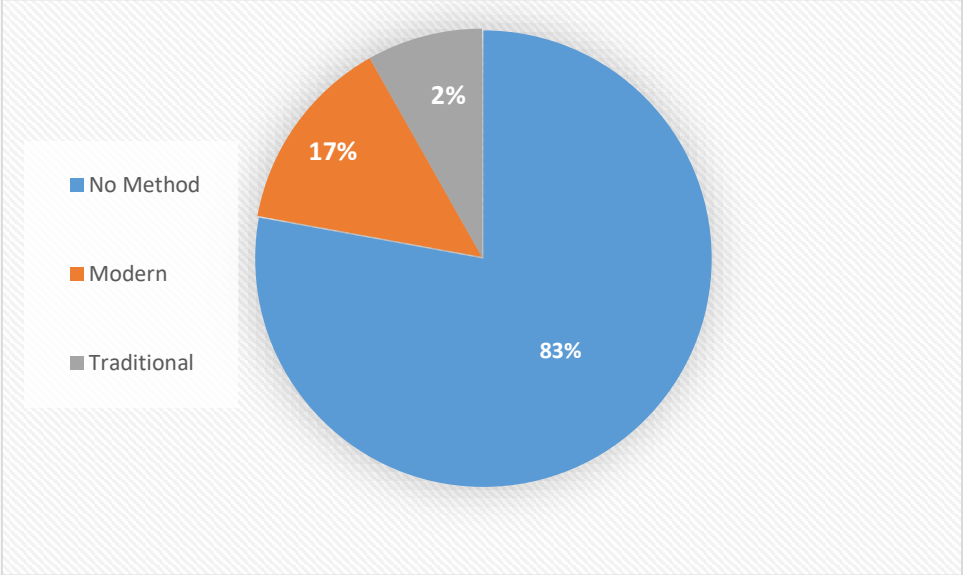
Of a sample population of 1,113 Black young women, on average 1,020 (91.5%) of young women aged 20-24 years old years old were sexually active while 93 (8.4%) were not engaged in any form of sexual activity.

Figure 4: Percentage of contraceptive use among sexually active young women 20-24 years old years old in the sample



From 1,020 sexually active young women aged 20-24 years old years old, 178 (17.4%) were using some method of contraception while 842 (82.5%) of the sexually active young women were not using contraception

Figure 5: Percentage distribution of the type of method of contraception used by sexually active young women 20-24 years old years old in the sample



Of the 1,020 sexually active young women 20-24 years old years old in the sample, 842 (82.5%) do not use any method of contraception while 176 (17.2%) make use of modern methods and only 2 (1.96%) use traditional methods of contraception.

Table 2: Percentage distribution of fertility intention as well as the socio-economic and demographic characteristics of sexually active young women in KZN.

Fertility Intention	Weighted sample frequency (N)	Percentage (%)
Preferred no. of children		
1-2 children	656	64.3
3+ children	341	33.4
No response	21	2.1
Total	**1,020**	**100**
Knowledge of HIV transmission		
HIV can be transmitted through sexual intercourse		
No	293	28.8
Yes	726	71.2
Total	**1,020**	**100**
Demographic characteristics		
Religion		
None	90	8.8
Catholic	159	15.6
Other Christian	770	75.5

Total	**1,020**	**100**
Relationship Status		
Single	260	25.5
Steady partner	759	74.4
Total	**1,020**	**100**
Age of sex partner		
Younger	295	28.9
Same age	543	53.2
Older	105	10.2
No response	75	7.4
Total	**1,020**	**100**
Socio-economic characteristics		
Place of residence		
Urban	514	50.4
Rural	502	49.2
No response	2	0.2
Total	**1,020**	**100**
Level of Education		
Secondary	177	17.3
Tertiary	81	8.0
Has matric	247	24.2
Dropped out	120	11.8
No response	393	38.5
Total	**1,020**	**100**
Employment Status		
In school	622	61.0
Employed	259	25.4
Unemployment	138	13.5
Total	**1,020**	**100**

*The categories 'no response' has been sent to missing

In Table 2 it is observed that more than half (64.3%) of sexually active young women (20 -24) have intentions to have 1-2 children in their lifetime whereas only 33% intend to have 3 or more children. From these young women, 71.2% believe that HIV/AIDS is transmitted through sexual intercourse while 28.8% are to the assumption that HIV/AIDS cannot be transmitted through sexual intercourse.

The majority of young women in the study are predominately Christian because as shown; 15.6% are Catholic while 75.5% ascribe to other Christian denominations (which include Zion and Ushembe Christian churches). Of the young women (20-24 years old), 74.4% reported

having a steady partner while 25.5% are single/not in a relationship. With regards to the age of their sex partner(s), 53.2% have the same age as their have sex partner(s) – (i.e. aged 20-24 years old), while 28.9% are older than their sex partners and 10.2% are younger than their sex partners.

Table 1 further shows an almost equal distribution of sexually active young women (20-24 years old) across rural and urban Kwazulu-Natal. On average, 50.4% of the young women reside in urban areas and 49.2% live in rural areas. Of the sampled sexually active young women, 24.2% have completed their matric/grade 12, 17.3% only reached up to secondary schooling while 11.8% had dropped out. Only 8% went as far as tertiary education and the remaining 38.5% of young women did not respond to the question on education. On average 25.4% of the young women are employed while 13.5% are unemployed, the remaining reported that they had no economic activity as they were still in school.

