

**PREGNANCY-RELATED CHALLENGES ENCOUNTERED BY STUDENT
NURSES AT THE SOUTH AFRICAN MILITARY HEALTH SERVICES NURSING
COLLEGE**

by

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DECLARATION

I declare that **PREGNANCY-RELATED CHALLENGES ENCOUNTERED BY STUDENT NURSES AT THE SOUTH AFRICAN MILITARY HEALTH SERVICES NURSING COLLEGE** is my own work and that all the sources used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

SIGNATURE

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PREGNANCY-RELATED CHALLENGES ENCOUNTERED BY STUDENT NURSES AT THE SOUTH AFRICAN MILITARY HEALTH SERVICES NURSING COLLEGE

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ABSTRACT

This study identified pregnancy-related challenges encountered by student nurses at SAMHS Nursing College, with an aim of identify factors contributing to student nurses' pregnancies as well as finding ways to deal and minimize the rate of the pregnancies amongst the student nurses. Thirty (30) structured interviews were conducted with student nurses who were pregnant and those who delivered their babies during the period 2002 to 2007. It has been revealed that ignorance is the major contributing factor for student nurses' pregnancies, 63% of the pregnancies were not planned, 52% of the respondents related their pregnancies to risk taking as they engaged in unprotected sex without the use of contraceptives, and thus it was concluded that student nurses are engaging themselves in risk behaviours and also engaging in unsafe sexual practices. The study also found that student nurses face physical, social, emotional as well as academic problems during pregnancy and after the delivery of their babies.

Student nurses should be encouraged to use condoms and other methods of contraception, coupled with educating them on life skills, provision of recreational facilities; provision of counseling and support services may be the tool to minimise the unplanned pregnancies.

KEY CONCEPTS

Abortion, attitude, adolescent, challenges, contraceptives, pregnancy, pregnancy rate, pregnancy-related challenges, reproductive health, student nurses, safe sexual practices, teenage pregnancy and unplanned pregnancy.

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DEDICATION

This dissertation is dedicated to
my late grandmother,
my children Khanyisa Rivoningo Chantelle and Thamsanqa Ammi
Michael Jr
my younger sisters Pretty and Innocent, my younger brothers
Ishmael, Andrew and Chris, may you be empowered with knowledge to
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List of abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal care
COTP	Choice on Termination of Pregnancy
DoD	Department of Defence
DOH	Department of Health
ECs	Emergency contraceptives
HIV	Human Immune Deficiency Virus
OC	Officer Commanding
SA	South Africa
SANC	South African Nursing Council
SANDF	South African National Defence Force
SOP	Standard Operating Policy
STIs	Sexual Transmitted Infections
SAMHS	South African Military Health Services
SG	Surgeon General
RSA	Republic of South Africa
TOP	Termination of Pregnancy
Unisa	University of South Africa
USA	United States of America

List of annexures

Annexure A Letter requesting permission to conduct the study

Annexure B Letter granting permission to conduct the study

Annexure C Consent form

Annexure D Interview schedule

Annexure E Newspaper references

CHAPTER 1

Background to the study

1.1 INTRODUCTION

Despite the availability of free contraceptives in South Africa, unplanned pregnancies continue to pose challenges to the reproductive health services. An unwanted or unexpected pregnancy among the youth is the logical end result of unprotected sex or unsafe sexual practices. It could be assumed that lack of sexual knowledge about the use of condoms and/or contraceptives, the effects of Human Immune-deficiency Virus (HIV) and other sexually transmitted infections (STIs) contribute to unprotected sexual behaviour. The incidence and prevalence of STIs, and HIV/Acquired Immune Deficiency Syndrome (AIDS) among the adolescents are high, and they reflect the level of effectiveness of the primary prevention services for reproductive health problems (Mataboge 2002:1). Adolescent sexual and reproductive activities have far-reaching social, economic, educational, moral, health and demographic effects. Failure to meet the diverse reproductive needs of the youth predisposes them to unintended pregnancies, the risk of induced abortions, STIs and HIV/AIDS.

Teenage pregnancy is a major health and social concern for countries on the African continent of which student nurses form part of the concern. Society finds it difficult to remain silent about issues on the birth and rearing of children, particularly when the parents in question are young (Goosen & Klugman 1996:236).

