

**EXPLORING THE NURSING STUDENTS' UTILIZATION OF
FAMILY PLANNING METHODS IN A SELECTED NURSING
EDUCATION INSTITUTION IN UMGUNGUNDLOVU DISTRICT,
KWAZULU-NATAL**

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DECLARATION

I, Vinkhumbo Gugu Aretha, declare that:

This research study, **Exploring the nursing students' utilization of family planning methods in a selected nursing education institution in UMgungundlovu District, KwaZulu-Natal**, is entirely the result of my own effort. It is being submitted for the degree of Masters in Nursing (Community Health) at the University of KwaZulu-Natal, Durban, South Africa. It has never been submitted for any other degree purpose. All sources that I have used have been acknowledged by means of referencing.


Student

17/12/2010
Date

Supervisor

Date

DEDICATION

This study is dedicated to my late son Azanda Malinga called to rest on the 05th of June 2010 at the age of 5 years. When I wanted to quit or not write exams, he would say, “Don’t worry mommy I’ll go with and write for you.”

To my surviving son, Phiwamandla Malinga, God is still good my son.

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ABSTRACT

AIM

The aim of this study was to describe the utilization of family planning methods by the nursing students in the selected nursing education institution.

METHODOLOGY

A non-experimental descriptive survey design with a quantitative approach was used to describe the utilization of family planning methods by the nursing students. For the study, the quota sampling technique where 106 nursing students were selected. A self-developed questionnaire based on a conceptual framework, study objectives, and existing questionnaires was used as a data collection instrument.

FINDINGS

The results yielded by the study showed that 63.9% (n = 62) used family planning methods before coming to college which was the majority of the respondents. Of the total number of participants, 35.1% (n = 34) who never used family planning methods before were still not using any method. The majority of students using family planning methods perceive this as beneficial. The perceived self-efficacy by the users is also high. A recommendation for future practice is that there should be health information available to students during orientation. The name used for these services may also need to be looked at. The qualitative study on the topic may yield different or similar results.

KEY CONCEPTS

Family Planning Services, Utilization, Family Planning Methods, Nursing Student, Nursing Education Institution.

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CHAPTER 1

1.1 INTRODUCTION

In 1798 an English parson by the name of Thomas Robert Malthus (1766-1834) published a famous polemical work, *An Essay on the Principle of Population*, in which he attributed the human misery of the time to a rapid growth in population (Jütte, 2003). His theory was that population increases in geometric progression, i.e. it increases at a constant rate, whereas the amount of available food only increases in arithmetic progression, and even has a tendency to decrease, since it is a question of absolute growth (Jütte, 2003). Malthus was not the first person to give some thought to the social consequences of an increase in population. Plato (*circa* 429-347 BC) and Aristotle (384-322 BC) both debated birth control, admittedly without basing their deliberations on the theoretical principles, which Malthus believed he had identified (Jütte, 2003).

It was during the Middle Ages that the counting of exact population numbers began. Census taking was intense in the Germany where in 1470 Archbishop of Speyer, Matthius of Ramung ordered his public servants to ascertain, not only the number of households, but the number of people in them by gender (Jütte, 2003). This changed during the Renaissance when women began to talk openly about the risks of falling pregnant. In the 19th century, the campaign to prevent pregnancy intensified and family planning programmes became one of the major health and social interventions in the second half of the 20th century (Jütte, 2003 and Seltzer, 2002). These programmes exist in most countries and in all world regions. As of 1998, 179 governments, representing 92

percent of governments where over 99 percent of the world's population lived, supported access to contraception (Seltzer, 2002).

Governments provide substantial support for family planning, and most users of contraception in developing countries rely on their governments for contraceptive supplies and services. Many of the family planning programmes in developing countries have been put in place with considerable support from international donors (Seltzer, 2002). In the early days of family planning programmes, the supply of contraceptive services was the major concern. Developing countries' governments, private organizations, and international donors directed considerable efforts toward increasing access to services. For years, the lack of access to services was seen as the major impediment to widespread use of contraception (Bertrand et al., 1995 in Seltzer, 2002). Easy access implied that contraceptives should be affordable, that services should be within a reasonable travelling distance and time, and that rules and regulations (such as limited clinic hours) should not limit access. Finally, easy access presumed that potential users had sufficient knowledge of the methods available and where to get them. Access continues to be seen as a constraint in many settings, especially in Africa, where the health infrastructure is weak, and among particular population groups such as adolescents (Seltzer, 2002). The study will therefore try to measure the utilization of family planning methods by the student nurses. It will interrogate whether the abovementioned factors are still at play in our modern day society.

1.2 BACKGROUND TO THE PROBLEM

The widespread adoption of family planning programmes represents one of the most dramatic changes of the 20th century (Murphy, 2004: 123-129). There has been a growing use of contraception around the world, a step, it has been argued, has given couples the ability to choose the number and spacing of their children and has had tremendous lifesaving benefits. Yet despite these impressive gains, contraceptive use is still low and the need for contraception is high in some of the world's poorest and most populous places (Smith; Ashford; Gribble and Clifton, 2009: 3).

Sub-Saharan Africa is the only region in the world where population growth rates have not fallen (Smith, et al., 2009). Because of high birth rates and falling death rates, annual growth rates for Sub-Saharan Africa were estimated to have risen from 2.5percent in 1960 to 3.0 percent in 1983. In 1983, the total fertility rate (TFR) for the region was an estimated 6.7 children per woman (Johnson, 1987 in Lucas, 1992). However, in the 1980s evidence was accumulating that southern Africa was a zone where fertility was expected to fall, and where contraceptive prevalence rates were high, at least in comparison with the overall levels for Africa in the 1970s (Lucas, 1992: 145).

Caldwell and Caldwell (2002: 76) have argued that the Sub-Saharan Africa will constitute the most important family planning frontier of the twenty-first century because fertility is still high in all its sub regions except Southern Africa. Caldwell and Caldwell (2002) further stated that at the end of the twentieth century, Sub-Saharan Africa was still characterized by a high population growth rate, around 2.5 percent. The doubt about

future trends is demonstrated by the United Nation's high and low variant projections that the population of the region of about 640 million in 2000, would approximately double or quadruple respectively by 2050 (United Nations, 1999). The medium variant figure for 2050 was 1.76 billion. The total fertility rate in the last year of the twentieth century was probably just under six births per woman of reproductive age, having been reduced to that level by substantial fertility declines in Southern Africa (Population Reference Bureau, 1999).

Some authors have argued that the introduction of family planning or contraceptive methods have contributed to women's freedom meaning they are now in a position to make decisions on whether to have babies and the number of babies they would like to have (Smith et al., 2009). However, even with these contraceptive methods being introduced, some women continue to have unwanted and or unplanned pregnancies (Smith et al., 2009). For some women, falling pregnant has resulted in unwanted consequences. Both unintended and unwanted pregnancy can have negative health, social and psychological consequences. (Russo, 2002 and Alvarez, 2008). Health related consequences include greater chances for illness and death for both mother and child. Social problems include divorce, poverty, child abuse, and juvenile delinquency (Russo, 2002 and Alvarez, 2008). In one study quoted by Russo (2002), unwanted children were found to be less likely to have had a secure family life. Another study conducted by Kaur in 2006, found that the planning status of pregnancy directly affected the anxiety levels of a woman. All of the above are a reflection of the dire consequences of unplanned and unwanted pregnancies. In nurse training, it was taboo for a nursing student, married or

not, to fall pregnant while on training. A pregnant nursing student was expected to resign or terminate her training. Many nursing students ended up hiding their pregnancies out of fear of losing their job or forfeiting the opportunity to complete their training (undocumented). However, with the introduction of new changes in the Nursing Education Curriculum, the present rule is that a student who falls pregnant is granted maternity leave and therefore drops a group or joins the lower group (KwaZulu-Natal College of Nursing Rule Book, 2007). The training period therefore becomes extended, but should not be extended by more than five years.

Nursing students, like other students in the institutions of higher learning are generally young and have just finished high school. According to the South African Nursing Council (2005) statistics, the majority of nurses that are trained in South Africa are female. Studies have shown that 68 percent of South African young men below 25 years were engaging in high risk sexual behaviours (Simbayi, Leickness, Kalichman, Seth, Jooste, Sean, 2004).

Nursing students, like all young people in tertiary institutions, are still in the exploratory phase of their young lives and are faced with health related challenges such as unhealthy lifestyles which include engaging in risky behaviour such as having unprotected sex (Alvarez, 2008). A number of studies have been conducted on the college students' risky lifestyles and many researchers agree that when students get to college, they are faced with challenges including risky sexual behaviours (Hicks and Miller, 2006; Cooper, 2002; and Leigh, 2002). The findings of all these studies have identified alcohol abuse as

a leading cause of the risky sexual behaviours. The findings of a study by Cooper (2002) in Columbia revealed that drinking was strongly related to the decision to have sex and to indulge in indiscriminate forms of risky sex, but was inconsistently related to protective behaviours like using condoms. Leigh (2002), on the other hand, found that the association of alcohol use and condom use varied by the type of sexual encounter. She concluded that drinking was not necessarily linked to unprotected intercourse and that the relationship between alcohol use and unprotected sex depended on the context and sexual experience of the partner (Leigh, 2002: 476-481).

During their training, nursing students have to fulfil different roles, i.e. being a student and being an employee. As such as they gain independence as they earn a salary and are employed under the Basic Conditions of Employment Act. Under this Act, they are entitled to Maternity Leave (Basic Conditions of Employment Act, No 75 of 1997). When nursing students fall pregnant during their training, they are faced with the same challenges that face any young parent. Literature indicates the most easily predictable psychosocial influences of premature pregnancy are:

- (a) dropping out of school or putting their training on hold, which in turn impairs the likelihood of a future job;
- (b) emotional marks left by an unwanted pregnancy or abortion, with or without complications;
- (c) affective, economic dependency, or both and
- (d) greater teenage mother vulnerability to prostitution and sexual exploitation, as well as to sexually transmitted infections (Alvarez, 2008: 2).

Young parents who are still studying also experience academic difficulties when faced with an unplanned pregnancy (Alvarez, 2008).

Several studies, including a study by Colditz (1994), have revealed that health care workers do not consistently use family planning methods. Similarly nursing students have been found to default from their family planning regime-especially their use of oral contraceptives (Colditz, 1994). This behaviour has been linked to a number of reasons, namely quality of care provided at public health facilities, adverse effects resulting from use of some methods and poor physical access (Knudsen, 2006: 18). Inadequate family planning practices may expose these young people to the risk of HIV/AIDS infection and unplanned or unwanted pregnancies (Pettifor, Rees, Kleinschmidt, Steffenson, MacPhail, Hlongwa-Madikizela, Vermaak and Padian, 2005).

Of the estimated 40 million people living with HIV/AIDS worldwide, nearly one-third is between the ages of 15 and 24 years (UNICEF-UNAIDS-WHO, 2002). Young women are at particularly high risk for becoming infected. In South Africa there are five infected 15-24 year-old females for every two infected males the same age (UNAIDS, 2002). Given this statistics, it is evident that the burden of new HIV infections in developing countries is concentrated among the young and females. There is emerging awareness that, even with knowledge of how to protect oneself from sexually-transmitted infections, such information may not always be usable in daily situations of economic and social disadvantage that characterize the lives of many young people, especially females (UNAIDS, 2002). This situation applies to nursing students because the majority of them

are young females. The selected institution's statistics show that of the 346 nursing students that were on training in 2009, 274 were females. This means that 79% of the nursing student population at the institution was female. The rate of pregnancy for the year 2007-2009 also show an increase in the number of nursing students who fall pregnant per year, despite the family planning services being available for and accessible to them. In the past three years, the statistics of students that have fallen pregnant in the selected nursing education institution have been as follows:

- (a) 2007-2.4 %;
- (b) 2008-3.3%; and
- (c) 2009-5.7%.

These statistics obviously show an increase every year, which is a major concern.

Globally, the contraceptive prevalence rate increased from 59% in 1990-1995 to 63% in 2000-2006 (WHO, 2009). Nonetheless, in some regions it remains very difficult to reduce the considerable unmet need for family planning and the high rates of adolescent fertility. Globally there were 48 births for every 1000 women aged 15-19 years in 2006, only a small decline from 51 per 1000 in 2000 (WHO, 2009: Health-related Millennium Development Goals).

Africa still has the highest number of women who are unable to access family planning services. Though the statistics at the KwaZulu-Natal occupational health clinics show the number of nurses that visit the clinic, this statistics does not reveal how many nursing students visit the clinic for family planning services. There have been no documented

studies that focus on the utilization of these health services, specifically by nursing students. Relevant studies conducted on young people in tertiary institutions have mainly focused on alcohol and substance abuse, as well as sexually transmitted infections. These studies have also focused on tertiary students in general and not on the nursing students specifically.

As part of the health care professional team, nurses are expected to set an example and utilize family planning clinics. However, relevant statistics have revealed that nursing students are still reported to experience unwanted or unplanned pregnancies, like any young people who are not health care providers. The study therefore aims to determine the factors related to utilization of family planning methods by the nursing students. The researcher aims to explore if the nursing students do utilize these family planning methods that are made available to them.

1.3 STUDY CONTEXT

The term “sick parade” will be used interchangeably with “occupational health clinic” which means the place or area in the hospital where employees go for various health services whilst on duty. It usually is situated among the ordinary wards for easy access to the employees. Not all of these clinics provide family planning facilities but information on these methods is freely available. In some hospitals these services are provided at Out-Patients Departments within the hospital premises.

1.4 PROBLEM STATEMENT

All KwaZulu-Natal College of Nursing campuses are located in or near a hospital that has an occupational health clinic which is meant to be utilized by staff members of that particular hospital. As part of the health care workforce, nursing students were allowed to utilize these services. There were no separate figures that show the utilization of these health services by nursing students because they were treated like any other health professionals who are employed full-time, and are qualified. However, nursing students are mainly young and are still exposed to a variety of challenges that are faced by young South African students. Reviewed literature showed that unlike the qualified, older nurses, when nursing students fell pregnant, they struggled to deal with the realities of parenthood. These consequences had a direct impact on their studies.

It is also not clear if nursing students as health professionals are utilizing these family planning clinics. A number of studies have been conducted to identify challenges faced by young people when they attend family planning clinics (Alvarez, 2008; Collumbien, Gerressu and Cleland, 2004). At the time of literature search no available studies had been conducted in South Africa to determine the extent to which young people who were in the nursing profession are utilizing family planning methods. It was therefore imperative that the utilization of family planning methods was explored in order to identify factors that influence their utilization of these methods.

1.5 PURPOSE OF THE STUDY

The purpose of the study was to describe the utilization of family planning methods by the nursing students in the selected nursing education institution.

1.6 RESEARCH OBJECTIVES

The study had the following objectives:

- To describe family planning method utilization by the nursing students.
- To describe nursing students' perceptions with regards to family planning methods utilization.
- To determine factors that influence family planning methods utilization by the nursing students.