From the sample, some young women gave no response to the questions posed on number of preferred children, age of sex partner, place of residence and level of education. These categories of women were sent to missing.

Table 3: Cross tabulation of individual characteristics of young women 20-24 years old years old by method of contraception.

	Method of contraception			
	No method	Modern	Traditional	P-value
No. of preferred children				
1-2 children	538	112	2	0.640
	82.5%	**17.1%**	**0.3%**	
3+ children	240	50	0	
	82.7%	**17.2%**	**0.0%**	
Total	778	162	2	
	82.5%	**17.2%**	**0.2%**	
HIV Knowledge: HIV can be transmitted through sexual intercourse				
No	266	46	0	0.315
	85.2%	**14.7%**	**0.0%**	
Yes	538	116	2	
	82.0%	**17.6%**	**0.3%**	
Total	804	167	2	
	83.0%	**16.7%**	**0.2%**	
Demographic Characteristics				
Religion				
None	74	12	0	0.737

	86.0%	**13.9%**	**0.0%**	
Catholic	124	30	0	
	80.5%	**19.4%**	**0.0%**	
Other Christian	606	120	2	
	83.2%	**16.4%**	**0.2%**	
Total	804	162	2	
	83.0%	**16.7%**	**0.2%**	
Relationship Status				
Single	170	14	0	0.001
	92.3%	**7.6%**	**0.0%**	
Steady Partner	634	148	2	
	80.8%	**18.8%**	**0.0%**	
Total	804	162	2	
	83.0%	**16.7%**	**0.2%**	
Age of sex Partner				
Younger	298	34	0	0.000
	89.7%	**10.2%**	**0.0%**	
Same Age	402	98	0	
	80.4	**19.6%**	**0.0%**	
Older	64	22	2	
	72.7%	**25.0%**	**0.02%**	
Total	764	154	2	
	83.0%	**16.7%**	**0.2%**	
Socio-economic Characteristics				
Place of residence				
Urban	394	106	2	0.000
	78.4%	**21.1%**	**0.04%**	
Rural	406	56	0	
	87.8%	**12.1%**	**0.0%**	
Total	800	162	2	
	82.9%	**16.8%**	**0.2%**	
Level of Education				
Secondary	140	20	0	0.009
	87.5%	**12.5%**	**0.0%**	
Tertiary	64	18	0	
	78.0%	**21.9%**	**0.0%**	
Has Matric	176	54	2	
	75.8%	**23.2%**	**0.8%**	
Dropped Out	128	16	0	
	88.8%	**11.1%**	**0.0%**	
Total	508	108	2	
	82.2%	**17.4%**	**0.3%**	
Employment Status				
In school	498	96	0	0.182

	83.8%	**16.1%**	**0.0%**	
Employed	202	44	2	
	81.4%	**17.7%**	**0.8%**	
Unemployed	104	22	0	
	82.5%	**17.4%**	**0.0%**	
Total	804	162	2	
	83.%	**16.7%**	**0.2%**	

From the cross-tabulation of the respondents' individual characteristics and method of contraception presented above, 82.5% of sexually active young women who in their lifetime intend to have 1-2 children (below TFR) were not using any method of contraception. Reportedly, 17% were using modern methods of contraception while below 1% (0.3%) made use of traditional methods. Of the young women that intended to have 3 or more children (equal and/or above TFR), again and overwhelming 82.7% were not using contraception while 17.2% used modern methods of contraception. Even so, there is seemingly no significant relationship between the number of preferred children and method of contraception because of an insignificant p-value of 0.640.

With regards to knowledge of HIV transmission, 82% of young women that acknowledged that HIV can be transmitted through sexual intercourse were not using any method of contraception, while 17.6% used modern methods of contraception. Similarly, 85.2% of those that said HIV cannot be transmitted through sexual intercourse were not using contraception while only 14.7% used modern methods. However, a p-value of 0.315 showed an insignificant relationship between HIV knowledge and method of contraception.

Of the Catholic women in the study, 80.5% were not using any method of contraception and only 13.9% made use of modern methods of contraception. Women from other Christian denominations also largely did not use contraception. 83.2% were not using contraception and only 16.4% made use of modern methods of contraception. Again, an insignificant relationship between religion and method of contraception is found because of an insignificant p-value of 0.737.

From the analysis 92.3% of young women that are single/not in a relationship were not using any method of contraception while only 7.6% used some type of modern contraceptive method. Of the young women in relationships with steady partners, 80.8% were not using contraception while 18.8% reported using some type of modern method of contraception. A p-value of 0.001,

identifiably, shows a significant relationship between relationship status and method of contraception.

Of the women whose sex partners were younger in age, 89.7% were not using contraception while only 10.2% used modern methods of contraception. From the young women that were the same age as their sex partners, 80.4% were not using any method of contraception while 19.6% used modern methods of contraception. Lastly of the women whose sex partners were older in age, 72.7% were not using contraception, however, 25% reported using some type of modern contraceptive method. Again, a p-value of 0.000 shows a significant relationship between age of sex partner and method of contraception.

In terms of place of residence, 78.4% of sexually active young women living in urban areas were not using any method of contraception with only 21.1% reporting use of some type of modern method of contraception. Moreover, 87.8% of young women in rural areas were not using any method of contraception with, again, a small percentage of 12.1% using modern methods. A seemingly significant association between place of residence and method of contraception is evident because of a p-value of 0.000.