On 26 March 2006 the Metro 11 column of the *Sunday Times* reported on teenage pregnancy of teenagers and stated that at one school, 61 schoolgirls had conceived during two years (Khupiso 2006:11). Furthermore, according to the report, the Gauteng Department of Education had placed “teenage pregnancy at the top of its agenda after 2 542 schoolgirls became pregnant during the previous two years in Gauteng Provincial schools”. Adolescents generally encounter more problems during pregnancy and childbirth than older women. Most teenagers who try to hide their pregnancies fail to get early, regular pre-natal care, leading to increased risks of medical complications

(Williams 2005:75). The long-term effects of teenage pregnancies are far-reaching and teenage mothers face difficulties, such as:

- Dropping out of school.
- With lack of education, a teenage mother may lack job skills, making it difficult for her to find and keep a job.
- Continued poverty and welfare dependency because of the inability to find and keep jobs that pay decent salaries.
- Further unwanted or unplanned pregnancies.
- Those who get married are more likely to get divorced than adults who planned their families.
- Suffering from depression which can lead to alcohol or drug abuse.
- The threat of violence or physical abuse from men (Williams 2005:75).

Since 2002 a rising number of student nurses in a selected military nursing college have fallen pregnant before completion of their training. Moreover, the rate is gradually increasing according to the Human Resources Maternity leave records of the South African Military Health Services (SAMHS) Nursing College (SAMHS 2005a:5). Research with regard to the challenges encountered by these student nurses is necessary to find out if their pregnancies have detrimental effects at personal, professional and socio-economic levels.

1.2 STATEMENT OF THE RESEARCH PROBLEM

Adolescents comprise approximately 40% of South Africa's population; therefore their reproductive health needs are of significance to all health professionals and the country. Adolescents' failure to complete their educational and career pathways is partly due to the impact of reproductive health problems; teenage pregnancies, resulting in school dropouts, as well as STI/HIV/AIDS causing early deaths (Mataboge 2002:1). Approximately 17 million girls younger than 20 years give birth each year in developing countries (Silberschmidt & Rasch 2001:1815). This indicates that about 500 adolescents are becoming mothers every day and this number includes students in nursing colleges and other training institutions. According to Chimere-Dan (1996:4-9), the less educated the woman is, the less likely she is to use contraceptives effectively and/or engage in safe sexual practices. Taking literacy into consideration, students in

nursing colleges and other training institutions, such as universities, should have the basic knowledge about the biology of the reproductive system, physiology, conception and contraceptives. Thus they have sufficient knowledge to be able to understand the use of contraceptives to prevent unplanned pregnancies.

It is imperative for student nurses to complete their training in the shortest time possible, as they are the future health care providers for South Africa's population, with high demands for health care with the increasing health needs of this country.

This therefore raised the following question: What challenges do student nurses encounter that become pregnant during their training in the SAMHS Nursing College?

1.3 BACKGROUND TO THE PROBLEM

For years it was hoped and believed that improved birth control techniques would reduce unwanted pregnancies and STIs. Despite efforts to prevent unwanted pregnancies through education, legalising abortion and supplying contraceptives, this did not happen. An unwanted/unplanned pregnancy can occur at any time for a number of reasons. However, a wanted pregnancy can become an unwanted pregnancy due to health problems, financial difficulties and clinical as well as theoretical requirements in the case of pregnant students.

According to Brienne and Fairburn (1996:46), there may be different reasons for students' pregnancies during training, including

- contraceptives failure
- inaccessible contraceptives
- ignorance due to poor sex education
- risk-taking behaviour
- cultural opposition to contraception
- religious opposition to contraception
- complex unconscious factors that need to be heard and understood
- media advertisements.

SAMHS is one of the arms of service of the Department of Defence (DoD). The role of the SAMHS is to provide health care services to the entire South African defence force, including nursing care. The DoD has a nursing college that has to train student nurses to become professional nurses. Besides being trained as nurses, they are also exposed to strenuous military training, which is both physically and emotionally demanding. Thus pregnant student nurses enrolled at SAMHS could encounter great challenges to continue with their training during their pregnancies.

The SAMHS Nursing College is situated at Thaba Tshwane in Pretoria and is the only military nursing college in South Africa, with satellite campuses in Cape Town and Bloemfontein. The South African National Defence Force (SANDF) recruits applicants between the ages of 18 and 22 years of age to become student nurses at the college. Staff nurses at the hospital are also recruited to do the four-year (R425) course, and some of them may be older than 25 years of age.

The researcher has worked at the SAMHS Nursing College for more than four years. During this time, the researcher observed that there is a tendency for nursing students to fall pregnant before they meet the requirements of their training, which prevents them from completing their studies within the stipulated time. This has financial and personnel provision implications for the students and the SANDF.

The researcher conducted informal interviews with professional nurses working in the hospital, who indicated that they experienced problems with students who became pregnant. These problems included extended sick leave of the pregnant students when they are in the clinical settings and experiencing problems to work shifts after the delivery because the mother might be breast-feeding or having to look after a sick baby without any support, often being single parents.