1.7 RESEARCH QUESTIONS

The study focused on addressing the following research questions:

- How were the nursing students utilizing family planning methods?
- What were the nursing students' perceptions with regards to utilizing family planning methods?

- What were the factors that influenced family planning methods utilization by the nursing students?

1.8 SIGNIFICANCE OF THE STUDY

There is a safe and effective family planning method for every woman that enables her to protect her health and that of her children. More than half of all couples in the developing world are using family planning to delay, space or limit future pregnancies, yet the need for family planning keeps increasing as the number of women of reproductive age continues to grow (Smith, Ashford, Gribble and Clifton, 2009). An estimated 137 million women worldwide have an unmet need for family planning – they are not using any method and report that they want to avoid a pregnancy (Smith et al., 2009). To reach these women, and save additional lives, governments and donors need to focus more attention on and commit more resources to family planning programmes (Smith et al., 2009).

Family planning is one of the most cost-effective, high-yield interventions that exist today. Countries that invest in family planning can reap immediate health benefits, investment savings in the health and education sectors, and social and environmental benefits that extend well beyond a single generation (Smith et al., 2009). Family planning could prevent as many as one in every three maternal deaths by allowing women to delay motherhood, space births, avoid unintended pregnancies and abortions, and allow them the choice to stop child bearing when they have reached their desired family size (Collumbien, Gerressu, and Cleland, 2004). After giving birth, family planning can help

women wait at least two years before trying to become pregnant again, thereby reducing newborn, infant, and child deaths significantly (WHO, 2007). Teen pregnancies pose health risks, not only for the babies, but also for the young mothers, particularly those under the age of 18. Family planning can help young women avoid having children during this high-risk time and also avoid the social and economic consequences of early childbearing.

The correct and consistent use of condoms can significantly reduce the rate of new HIV infections. Many HIV-positive women and couples want to avoid becoming pregnant and there are many effective methods available to assist them. By averting unintended and high-risk pregnancies, family planning reduces mother-to-child transmission of HIV and the number of AIDS orphans whose life chances are seriously diminished because they have lost a parent, particularly the mother (Smith et.al., 2009). Governments around the world are focused on combating poverty and achieving a range of health and development goals, such as those outlined in the United Nations' Millennium Development Goals (MDGs). Family planning can contribute to nearly all of these goals, including reducing poverty and hunger, promoting gender equity and empowering women, reducing child mortality, improving maternal health, combating HIV/AIDS, and ensuring environmental sustainability (Population, Development, and Reproductive Health, 2007).

The findings of this study can be utilized as a baseline for designing strategies aimed at encouraging health care workers to utilize family planning services. The findings can also

be used in nurse training institutions to review their policies. One institution already has a policy on pregnant students which can be utilized as a baseline for the development of such policies (Rhodes University, 2007). Family planning is taught in the curriculum but the way it is done may need modification to give the nursing students insight into the importance of them actually utilizing the family planning services. The nursing students should not view family planning services as only intended for the patients of the clinic, but should consider using the services themselves. The study would also make researchers consider further exploration of the phenomenon.

1.9 OPERATIONAL DEFINITIONS

- **Family Planning (F/P) Services**

Family planning services in this study will mean a health clinic that offers family planning services to all nurses, including student nurses. The family planning services should be linked to a hospital that trains students and should be mainly for the employees of that institution.

- **Utilization**

For the purpose of the study utilization of family planning services will mean making use of the family planning services for the purpose of obtaining information, advice and/or any contraceptive method during the period of training.

- **Family Planning Methods**

Family planning methods in this study will refer to any method used to prevent pregnancy from occurring. These will include barrier methods, condoms, injectable methods, and oral contraceptives, both hormonal and non-hormonal methods. The term family planning methods will be used interchangeably with contraceptive methods.

- **Nursing Student**

A nursing student in the study will refer to any person, male or female, who is undergoing a four year diploma (R425) at a nursing education institution in order to enter into the nursing profession. This definition excludes people who are studying towards a post basic qualification. This term will be used interchangeably with the term student nurse.

- **Nursing Education Institution**

A nursing education institution in this study will refer to a place or area where nursing students go for theoretical instruction and where their training records are kept. Their training plan is also kept in this area. The nursing education institutions are located within or close to the hospital premises.

1.10 CHAPTER CONCLUSION

The chapter has looked at the background of the study which highlighted the problem within the sub-Saharan Africa where statistics shows that the fertility rate is increasing despite the introduction of family planning measures. The study has proven to be

important because an effective family planning programme could prevent maternal deaths as well as the transmission and spread of diseases. Family planning is also important if we want to achieve the United Nation's Millennium Development Goals (MDGs, 2009).

The results that will be generated by the study will assist in initiating intervention plans to encourage the use of a family planning programme for a healthier, happier generation.

Chapter 2 will look at literature related to the study. Chapter 3 will look at the methodology; while Chapter 4 is concerned with the findings of the study. Chapter 5 is where the findings are discussed and the list of references follows thereafter.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The literature review will endeavour to provide a theoretical body of knowledge related to family planning, its meaning, origins, and its significance in today's living. The main purpose of the study is to explore the extent of utilization of family planning services by the young student nurses in the Umgungundlovu district. Literature suggests that family planning can be very useful if we want to achieve most of our Millennium Development Goals (2009). Various studies have attempted to explore the utilization of primary health care services (family planning services included), as these form part of the health promotion measures.

2.2 FAMILY PLANNING

Recent research has shed light on how family planning increases rates of survival, improves the health of millions of people, and helps achieve national goals (Smith et al., 2009: 3). Family planning is still considered the most cost effective intervention which serves to benefit many people. There are a number of benefits from family planning that were identified by Smith et al. (2009):

(a) ***Family planning saves women's lives***. Family planning could prevent as many as one in every three maternal deaths by allowing women to delay motherhood, space births, avoid unintended pregnancies and abortions, and stop childbearing when they have reached their desired family size;

(b) ***Family planning saves children's lives.*** After giving birth, family planning can help women wait at least two years before trying to become pregnant again, thereby reducing newborn, infant, and child deaths significantly (WHO, 2007);

(c) ***Family planning saves adolescents' lives.*** Teen pregnancies pose health risks not only for the babies but for the young mothers, particularly those under the age of eighteen. Family planning can help young women to avoid having children during this high-risk time in their lives and also avoid the social and economic consequences of early childbearing;

(d) ***Family planning reduces deaths from AIDS.*** The consistent and correct use of condoms can significantly reduce the rate of new HIV infections. Many HIV-positive women and couples want to avoid becoming pregnant and many effective methods are available to assist them. By averting unintended and high risk pregnancies, family planning reduces mother-to-child-transmission of HIV and the number of AIDS orphans, whose life chances are seriously diminished because they have lost a parent, particularly the mother; and

(e) ***Family planning helps governments achieve national and international development goals.*** Governments around the world are focusing their efforts and resources on combating poverty and achieving a range of health and development goals, such as those outlined in the United Nations' Millennium Development Goals (MDGs). Family planning can contribute to nearly all of these goals, including reducing poverty and hunger, promoting gender equity and empowering women, reducing child mortality, improving maternal health, combating HIV/AIDS, and ensuring environmental sustainability.

There is a safe and effective family planning method for every woman that can enable her to protect her health and that of her children. Family planning is defined by the World Health Organization as an important aspect if we want to achieve the optimal health for our communities. Family planning originated in the 1960s, but still there are countries that have very poor coverage as far as the programme is concerned. Women from these countries have expressed their desire to avoid pregnancy and space their children properly, therefore governments and donors need to focus more attention and commit more resources to family planning programmes (Smith et al., 2009). Policymakers have turned their attention to other issues such as HIV/AIDS, infectious diseases, and alleviating persistent poverty and as a result, family planning programmes are struggling at a time when universal access to family planning could contribute to solving these issues (Smith et al., 2009). Overcoming these challenges is important for the health and welfare of mothers, children and families. Family planning has health benefits for women, their sexual partners, and their children. It helps to prevent unintended pregnancies and the number of unsafely performed abortions, thereby reducing maternal deaths and disabilities, as well as infertility. Family planning also prevents high-risk pregnancies among adolescents under the age of 18, women over the age of 35, women who have had many births or births spaced too closely together, women with HIV/AIDS and other health conditions such as malaria and tuberculosis. Family planning also helps with spacing births resulting in lower rates of newborn, infant and child mortality. Women get more time to breastfeed their baby which improves infant health and more time to recover physically and nutritionally between births (Singh, 2003:24).

2.3 REPRODUCTIVE HEALTH INITIATIVES

In the past young, unmarried people were not expected to need reproductive health services. Significant social changes, which affect all societies to some degree, have prompted programme planners and managers to consider specialized services for people in the adolescent or young adult age group. Some of these changes relate to broadened opportunities for women, who are now staying in school longer and entering the workforce in larger numbers. The age of marriage is rising in most countries. Combined with the decreasing age of menarche, those years create a longer time period during young women are single and are capable of becoming pregnant. Sexual activity during this unmarried period has increased, fostered by other social changes such as urbanization and mass communications, thereby creating a new level of need for reproductive health care (Senderowitz, 1999: 4). Another impetus for placing greater emphasis on the reproductive health of this group is the alarming increase of sexually transmitted infections (STIs), including HIV. Young people are contracting sexually transmitted infections out of proportion to their numbers. In particular, young women represent the fastest-growing cases of new HIV infection (Cates and McPheeters, 1997 in Senderowitz, 1999).

Health services are thought of as offered at a fixed site to which clients come for care. Senderowitz (1999) continues to argue that to a major extent, because this infrastructure is already available, a practical urgency exists to consider how such services could be adapted to better attract and serve a clientele of young people. The reproductive health services needed by the young people include sexual and reproductive health education

and counselling; physical examinations, including breast examinations for females and testicular exams for males; cervical cancer screening e.g. Pap smears; sexually transmitted infections screening, counselling and treatment; HIV testing and counselling; contraceptive method choice, adoption and follow-up; pregnancy testing and options counselling; abortion services (where legal) and post abortion care; prenatal and postpartum care; well-baby care; and nutritional services (Brindis and Davis, 1998 in Senderowitz, 1999). In developing countries, most clinics or service providers have to limit the number of services provided. It is important; therefore, for clinics to carefully assess the health trends and needs among their specific target populations to determine the priority of services they offer (Senderowitz, 1999).

An increasing number of channels and models have proven successful to serve the youth in the area of reproductive health services. Large clinics are sometimes located in areas which are not conveniently located for the youth. A project implemented by the Association for Reproductive and Family Health (ARFH) in Nigeria addressed that problem by establishing satellite clinics in rooms donated by the community in locations where a large proportion of school-going and out-of-school youth are located (Duby, 1998). School-linked clinics are another way to bring services to locations where large numbers of young people spend time. Importantly, workplace models have become more common as employers understand the benefits of a healthy workforce and delayed pregnancies among their young female employees (Senderowitz, 1997a). Partnering with existing agencies that serve the youth is a way to reach a significant number of young people already organized into programmes and activities. In Africa, a family life

education project (though not offering services) was implemented by the 29-country Africa Region Boy Scout Association (Paxman, 1993). The programme proved to be more challenging than anticipated and fell short of its objectives and anticipated expansion activities (Senderowitz, 1997a). An apparently more successful model implemented by the International Planned Parenthood Federation (IPPF) in six countries, Youth for Youth, worked through a variety of non-governmental organizations (NGOs) that reached young people in urban slums, prisons, schools, in the military, as well as those already parenting (International Planned Parenthood Federation, 1993; 1994; Senanayake, 1992). All of these approaches can and should consider ways to make services more accessible and friendlier to their young clients or participants.

2.4 REASONS FOR AVOIDING EXISTING SERVICES

Young people avoid utilizing the existing services due to policy constraints, operational barriers, lack of information, and feelings of discomfort.

2.4.1 POLICY CONSTRAINTS

Laws in many countries restrict access to certain kinds of health services according to age, marital status, or both (Family Health International, 1997). Reproductive health services often discriminate against young people, sometimes by requiring a minimum age or parental consent. Even where the law does not specify restrictions, health facilities, health staff members and other providers sometimes establish their own policies that prevent or diminish adolescent access. This situation occurs more frequently when laws or policies are unclear or unevenly enforced (Senderowitz, 1999).

2.4.2 OPERATIONAL BARRIERS

Even when clinics and other service programmes do not intend to bar adolescent clients from their services, operational policies or clinic characteristics can inadvertently serve to reduce access. Some of the barriers include inconvenient hours of operation; lack of convenient transportation; and high costs of services in countries where fees are paid for services (Knudsen, 2006).

2.4.3 LACK OF INFORMATION

Young people are constantly learning new information about their emerging sexuality and development. Often their friends are the source of information and as a result, many tend to be poorly informed or misinformed about such matters. Situations that reflect this condition and comprise additional barriers to service are a poor understanding of their changing bodies and needs; insufficient awareness of pregnancy and sexually transmitted infections risks; little knowledge of what services are available; and lack of information of reproductive health service locations (Knudsen, 2006).

2.4.4 FEELING OF DISCOMFORT

The most widespread explanation for young people's avoidance of clinics and service providers is their discomfort with real or perceived clinic conditions and attitudes of providers. Such perceptions could result from their own experiences, second-hand information from peers and significant others, or a general reputation about the services. The following are specific concerns that young people have suggested as reasons for their not seeking or using reproductive health services:

- (a) the belief that the services are not intended for them;
- (b) concern that the staff will be hostile or judgmental;
- (c) fear of medical procedures and contraceptive methods, including side effects;
- (d) concern over lack of privacy and confidentiality;
- (e) fear that their parents might learn of their visit;
- (f) embarrassment at needing or wanting reproductive health services; and
- (g) shame, especially if the visit follows coercion or abuse (Senderowitz, 1999).

2.5 YOUTH-FRIENDLY SERVICES

According to Senderowitz (1999), services are youth-friendly if they have policies and attributes that attract youth to the facility or programme, provide a comfortable and appropriate setting for serving youth, meet the needs of young people, and are able to retain their youth clientele for follow-up and repeat visits. Some of the adaptations and additions needed to make services youth friendly have been identified by adolescents themselves. Other characteristics have been identified by service professionals, including some that have been implemented and evaluated as part of an overall effort to provide effective reproductive health services for youth. The characteristics relate to the provider, the facility, and the overall design.

The provider characteristics include specially trained staff; respect for young people; a place where patient privacy and confidentiality are honoured; adequate time is available for client and provider interaction; and peer counsellors are available. The people providing youth-friendly services must be specially trained so that they understand the

young people very well. The importance is that the staff should be able to communicate with the young people, must come down to their level and need to understand adolescent developmental physiology. Young people, like everyone, need to be respected so that they are able to show respect themselves. When young people reach the adolescent stage, the most important thing that they value is their privacy. The youth-friendly services provider needs to ensure that privacy and confidentiality are maintained at all times, even if the provider is familiar with the parents. Young people have a lot of questions and problems that they face in their day to day lives and adequate time is required to have those questions and problems properly addressed. They will not respond to rushed services which leave them even more confused. A well trained provider will know the delicateness of dealing with the youth. Over and above being trained in youth health, it is advisable that the peers who have certain experiences, like having a baby, avail themselves to counsel others. The youth tend to listen more to their peers than adults.