With regards to level of education, 87.5% of young women with secondary education were not using any method of contraception while only 16.1% used modern methods of contraception. From the women that have tertiary education, 78% were using no method of contraception and 21% used modern contraceptive methods. Furthermore, of the young women that had matric, 75.5% were not using any method of contraception while 23.2% reported using some type of contraceptive method. From the women that dropped out of school, 88.8% were not using any method of contraception and only 11.1% used modern methods of contraception. A significant relationship between level of education and method of contraception is observed because of a significant p-value of 0.009.

Lastly, 83.8% who had no economic activity because they were still in school were not using any method of contraception while 16.1% reported using modern contraceptive methods. Of the young women that are employed, 81.4% were using no method of contraception and only 17.7% used modern contraception. From the unemployed young women, 82.5% did not use any method of contraception and only 16.7% used some type of modern contraceptive method

Multivariate Analysis showing the statistical relationship between fertility intention and method of contraception

The analysis presented below shows the multinomial logistic regression results of the relationship between fertility intention, method of contraception and associated individual characteristics of young women (20-24 years old) in KZN.

Table 4a: Unadjusted and adjusted relative risk ratios of the association between fertility intention; other selected characteristics of young women; and modern method of contraception

Modern				
Method of Contraception	**Unadjusted**		**Adjusted**	
No method (base)	**Relative Risk Ratio (rrr)**	**Confidence Interval**	**Relative Risk Ratio (rrr)**	**Confidence Interval**
Fertility Intention: Preferred no. of children				
1-2 children (ref)				
3+ children	1.151	0.7953-1.667	0.620	0.3516-1.0950
HIV Knowledge: HIV can be transmitted through sexual intercourse				
No (ref)				
Yes	0.920	0.6269-1.3526	1.856	1.0066-3.4229
Religion				
None (ref)				
Catholic	1.926	0.8223-4.5142	0.484	0.1563-1.5018
Other Christian	1.826	0.8642-3.8582	0.327	0.1188-0.9001
Relationship Status				
Single (ref)				
Steady partner	2.891	1.6329-5.1194	1.633	0.8030-3.3233
Age of sex partner				
Younger (ref)				
Same age	1.920	1.2131-3.0396	1.414	0.8022-2.4933
Older	2.042	1.0499-3.9741	1.992	0.8376-4.7404
Place of residence				
Urban (ref)				
Rural	0.596	0.4154-0.8571	0.499*	0.3000-0.8313
Level of education				
Secondary (ref)				
Tertiary	1.883	0.8488-3.9483	1.721*	0.7438-3.9862
Has matric	2.305	1.3067-4.0682	1.868	0.9701-3.5975
Dropped out	1.463	0.7356-2.9114	1.0490	0.4844-2.2714
Employment Status				
In school (ref)				
Employed	1.483	0.9865-2.2298	0.549	0.2748-1.0996

Unemployed	1.027	0.6004-1.7587	1.726	0.8852-3.3673

Significant findings are denoted with *****

No method vs Modern method

Table 4a presents the results of the unadjusted and adjusted relative risk ratios. Also shown are the associated confidence intervals for the relationship between choice of contraceptive method and fertility intention among sexually active young women in KwaZulu-Natal. The confidence interval has been set at 95%, with a level of significance of 0.05. While not depicted in the table, the Pseudo R2 is 14.1 which mean that about 14% of the variability was explained. Thus, implying that there are other factors that could influence type of contraceptive use among young women.

Results from the adjusted multinomial logistic regression presented above begin with an exploration of women that use no method of contraception and those using modern methods of contraception. After controlling for other factors, the results show no positive association between fertility intention and method of contraception.

Among sexually active young women 20-24 years old years old that intend to have three or more children in their lifetime compared to those that intend to have 1-2 children, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.620 (95% CI=0.351,1.095; P>0.05). The findings are not significant because p-value is above 0.05

Again, there was no significant association found between knowledge of HIV transmission and method of contraception. Among the young women 20-24 years old years old that acknowledge that HIV can be transmitted through sexual intercourse compared to those that believe that HIV cannot be transmitted through sexual intercourse, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to increase by a factor of 1.856 (95% CI=1.006, 3.422; P>0.05).

With regards to religion, there was no significant association between religion and type of method of contraception. Among the young women that are Catholic compared to those that have no religion, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.484 (95% CI=0.156, 1.501; P>0.05). Furthermore, among women that ascribe

to other Christian denominations compared to women that have no religion, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.327 (95% CI=0.118, 0.900; P>0.05).

Among young women that have steady partners compared to those that are single/not in a relationship, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.591 (95% CI=0.803, 3.323; P>0.05). Identifiably, there is no significant association between relationship status and type of method of contraception.

Moreover, an insignificant relationship between age of sex partner and type of method of contraception was found. Among women with the same age as their sex partners compared to women who were younger than their sex partners, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to increase by a factor of 1.414 (95% CI=0.802, 2.493; P>0.05). However, among women who are older than their sex partners compared to women who were younger than their sex partners, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to increase by a factor of 1.992 (95% CI=0.837, 4.740; P>0.05).

However, the results show that there exists a significant relationship between place of residence and method of contraception. Among young women living in rural areas compared to those in urban areas, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.499 (95% CI=0.300, 0.831; P<0.05).

Furthermore, a significant relationship was found between level of education and type of method of contraception. Among young women who had completed tertiary compared to those with only secondary education, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to increase by a factor of 1.721 (95% CI=0.743, 3.986; P<0.05).