Statistics from the SAMHS Nursing College for 2005 (see table 1.1) reveal that there were pregnant student nurses at each level of study, decreasing the number of qualified nurses at the end of four years, with financial implications for the SANDF, the nursing college and the student nurses concerned.

Table 1.1 Pregnant students at different stages of training during 2005

Year of study	Number of pregnant students	Number of students
First year	2	40
Second year	3	52
Third year	1	49
Fourth year	4	44
Total	10	185

Source: SAMHS 2005a:5

Table 1.1 indicates that during 2005, out of 185 student nurses, 10 (5.4%) became pregnant. These statistics seem to suggest that student nurses might require sex education, life skills and contraceptive counselling. Although the pregnancy rate of 5.4% for 2005 might seem low, this rate could increase to 21.6% over the minimum training period of four years.

Student nurses are supposed to be well equipped with knowledge about contraceptives and safe sexual practices. There are shortages of health care providers in South Africa whilst there is an increase in public health care demands for various reasons, such as the HIV/AIDS pandemic. Thus, a decreased output of professional nurses at the end of four years' training, due to delays caused by pregnancies, might further deplete the number of health care professionals in the DoD and South Africa.

According to the salary directive of the DoD (DS/CDHRPP/HHRSS/R/104/1/P) of 01 July 2006, it will cost the SANDF R38 926.50 per year for a student nurse's salary only. In the case of a student nurse becoming pregnant, R12 975.32 will be paid to the student nurse during the four months of maternity leave. At least an additional six months (costing R19 462.98 in additional salaries) could be added to the training of the individual pregnant student nurse. These costs of R32 438.30 exclude the hidden costs of the facilitators' salaries, training aids, classroom maintenance, travelling costs, and other factors involved in the training of student nurses. Reducing the number of pregnancies amongst the student nurses would thus reduce these training costs for the institution and enable more student nurses to become professional nurses after the successful completion of four years' training.

1.4 SIGNIFICANCE OF THE STUDY

The findings of the study will

- provide more knowledge about challenges faced by pregnant student nurses in SAMHS
- identify gaps in student nurses' knowledge of contraceptives and safe sexual practices
- contribute to the body of knowledge for the development of special programmes, such as student health projects
- create awareness by the institution to establish a policy on the employment and placement of staff dealing with student problems

1.5 PURPOSE OF THE STUDY

The overall purpose of this study was to identify challenges encountered by pregnant student nurses employed by the SANDF.

1.6 RESEARCH OBJECTIVES

The research objectives of this study were to

- describe the factors contributing to unplanned pregnancies among student nurses employed by the SANDF
- identify the challenges encountered by student nurses employed by the SANDF who fall pregnant during their training
- explore and describe the attitudes of student nurses employed by the SANDF towards using contraceptives
- develop strategies to minimise unplanned pregnancies of student nurses employed by the SANDF
- make recommendations for the development of Standard Operating Policy (SOP) to manage pregnant student nurses
- make recommendations for further research and planning

1.7 CONCEPT CLARIFICATION

The primary concepts used in this study include abortion, attitude, adolescent, challenges, contraceptives, pregnancy, pregnancy rate, pregnancy-related challenges, reproductive health, student nurses, safe sexual practices, teenage pregnancy and unplanned pregnancy. For the purposes of this study, these concepts are used as defined below.

- **Abortion**

Abortion is the termination of a pregnancy before the foetus has developed sufficiently to live outside the uterus (*Mosby's Medical, Nursing, & Allied Health Dictionary* 2002:6). Abortion is the expulsion (either spontaneous or induced) of a foetus from the womb before it is able to survive independently (*Oxford Dictionary* 2000:11).

In this study, abortion means the removal of the foetus from the womb by legal or illegal means before it can survive outside the womb (uterus).

- **Adolescents**

In South Africa, adolescents are defined as persons from 12 to 19 years, and youth as 20 to 24 years (DOH 2001:8).

In this study, student nurses in the SANDF, who may be adolescents (especially during their first year of training) or youth, were used as the participants.

- **Attitude**

An attitude refers to a way of thinking or behaving (*Little Oxford Dictionary* 2000:39).

In this study, attitude referred to the perceptions and feelings of student nurses about pregnancies' challenges during their training in the SAHMS Nursing College.

- **Challenges**

A challenge is an invitation to someone to take part in a contest or prove something. A challenge is a demanding task or situation (*Little Oxford English Dictionary 2002:106*).

In this study, challenges referred to the difficulties and/or problems that pregnant student nurses face while employed by the SANDF.