The health facility characteristics include a separate space and special times set aside for the youth; convenient hours and location; adequate space and sufficient privacy; as well as comfortable surroundings.

The programme design characteristics will be achieved through youth involvement in the design and continuing feedback; drop-in clients should be welcomed and appointments arranged rapidly; there should be no overcrowding and short waiting times; affordable fees (where applicable); publicity and recruitment that inform and reassure youth; boys and young men welcomed and served; a wide range of services available; and necessary

referrals available. Other possible characteristics are educational material available on site and to take home; group discussions available; delay of pelvic examination and blood tests possible; and alternative ways to access information, counselling, and services (Senderowitz, 1999).

2.6 PREVENTION AND REPRODUCTIVE HEALTH PROMOTION PROGRAMMES

In the United States, a model known as the Peer Providers of Reproductive Health Services, was implemented to improve strategies for meeting the reproductive health needs of adolescents. Peer providers were trained and certified as fully functioning family planning clinic staff who delivered services to adolescent clients during Teen Clinic hours, as well as during regular adult clinic hours. Other features of this model include a strong outreach component that provided individual and group health education in schools and community settings, a teen phone line, a quarterly follow-up telephone call, an emphasis on male services, and a Teen Advisory Committee that provided input into programme operations. An evaluation found increased contraceptive compliance by teen clients (27% increase in the percentage of female clients who always use birth control and a 17% increase in the percentage of female clients who used birth control at last intercourse), increased use of an effective contraceptive method at last intercourse (81%), decreased interval between sexual debut and adoption of contraception, increased number of prosexually active teenagers enrolled in the clinics, and an indication that the longer clients were exposed to the peer provider clinic, the greater likelihood of decreased pregnancy and sexually transmitted infection rates. Outreach programmes at schools and

in the community also appeared to be a key referral source and were especially effective at increasing the number of male clients (Herz, Olson, and Reis, 1988).

In the Philippines, in response to a Department of Health initiative, the Johns Hopkins Programme for International Education in Gynecology and Obstetrics (JHPIEGO) supported an effort to improve reproductive health services in collaboration with the Association for Philippine Schools of Midwifery, the Association of Deans of Philippine Colleges of Nursing, and the Foundation for Adolescent Development. The project aimed to strengthen adolescent reproductive health services in 27 reproductive health training network clinics and to improve adolescent reproductive health training for faculty members in the schools of midwifery and colleges of nursing. Actions included training needs assessments, development of training materials, development of action plans to strengthen peer counselling and referral systems at the colleges and universities, and follow-up visits to the clinic sites to assess the quality of service to adolescents. According to the training post-test, attitudes were positively changed among faculty members and project staff members. Furthermore, site reports and follow-up visits showed adjustments at several clinic sites that improved service delivery for adolescents. These adjustments included the addition or improvement of counselling for adolescents, the arrangement of separate space for counselling adolescents, the setting aside of special times for adolescents, the establishment of outreach and referral systems, and the training of peer counsellors (Agbayani, 1997; Dean, 1998b).

In Zambia, a John Snow, Inc. Service Expansion and Technical Support (JSI/SEATS) project, the Lusaka Urban Youth-Friendly Health Services project, collaborated with the Lusaka District Health Management Team to improve and to promote access to and use of quality reproductive health services for youth ages 10 to 24 years. Before establishing the programme, a participatory learning and action exercise was undertaken to create awareness and to identify needs. An important finding from this exercise was that parents are too shy to discuss reproductive health issues with their children, a task formerly carried out by grandparents and aunties. Thus the project was conceptualized to the community as placing the health facilities in the role of grandparents – with parents kept informed. A key design element to attracting and serving the youth is providing peer educators in two clinics. The peer educators also perform community outreach. Contraceptive education and prenatal care are available daily at seven health centres. Condoms and foaming tablets are provided free and referrals are made for other services. Assessment of youth utilization indicates that the number of users has doubled from baseline figures, including a significant increase in participation by non pregnant teens seeking counselling and prevention services (Chirwa, 1998; Zeko and Weiss, 1998).

The Planned Parenthood Association of South Africa set up the Youth Information Centre Pilot Project to provide clinic reproductive health services exclusively for adolescents and to create a replicable model for widespread adoption. A key planning strategy was the involvement of young people in the programme's design. They are also involved in monitoring and management. The seven pilot centres are run by young professionals and offer contraceptive services, sexually transmitted infections treatment,

counselling, and pregnancy tests in a youth-friendly environment. Part of the “friendliness” was defined by not using the term “clinic” and not furnishing the centres in a medical mode. The centres also offer some form of entertainment, such as recreational and educational videos, and health literature. Privacy is assured. Referrals are made to alternative health and social services which are not provided by the centres. Although fully-fledged evaluations have not yet occurred following the initial baseline studies, attendance information shows that clients have been increasing since the programme began. Staff members report improved attitudes toward condom use (Trangsrud, 1998).

2.6.1 CHECKLIST: CHARACTERISTICS OF YOUTH-FRIENDLY SERVICES

Provider Characteristics

- Specially trained staff
- Respect for young people
- Privacy and confidentiality honoured
- Adequate time for client and provider interaction
- Peer counsellors available

Health Facility Characteristics

- Separate space and special times set aside
- Convenient hours
- Convenient location
- Adequate space and sufficient privacy
- Comfortable surroundings

Programme Design Characteristics

- Youth involvement in design and continuing feedback
- Drop-in clients welcomed and appointments arranged rapidly
- No overcrowding and short waiting times
- Affordable fees
- Publicity and recruitment that inform and reassure youth
- Boys and young men welcomed and served
- Wide range of services available
- Necessary referrals available

Other Possible Characteristics

- Educational material available on site and to take home
- Group discussions available
- Delay of pelvic examination and blood tests possible
- Alternative ways to access information, counselling, and services

Source: Senderowitz Judith, 1999. Making Reproductive Health Services Youth Friendly: Research, Programme and Policy Series.

2.7 FAMILY PLANNING STRATEGIES IN SOUTH AFRICA

After the adoption of the Constitution in 1996, a policy framework for the provision and use of contraception was drafted, based on the three main broad objectives:

- (a) To remove barriers that restrict access to contraceptive services;
 - (b) To increase public knowledge of client's rights, contraceptive methods and services;
- and

(c) To provide high quality contraceptive services.

In pre-colonial southern Africa, fertility was regulated through a range of cultural practices that ensured effective child spacing. With the colonization and industrialization of South Africa, Africans largely lost the ability to exercise control over various aspects of their society, community and personal lives, which contributed to rapid population growth. Migrant labour and influx control regulations, in particular, dramatically affected Africans' control over reproduction because of the separation of husbands from their wives and the undermining of normal social institutions (Plaatjie, 1982).

Family planning services in South Africa began in the 1930s as mothers' clinics that were intended largely to provide white, poor married women with birth control methods and advice. From around the end of the 1930s onwards, the falling birth rate of the white population, together with the increase of the non-white population caused increasing fear among the white community of being swamped by large numbers of black people. During the 1960s, the government introduced new demographic-related policies and programmes in response to the *swart gevaar* (black fear). Certain politically destabilizing events, such as the growth of the Black Consciousness Movement and the 'winds of change' swept through the rest of the continent. In the words of Prime Minister BJ Voster in 1972, "*We would like to reduce them, and we are doing our best to do so, but at all times we would not disrupt the South African economy*" (Rogers, 1972). Positive incentives (e.g. child benefit payments) were offered to whites in the country to increase the number of children per family. The national family planning programme was formally established in

1974. Free family planning services were made available to all racial groups but on a segregated basis. In municipal areas, family planning was offered as an integral part of Mother and Child Health services, but elsewhere national and provincial health departments developed strong vertical family planning services. In the 1980s, the ideology shifted from family planning services being a population control tool to it being a programme to improve women's health through birth spacing. It was not until the late 1980s and early 1990s that family planning services were integrated into primary health care services, chiefly for financial reasons, but also in response to international trends and pressure by opposition groups within the country (Richter, 1996).

According to the Department of Health's website, family planning services were impacted upon by the following legislation:

- Abortion and Sterilization Act, 1975 (Act No. 2 of 1975). This contained highly restrictive criteria that made abortion illegal or inaccessible for most women.
- Apartheid legislation. Under apartheid, race played a major role in determining an individual's legal status. A combination of apartheid land laws, separate development laws and pass laws (e.g. Group Areas Act, 1950 and 1957, and the Reservation of Separate Amenities Act, 1953) significantly affected all aspects of the lives of people of different races, including access to health services.
- Women's legal capacity. By common law in South Africa, a woman was subjected to her husband's marital power. Regarding family planning service provision, this translated into women requiring their husbands' consent in order to be sterilized and, in some places, even to receive any family planning method.

The Matrimonial Property Act, 1984 (Act 88 of 1984) abolished the common law rule.

2.8 CURRENT STATUS OF CONTRACEPTION

South Africa has a total population of approximately 40.6 million. The average growth rate of the population is estimated at 2.02 percent a year (1991-1996). The racial composition of the population is 76.7 percent African; 10.9 percent White; 8.9 percent Colored; 2.6 percent Asian; and 0.9 percent unspecified. Overall, 44.2 percent of the population is under 20 years. According to the most recent South Africa Demographic and Health Survey (SADHS), an estimated 51% of South African adults were using contraceptives in 1998. The total fertility rate for the period 1995 to 1998 is 2.9. The total fertility rate for non-urban women (3.9) is almost double that for urban women (2.3). Fertility rate declines as education increases – the total fertility rate among women with no education is 4.5 compared with 1.9 for women with some university-level education (Statistics in Brief, 1996).

TABLE 2.1: KNOWLEDGE AND USE OF CONTRACEPTIVE METHODS AMONG ALL WOMEN AGED 15-49.

<i>CONTRACEPTIVE METHOD</i>	<i>PERCENT WHO KNOW METHOD</i>	<i>PERCENT WHO ARE CURRENTLY USING</i>
Any method	96.7	50.1
Any modern method	96.5	49.3
Pill	93.2	9.3
IUD	71.3	1.2
Injections	94.4	27.3
Diaphragm/foam/jelly	16.4	0.0
Condom	88.7	1.9
Female sterilization	67.9	8.7
Male sterilization	35.3	0.9
Any traditional method	37.2	0.6
Periodic abstinence	25.3	0.2
Withdrawal	30.5	0.4
Herbs	12.4	0.1
Other methods	4.8	0.1

Adapted from South African Health Review, 1997.

Research has also highlighted some common patterns of contraceptive use and sexual behaviour that are of practical relevance for contraceptive service provision. The Medical

and Service Delivery Guidelines for Family Planning (1997) identified the most significant factors that influence contraceptive use:

- (a) knowledge about contraception;
- (b) attitudes on issues related to contraception;
- (c) socio-economic development;
- (d) urban-rural residence;
- (e) women's education and status; and
- (f) cultural values, beliefs and norms.

2.9 STUDENTS' HEALTH-RELATED BEHAVIOUR

Students in higher education institutions face a heavy workload, have a low degree of control over their personal situations, and receive limited appreciation and feedback for their work. These factors, combined with the perspective of a competition-dominated and individualistic labour market, may account in part for the development of a variety of health problems (Vaez and Laflamme, 2003).

On the positive side, tertiary education marks a period when new systems of social support are being created. New peer groups that form in college or university influence students' thoughts and behaviours (Hicks and Miller, 2006). Researchers have proven that there is substantial change in the performance of health behaviours during the first three years of college and that peers can have a strong impact on the types and magnitude of these changes (Lau, Quadrel and Hartman, 1990). When students get to institutions of higher learning they immediately have to mature and become adults. Institution life is

tough and hostile to some students. They also enjoy the extended freedom where they can do as they please without anyone following them. Their behaviour changes and they may even engage in dangerous and risky behaviours such as using drugs or alcohol and may engage in risky sexual activities. Most of the student nurses do not make it through the first year because of the distractions that they face. What is even more worrying nowadays is the number of serious diseases which impact on their lives permanently. It is during this time that they reach the peak of their sexual emotions (Experiential information) but there is usually less talk about use of family planning services and health matters are generally taken for granted.

2.10 THEORETICAL UNDERPINNINGS

Two models were reviewed namely; the Health Belief Model and the Health Promotion Model in order to select the one that could best support the study.

2.10.1 THE HEALTH BELIEF MODEL

The Health Belief Model is a commonly used model in health education and health promotion. The underlying concept of the original Health Belief Model is that health behaviour is determined by personal beliefs or perceptions about a disease and the strategies available to decrease its occurrence (Hochbaum, 1958 in Glanz, Rimer and Lewis, 2002).

This model has four main theoretical constructs, namely: perceived seriousness, perceived susceptibility, perceived benefits, and perceived barriers. Each of these

perceptions, individually or in combination, can be used to explain health behaviour. More recently, other constructs have been added to the Health Belief Model and the model has been expanded to include cues to action, motivating factors, and self-efficacy (Turner, Hunt, DiBrenzo and Jones, 2004).

The construct of perceived seriousness speaks to an individual's belief about the seriousness or severity of disease. While the perception of seriousness is often based on medical information or knowledge, it may also come from beliefs that a person has about the difficulties a disease would create or the effects it would have on his or her life in general (McCormick-Brown, 1999).

Personal risk or susceptibility is one of the more powerful perceptions in prompting people to adopt healthier behaviours. The greater the perceived risk, the greater the likelihood of engaging in behaviours to decrease the risk (Turner, et. al, 2004).

The construct of perceived benefits is a person's opinion of the value or usefulness of a new behaviour in decreasing the risk of developing a disease (Turner, et. al, 2004). The last construct of the Health Belief Model addresses the issue of perceived barriers to change. This is an individual's own evaluation of the obstacles in the way of him or her adopting a new behaviour (Turner, et. al, 2004).

The four major constructs of perception are modified by other variables, such as culture, education level, past experiences, skill, and motivation. These are individual characteristics that influence personal perceptions (Turner, et. al, 2004).

Cues to action are events, people, or things that move people to change their behaviour (Graham, 2002). Self-efficacy is the belief in one's own ability to do something (Bandura, 1977). People generally do not try to do something new unless they think they can do it.

2.10.2 THE HEALTH PROMOTION MODEL

The health promotion model (HPM) proposed by Nola J. Pender (1982; revised, 1996) [Figure 2.1] provides a heuristic framework on exploring the utilization of family planning programme by the young student nurses.

Health promotion model describes the multi dimensional nature of persons as they interact within their environment to pursue health. The model focuses on the following major concepts:

- Individual characteristics and experiences;
- Behaviour-specific cognition and affect; and
- Behavioural outcomes.