Lastly, among young women that are employed compared to those that are still in school, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.549 (95%

CI=0.274, 1.099; P>0.05). Among young women that are unemployed compared to those that are still in school, the relative risk of using a modern method of contraception compared to not using any method of contraception has been expected to increase by a factor of 1.726 (95% CI=0.885, 3.367; P>0.05). As a result, there is no significant relationship between employment status and type of method of contraception.

Table 4b: Unadjusted and adjusted relative risk ratios of the association between fertility intention; other selected characteristics of young women; and traditional method of contraception

Traditional				
Method of Contraception	**Unadjusted**		**Adjusted**	
No method (base)	**Relative Risk Ratio (rrr)**	**Confidence Interval**	**Relative Risk Ratio (rrr)**	**Confidence Interval**
Fertility Intention: Preferred no. of children				
1-2 children (ref)				
3+ children	0.661	0.3943-1.1102	0.729	0.3104-1.7163
HIV Knowledge: HIV can be transmitted through sexual intercourse				
No (ref)				
Yes	2.877	1.4917-5.5504	4.440	1.4036-14.0469
Religion				
None (ref)				
Catholic	7.553	1.8368-31.0618	2.472	0.4162-14.6875
Other Christian	3.519	0.8951-13.8401	0.322	0.0612-1.6940
Relationship Status				
Single (ref)				
Steady partner	0.180	0.1121-0.2901	0.274*	0.1224-0.6175
Age of sex partner				
Younger (ref)				
Same age	4.338	2.0792-9.0533	1.881	0.6646-5.3286
Older	5.616	2.3046-13.6899	4.875*	1.5055-15.7894
Place of residence				
Urban (ref)				
Rural	0.244	0.1434-0.4179	0.518	0.2297-1.1680
Level of education				
Secondary (ref)				
Tertiary	6.454	2.3133-18.007	6.167*	1.7795-21.3778
Has matric	4.022	1.5844-10.2116	2.559	0.8477-7.7245
Dropped out	1.076	0.2918-3.9725	1.582	0.3800-6.5854
Employment Status				
In school (ref)				
Employed	2.150	1.3427-3.4443	1.555	0.5907-4.0954
Unemployed	0.244	0.6868-0.8669	0.537	0.1015-2.8476

Significant findings are denoted with *

No method vs Traditional method

Presented also in table 4b is an exploration of women that use no method of contraception and those using traditional methods of contraception.

Results from the adjusted multinomial logistic regression show that among sexually active young women 20-24 years old years old that intend to have three or more children in their lifetime compared to those that intend to have only 1-2 children, the relative risk of using a traditional method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.729 (95% CI=0.310, 1.716; P>0.05). Identifiably, there is no significant association between a young women's preferred number of children and method of contraception.

Furthermore, an insignificant relationship was found between knowledge of HIV transmission and method of contraception. Among the young women 20-24 years old years old that acknowledge that HIV can be transmitted through sexual intercourse compared to those that believe that HIV cannot be transmitted through sexual intercourse, the relative risk of using a traditional method of contraception compared to not using any method of contraception has been expected to increase by a factor of 4.440 (95% CI=1.403, 14.046.422; P>0.05).

With regards to religion, there was no significant association between religion and type of method of contraception. Among the young women that are Catholic compared to those that have no religion, the relative risk of using a traditional method of contraception compared to not using any method of contraception has been expected to increase by a factor of 2.472 (95% CI=0.416, 14.687; P>0.05). Furthermore, among women that ascribe to other Christian denominations compared to women that have no religion, the relative risk of using a traditional method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.322 (95% CI=0.061, 0.694; P>0.05).

However, a significant relationship was found between relationship status and method of contraception. Among young women that have steady partners compared to those that are single/not in a relationship, the relative risk of using a traditional method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.274 (95% CI=0.122, 0.617; P<0.05).

Furthermore, there was a significant association found between age of sex partner and method of contraception. Among women with the same age as their sex partners compared to women who are younger than their sex partners, risk of using a traditional method of contraception compared to not using any method of contraception has been expected to increase by a factor of 4.8755 (95% CI=1.505, 15.789; P<0.05).

However, when comparing women using traditional methods and no method, an insignificant relationship was found between place of residence and method of contraception. Among young women living in rural areas compared to those in urban areas, the relative risk of using a traditional method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.518 (95% CI=0.229, 1.168; P>0.05).

Nonetheless, a significant relationship was found between level of education and type of method of contraception. Among young women who had completed tertiary compared to those with only secondary education, the relative risk of using a traditional method of contraception compared to not using any method of contraception has been expected to increase by a factor of 6.167 (95% CI=1.779, 21.377; P<0.05).

Lastly, among young women that are employed compared to those that are still in school, the relative risk of using a traditional method of contraception compared to not using any method of contraception has been expected to increase by a factor of 1.555 (95% CI=0.590, 4.095; P>0.05). Among young women that are unemployed compared to those that are still in school, the relative risk of using a traditional method of contraception compared to not using any method of contraception has been expected to decrease by a factor of 0.537 (95% CI=0.101, 2.847; P>0.05). As a result, there is no significant relationship between employment status and type of method of contraception.

CHAPTER 5

5.1 Discussion of the findings

Overall, the objective of the study was to determine the relationship between fertility intention and method of contraception among young women 20-24 years old years old. In the context of the growing HIV/AIDS epidemic, it is important for women to have control over the timing, limiting and spacing of their births.