- **Contraceptives**

A contraceptive is any device or technique that prevents conception. Contraception is a process or technique for preventing pregnancy by means of medication, device, or method that blocks or alters one or more of the processes of reproduction in such a way that sexual union can occur without conception (*Mosby's Medical, Nursing & Allied Health Dictionary 2002:425*).

In this study, contraceptives referred to any device or technique that the student nurses, employed by the SANDF, might use to prevent conception.

- **Pregnancy**

Pregnancy is the gestational process, comprising the growth and development within a woman's uterus of a new individual from conception through the embryonic and foetal periods to birth (*Mosby Medical, Nursing & Allied Health Dictionary 2002:1389*). Pregnancy is the condition from conception to the expulsion of the foetus (*Bailliere's Nurses Dictionary 1996:313*). Pregnancy is the state or period of being pregnant, and being pregnant means having a baby developing inside a woman's womb (*Little Oxford Dictionary 2002:544*).

In this study, pregnancy referred to the condition from conception, the development of the foetus/baby, to the delivery of that baby.

- **Pregnancy rate**

A rate is a measure, quantity, or frequency measured against another. It refers to the

speed of something (*Little Oxford English Dictionary* 2002:577).

In this study, pregnancy rate referred to the annual number of pregnancies among student nurses employed by the SANDF.

- **Pregnancy-related challenges**

Collins Cobuild English Dictionary (2001:1301) defines “relate” as “if something relates to a particular subject, it concerns that subject; the way two things relate, or that one thing relates to another, is the sort of connection that exists between them”.

In this study, pregnancy-related challenges referred to demanding tasks, situations, difficulties and/or problems connected to pregnancies and/or having delivered babies that student nurses encounter while employed by the SANDF.

- **Reproductive health**

The DoH (1999:iii) defines reproductive health as “the physical, mental and social well-being and the ability to enjoy sexual relationships without fear of unwanted pregnancies”. It refers to the ability to decide about how many children one wants to have and when to have children. It aims at equipping individuals about strategies and information to prevent STIs and HIV/AIDS; it is not gender biased and ensures availability and accessibility of services to all individuals and groups.

In this study, reproductive health referred to a student nurse's physical, mental and social well being and the ability to enjoy sexual relationships without fear of unwanted pregnancy while employed by the SANDF.

- **Student nurses**

A student nurse refers to a person registered with the South African Nursing Council (SANC) under section 23 of the Nursing Act, No 50 of 1978 as such (RSA 1978).

In this study, a student nurse referred to a person registered with the SANC under section 23 of the Nursing Act, No 50 of 1978, as amended and employed by the SANDF

as a student nurse.

- **Safe sexual practices**

Safe sexual practices are “sexual practices that limit the risk of transmitting or acquiring an infectious disease via exchanges of semen, blood and other bodily fluids, use of condoms, mutual masturbation, and avoidance of anal intercourse” (*Stedman Medical Dictionary* 2000:1626).

In this study, safe sexual practice referred to any activity, practice and behaviour that student nurses employed by the SANDF might use during sexual activity to protect them from HIV/AIDS, STIs and pregnancy as well as limit the risk of transmitting or acquiring infectious diseases via exchanges of semen, blood and other body fluids.

- **Teenage pregnancy**

Teenage pregnancy refers to pregnancy that occurs in a woman aged 19 or younger (Speroff & Darney 1996:295).

This definition applied to the term in this study.

- **Unplanned pregnancy**

A plan is “a way of doing something that you have worked out in detail beforehand” (*Collins Cobuild English Dictionary* 2001:1170) while unplanned indicates that the way of doing things was not worked out or thought out beforehand. The term “unplanned pregnancy”, then, would refer to a pregnancy that occurred without advanced planning.

In this study, an unplanned pregnancy referred to a pregnancy that occurred during the student nurses training at SAMHS nursing college, and which the student nurse did not plan.

1.8 RESEARCH METHODOLOGY

Polit and Hungler (1995:431-432) describe research methodology as "procedures for obtaining, organizing and analysing data". Babbie and Mouton (2003:75) add that research methodology is .the "process and procedures to be used in a study which is conducted in a systematic and logical way".

The researcher selected to undertake a quantitative, explorative, descriptive, contextual study to identify the challenges encountered by pregnant student nurses employed by the SAMHS.

1.8.1 Research design

Polit, Beck and Hungler (2001:167) define the research design as "a blueprint for conducting a study which is necessary as it maximizes control over factors that interfere with the validity of the findings". In order to achieve a goal, a strategy or plan is required to indicate how the goal will be achieved.

Burns and Grove (1999:223) state that the design "guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal".