The model notes that each person has unique personal characteristics and experiences or individual perceptions that affect subsequent actions. These individual perceptions include how one important one perceives health to be, as well as the things that are

perceived as benefits and threats. The set of variables for behavioural specific knowledge and affect have important motivational significance. These variables can be modified through nursing actions. Health promoting behaviour and likelihood to action are the end points in the health promotion model. Health promoting behaviours should result in improved health, enhanced functional ability and better quality of life at all stages of development. The final behavioural demand is also influenced by the immediate competing demand and preferences, which can derail an intended health promoting actions.

2.10.2.1 ASSUMPTIONS OF THE HEALTH PROMOTION MODEL

The health promotion model is based on the following assumptions, which reflect both nursing and behavioural science perspectives:

- Persons seek to create conditions of living through which they can express their unique human health potential.
- Persons have the capacity for reflective self-awareness, including assessment of their own competencies.
- Persons value growth in directions that they view as positive and they attempt to achieve a personally acceptable balance between change and stability.
- Individuals seek to actively regulate their own behaviour.
- Individuals in all their biopsychosocial complexity interact with the environment, progressively transforming the environment and being transformed over time.
- Health professionals constitute a part of the interpersonal environment, which exerts influence on persons throughout their lifespan.

- Self-initiated reconfiguration of person-environment interactive patterns is essential to behaviour change.

Personal perceptions and cognitions of any given situation or context that can facilitate or impede behaviour, include perceptions of options available, demand characteristics and the aesthetic features of the environment in which given health promoting is to take place. Situational influences may have direct or indirect influences on health behaviour. (www.currentnursing.com).

The Health Promotion Model was selected over the Health Belief Model even though there are similarities between the two. The Health Promotion Model provides an in-depth explanation in relation to the study topic. Some constructs which are present in the Health Promotion Model are not found in the Health Belief Model.

2.11 APPLICATION OF MODEL IN THE STUDY

There are three major concepts in the Health Promotion Model, namely: individual characteristics and experience, behaviour-specific cognition and affect, and behavioural outcome (Figure 2.1).

2.11.1 INDIVIDUAL CHARACTERISTICS AND EXPERIENCE

The study will examine personal factors like age, gender, marital status, race, level of study. The frequency of the similar behaviour in the past, i.e. past experiences will also be examined to determine what the students perceive as the importance of health. Do they

view utilizing family planning methods as important? What they perceive as threats and benefits also form an integral part of the study because some students may not be utilizing family planning services because they have their own perceived threats. Some student nurses may use the family planning services because they have their perceived benefits.

2.11.2 BEHAVIOURAL SPECIFIC COGNITIONS AND AFFECT

There are a variety of factors that may cause the student nurses to utilize the family planning services. The behavioural specific cognition and affect include variables such as perceived benefits of action, i.e. does the nursing student view utilizing family planning services as beneficial? Perceived barriers to action are the things that inhibit family planning service utilization while perceived self efficacy is the confidence that the nursing student has about family planning service utilization. Situational influences include the contraceptive methods that are available.

2.11.3 BEHAVIOURAL OUTCOME

The behavioural outcome is influenced by the individual's commitment to the utilization of family planning services. Competing demands make a nursing student feel like he/she has a low level of control while competing preferences which are behaviours over which a nursing student exerts high control such as choosing the contraceptive method of choice. Health promoting behaviour is that behaviour which is intended to achieve the utilization of family planning services.

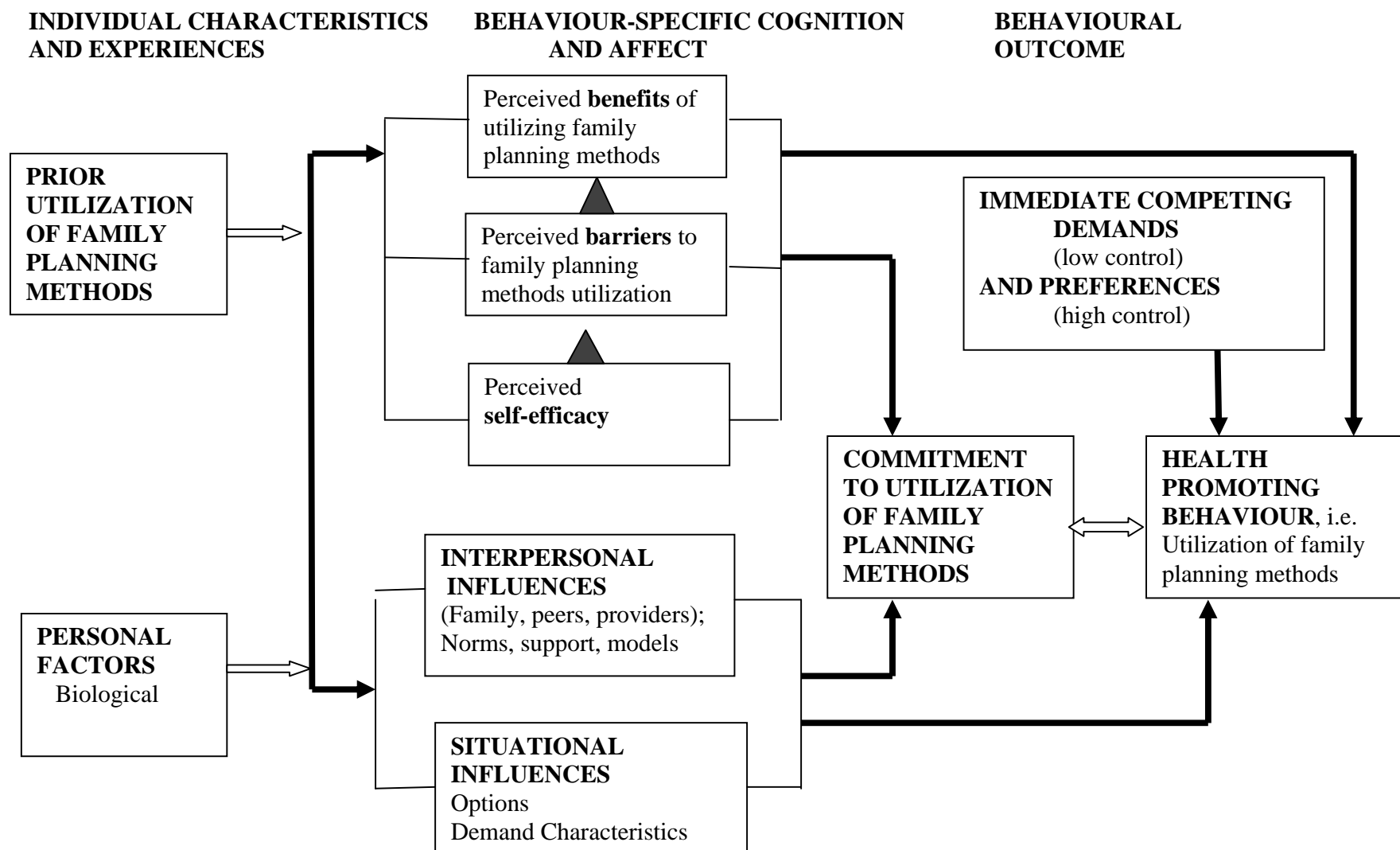


Figure 2.1: (Conceptual framework adapted from health promotion in nursing practice, Pender, 1982 and Becker; Drachman and Kirscht, 1974; modified to explain the study)

2.12 CHAPTER CONCLUSION

The chapter has closely looked at literature related to the utilization of family planning services and has discovered that there are a number of factors that may cause the youth to avoid these services. The study will therefore examine whether there is utilization or not. The gap in literature has been observed because most of the literature available is about adolescents (presumed to be of school going age) and not about young people in service or at institutions of higher learning. The literature has uncovered the development of youth-friendly reproductive health services. The general statistics on total fertility rates has been looked at briefly, but the study will uncover if there is any truth in the perception that the number of nursing students falling pregnant is increasing like that of the general population.

CHAPTER 3

METHODOLOGY

3.1 PARADIGM

The study was informed by the positivistic paradigm as it views things objectively, excludes bias and is deductive in nature. Positivists believe that phenomena are not haphazard or random events, but rather have causes (Polit, Hungler and Beck, 2001: 12). The researcher in this study aimed to determine the underlying factors that influence the utilization of family planning methods by nursing students.

3.2 RESEARCH APPROACH

The study utilized a quantitative, non-experimental approach since the purpose of the study was to describe the utilization of family planning methods by the nursing students.

3.3 RESEARCH DESIGN

The study was descriptive. Descriptive designs provide descriptions of the variables in order to answer the research questions (Brink, 2000: 109; Polit and Beck, 2004).

3.4 STUDY SETTING

The setting was a selected nursing education institution in the Umgungundlovu District. The campus is situated about four kilometres from the city centre and eight kilometres from the nearest hospital with which the campus is linked for training of students. It is a

well established institution with a rich history of producing nursing professionals of highest calibre. The institution runs a number of nurse training programmes, including the basic four-year diploma programme according to Regulation 425 (R425) of 22 February 1985. There are more than five hundred students currently training at the institution and the basic four-year diploma comprises about 335 students. There are a number of student intakes every year, at different times for different programmes. The basic four-year diploma intakes are in January and July where a maximum of fifty (50) students are enrolled per intake.

3.5 POPULATION

The study population included all 265 female students enrolled in the basic four-year diploma (from level one to four of training). The male students were excluded because the phenomenon of interest was the rate of pregnancy of female students whose studies would have been inadvertently interrupted. The males were also in a minority (21%) and rarely had their studies interrupted.

3.6 SAMPLING

The nursing students were randomly selected and the representativity of the sample ensured. Stratified random sampling, also called the proportional or quota sampling technique was used for more statistical precision. The students were divided into strata according to the level of training and then a certain percentage from each stratum was selected (Brink, 2000; Katzenellenbogen et al, 2004).

3.6.1 SAMPLE SIZE

To ensure the stability and reliability of the results, the sample size was 40% of the total population (Katzenellenbogen et al, 2004). This meant that the sample size was calculated as follows:

$$\begin{aligned}\text{Sample size} &= \text{Population} \times 40 / 100, \\ &= 265 \times 40 / 100 \\ &= 106 \text{ nursing students.}\end{aligned}$$

3.6.2 SAMPLING FRAME

A list of potential sample students was compiled.

3.7 DATA COLLECTION PROCESS

Ethical clearance from both the University of KwaZulu-Natal Ethics Committee and the Nursing Institution's board was granted to the researcher, and the process of data collection commenced. The sampled participants were contacted and informed that they had been randomly selected. A meeting was arranged with the participants in the institution's boardroom or classrooms as they were well controlled environments. This ensured that there was minimal or no disturbance during data collection. The researcher explained the study purpose and process to the participants and all ethical issues were addressed. Once the informed consent document had been signed by both the researcher and the participants, questionnaires were then distributed to the participants. The

participants were asked to complete the questionnaires themselves and drop them in the provided questionnaire return box which was placed at exit point. The researcher was not in the room during the completion of the questionnaire but was in the next room to avoid the participants feeling intimidated or pressurized. The researcher was available to clarify queries that might have been raised by the participants.

3.8 RESEARCH INSTRUMENT DESCRIPTION

Data collection was conducted using a self-developed questionnaire based on a conceptual framework, study objectives, and an existing questionnaire once used by Simbayi, et al., 2004. The conceptual framework enabled the researcher to formulate questions around the framework's major concepts.

The instrument was divided into three sections:

Section A: Questions on individual characteristics and experiences.

Section B: Questions on behaviour-specific cognitions and affect.

Section C: Questions on behavioural outcome.

3.9 DATA QUALITY

No data-collection technique is perfect (Katznellenbogen, 2004). It is therefore important that the margin for error is controlled and reduced where possible to the lowest possible level. To ensure the credibility of the data collected, it was important that the instrument was checked for validity and reliability (Polit and Beck, 2004).

3.9.1 VALIDITY AND RELIABILITY OF THE DATA COLLECTION INSTRUMENT

Reliability of the instrument refers to the degree to which the instrument can be depended upon to yield the consistent results, if it is used repeatedly over time on the same persons, or if used by two researchers (Brink, 2000: 164). Ten students from the main sample were given the questionnaire twice at different intervals to see if it yielded consistent results. The correlation of the two results was calculated using the Cronbach's Alpha. This served to ensure reliability of the instrument.

Cronbach's alpha values

The normal range of Cronbach's alpha values is between .00 and +1.00, and higher values reflect a higher internal consistency (Polit and Beck, 2004).

In the study, the following measurements were obtained using Cronbach's Alpha test:

Benefits = 0.42 meaning there is no internal consistency since the value is low. There were five questions in this domain.

Barriers = 0.56 also mean there is weak internal consistency. There were seven questions in this domain.

Self-efficacy = 0.72 means that there is some degree of internal consistency as the value is closer to +1.00. There were three questions in this domain.

The content validity of the instrument that was used in this study is summarized as follows:

OBJECTIVES	CONCEPTUAL FRAMEWORK	QUESTIONS
To describe family planning method utilization by the nursing students.	Individual characteristics and experiences; age, marital status, race, level of study; prior related behaviour	Q5-Q12
To describe nursing students' perceptions with regards to family planning methods utilization.	Behaviour-specific cognition and affect; perceived benefits of utilizing family planning methods, perceived barriers to family planning methods utilization, perceived self-efficacy.	Q13-Q26
To determine factors that influence family planning methods utilization by the nursing students.	Behaviour-specific cognition and affect; interpersonal influences, situational influences. Behavioural outcome; immediate competing demands and preferences.	Q27-Q30 Q31-Q41

3.9.2 PILOT STUDY

A pilot study is a means of ensuring the content validity and reliability of the instrument. The questionnaire was self-developed and therefore there were adjustments required to the instrument. The pilot study was conducted to test design issues, stability of the instrument and to detect possible flaws in the instrument (Burns and Grove, 1997). Five nursing students were asked to complete the questionnaire and minor adjustments like phrasing of the statements and arrangement of the questionnaire were

made based on the outcome of their responses. After a pilot study, there was a short session with the participants to assess their perceptions of the questionnaire in general. Their input was instituted as stated above. The questionnaire was also discussed with the experts in the field of family planning. This strengthened the value of the instrument, i.e. the validity and reliability.

3.10 DATA ANALYSIS

Data for this study was analyzed with the guidance of the University's Biostatistician. Version 15 of SPSS was used since it is deemed to be the simplest and the most accurate system. Descriptive statistics was used since the data was condensed and converted into an organized, visual representation of data in a variety of ways, so that the data had some meaning for the readers of the research report (Brink, 2000: 179). A descriptive approach employs measures such as frequency distributions, measures of central tendency and dispersion or variability and measures of relationships (Polit and Beck, 2004).

3.10.1 STAGES OF STATISTICAL ANALYSIS

With statistical data analysis programmes the researcher followed several steps in one operation.