Moreover, in the South African context, understanding this relationship is paramount given the high rate of unintended pregnancies (65%) which is inconsistent with the increased use of contraceptionContrary to the reported contraceptive prevalence rate (65%) in South Africa, the study found that only 17% of young women make use of contraception. However, this could be because the study only accounted for the contraceptive prevalence of women aged (20-24 years). Furthermore, the study findings are based on a single province (KwaZulu-Natal) instead of an entire country. Nonetheless, while contraceptive use has increased over the last 40 years, women in South Africa continue to experience increased levels of unwanted fertility and many (43%) of first births are mistimed (Maman, Groves, & Moodley, 2012). Thus, indicating that young women are either falsely reporting contraceptive use or using contraception incorrectly or inconsistently.

Through conducting an investigation into women's fertility intentions and method of contraception, the study aimed to show the importance of ensuring that young women make use of correct methods of contraception in order to prevent unintended/unwanted pregnancies. For example, long acting methods of contraception such as injectables, intrauterine devices (IUDs) and contraceptive implants are more effective in preventing unintended pregnancies than short acting methods of contraception such as pills or condoms. A study found that long acting methods of contraception were associated with longer protection, better child-spacing and effectiveness (Tibaijuka, Odongo, Welikhe, & Mukisa, 2017). As such, women whose fertility intentions are to delay childbirth over a long period or completely stop childbirth should consider long acting methods of contraception as opposed to short acting methods. Fertility Intention and Choice of method of contraception

The findings in this study show that there is no significant relationship between fertility intention and choice of contraceptive method in KwaZulu-Natal. While a significant

relationship was expected, the findings illustrate that women's fertility intentions do not, necessarily, influence their type of contraceptive usage.

Among other reasons, that may be because even while women may have fertility intentions to either space, limit or stop childbearing, poverty and low socio-economic standards often challenges their ability to access health care facilities where they can obtain contraception (Dehlendorf, Rodriguez, Levy, Borrero, & Steinauer, 2010). Furthermore, where such facilities are accessible, women are often presented with methods of contraception that are available and not, necessarily, methods of their choice. The South African National Contraception Policy Guidelines have acknowledged that there is a limited range of contraceptive methods available at public sector health facilities. Moreover, clinics mostly promote two methods, commonly, injectables and the pill, with the majority of African women using injectables (SA Department of Health, 2014). This at times leads to women making use of methods of contraception that are not coherent with their fertility intentions. A study in the U.S found that about 58% of women made use condoms because they disliked other methods of contraception that were presented to them (Frost & Darroch, 2008). In Tunisia while it was found that fertility intentions potentially play an important role in explaining contraceptive use, the number of contraceptive methods available in the community was among factors that significantly increased use (Cochrane & Guilkey, 1992).

However, it also important to acknowledge that young women also often lack the agency to request for contraceptives of their choice because of the stigma and discrimination associated with contraceptive use and early sex debut. A study conducted in South Africa among high school girls in Limpopo found that fear of parental reaction to contraceptive use was one of the reasons why young women opted to not using any method of contraception (Ramathuba, Khoza, Mutshinyalo, & Netshikweta, 2012).

Other studies have also shown no significant relationship to exist between

of contraception. In Nairobi, although 86% of women did not desire a pregnancy in the next two years, only 44% made use of a contraceptive method – unmet need for contraception (Bogale, 2013). This is an important study as it is similar to the findings in this study that showed that in KwaZulu-Natal, 82.5% of young women 20-24 years old years old that intended to have between 1 -2 children were not using any method of contraception.

A subsequent consequence of not using contraception is unwanted or mistimed pregnancy. In Morocco, of women that did not want any/more children, 29% gave birth the following year

(Evens, 2010). Thus, indicating either contraceptive failure or a lack of use of any method of contraception to prevent pregnancy and, unfortunately, a missed opportunity to achieve desired fertility intentions.

Factors associated with choice of contraceptive method

Despite a high prevalence (19.2%) of HIV in South Africa, the study surprisingly found no significant association between knowledge of HIV transmission and method of contraception. Identifiably, while young women were knowledgeable that HIV was, predominantly, transmitted through sexual intercourse, they were still not using any method of contraception to prevent themselves from the disease or, even, unwanted pregnancy. In South Africa, some research also found that HIV prevention knowledge did not predict use of a contraception method (Prickett & Marteleto, 2014). Similar to the findings in this study, research on nine countries-inclusive of Rwanda, Zimbabwe and Malawi-further found that even among women living with HIV/AIDS, there was no clear and/or consistent pattern of fertility intention and use of modern methods of contraception (Mumah, Ziraba, & Sidze, 2014).

Provided that knowledge is a conscious familiarity and awareness of a concept, these findings, notably, provide evidence that knowledge does not, necessarily, translate into actionable behaviour which is fundamentally, one of limitations that the Theory of planned behaviour used in this study did not accurately reflect. Identifiably, in the same way that HIV knowledge does not predict safe sexual practices, knowledge of one's fertility intention does not, automatically, translate into adoption of a contraceptive method (behaviour). That is because there are often societal, political and economic factors that influence the adoption of certain behaviour outcomes. As discussed, while individuals may be knowledgeable of the different types of contraception and show a willing desire to make use of contraception in an effort to prevent pregnancy, their economic resources to obtain contraception as well as the cultural/societal/religious norms about contraceptive use or some types of methods may hinder their subsequent use of contraception (Srikanthan & Reid, 2008).