1.8.1.1 Quantitative

Burns and Grove (1999:27) describe a quantitative study as "a formal, objective, systematic process of obtaining numerical data". Quantitative research is a formal and objective process for generating information about the world in which logical systematic steps are adhered to. The purpose of quantitative research is to describe new situations (Burns & Grove 1999:23).

In this study, the researcher used structured interview schedules to collect data from student nurses who were pregnant and who had delivered babies whilst in training at the SAMHS Nursing College.

1.8.1.2 Exploratory

The aim of exploratory research is “to explore the nature of the phenomenon, the manner in which it is manifested and its underlying processes” (Polit & Hungler 1999:178).

In this study, the researcher explored the challenges facing pregnant student nurses and their knowledge of contraceptives and safe sexual practices.

1.8.1.3 Descriptive

According to Brink and Wood (1998:289), descriptive studies describe aspects of a situation as they occur naturally. The main objective of descriptive research is to accurately portray the characteristics of persons, situations, or groups and/or the frequency with which certain phenomena occur (Polit & Hungler 2001:460).

This study identified, described and documented aspects that give rise to the increasing rate of student nurses’ pregnancies, problems related to pregnancies during the period of training in the SANDF, and the implications thereof.

1.8.1.4 Contextual design

A contextual design focuses on the context of the study which could be a certain time period, geographical area and/or specific phenomenon (Neuman 1997:331).

This study was contextual in nature as it was executed within the context of the training of student nurses presently employed by SAMHS Nursing College during 2007 in the Gauteng Province of South Africa only.

1.8.2 Research population and sample

A *population* is the “entire aggregation of cases that meets a designated set of criteria” (Polit & Hungler 1997:223).

In this study, the population comprised all student nurses at the SAMHS Nursing

College registered with SANC as students in that institution, who bore children between 1 January 2007 and 31 July 2007.

A *sample* is a “subset of a population selected to participate in a research study through a sampling process” (Polit & Hungler 1997:468).

To be included in the study, the participants had to be

- Student nurses employed by the SANDF
- Pregnant, or
- Mothers of a child/children born during the period of training

1.8.3 Context

According to Polit, Beck and Hungler (2001:44), context refers to "the setting within the site in which the data collection will occur".

In this study, the data was collected from 30 student nurses at the SAMHS Nursing College after permission had been obtained from the SAMHS Ethics Committee (see annexure A).

1.8.4 Data collection

According to Polit et al (2001:36), data collection is the "method used to collect information required to conduct the research study". Research objectives in a quantitative study must be accomplished with data collected (Burns & Grove 1999:50).

In this study, the researcher conducted a survey as the data-collection method. A survey is "a process by which people's habits, opinions, attitudes, beliefs, characteristics and performance, are gauged by questioning them" (Van Lill & Visser 1998:3). This was accomplished by conducting structured interviews (see annexure D) with 30 students according to the inclusion criteria (see section 1.8.2.2).

1.8.4.1 Data-collection instrument

The data were collected during structured interviews conducted with each student nurse who met the inclusion criteria. The researcher, with the help of the study supervisors, prepared the interview schedule used to collect the data. The interview schedule was developed with main and sub-questions, to focus on the research problem during the structured interviews.

1.8.4.1.1 Validity

According to Brink (1996:167), validity refers "to the degree to which an instrument measures what it is supposed to measure given the context in which it is applied". The study supervisors assisted in the formulation of the interview schedule, and it was given to an independent expert and a statistician to evaluate for face and content validity, as well as for conceptual clarity and investigative bias.

1.8.5.1.2 Reliability

Reliability is "a matter of whether a particular technique, applied repeatedly to the same object, would yield the same results each time" (Babbie & Mouton 2003:119).

In this study, a pre-test (pilot study) was conducted with five student nurses who were not part of the survey. The aim of the pre-test was to identify problems related to the research instrument, the structured interview schedule.

1.8.5 Data analysis

A statistician analysed the data through coding and analysis of the completed interview schedules. Frequencies and basic statistics were calculated and presented in tables and graphs (see chapter 3).

1.9 SCOPE AND LIMITATIONS

This study was unique as it was conducted in the military environment where there are strict rules and discipline and a study of this nature had not previously been conducted.

1.10 ETHICAL CONSIDERATIONS

According to Burns and Grove (2001:191), in order to maintain a high standard of research, the conduct of nursing research requires not only expertise and diligence, but also honesty and integrity. Ethical considerations in research are also essential to generate sound knowledge for practice. Polit et al (2001:141) are of the opinion that, in order to ensure a high standard of research, ethical guidelines are set to direct researchers.