1. The data was cleaned by:
 - a. Making sure that data were correct.
 - b. Making sure that missing values were clearly identified as missing data.
2. Knowledge about data was gained by:

- a. Making lists of data.
 - b. Producing descriptive statistics e.g. mean, standard-deviation, minima, and maxima for each variable.
 - c. Producing graphics e.g. histograms or box plots that showed the distribution.
3. Composed scales, e.g. creating a single variable from a set of questions, were produced using Chi-Square, Mann-Whitney, and Spearman's rho tests.
4. Graphics or tables that show relationships, e.g. Scatter plots for interval data or cross tabulations, were produced, e.g. crosstabulations between pill, injection, condoms/foams/jelly and age, as well as between level of study and whether the student has been pregnant before or during training.
5. Coefficients that measure the strength and the structure of a relation were calculated, e.g. calculation of the Cronbach's Alpha.

3.11 DATA MANAGEMENT

Data management is a process of managing data as a resource that is valuable to an organization or business. One of the largest organizations that deal with data management, DAMA (Data Management Association), states that data management is a process of developing data architectures, practices and procedures dealing with data and then executing these aspects on a regular basis (www.topbits.com). This website also explains the terms related to data management, e.g. data modelling, data warehousing, data movement and database administration.

The data collected through this study will be kept at the University of KwaZulu-Natal's library in the form of a printed thesis. It will be kept in a hard cover so that it is well preserved. It will also appear on the University's database and will be kept with the supervisor until 5 years, after which it will be shredded. Electronic data will be kept in a password-controlled Personal Computer.

3.12 DATA DISSEMINATION

Data dissemination is closely related to data management because if the data is well managed, it is easy to disseminate for others to access. Data dissemination will occur through a number of communications protocols. As mentioned before, the university will keep the database so that interested researchers are able to access the information and utilize it for their studies. Upon completion of the study, nursing students' conferences, workshops and symposia will be organized regarding the topic. The researcher will also request permission to participate in the orientation of new students so that the topic will be discussed with the students. The results and the recommendations of the study will also be communicated with the managers and participants of the institutions concerned. The real names of these institutions and the individual students will not be used to ensure anonymity.

3.13 ETHICAL CONSIDERATIONS

The researcher has the responsibility of conducting the research in an ethical manner. Since it involved participants, the study adhered to the fundamental ethical principles

underlying protection of human subjects, namely principle of respect for persons, beneficence and justice.

3.13.1 ETHICAL REVIEW

The research proposal was submitted to the research ethics committee of the university to ensure the protection of both the researcher and the research subjects. Permission to conduct a study was applied for from the nursing institution involved after the university's review board had granted permission for the study.

3.13.2 INFORMED CONSENT

Due to the large numbers, the participants were given information about the study in a verbal form. They then gave their consent to participate in a study. The researcher also informed the participants that they had the choice to terminate or leave the study if they felt uncomfortable. It was critical that the participants understood the study. Some data collected might have been invasive to the participants and the participants were assured of anonymity and confidentiality. The data was collected with the participants' knowledge and consent.

3.13.3 ONGOING RESPECT FOR PARTICIPANTS

The principle of respect for persons has two convictions: individuals are autonomous and individuals with diminished autonomy require protection. The participants and their individual autonomy were respected by the researcher. The principle of beneficence involves an effort to secure the well-being of persons (Brink, 2000: 40). Physical,

emotional, spiritual, economical, social, or legal harm to the participants was avoided by the study.

3.13.4 FAIR SELECTION

The principle of justice includes the participants' right to fair selection and treatment and their right to privacy. Participants were selected for reasons directly related to the research and they received fair treatment. The right to privacy of the participants was respected.

3.13.5 FAVOURABLE RISK-BENEFIT RATIO

Another ethical consideration was to take into account the risk-benefit ratio, i.e. the negative and the positive value that would have resulted from the study. The participants needed to be made aware of these. In this study there was minimum risk posed to the participants and the benefit was that the participants might have begun to understand the importance of adhering to the family planning regimens.

3.13.6 SOCIAL VALUE

The outcomes of this study hoped to yield high social value in that the nursing education community would begin to understand the fact that family planning methods are not only meant for patients or clients, but are for every woman. The institutions will be able to come up with strategies to prevent occurrence of pregnancies. The health profession as a whole will have healthy and happy employees with properly planned

lives. The research community will have opportunity to critically look at this study and come up with more researchable topics on the subject.

3.13.7 SCIENTIFIC VALIDITY

The researcher also had a responsibility to demonstrate respect for the scientific community by protecting the integrity of scientific knowledge (Brink, 2000: 47). The information was not fabricated, falsified or forged. The design method and data were not manipulated. Relevant references were quoted to prevent plagiarism and irresponsible collaboration was avoided (Brink, 2000: 47). The study was tested for plagiarism through a programme called *Turnitin* and was 8%.

3.13.8 COMMUNITY PARTICIPATION

The study came about because of the meetings (formal and informal) with the employers and nurse educators where, on more than one occasion, the issue of nursing students' pregnancy rate had been raised.

3.13.9 COSTS

The study did not require a great deal of financing and therefore the costs were kept to the minimum. The researcher did not apply for funding to conduct the study.

3.13.10 REPORT

The findings of the study will be submitted to the University of KwaZulu-Natal, Faculty of Health Sciences-School of Nursing for the fulfilment of the Masters of

Nursing degree. They will also be published in the peer reviewed journals, and then disseminated to various stakeholders.

3.14 STUDY LIMITATIONS

The participants in the study were females, because the nature of the nursing profession is female-gendered which makes the ratio of males to females unbalanced. Even though this may look like a limitation, most people who are involved in utilizing family planning methods are females. The inception of these services was to benefit the women. Males are also expected to utilize family planning methods like condoms, sterilization and other natural methods.

The second study limitation will be gaining access to the students at the same time. This proved to be highly unlikely and therefore a number of data collection sessions were carried out. It did not affect the study in any way since the questionnaire remained uniform throughout the study.

The third limitation was that the students might have withheld important and useful information because of fear of the results. This was prevented by thoroughly explaining the study and the importance of giving accurate information and its implications to the study.

3.15 CHAPTER CONCLUSION

The chapter thoroughly looked at the methodology that was followed during the study and the issue of ethical principles was elaborated on as it applies to this particular study.

CHAPTER 4

RESULTS

4.1 INTRODUCTION

This chapter presents the findings of the study in terms of demographics, prior related behaviour, perceived benefits, perceived barriers, perceived self efficacy, interpersonal influences, situational influences and behavioural outcome as outlined by the conceptual framework.

The study attempted to answer the following questions:

- How are the nursing students utilizing family planning methods?
- What are the nursing students' perceptions with regards to family planning methods utilization?
- What are the factors that influence family planning methods utilization by the nursing students?

These questions were analyzed using the Mann-Whitney Test in SPSS, Version 15.0.

This was done with the assistance of the biostatistician at the University of KwaZulu-Natal, College of Health Science.

4.2 DESCRIPTION OF A SAMPLE

The nursing students were divided into strata according to the level of training and a certain percentage from each stratum was randomly selected.

4.2.1 SAMPLE SIZE

The sample size was 40% of the population. This served to ensure stability and reliability of the results. The sample size was calculated as follows:

$$\begin{aligned}\text{Sample size} &= \text{Population} \times 40/100 \\ &= 265 \times 40/100 \\ &= 106 \text{ nursing students}\end{aligned}$$

4.2.2 RESPONSE RATE

The questionnaires were distributed to 106 nursing students. Ninety seven (97) were returned, which means:

$$97/106 \times 100 = 92\% \text{ of the responses were returned.}$$

4.3 FINDINGS OF THE STUDY

Findings of the study are presented under Section A, B, and C.

4.3.1 SECTION A: INDIVIDUAL CHARACTERISTICS AND EXPERIENCES

This section includes personal factors or demographics in terms of age, marital status, race, level of study and prior related behaviour.

4.3.1.1 Age

From the frequency distribution is presented in Table 4.1. From the results it may be deduced that 16.5% (n = 16) in the sample were between 35 to 44 years of age. It could thus be seen that the majority of the nursing students in the sample, 44.3% (n = 43) fell

into the age category 25-34. This was followed by the younger than 24 year age category into which 39.2% (n = 38) of the respondents fell. The results therefore suggested that the students in training are young adults.

Table 4.1: Age (N = 97)

	Frequency	Percent
Younger than 24	38	39.2
25-34	43	44.3
35-44	16	16.5
Total	97	100.0

4.3.1.2 Marital Status

From Table 4.2, one can deduce that 87.6% (n = 85) of nursing students were single and only 11.3% (n = 11) were married. Only 1% (n = 1) was cohabiting.

Table 4.2: Marital Status (N = 97)

	Frequency	Percent
Single	85	87.6
Married	11	11.3
Cohabiting	1	1.0
Total	97	100.0

4.3.1.3 Race

Although training is offered across all racial groups, 87.6% (n = 85) of the sample were African as reflected in Table 4.3. The proportions of Indians on training were 5.2% (n = 5) and the Coloured sample was 6.2% (n = 6).

Table 4.3: Race (N = 97)

	Frequency	Percent
African	85	87.6
Indian	5	5.2
Coloured	6	6.2
Missing Data	1	1.0
Total	97	100.0

4.3.1.4 Level of Study

Table 4.4 indicates that 24.7% (n = 24) of the respondents were in their first level of training. A total of 16.5% (n = 16) of the respondents were in the second level; 28.9% (n = 28) were in their third and fourth levels respectively. This result reveals that the majority of the respondents got selected from the senior nursing students.

Table 4.4: Level of Study (N = 97)

	Frequency	Percent
First	24	24.7
Second	16	16.5
Third	28	28.9
Fourth	28	28.9
Missing Data	1	1.0
Total	97	100.0

4.3.1.5 Prior related behaviour

According to Table 4.5, the majority of students, 63.9% (n = 62), have used family planning methods before coming to college. The percentage that was not using any family planning method was 36.1% (n = 35).

Table 4.5: Have you used any family planning methods before coming to this college? (N = 97)

	Frequency	Percent
Yes	62	63.9
No	35	36.1
Total	97	100.0

4.3.1.5.1 Consistent use of Family Planning methods

It is evident also that these students, 44.3% (n = 43) continued to use family planning methods as the figures in Table 4.6 show. The number of nursing students who were

not using the methods was 18.6% (n = 18). It was evident that 36 out of 97 participants did not answer these questions.

Table 4.6: If you answered YES to question 5, are you still using family planning methods? (N = 97)

	Frequency	Percent
Yes	43	44.3
No	18	18.6
Missing Data	36	37.1
Total	97	100.0

4.3.1.5.2 Family Planning Services used

With reference to Table 4.7, 24.7% (n = 24) of these students still used the clinics they were using before coming to college. Only 8.2% (n = 8) of the respondents used the campus-based clinic, and 13.4% (n = 13) used other clinics. The majority of the participants did not answer this question 53.6% (n = 52).

Table 4.7: If YES, where do you go for family planning needs? (N = 97)

	Frequency	Percent
Campus-based clinic	8	8.2
Clinic I was using before	24	24.7
Other	13	13.4
Missing Data	52	53.6
Total	97	100.0

4.3.1.5.3 Stopping family planning methods use

Seventy three participants did not answer this question, which means that 75.3 percent were still using family planning methods. The results are depicted in Table 4.8.

Table 4.8: If you have stopped using family planning methods, when did you stop?

(N = 97)

	Frequency	Percent
Before coming to college	16	16.5
After coming to college	8	8.2
Missing Data	73	75.3
Total	97	100.0

4.3.1.5.4 Continuous use of Family planning methods

Of the total number of participants, 35.1 percent of the students ($n = 34$) who never used family planning methods before were still not using any method, and 36.1 ($n = 35$) were continuing to use the family planning methods, as shown in Table 4.9. Twenty eight questionnaires did not have an answer to this question.

Table 4.9: Are you using any family planning methods now? (N = 97)

	Frequency	Percent
Yes	35	36.1
No	34	35.1
Missing Data	28	28.9
Total	97	100.0

4.3.1.5.5 Family planning facility preferred

It is noted that 22.7% ($n = 22$) of students were using other facilities and not the campus-based clinic which was used by only 7.2% ($n = 7$) (Table 4.10).

Table 4.10: If YES, where do you go for your family planning needs? (N = 97)

	Frequency	Percent
Campus-based clinic	7	7.2
Other	22	22.7
Missing Data	68	70.1
Total	97	100.0

4.3.1.5.6 Number of pregnancies

With reference to Table 4.11, 41.2% (n = 40) students had been pregnant once; 17.5% (n = 17) had been pregnant more than once and 38.1% (n = 37) had never been pregnant.

Table 4.11: How many pregnancies have you had? (N = 97)

	Frequency	Percent
None	37	38.1
One	40	41.2
More than one	17	17.5
Missing Data	3	3.1
Total	97	100.0

4.3.1.5.7 Pregnancy before or during training

The majority of students 55.7% (n = 54), had been pregnant before training and 5.2% (n = 5) had become pregnant during training (Table 4.12).

Table 4.12: If you have been pregnant, was it before or during your current training? (N = 97)

	Frequency	Percent
Before training	54	55.7
During training	5	5.2
Missing Data	38	39.2
Total	97	100.0

4.3.2 SECTION B: BEHAVIOUR-SPECIFIC COGNITIONS AND AFFECT

This section looks into the perceived benefits, perceived barriers, perceived self-efficacy, interpersonal influences as well as situational influences which are associated with utilizing family planning methods.

4.3.2.1 Perceived Benefits

The participants responded to the following statements, represented by Figure 4.1:

Q13: Utilizing family planning methods is important to me.

Q14: Delaying pregnancy through contraceptive use will help me complete my studies sooner.

Q15: Campus-based family planning services are convenient for me.

Q16: Family planning methods prevent the development of health, social and psychological problems.

Q17: Using family planning methods has potential positive consequences.

Looking at Figure 4.1 it is obvious that a large percentage of the respondents (71.3%, 83.9%, 48.9%, 62.4% and 67.7% for each question respectively) strongly agreed with the statements. However it is of concern that only 48.9% viewed the Campus based family planning services as convenient for them. On the other hand 4.3%, 21.1%, 11.8% and 3.1% disagreed with the statements.

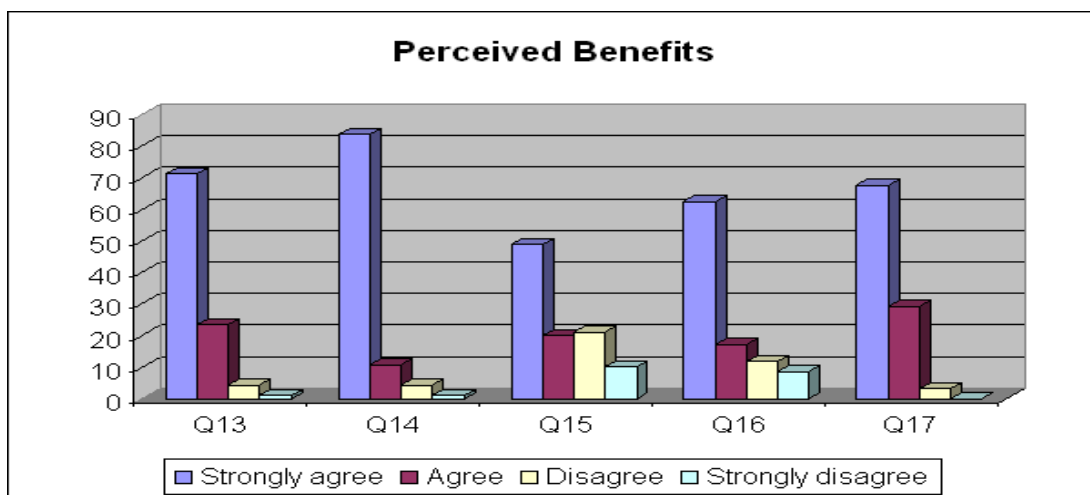


Figure 4.1: Perceived Benefits (N = 97)

4.3.2.2 Perceived Barriers

Figure 4.2 shows the perceived barriers that may stop the participants from using family planning services. The following are the statements they responded to:

Q18: Family planning nurses' attitude discourages me from using family planning services.