While the use of the theory in this study can further be criticised for not explicitly considering the dynamic nature of reproduction, the conceptual framework provided has accurately shown that, controlling for other variables, there is no direct relationship between fertility intention and the adoption of a contraceptive method. Instead, there are often background factors that influence individual intentions as well as demographic and socio-economic characteristics that

intervene the relationship between intentions and behaviour. For example, the conceptual framework has illustrated that level of education and place of residence have an influence on women's fertility attitudes and/or intentions.

Causes and implications of the lack of contraceptive use

As earlier alluded to, research has found that even while a fertility intention to either space or time a pregnancy may be established jointly with a desire to make use of contraception, in many parts of South Africa –including KwaZulu-Natal-women are presented with limited contraceptive options and are at times, not able to access services (Maman, Groves, & Moodley, 2012). As a result, women end up using contraceptive methods that are not in line with their fertility intentions or, unfortunately, resolve to not using contraception at all.

Indeed, in Malawi it was found that the use of any method of contraception was a common trend in most settings. Moreover, contraception did not vary according to a women's or man's fertility intentions (Dube, et al., 2012). This is indicative that while women may have intentions to limit, space or time their childbearing; they were not primarily selective on the type of contraceptive method.

An inability to be selective of a method of contraception also reflects the possibility of women's limited knowledge on the type of contraceptive method which best match their fertility goals. In several poor regions in Africa; including Mozambique and Ethiopia, women make use of contraception in order to space rather than to stop childbearing, therefore, resulting in an increased use of short-acting methods of contraception even among women that want to stop childbearing (Creanga, Gillespie, Karklins, & Tsui, 2011). As a result, some women become unable to achieve their desired fertility intention because of the use of incorrect methods of contraception, often leading also to contraceptive failure.

Even so, it is notably important to acknowledge that in some contexts a positive association between fertility intention and method of contraception has been found. In Kenya, of the women who intended to not have any/more children, an above average (71%) percentage were using some method of contraception; with condoms being their most preferred modern method of contraception (Karanja, 2015). Similarly, a study in Pakistan found that the likelihood of using any method of contraception was four times higher among women who did not want any/more children compared to women that wanted to have more children within the next two

years (Shah, Shah, & Radovanovic, 1998). A notable approach taken in these contexts has been to increase the access to contraception for women living in poverty and of low socio-economic status. In Kenya, there is evidently a narrowing gap between the use of modern methods of contraception among women in poor and wealthy regions of the country (Fotso, Speizer, Mukiira, Kizito, & Lumumba, 2013). Similarly, while acknowledging their high population Pakistan continues to revise its strategies to increasing access to contraception, particularly in rural areas (Douthwaite & Ward, 2005).

However, research has shown that subsequent use of any method of contraception after a stated fertility intention was often dependent on the strength of the intention or the motivation (Withers, Tavrow, & Adinata, 2011). For example, a study in Honduras found that among women who reported 'getting pregnant soon' as a big problem, 82% made use of some method of contraception (Speizer, Irani, Barden-O'Fallon, & Levy, 2009).

Identifiably, women who recognise and weigh the disadvantages of unintended or mistimed pregnancy in their own lives have greater determination to make use of contraception to prevent unwanted pregnancy. This is supported by further research that found that it was, predominately, women with uncertain fertility intentions that used less effective methods of contraception or were inconsistent in their contraceptive use (Dixon-Mueller & Germain , 2007). As a result, some research went on to conclude that the lack of or use of ineffective methods of contraception was largely due to women's lack of firm motivations towards their fertility or pregnancy goals (Schwarz , Lohr , Gold , & Gerbert , 2007). Provided that ambivalent fertility intentions negatively influence use of contraception, ambivalent feelings towards pregnancy intention are largely expected among young women. This is supported by research in Malawi which found that over 50% of young women aged 15 -24 were expected to change their desired intentions for pregnancy at least every four months (Yeatman & Sennott, 2012). This is of course, in the context of the influence of life changes such as entering a serious relationship or childbirth. However, these changes in fertility preferences, identifiably, have an impact on young women's contraceptive behaviour. Notably, if women are unsure about their fertility intentions, they are most likely to take irrational decisions about the type of contraceptive method they use or not use contraception at all. Indeed, in the U.S it was identified that 37% of women who were ambivalent about their intentions for pregnancy were

less likely to use any method of contraception compared to the 72% of women that were determined about not becoming pregnant (Kavanaugh & Schwarz, 2009).

Therefore, while this study had sampled out women that were below the age of 20 years and included only women between 20 -24 years, this group of women is also fairly young to be certain about their fertility goals. Some research has, thereof, asserted that it is hardly surprising that a correlation between fertility intention and contraceptive behaviour is not found among some subsets of women (Zabin, 1999). That is because the use of any method of contraception cannot be predicted using the single predictor of fertility intention/desire for children (Jaccard, Helbig, Wan, Gutman, & Kritz-Silverstein, 1990). It is instead often guided by other demographic and socio-economic factors other than their fertility intentions such as level of education, employment status and place of residence.

As such, while a significant relationship between fertility intention and method of contraception was not found, the study revealed that fertility intention is significantly associated with some of the demographic and socio-economic characteristics of young women. Of the demographic characteristics of young women that were included in the study, a significant relationship was found between women in steady relationships and modern method s of contraception.