To ensure that ethical considerations were adhered to and maintained in this study, the research proposals was sent for approval to the Research and Ethics Committee at the Department of Health Studies of the University of South Africa prior to commencement of the study as well as to the SAMHS Ethics Committee (see annexure A).

With regard to the ethical responsibility of the researcher towards the participants in this study, each participant was treated with respect and dignity and privacy was provided at all times (see chapter 3).

1.11 OUTLINE OF THE STUDY

Chapter 1 introduced the rationale for, purpose of, objectives and the significance of the study, defined key concepts, and explained the research design and methodology and ethical considerations.

Chapter 2 presents the literature review undertaken on pregnancy rates amongst student nurses and the challenges thereof.

Chapter 3 discusses the research design and methodology, including the selection and development of the data collection instrument.

Chapter 4 presents the data analysis and discusses the findings.

Chapter 5 concludes the study, presents the limitations and makes recommendations for practice and further research.

1.12 CONCLUSION

This chapter outlined the background to, rationale for, and the purpose, objectives and significance of the study. The key concepts were defined; the research design and methodology and the data-collection instrument described, and the ethical considerations were outlined.

Chapter 2 discusses the literature review of pregnancy-related challenges encountered by young people generally, and students specifically.

CHAPTER 2

Literature review

2.1 INTRODUCTION

The researcher conducted a review of empirical and theoretical literature sources on pregnancies and students to identify what was known about the challenges of students' pregnancies. The literature review revealed that a considerable amount of research has been done on teenage/adolescent pregnancies and health-related problems which teenagers experience during pregnancy, including academic, support, financial and psychological problems. However, only one study could be traced on the health care needs of pregnant student nurses conducted in the Limpopo Province of South Africa.

The researcher identified sources for the literature review with the aid of the following computer-assisted data based bibliographies:

- Unisa's library search, which included searches of references to South African material, MEDLINE express, OASIS library catalogue, journals and books in the Unisa library and material in South African libraries as well as the international nursing index (CINAHL) and Social Science Index
- South African magazines, newspapers and journals
- The South African Military Health Training Formation library search.

2.2 PURPOSE OF THE LITERATURE REVIEW

The purpose of the literature review was to acquaint the researcher with the current state of knowledge concerning pregnancy-related challenges encountered by students at the SAMHS Nursing College and the participating hospital during their clinical exposure.

The literature sources were reviewed, analysed and categorised according to

- possible factors contributing to student nurses' pregnancies
- the use of contraceptives by students, including teenagers, adolescents and young people
- sexual behaviour of students
- policies and legislation impacting on contraceptive use and reproductive health in South Africa
- challenges encountered by student nurses during and after pregnancy in the SAMHS Nursing College as well as in the clinical setting
- measures to reduce and/or prevent pregnancies among students
- services needed by pregnant students.

Since there was inadequate data on student nurses' pregnancies in South Africa, information about teenage and adolescent pregnancies formed the basis of this literature review.

2.3 POSSIBLE FACTORS CONTRIBUTING TO STUDENT NURSES' PREGNANCIES

Various factors, including social, cultural, emotional, educational and economic issues, might contribute to teenage pregnancies. Considerable international research has been conducted on the factors contributing to adolescent pregnancies.

2.3.1 Social factors

According to Giddens (2001:26), socialisation is the process by which humans learn the culture of their society and become adult members of that society. It teaches humans the values and norms of the society in which they live. Socialisation teaches humans to live in society and what is regarded as appropriate behaviour in different situations. Different agencies influence an individual's behaviour, namely the family, the peer group, the mass media, schools and religion.

2.3.2 Cultural factors

Giddens (2001:23) refers to culture as the way of life of the members of a society, or of groups within a society. It includes how people dress, their marriage customs and family life, their patterns of work, religious ceremonies and leisure pursuits. According to Stanhope and Lancaster (1996:933), culture also includes the community residents' beliefs, values, customs and institutions.

Culture may have positive or negative effects on adolescent motherhood and the support expected from their societies. Traditional beliefs might curb the problem by ensuring well-organised support systems. Dlamini (2002:4) points out that some African cultures are in a transitional stage, which means that culture is changing from the traditional way of life to the more modern Westernised culture. This transitional process may result in uncertainty in the minds of community members on how to cope with teenage/adolescent pregnancies. The community usually has no answers for all the problems they encounter and the teenager mother is then left without the strong support system she desperately needs (Dlamini 2002:4).

The morals and values of members may be detrimental to the well-being of a community (Dlamini 2002:44). In some cultures, sexual matters are not openly discussed with children. In a cross-cultures study, Clarke (1999:335) found the highest teenage motherhood rates in countries or sections of societies with the least open attitudes towards sex.