Q19: Clinic operating times are not convenient for me.

Q20: Nurses queue for attendance at the clinic.

Q21: The clinic does not offer a service relevant for me.

Q22: I do not use the clinic because the clinic staff will know about my personal life.

Q23: I have other reasons for not using the family planning clinic.

From the information in Figure 4.2 one can therefore deduce that a small percentage of participants perceived that there were barriers to utilizing family planning services. When analyzing statement Q19, it was evident that the operating times were a major barrier to nursing students utilizing the services available.

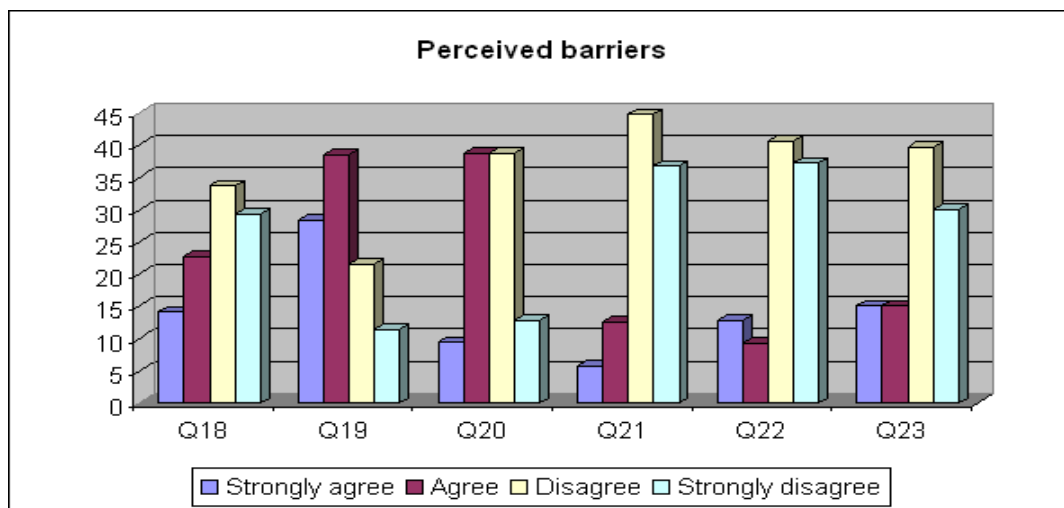


Figure 4.2: Perceived Barriers

4.3.2.3 Perceived self-efficacy

The following three statements sought to explore the perceived efficacy of the respondents (Figure 4.3):

Q24: I am confident that I can use the family planning services.

Q25: The information and knowledge of family planning methods made me choose the most effective method.

Q26: My peers also utilize the family planning methods which increases my confidence in the methods.

With reference to Figure 4.3 and Table below, the majority of respondents strongly agreed to the above statements. This affirmed the notion that the nursing students have confidence and trust in the available family planning methods.

	Strongly agree	Agree	Disagree	Strongly disagree
Q24	64%	23.6%	6.7%	5.6%
Q25	57.1%	27.5%	11%	4.4%
Q26	34.8%	37%	21.7%	6.5%

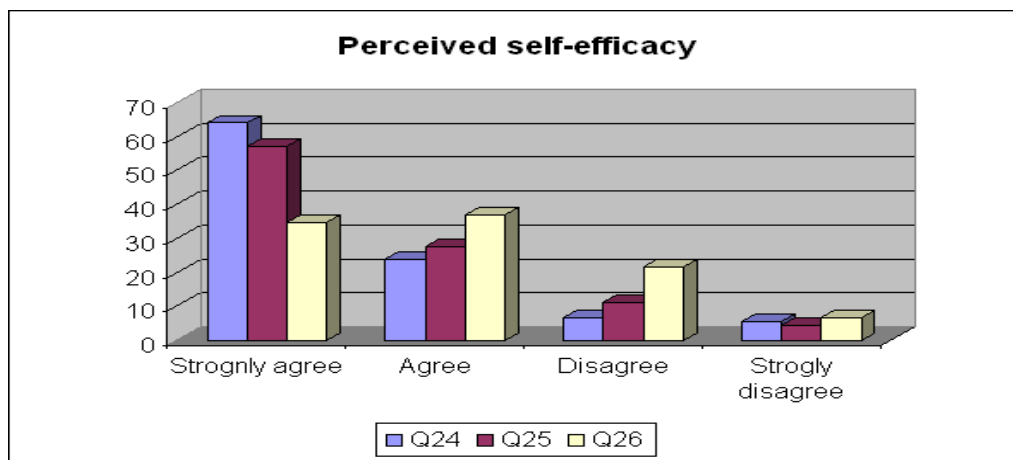


Figure 4.3: Perceived Self-efficacy

4.3.2.4 Interpersonal Influences

It is evident that 28.1% of the respondents had received encouragement to use the family planning methods from their husbands or partners, 20.8% were encouraged by their parents, 12.5% by their siblings, 36.5% by their close friends, 10.4% by the doctors, 31.3% by the nurses, 17.7% by the media and 26% had no one encouraging them (refer Figure 4.4). From the above statistics it can be concluded that close friends and the nurses have played a vital role in encouraging nursing students to utilize family planning methods.

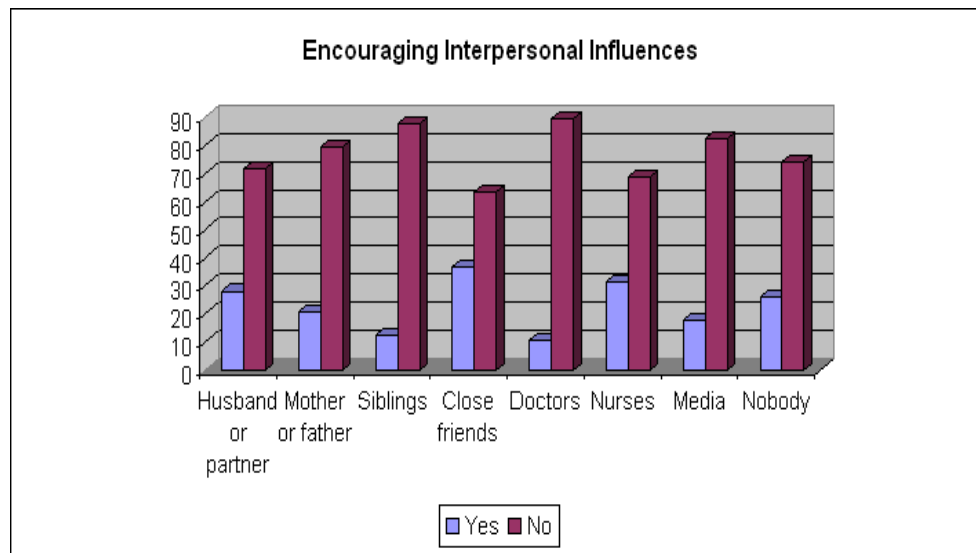


Figure 4.4: Encouraging Interpersonal Influences

Figure 4.5 clearly shows that the nursing students received very little discouragement from their loved ones. It is evident that 9.4% were discouraged by their husbands or partners, 4.2% by their parents, 1% by their siblings, 7.3% by their close friends, 0% by their doctors, 4.2% by the nurses, 1% by the media and 74% agreed that no one discouraged them from using the

family planning methods.

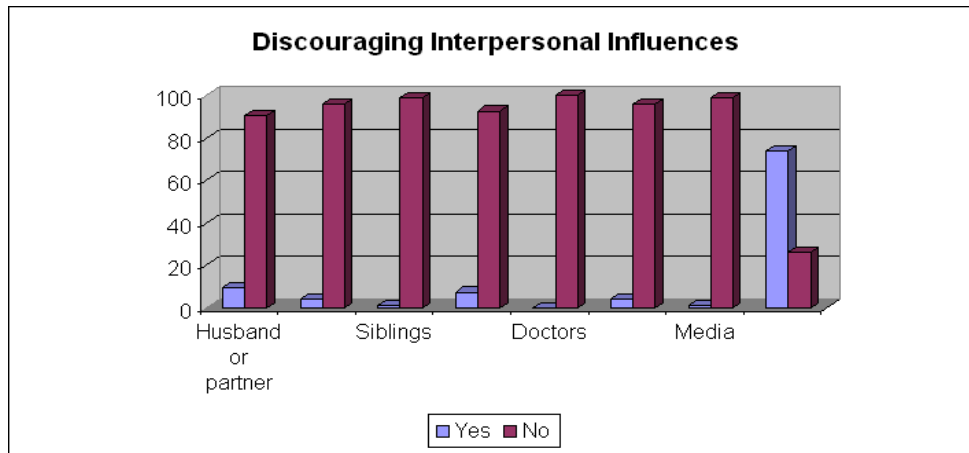


Figure 4.5: Discouraging Interpersonal Influences

4.3.2.5 Type of Method Used

The majority of the respondents (56.3%) utilize condoms / foams / jelly followed by 32.3% who use injection, 13.5% who use natural methods and 11.5% are on the Pill. The injection is known to have a high adherence rate among the young people because it is given once in a two or three month interval (Table 4.13).

Table 4.13: Type of Method Used (N = 97)

METHOD	Yes	No
Pill	11.5%	88.5%
Injection	32.3%	67.7%
Intra-Uterine Device	0%	100%
Condoms/Foams/Jelly	56.3%	43.8%
Hormone implants	0%	100%
Sterilization	2.1%	97.9%
Natural methods	13.5%	86.5%

4.3.2.6 Situational Influences

Referring to Figure 4.6, it is clear that the nursing students (79.2%) have received positive health information from the health providers which influenced their choice of method, 39.6% had been given reading material, 26% had been positively received in the facilities, 18.8% had been listened to, 19.8% had their concerns addressed, and only 4.2% reported to have received no assistance from the health services providers.

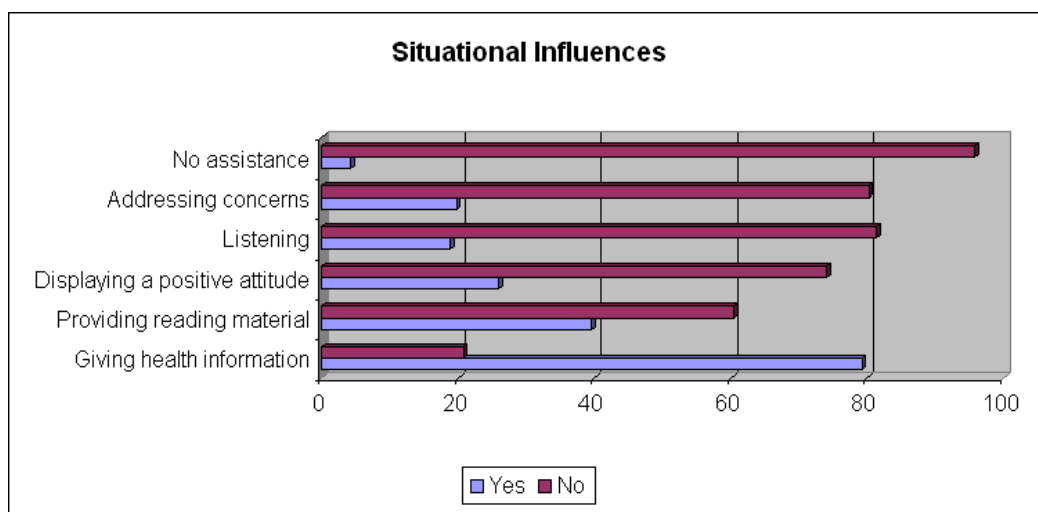


Figure 4.6: Situational Influences

4.3.3 SECTION C: BEHAVIOURAL OUTCOME

When assessing the behavioural outcome, the following statements appeared in the questionnaire:

Q31: I am free to talk to my spouse about family planning.

Q32: My studies are demanding I don't have time to think about family planning.

Q33: There is adequate information available at work relating to family planning.

Q34: I am allowed time-out at work to attend family planning services.

Q35: I am coerced to use family planning methods(s).

Q36: I have good knowledge regarding family planning.

Q37: The family planning method I am using was my first choice.

Q38: I view it as important to keep all my family planning appointment dates.

Q39: I will always use family planning unless ready to have a child.

Q40: It is right to recommend family planning services to my peers.

Q41: I have never missed my appointments.

The results reflected in Figure 4.7 show that there is a positive behavioural outcome from the respondents. A total of 65.5% of the respondents strongly agreed with statement Q31, 47.1% strongly agreed with statement Q37 that the method they were using at the time was their first choice, 64.6% strongly agreed with statement Q38 that it is vital to keep the appointment dates and 77.4% strongly agreed with statement Q40 that it is right to recommend family planning services to peers. These results clearly demonstrate the degree of confidence that the nursing students have in family planning methods and services.

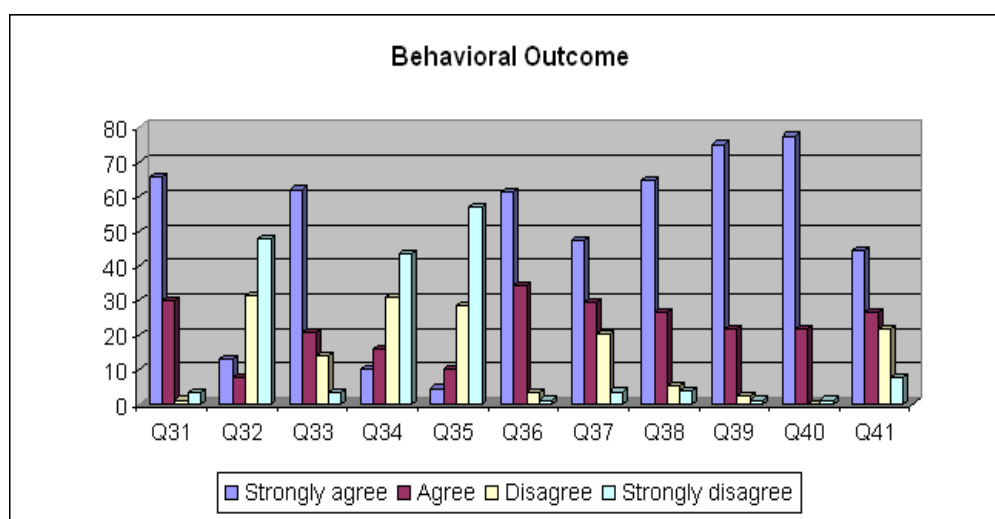


Figure 4.7: Behavioural Outcome

4.3.4 NON PARAMETRIC FINDINGS

This section deals with the inferential statistics and examines at the relationships between the variables such as individual characteristics (demographics), as well as behaviour-specific cognitions and affect (perceived benefits, barriers and self-efficacy).