This is coherent with research conducted on adolescent women in Ghana which also found that young women in close relationships were more likely to use some method of contraception compared to their counterparts who are either single or in more casual relations (Upadhyay, Raifman, & Raine-Bennett, 2016). Further confirming this, is a study in Tanzania which found about 35% of women in stable relationships were using some method of contraception (Michael, 2012). Arguably, women in stable relationships feel that they are more susceptible to frequent/unprotected sexual intercourse and pregnancy. Thus, finding it essential to adopt a contraceptive method to prevent pregnancy. Research has indicated that the most preferred method of contraception among these women are condoms (75%) followed by the pill (17%) (Manning, Longmore, & Giordano, 2000). These findings are, therefore, indication that the use of modern methods of contraception is highly likely among young women in stable relationship.

This pool of research provides depth to the findings in this study in that the high proportion of women in stable relationship (74%) and high proportion of contraception non-use (77%) found

in this study reiterate that the partners' perception of fertility and childbearing could well be a significant factor for the lack of use of any method of contraception among young women. Thereof, while young women in stable or committed relationships can be informed and aware of the importance of contraceptive use in attaining their fertility goals, their involvement in a stable relationship, identifiably, depreciates their ability to make use of some method of contraception to attain their fertility intention. This is because often their partners may also influence their adoption of contraception. For example, a study in Kenya found that 38% of women did not make use of any method of contraception because of their partners' disapproval (Izale, Govender, Fina, & Tumbo, 2014).

A significant relationship was further found between rural place of residence and method of contraception. In Afghanistan, it was found that women in urban areas were more likely to use some method of contraception compared to women in rural areas (Osmani, Reyer, Osmani, & Hamajima, 2015). Similarly, in Malawi, women in rural areas were 23% less likely to make use of any method of contraception compared to women in urban areas (Gilbert & Benard, 2015). The low use of contraception has been argued to be as a result of, among others, lower socio-economic status and the limited access to family planning services in rural areas. Identifiably in South Africa, there has been notable progress to increase supply and accessibility to contraception even in rural areas. However, the study results have reflected low use of any method of contraception. Identifiably, this could be as a result of negative attitudes and beliefs about contraceptive use or fear of the resulting side effects. Popular misconceptions have been that contraception causes infertility problems and is associated with increased weight gain (Chipeta, Chimwaza, & Kalilani-Phiri, 2010).

These findings are critical to this study in that they indicate that while fertility intentions may be established and access to contraception may be improved in all regions, changing perceptions and attitudes around contraceptive use is fundamental to increasing the use of correct and effective methods of contraception. This study has evidently revealed that fertility intention does not directly influence choice of contraceptive method because of the existence of other prevailing demographic and socio-economic characteristics of young women. As such, drawing from this analysis and the literature provided, the study accepts the null hypothesis that states that there is no association between fertility intention and method of contraception.

In the conceptual framework, demographic and socio-economic characteristics were shown to have an influence on women's attitudes towards fertility and contraception. In turn, women's

attitudes towards pregnancy and contraception were shown to have an impact on their desired number of children and subsequent choice of contraception. The study showed that even after establishing their fertility intentions and showing desire to make use of contraception, the demographic and socio-economic circumstances of young women had a direct impact on their use and choice of contraception. Reflecting this finding, is the significant association that was found between place of residence and method of contraception as well as between relationship status and method of contraception. Notably, showing that in the context of stable relationships, partners' perceptions of fertility and contraception should be equally considered in the exploration of women's use and adoption of contraception.

The insignificant association between fertility intention and method of contraception has potentially been identified as a result of the limited access to healthcare centres and contraception. Young women may also not make use of any method of contraception because some may be undecided/ambivalent about the fertility intentions. Ambivalent fertility intentions thereof translate into poor and/or lack of use of any method of contraception. This study has to some extend showed that poor or lack of use of any method of contraception was as a result of prevailing beliefs and misconceptions about contraception. Furthermore, through guidance of existing literature, it has become evident that even while access to resources may be improved, women who are uncertain/doubtful about their pregnancy intentions are less likely use contraceptive methods that would prevent them from pregnancy. Although ambivalent feelings were expected among the sampled women aged between 20 to 24 years-as this age group represents early adulthood-a high percentage (92%) of these women are sexually active. Thus, proving that that their ambivalence cannot be ignored as it risks posing an even greater crisis of contraceptive non-use, unwanted pregnancy and HIV/AIDS in South Africa.

CHAPTER 6

6.1 Conclusion

Increasing the access and options of contraception for young women can be fundamental to ensuring that women make use of contraception that will assist them to achieve their fertility intentions. Both women in urban and rural areas should be presented with equal opportunity to access health facilities and the different methods of contraception. This entails ensuring that public health facilities are equipped with the same methods of contraception accessible in private health facilities by women with better socio-economic status. This will, in turn decrease the high rates of unwanted and unintended pregnancy in South Africa.

Through conducting this study, it is evident that in some contexts fertility intention or desires do not influence choice of contraception among young women. However, this could be as a result of other factors (i.e. partners' influence) that were not controlled for because of data limitation. In KwaZulu-Natal, while most young women have intentions to keep their fertility outcomes to a maximum of three children (in line with the TFR in South Africa), the study found that the majority of these women were not complementing their desired fertility intentions with the necessary contraceptive behaviour that would allow them to achieve their fertility goals. Therefore, resulting in the high rate (65%) of unwanted and unintended pregnancies in the country.