According to Dlamini (2002:45), cultural norms and values could be to the detriment of teenage mothers' empowerment and could contribute to greater confusion in teenagers' minds. However, Netshikweta (1999:25) believes cultural practices were useful in the Limpopo Province of South Africa and that the cultural beliefs helped to prevent premarital conception among teenagers where these practices were maintained.

According to Giddens (2001:25), culture plays a significant role in perpetuating the values and norms of a society, yet it also offers important opportunities for creativity and change. Subcultures and countercultures groups, which largely reject the prevailing values and norms of the society, can promote views that show alternatives to the dominant culture. Social movements, or groups of people sharing common lifestyles,

are powerful forces of change within societies (Giddens 2001:25). In these ways, subcultures allow freedom for people to express and act on their opinions, hopes and beliefs.

2.3.3 Emotional factors

Becoming a mother and/or having a child are serious decisions, which involve life-long commitment and responsibilities. The decision to have a baby should be made with an open mind and should not be an one.

According to Mwasu (1994:14) and Schoeman (1990:15) (cited by Netshikweta 1999:26), 72% of teenagers believed that pregnancy can be one of the happiest times in a woman's life, and 54% believed that getting pregnant would improve relationships. However, Dlamini and Mckenzie (1991:28) reported that out of 50 pregnant girls, 92% were frustrated and unhappy and only 8% were happy with their pregnancies. In a study in northern Pretoria in South Africa Mogotlane (1993:3) found that only 3% of the adolescents were happy with their pregnancies while 43% were miserable due to the pregnancies.

Boult and Cunningham (1992b:160) and Mokgalabone (1999:56) found that the following emotional factors contributed to adolescent motherhood:

- deliberately becoming pregnant in order to have someone to love
- to claim attention
- trying to overcome low self-esteem
- experiencing peer pressure
- wanting to "hold on" to a male partner
- to prove their ability to attract male partners
- rebelling against parental constraints
- child-bearing brings with it a prospect of starting an independent household
- to indicate that the teenager is no longer a child
- a possible solution when it is difficult to find employment
- rapid urbanisation and Westernisation, which have eroded many of the traditional norms and values

- bored with school
- the assumption that poverty will be overcome.

Adolescents are often seen as extremely idealistic, constantly challenging current norms and values, opposing authority, and considering the way things ought or could be. Adolescents may even discard what is and may be totally intolerant to things as they are. This can lead to rejection of family beliefs, religion, or social and cultural values, which seem inappropriate for them (Edelman & Mandle 1998:552).

2.3.4 Education levels

Parekh and De la Rey (1996:5 as cited by Netshikweta 1999:17) state that student pregnancies are associated with a lack of understanding of the likelihood of pregnancy following sexual intercourse. Netshikweta (1999:17) also refers to Hudson and Ineichen (1991:19) who maintain that issues of student pregnancies might be related to a lack of education and career opportunities for girls from lower socio-economic groups in London. Early pregnancies might be a way for students to find other roles in life. Poor performance at college, low self-esteem, and poor communication with parents were additional factors associated with student pregnancies. In the USA, Walsh and Corbett (1995:278) found that poor performance at tertiary institutions, low self-esteem, as well as poor communication with parents, were associated with student pregnancies.

In a study on pregnant student nurses in the Northern Province of South Africa, Netshikweta (1999:114) found a lack of knowledge about specific contraceptives. Lack of knowledge was found to be a key factor contributing to student nurses' pregnancies as manifested by their ignorance about contraceptives, their effects and the need for consistent use of contraceptives.

Boult and Cunningham (1992b:162) also indicate that ignorance of the relationship between menstruation, coitus, fertility and conception may contribute to teenage pregnancies. In addition, at the University of East Anglia in London, Schofield (1994:28) reported that ignorance about contraceptives together with poor control were major factors that put young adolescents at risk of unwanted pregnancies. Lack of parental guidance and discussions on sexuality and contraception, teenage experimentation and risk-taking behaviour, insufficient knowledge about pregnancies, and lack of insight are

factors influencing adolescent pregnancy rates (Clarke 1999:334; Dlamini 2002:44; Mokgalabone 1999:56).

Kaseke (1996:16) maintains that the majority of student pregnancies in South Africa might be unintentional as a result of lack of information, ignorance, myths, non-use of contraceptives and low socio-economic status.

Accessible health services might help to address adolescents' needs (Dlamini 2002:38; Mkwaikambo 1995:10; Netshikweta 1999:115). In addition, people's literacy, level of training, education and intellect co-determine their decisions and choices (Netshikweta 1999:18). Dunjwa (1990:7) found that income categories, life styles and living conditions contributed to perceptions on child bearing.