4.3.4.1 Individual experience vs. behaviour-specific cognitions and effect using Mann-Whitney Test

The Mann-Whitney Test was used to test the difference between the individual experience of using family planning methods and the behaviour-specific cognitions and effects like perceived benefits, barriers and self-efficacy (Polit and Beck, 2004). This test throws away less information and therefore it is quite powerful. There is a significant difference between use of the family planning service and benefits (p values value $< .05$) and self efficacy (p value $< .05$) in Table 4.14.

Table 4.14: Mann-Whitney Test

Are you using any family planning methods?		N	Mean Rank	Test	df	p value
Benefits	Yes	32	36.63	316	-2.341	.019
	No	30	26.03			
	Total	62				
Barriers	Yes	26	22.04	222	-1.759	.079
	No	24	29.25			
	Total	50				
Self-efficacy	Yes	34	35.74	332	-2.075	.038
	No	28	26.36			
	Total	62				

4.3.4.2 Comparing users and non-users using Spearman's rho test

Looking at the correlations between the users and the non-users, one may deduce that there was a strong correlation between the benefits and self efficacy, and no correlation

among the barriers and self efficacy of using the family services (Table 4.15). This therefore means that the nursing students who used the family planning methods had strong perceptions of the benefits and therefore, their perceptions on self-efficacy are also strong.

Table 4.15: Correlations

			Benefits	Barriers	Self-efficacy
Spearman's rho	Benefits	Correlation Coefficient	1.000	-.085	.469**
		p value	.	.502	.000
		N	87	65	85
	Barriers	Correlation Coefficient	-.085	1.000	-.136
		p value	.502	.	.275
		N	65	67	66
	Self-efficacy	Correlation Coefficient	.469**	-.136	1.000
		p value	.000	.275	.
		N	85	66	88

**. Correlation is significant at the 0.01 level (2-tailed)

4.3.4.3 The Kruskal-Wallis Test

The Kruskal-Wallis test shows that there is no statistical difference between benefits barriers and self efficacy statistically significant.

Table 4.16: Kruskal-Wallis Test

	Benefits	Barriers	Self-efficacy
Chi-Square	.139	1.138	.046

4.3.5 CONTINGENCY TABLES

A contingency table is a two-dimensional frequency distribution in which the frequencies of two variables are cross-tabulated (Polit and Beck, 2004). In this study the contingency tables are those of age and the different types of family planning methods used, as well as the level of study and the period of previous pregnancy.

4.3.5.1 Crosstabulation between the Pill and age

In Table 4.17, 13.2% (n = 5) of the age category younger than 24 were on the Pill whereas 86.8% (n = 33) were not, 11.9% (n = 5) in the age category 25 – 34 were also using the Pill whereas 88.1% (n = 37), and 6.3% (n = 1) of the age group 35 – 44 were on the Pill compared to 93.8% (n = 15) who were not. The results are evidence of a fact that the Pill is not a popular family planning method for the students.

Table 4.17: Crosstab – Pill * Age (N = 97)

			Age		
			Younger than 24	25 – 34	35 – 44
Pill	Yes	Count % within Age	5 13.2%	5 11.9%	1 6.3%
	No	Count % within Age	33 86.8%	37 88.1%	15 93.8%

Chi-Square Test

	X²	df	p value
Pearson Chi-Square	.544	2	.762

4.3.5.2 Crosstabulation between the injection and age

The injection use among the younger than 24 age group is 31.6% (, n = 12) and 68.4% (n = 26) were not using the injection, 31.0% (n = 13) in the 25 – 34 age category were using the injection compared to 69.0% (n = 29), and 37.5% (n = 6) among the 35 – 44 years age category were using the injection and 62.5% (n = 10) were not using an injection (Refer table 4.18). The student nurses were using the injection more than the Pill.

Table 4.18: Crosstab – Injection * Age (N = 97)

			Age		
			Younger than 24	25 – 34	35 – 44
Injection	Yes	Count % within Age	12 31.6%	13 31.0%	6 37.5%
	No	Count % within Age	26 68.4%	29 69.0%	10 62.5%

Chi-Square Test

	X²	df	p value
Pearson Chi-Square	.242	2	.886

4.3.5.3 Crosstabulation between condoms/foams/jelly and age

From the cross tabulation of condoms/foams/jelly and age (Table 4.19), one can deduce that 31.6% (n = 12) of the age category younger than 24 were using this type of contraception and 68.4% (n = 26) were not using it; 31.0% (n = 13) were within the age category 25 to 34 and 37.5% (n = 6) were within the 35 to 44 age category. It is comforting to note that such a number of students were using condoms/foams/jelly because this type of method does not only prevent pregnancy but it also prevents sexually transmitted infections including HIV/AIDS (Kaur, 2006).

Table 4.19: Crosstab – Condoms / Foams / Jelly* Age (N = 97)

			Age		
			Younger than 24	25 – 34	35 – 44
Condoms/Foams/Jelly	Yes	Count % within Age	12 31.6%	13 31.0%	6 37.5%
	No	Count % within Age	26 68.4%	29 69.0%	10 62.5%

Chi-Square Test

	χ^2	df	p value
Pearson Chi-Square	3.403	2	0.182

4.3.5.4 Crosstabulation between period of pregnancy and level of study

The number of nursing students who had been pregnant before training totalled 91.4% (n = 53) and those who had been pregnant during training are 8.6% (n = 5) [Refer Table 4.20]. One can therefore conclude that the majority of students start their training with a certain amount of knowledge of family planning, since that type of health information is usually given to mothers after giving birth. This also demonstrates the need for intense reproductive health education of teenagers during primary and high school training.

Table 4.20: Crosstab – Level of Study * If you have been pregnant, was it before or during your current training? (N = 97)

		If you have been pregnant, was it before or during your current training?		Total
		Before training	During training	
Total	Count	53	5	58
	% within Level of study	91.4%	8.6%	100.0%

Chi-Square Tests

	X ²	df	p value
Pearson Chi-Square	2.356	3	0.502

4.4 CHAPTER CONCLUSION

This chapter has focused on the presentation of results achieved in the study. Frequencies, Mann-Whitney Test, Cronbach Alpha, Kruskal-Wallis Test, Pearson Chi-Square Test, Likelihood Ratio, Fisher's Exact Test, and Linear-by-Linear Association were used to indicate relationships and produce analysis of various constructs related to the study.

From the results analyzed in the chapter, the level of significance varied between variables. There is a strong correlation between perceived benefits and perceived self-efficacy. The crosstabulation results showed no statistical significance. The crosstabulation that displayed some form of significance was the one between the level of study and whether the student had been pregnant before or during her training. It was also clear that the nursing students were using family planning methods but from other facilities other than the Campus-based clinic. This may need to be interrogated further in future research

CHAPTER 5

5.1 INTRODUCTION

This chapter provides a detailed discussion of the results of the statistical analysis in the context of the research questions, related literature as well as the conceptual framework.

5.2 DISCUSSION OF FINDINGS

The findings are discussed within the context of the conceptual model.

5.2.1 INDIVIDUAL CHARACTERISTICS AND EXPERIENCES

Looking at the demographics, 39.2% of the respondents were younger than 24 and some of them were assumably still in their teenage years. Teen pregnancies pose health risks not only for the babies, but also for the young mothers. Family planning can help them avoid having children during this developmental stage of their lives. The majority of the respondents were single and there is evidence from previous research that sexual activity during non-marital time has increased (Senderowitz, 1999; Alvarez, 2008). Young unmarried people are contracting sexually transmitted infections out of proportion to their numbers (Cates and McPheeters, 1997 in Senderowitz, 1999; Kaur, 2006).

5.2.2 PRIOR RELATED BEHAVIOUR

It was also evident that 63.9% of the nursing students' population had used family planning methods before commencement of college training. This meant that there was a level of awareness in young women from high schools about these methods. Even

though this was the case, one still needed to explore their understanding of these methods. That 70.5% of the students were still using a family planning method is a good indication of their commitment to not falling pregnant while studying. This may be attributed to the fact that The Planned Parenthood Association of South Africa set up the Youth Information Centre Pilot Project to provide clinic reproductive health services exclusively for adolescents (Trangsrud, 1998).

5.2.3 BEHAVIOUR-SPECIFIC COGNITIONS AND AFFECT

A number of these students (82.2%) shy away from using the campus-based clinic. It is stated in literature that young people avoid utilizing the existing services due to policy constraints, operational barriers, lack of information, and feeling of discomfort. These factors may need to be explored. The South African law does not specify restrictions as far as access to family planning services is concerned, but there are places where the health care providers have established their own policies (written and unwritten) that make teenage access difficult or impossible. The operational barriers in South Africa may include the clinic characteristics, inconvenient hours of operation and lack of convenient transportation, especially in the remote and rural areas (Senderowitz, 1999). A lot is being done in this country to increase the knowledge base and inform the teenagers of their reproductive health rights and responsibilities (Brindis and Davis, 1998). This is taught at school as a subject. It is true that the issue of reproductive health is a very sensitive topic for teenagers and young adults; therefore it may be true that they feel uncomfortable seeking advice and help with regards to their reproductive health.

Some nursing students stated that they had been pregnant during current training are 8.5% of the respondents (Table 4.12). This is a worrying percentage. As discussed earlier in the background to the study, the statistics show that the number of students who have fallen pregnant in the selected nursing education institution has been increasing yearly from 2007 to 2009. In 2009, 5.7% of the nursing students fell pregnant. This number does not include the students who fell pregnant and delivered unnoticed. A total of 67.7% of the nursing students perceive the use of family planning methods as having potential positive consequences and therefore perceive these methods as beneficial. A number of the nursing students perceive that the campus-based family planning services are not convenient for them (Figure 4.1) which may be due to the factors mentioned earlier in the chapter.

The nursing students disagree with the barriers to utilization of family planning services and methods. From their responses, it was evident that they did not perceive many barriers to utilizing family planning services. The main barrier that was identified by the students was that clinic operating times were not convenient for them. This may be due to the fact that the nursing students at the identified institution began their tuition at 07H00 and finish at 16H00. These times were the same times of operation for the campus-based clinic. The other barrier was that nurses had to wait in the queue for attendance at the clinic. The clinic does not only cater for the nurses, but all the staff members at the hospital use the clinic. The students might have been viewing this as wasting their valuable time (Figure 4.2) or perhaps they were embarrassed at being seen in the queue by others who may view utilization of family planning services as taboo.

The nursing students have reported that they had confidence in the family planning services and methods (Figure 4.3). This may be partly due to the fact that there was an introduction of youth-friendly services. According to Senderowitz (1999), services are youth-friendly if they have policies and attributes that attract youth to the facility or programme, provide a comfortable and appropriate setting for serving youth, meet the needs of young people, and are able to retain their youth clientele for follow-up and repeat visits. The staff in these services must be able to communicate with the young people and must be at their level.

5.2.4 INTERPERSONAL INFLUENCES

The discouraging factors slightly outnumber the encouraging factors (Figure 4.4 and 4.5). It is good that most of the respondents (56.3%) used barrier methods like condoms, foams and jelly (Figure 4.6). This is important in the prevention of not only pregnancy, but also of sexually transmitted infections. The reviewed literature states that in South Africa there are five HIV-infected 15-24 year old females for every two infected males the same age (UNICEF-UNAIDS-WHO, 2002). Given this statistic, it is evident that the burden of new HIV infections is concentrated among the young and females. The Planned Parenthood Association of South Africa set up the Youth Information Centre Pilot Project to provide clinic reproductive health services exclusively for adolescents and to create a replicable model for widespread adoption. Although a fully-fledged evaluation has not yet occurred following the initial baseline studies, attendance information shows that clients have been increasing since the

programme began. There is improved attitude toward condom use that has been reported (Trangsrud, 1998, Knudsen, 2006).

5.2.5 SITUATIONAL INFLUENCES AND BEHAVIOURAL OUTCOME

The health professionals have provided health information to the nursing students (Figure 4.7). This is a strength that enables the nursing students to make informed choices. In Figure 4.8 it is evident that there is a positive behavioural outcome and nursing students have reported to be free to recommend family planning services to peers.

The Cronbach alpha values: benefits = 0.4236 and barriers = 0.5607 mean that there is no internal consistency as the values are low or not close to 1. The Cronbach alpha value for self-efficacy is 0.7235 meaning there is some degree of internal consistency. It is the similar case with the significance alpha. One can then conclude that there is statistical significance for perceived self-efficacy and perceived benefits.

5.3 RECOMMENDATIONS

The following are recommendations generated by the results of the study. These recommendations are categorized into practice, management, education and research.

5.3.1 PRACTICE

It is evident that, even though there are nursing students who utilize family planning services and methods, there are some who do not.

Health information should be made available to students from the time they come for training – during orientation. The curriculum should be set up in such a way that the importance of family planning is emphasized from their first year of study. This will encourage the students not to view family planning as applicable to their clients only, but they will recognize their own immediate need to utilize the services.

5.3.2 MANAGEMENT

The Campus should have a policy on the use of family planning services and methods before drafting a pregnancy policy.

The clinic operating times may need modification to accommodate the nursing students. Should that fail, the nursing students should be allowed to make appointments in case they want to use the clinic after hours.

The institution may also need to look at the possibility of the senior students providing these services to their juniors in order to increase adherence to the methods.

The name used for the family planning clinic may need to be changed to reduce embarrassment of the youth who seek reproductive health help.

5.3.3 EDUCATION

Workshops and in-service training on running a “youth-friendly” service must be conducted so that the attitudes of the health service providers are changed.

There should be a support group that deals with reproductive health issues for the nursing students which is run by them.

Classroom teaching could use the nurses’ experiences for learning.

5.3.4 RESEARCH

The study has provided other areas for research purposes like doing a qualitative study on the topic where in-depth interviews may be used to gain a better understanding of benefits and barriers to family planning to be able to utilize these for the betterment of family planning. The qualitative study may yield different or similar results.

5.4 LIMITATIONS

Sample size and setting do not allow generalization because the sample is too small and only one institution among eleven campuses was used (Terre Blanche, et. al, 2006)

The quantitative approach does not allow in-depth understanding of the issues surrounding barriers and benefits of family planning because structured and brief responses do not allow the respondents to expand on these issues as they view them.

Only female students were used, therefore there is a gender bias in the study.

The sample was made up of students who may have felt compelled to respond to please the researcher as a lecturer. However, the researcher avoided bias by using another person to collect data. Students were made aware that they were participating voluntarily and could withdraw anytime of the study.