In an effort to decrease the high rate of unintended pregnancy in South Africa, a lot of focus has been directed at increasing contraceptive use among young women. This includes policies and programmes such as the National Contraception and Fertility Planning Policy which has been instrumental in increasing the awareness and uptake of contraception (South African Department of Health, 2012). At a provincial level, the KwaZulu-Natal provincial 5-point contraceptive strategy has, among others, aimed to increase contraceptive awareness and access at health facilities and in the community. However, surprisingly while these efforts have led to the increase in contraceptive use from 55% in 1998 to 65% in 2008, the rate of unintended pregnancy among young women has remained high at 65% (Alkema et al., 2013; UNFPA, 2015). Identifiably, this has indicated that unintended pregnancy is not only as a result of contraceptive non-use.

While the vast majority of existing literature and policy approaches have created emphasis on the importance of increasing contraceptive use in order to decrease unintended pregnancy, the contribution that this study has made has been to demonstrate that beyond just increasing the use of contraception, it is important for women to make use of correct methods of contraception that will assist them to achieve their fertility goals. Ideally, this will ensure that South Africa's total fertility rate (TFR) is maintained at 2.4 children per woman. More importantly, it will assist young women to avoid unplanned and unwanted pregnancies.

In answering the main study objective, the study findings showed the existence of an insignificant relationship between fertility intention and method of contraception. Notably, while women were conscious about their childbearing intentions, their adoption of any method of contraception was affected by existing demographic and socio-economic factors such as their relationship status and place of residence. This is to show that the dynamic nature of individuals and the societies in which they reside plays an important role in influencing individual behaviour patterns such as the uptake of contraception. While a direct association was not found, the benefit brought by this study for young women is that it emphasises the importance of planning for pregnancy and reveals that continuous lack of use of any method of contraception will result in unchanged or rising levels of unwanted pregnancy and, possibly, HIV/AIDS.

Over and above the demographic and socio-economic factors that have been found to have a direct impact on method of contraception, previous studies have shown that young women's ambivalent fertility intentions often translate into poor and/or lack of use of any method of contraception. For example, in the U.S it was identified that 37% of women who were ambivalent about their intentions for pregnancy were less likely to use any method of contraception compared to the 72% of women that were determined about not becoming pregnant (Kavanaugh & Schwarz, 2009). As such, it is paramount that health providers assist young women to think through their fertility intentions. In assisting them, young women can become decisive about their reproductive goals. Thus, strengthen their motivations to adopt contraceptives and use them effectively (Speizer, 2006; Speizer et al., 2009).

Identifiably in order to achieve the national objective of reducing unintended pregnancy and HIV/AIDS, South Africa requires an integrated policy approach from the departments of Health, Social and Economic development that will address the broader socio-economic

challenges that include access to resources and services and have been found to impede the use of contraception. However, future contraceptive policies or amendments to existing contraceptive policies such as the KwaZulu-Natal provincial 5-point contraceptive strategy can reference the findings in this study in an effort to enhance knowledge about contraceptive use in South Africa and establish ways in which to persuade young women into using correct methods of contraception.

6.2 Limitations

Inclusion criteria:

In an effort to avoid further reducing the sample size, the study did not separate women who had never given birth and those that had children. As such, there is a possibility that women who have children have a higher use of modern methods of contraception (Ram, Shekhar, & Chowdhury, 2014). As a result, the study could not determine contraceptive use and the methods used by women who had already had at least one child.

Under-reporting:

It is possible that young women in the study could have under reported their use of contraception because of fear of either their parents/guardians finding out that they are sexually active or in fear of their sexual partners who do not support their use of contraception (Marlow, Maman, Groves, & Moodley, 2012). As such the study could have been limited in providing an accurate account of the methods of contraception used by young women

Causality:

In addition, the causal relationship between fertility intention and method of contraception cannot be determined because the study was cross-sectional.

6.3 Recommendations

There a number of factors that this study did not fully explore which further studies can pick up on in enhancing further research on fertility and contraception. Predominantly, the study did not investigate the fertility intentions and the use of contraception of women who had given birth or have children. Identifying and understanding the difference between the fertility intentions of women who had never given birth and those with children may provide insight on women's choice of contraception.

The study also did not account for the fertility intention of women who were already using contraception. That is, understanding whether the fertility intentions of young women remain the same over time after their adoption of a contraception. Therefore, in South Africa a longitudinal study of this nature can enrich research in this area of study.

Furthermore, among factors that were expected to influence use and choice of contraception, the study revealed that knowledge of HIV transmission did not influence women's use or choice of contraception to prevent infection or pregnancy. A study that examines contraceptive decision making in the context of HIV can provide useful input of young women's understanding of HIV/AIDS and important factors that determine contraceptive use.

APPENDIX

7.1 Definition of Terms

Intentions: In psychological literature, intentions are: "complex mental states in which there is a desire for some outcome, a belief that taking a particular action will lead to that outcome and some degree of commitment to perform the action" (Malle., Baldwin, & Moses, 2003).

Total Fertility Rate (TFR): TFR refers to the (expected) number of children born to a woman if she were to live to the end of her reproductive years (15-49) and remain subject to the current age-specific fertility rates (Bongaarts, 1978).

Contraception: Contraception refers to methods or techniques that prevent pregnancy before or after sexual intercourse. They vary among males and females and include, but not limited to condoms; birth control pills; tubal sterilization; intrauterine devices (IUDs) and withdrawal methods (Schwartz & Gabelnick, 2002).

Contraception failure: occurs when incorrect/ inappropriate methods of contraception are used to prevent pregnancy or when contraception is not used consistently (Trussell, 2011).

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