5.5 CHAPTER CONCLUSION

The study has answered all the questions that the researcher had initially raised. Nursing students utilize family planning methods and some of them have been utilizing these methods before commencement of training.

The nursing students also perceive utilizing family planning methods as having a number of benefits. The barriers that they identified are modifiable. They displayed confidence and knowledge in the utilization of family planning methods.

The students reported a positive behaviour-specific cognition and affect which leads to a positive behavioural outcome.

There is hope that more students will begin to use family planning methods with positive motivation.

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ANNEXURE A: PARTICIPANT INFORMATION SHEET

TITLE: **EXPLORING THE NURSING STUDENTS' UTILIZATION OF FAMILY PLANNING METHODS IN A SELECTED NURSING EDUCATION INSTITUTION IN UMGUNGUNDLOVU DISTRICT, KWAZULU-NATAL**

RESEARCHER: **GUGU VINKHUMBO – RN, RM, RPN, RCN + PHC, RNE, RNM**

CURRENT REGISTRATION: **MASTER OF NURSING – COMMUNITY HEALTH NURSING**

Invites you to participate in a research study of the above topic. The purpose of the study is to explore the utilization of family planning services by the student nurses. The objectives of the study are:

- To describe family planning method utilization by the nursing students.
- To describe nursing students' perceptions with regards to family planning methods utilization.
- To determine factors that influence family planning methods utilization by the nursing students.

Although the study may not benefit you directly, the information obtained may assist others who have negative perceptions about family planning services. programmes and policies may need to be developed to increase awareness and utilization of family planning services.

There are no risks associated with the study and the responses will be treated with privacy and confidentiality. This is so, because others may view this as an intimate and delicate issue.

You are requested to take about 20 minutes of your time to respond to the questionnaire. You may not give your name, details and contact numbers on any part of the questionnaire. If you have questions and problems regarding the study, please do not hesitate to ask the researcher.

Your participation in this study is totally voluntary: you are under no obligation to participate. You have the right to withdraw at any time without repercussion or penalty.

The research study has been approved by the University of KwaZulu-Natal Ethics and Review Committee and permission to conduct this study has been granted by the Campus Management, KwaZulu-Natal College of Nursing Management and the Provincial Department of Health.

ANNEXURE B: PARTICIPANT CONSENT FORM

I have discussed the research study with the participants. It is my opinion that the participant understands the benefits, risks and obligations involved in participating in this study.

Researcher

Date

I understand that my participation is voluntary and that I may refuse to participate or withdraw my consent and stop taking part without penalty.

I hereby freely consent to take part in this research study.

Signature of participant

Date

ANNEXURE C: LETTER OF REQUEST TO CONDUCT RESEARCH

University of KwaZulu-Natal

Howard College Campus

School of Nursing

Date

The Principal

KwaZulu-Natal College of Nursing

Edendale Campus

P/Bag X9099

PIETERMARITZBURG

3200

Sir / Madam

REQUEST FOR PERMISSION TO UNDERTAKE A RESEARCH STUDY

Kindly receive my request to conduct a research study in your institution. It is a partial requirement for the completion of a degree of Master of Nursing at the University of KwaZulu-Natal. The purpose of the study is to explore the utilization of family planning services by the student nurses in your institution. The objectives of the study are:

- To describe family planning methods utilization by the nursing students.

- To describe nursing students' perceptions with regards to family planning methods utilization.
- To determine factors that influence family planning methods utilization by the nursing students.

The participants will not be at risk at all during the study. The study will yield positive results in that the College will be able to formulate policies around the issue and programmes will be planned to assist the students and the College community. Furthermore the findings will give us insight into what students perceive when it comes to family planning services. There will be minimal or no disruption of tuition.

The envisaged period for data collection is June to September 2010.

Thank you.

Yours faithfully

Gugu Aretha Vinkhumbo

RN, RM, RCN + PHC, RPN, RNE, RNM



**UNIVERSITY OF
KWAZULU-NATAL**

*University of KwaZulu-Natal
Research Office
Govan Mbeki Centre
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University Road
Chiltern Hills
Westville
3629
South Africa
Tel No: +27 31 260 3587
Fax No: +27 31 260 2384
E-mail : naidoo4@ukzn.ac.za*

24 May 2010

Miss G A Vinkhumbo
P O Box 14096
MADADENI
2951

Dear Miss Vinkhumbo

PROTOCOL: Exploring the Nursing students' utilization of family planning methods in a selected nursing education institution in Umgungundlovu district, KwaZulu-Natal
ETHICAL APPROVAL NUMBER: HSS/0267/2010 M: Faculty of Health Sciences

In response to your application dated 21 May 2010, Student Number: 951007597 the Humanities & Social Sciences Ethics Committee has considered the abovementioned application and the protocol has been given **FULL APPROVAL**.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Professor Steve Collings (Chair)
HUMANITIES & SOCIAL SCIENCES ETHICS COMMITTEE

SC/sn

cc: Prof. B R Bhengu (Supervisor)
cc: Mr S Reddy



DEPARTMENT OF HEALTH
PROVINCE OF KWAZULU-NATAL
KWAZULU NATAL COLLEGE OF NURSING
EDENDALE NURSING CAMPUS

29 Havelock Road, Pietermaritzburg. 3201
Private Bag X9093, Pietermaritzburg. 3200
Tel: 033-3456810/3927566 Fax: 033-3459477 Email: 0865743522
e-mail address: ntombizakhona.majola@kznhealth.gov.za
www.kznhealth.gov.za

DATE: 23 JUNE 2010

TO: Ms G. Vinkhumbo

SUBJECT: REQUEST FOR PERMISSION TO CONDUCT A NURSING RESEARCH-
EXPLORING NURSING STUDENTS UTILIZATION OF FAMILY PLANNING
METHODS – EDENDALE NURSING CAMPUS

Permission is hereby granted that the study, as stated above, be conducted on site
using nursing students as participants.

Please ensure that the participants give an individual informed consent.

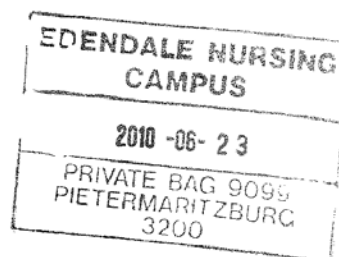
The campus will welcome the report once all the study processes have been closed,
so as to access the findings and recommendations for student support in this area.

You are wished well in your studies.

Thank You

SIGNED: N.C. MAJOLA (MRS)
EDENDALE NURSING CAMPUS PRINCIPAL

Majola
Umnyango Wezempilo. Departement van gesondheid
Silwa Nezifo, Silwa Nobubha, Sinika Ithemba
Fighting Disease, Fighting Poverty, Giving Hope





Health Research & Knowledge Management sub-component
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg
3200
Tel.: 033 – 3953189
Fax.: 033 – 394 3782
Email.: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

Reference : HRKM095/10
Enquiries : Mrs G Khumalo
Telephone : 033 – 3953189

23 June 2010

Dear Ms G Vinkhumbo

Subject: Approval of a Research Proposal

1. The research proposal titled '**Exploring the nursing students' utilization of family planning methods in a selected Nursing Education Institution in Umgungundlovu**' was reviewed by the KwaZulu-Natal Department of Health.

The proposal is hereby **approved** for research to be undertaken at the **Edendale Hospital Nursing College**.

2. You are requested to take note of the following:
 - a. Make the necessary arrangement with the identified facility before commencing with your research project.
 - b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.
3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Mrs G Khumalo on 033-3953189.

Yours Sincerely

Dr S.S. Buthelezi

Date: 27/10

Chairperson, Health Research Committee
KwaZulu-Natal Department of Health

uMnyango Wezempilo . Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope



KWAZULU- NATAL COLLEGE OF NURSING
P/Bag X9089, Pietermaritzburg, 3200
Tel.: (033) 264 7800, Fax: (033) 394 7238
e-mail: lulama.mthembu@kznhealth.gov.za
www.kznhealth.gov.za

Enquiries: Mrs. S. Maharaj
Telephone: 033 – 264 7806
Date: 16 July 2010

Principal Investigator:
Ms GA Vinkhumbo (951007597)
School of Nursing
University of KwaZulu-Natal

Dear Sir/Madam

RE: PERMISSION TO CONDUCT RESEARCH AT EDENDALE CAMPUS

I have pleasure in informing you that permission has been granted to you by the Principal of the KwaZulu-Natal College of Nursing to conduct research on the "Title of the research study". **Exploring student's utilization of family planning methods in a selected educational institution in Umgungundlovu District, KwaZulu-Natal.**

Please note the following:

- 1) Please ensure that you adhere to all policies, procedures, protocols and guidelines of the Department of Health with regards to this research.
- 2) This Research will only commence once this office has received confirmation from the Provincial Health Research Committee in the KZN Department of Health.
- 3) Please ensure this office is informed before you commence your research.
- 4) The KwaZulu-Natal College (Edendale Campus) will not provide any resources for this research.
- 5) You will be expected to provide feedback on your findings to the Principal of the KwaZulu-Natal College of Nursing.

Thanking You.
Sincerely

Dr. LL. Nkonzo-Mtembu
Principal: KwaZulu-Natal College of Nursing

uMnyango Wezempilo. Departement van Gesondheid
Fighting Diseases, Fighting Poverty, Giving Hope.

QUESTIONNAIRE
UNIVERSITY OF KWAZULU-NATAL
HOWARD COLLEGE CAMPUS
SCHOOL OF NURSING

TITLE: EXPLORING THE NURSING STUDENTS' UTILIZATION OF FAMILY PLANNING METHODS IN THE SELECTED NURSING EDUCATION INSTITUTION IN UMGUNGUNDLOVU DISTRICT, KWAZULU-NATAL

RESEARCHER: GUGU ARETHA VINKHUMBO

CONTACT DETAILS: Tel (W): 033 392 7584

Cell: 083 548 9332

E-mail: gugu.vinkhumbu@kznhealth.gov.za

PLEASE NOTE:

1. The questionnaire will take about 20 minutes to complete.
2. Ensure that your name or personal information does not appear on any part of the questionnaire.
3. Tick the selected response.

SECTION A: INDIVIDUAL CHARACTERISTICS AND EXPERIENCES

PERSONAL FACTORS

- | | | |
|---------|-----------------|--------------------------|
| 1. AGE: | Younger than 24 | <input type="checkbox"/> |
| | 25-34 | <input type="checkbox"/> |
| | 35-44 | <input type="checkbox"/> |
| | Older than 44 | <input type="checkbox"/> |

2. MARITAL STATUS:
- Single ☐
- Married ☐
- Divorced ☐
- Widowed ☐
- Cohabiting ☐

3. RACE:
- African ☐
- White ☐
- Indian ☐
- Colored ☐

4. LEVEL OF STUDY:
- First ☐
- Second ☐
- Third ☐
- Fourth ☐

PRIOR RELATED BEHAVIOR

5. Have you used any family planning methods before coming to this college?

Yes ☐

No ☐

If you answered NO to question 5 proceed to question 9. If you answered YES to question 5, then continue with question 6 to 8.

6. If you answered YES to question 5, are you still using family planning methods?

Yes ☐

No ☐

7. If YES, where do you go for family planning needs?

Campus-based family planning clinic ☐

The clinic I was using before coming to college ☐

Other, please explain ☐

8. If you have stopped using family planning methods, when did you stop?

Before coming to the college ☐

After coming to the college ☐

9. Are you using any family planning methods now?

Yes ☐

No ☐

10. If YES, where do you go for your family planning needs?

Campus-based family planning clinic ☐

Other, please explain ☐

All respondents to continue answering from this question to the end of the questionnaire.

11. How many pregnancies have you had?

None ☐

One ☐

More than one, specify ☐

12. If you have been pregnant, was it before or during your current training?

Before training ☐

During training ☐

SECTION B: BEHAVIOR-SPECIFIC COGNITIONS AND AFFECT

PERCEIVED BENEFITS

STATEMENT	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
13. Utilizing family planning methods is important to me.				
14. Delaying pregnancy through contraceptive use will help me complete my studies sooner.				
15. Campus-based family planning services are convenient for me.				
16. Family planning methods prevent the development of health, social and psychological problems.				
17. Using family planning methods have potential positive consequences.				

PERCEIVED BARRIERS

STATEMENT	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
18. Family planning nurses' attitude discourages me from using family planning services.				
19. Clinic operating times are not convenient for me.				
20. Nurses queue for attendance at the clinic.				
21. The clinic does not offer a service relevant for me.				
22. I do not use the clinic because the clinic staff will know about my personal life.				
23. I have other reasons for not using the family planning clinic. (please explain in the space provided below).				

PERCEIVED SELF EFFICACY

STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
24. I am confident that I can use the family planning services.				
25. The information and knowledge of family planning methods made me choose the most effective method.				
26. My peers also utilize the family planning methods which increase my confidence in the methods.				

INTERPERSONAL INFLUENCES

27. Who or what encourages you to use family planning methods? You may have more than one response.

- | | |
|--------------------|--------------------------|
| Husband or partner | <input type="checkbox"/> |
| Mother or father | <input type="checkbox"/> |
| Siblings | <input type="checkbox"/> |
| Close friends | <input type="checkbox"/> |
| Doctors | <input type="checkbox"/> |
| Nurses | <input type="checkbox"/> |
| Media | <input type="checkbox"/> |
| Nobody | <input type="checkbox"/> |

28. Who or what discourages you from using family planning methods? You may have more than one response.

- | | |
|--------------------|--------------------------|
| Husband or partner | <input type="checkbox"/> |
| Mother or father | <input type="checkbox"/> |
| Siblings | <input type="checkbox"/> |
| Close friends | <input type="checkbox"/> |
| Doctors | <input type="checkbox"/> |
| Nurses | <input type="checkbox"/> |
| Media | <input type="checkbox"/> |
| Nobody | <input type="checkbox"/> |

SITUATIONAL INFLUENCES

29. Which type of contraceptive method are you using? You may have more than one response.

- Pill ☐
- Injection ☐
- Intra-Uterine-Device ☐
- Condoms/Foams/Jelly ☐
- Hormone implants ☐
- Sterilization ☐
- Natural methods ☐

30. In what way have the health professionals assisted you? You may have more than one response.

- Giving health information ☐
- Providing reading materials ☐
- Displaying a positive attitude ☐
- Listening ☐
- Addressing concerns ☐
- No assistance ☐

SECTION C: BEHAVIORAL OUTCOME

STATEMENT	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
31. I am free to talk to my spouse about family planning.				
32. My studies are demanding I don't have time to think about family planning.				
33. There is adequate information				

available at work relating to family planning.				
34. I am allowed time-out at work to attend family planning services.				
35. I am coerced to use family planning methods(s).				
36. I have good knowledge regarding family planning.				
37. The family planning method I am using was my first choice.				
38. I view it as important to keep all my family planning appointment dates.				
39. I will always use family planning unless ready to have a child.				
40. It is right to recommend family planning services to my peers.				
41. I have never missed my appointments.				

42. I have personal recommendations with regards to family planning services.

Thank you for taking part in this study. Your input is highly appreciated.