2.3.5 Economic factors

Poverty is the most frequent cause and consequence of teenage pregnancies and motherhood. Pregnant teenagers are more likely to come from homes marked by poverty and lack of education, and from single-parent homes in South Africa (Boult & Cunningham 1992b:159; Smith 1996:132).

In a study in Botswana, Van Driel (1994:189,202) found 59 unmarried mothers with children in 27 households. The unmarried mothers stayed in rural areas with female-headed families and were poor, with dependants to support. They were not only economically disadvantaged, but also educationally disadvantaged, which diminished their chances of being employed in the labour market (Van Driel 1994:202).

2.4 TEENAGERS' AND STUDENTS' USE OF CONTRACEPTIVES

Contraception remains an important part of the national effort to reduce adolescent pregnancies in the USA. A number of safe and effective contraceptive methods are available, including abstinence, barrier methods, oral contraceptives, depo provera, and Norplant. The use of condoms and vaginal spermicidal preparations is recommended for all sexually active adolescents to reduce (not eliminate) the risk of acquiring STIs. Abortion is not considered a contraceptive method (Greydanus, Patel & Rimsza 2001:562). Sexually active adolescents should understand the benefits and limitations

of the various contraceptive methods. Greydanus et al (2001:562) indicate that 45% of teenagers did not use contraceptives and even if they used contraceptives, they did not do so correctly. Sexually active adolescents should understand the benefits and limitations of the various contraceptive methods (Greydanus et al 2001:563). The efficacy of contraceptive methods could be improved if those using it had access to healthcare professionals who provide appropriate education in conjunction with contraceptive prescriptions. Questions regarding contraceptives' side effects must be acknowledged, and accurate information provided (Greydanus et al 2001:562-563).

According to Ehlers (2003:19-20), adolescent mothers in South Africa gave the following reasons for not using contraceptives:

- ignorance about contraceptives
- fear of going to the clinic
- fear of picking up weight
- opposition of their boyfriends.

The same problems affected adolescents in Texas, USA. Adolescents on oral contraceptives or injectable hormonal contraceptives were concerned about gaining weight (Wilcox, Baird & Weinberg 1999:365).

In South Africa, Ehlers (2003:20) found that the following factors impeded the use of condoms by youth:

- lack of perceived risk
- peer norms
- condom availability
- adult attitudes to condoms
- sex, and gender power relations

Dlamini (1995:6) (cited by Dlamini 2002:25) found that teenagers in Swaziland were sexually active but ignorant about contraceptives to prevent pregnancies (see table 2.1).

Table 2.1 Sexual behaviour and reproduction among teenage girls aged 10 to 19 in Swaziland

SEXUAL EXPERIENCE	PERCENTAGE
Percentage of girls sexually mature by age 15 (onset of menarche)	19,3
Percentage of girls having experienced sexual intercourse, ages 15 to 19	52,0
Percentage of girls with children made pregnant by schoolmates	31,0
KNOWLEDGE AND USE OF FAMILY PLANNING	PERCENTAGE
Percentage of girls ages 10 to 14 using contraception	1,0
Percentage of girls ages 15 to 19 using contraception	9,5

Compiled from Dlamini 2002:25

According to Dlamini (2002:26), adolescents in the age group 15 to 19 years are increasingly using contraceptives, while those in the age group 10 to 14 years remain less likely to do so. Reasons include (Dlamini 2002:26; Edelman & Mandle 1998:567):

- younger teenagers' cognitive immaturity (lack of appreciation of the consequences of their actions)
- lack of knowledge about sexuality
- teenage relationships and peer group pressure
- irregular sexual intercourse

In their study, Netshikweta and Ehlers (2002:76) found that 71 % of the student nurses did not know that conception could take place during the first sexual intercourse; 66% had no knowledge about contraceptives, and 34% knew something about contraceptives. The majority (70%) of the participants lacked accurate knowledge about specific contraceptive methods and about the correct use of contraceptives; 41.9% were not familiar with emergency contraceptives, and 15.1 % believed that oral contraceptives caused cancer or made the users fat and/or sterile. None of the participants insisted that their male partners use condoms.

According to Lowe and Radius (2004:291), college students had misconceptions about anatomy, physiology and the appropriate use of effective contraceptives. Of their participants, 68.2% had experienced coitus, but 56.6% did not take adequate precautions to prevent pregnancy at the time of their first coitus. Among the sexually

experienced, 76.9% reported using specific effective methods at the previous coitus. More than 60% underestimated adolescent pregnancy rates, 43% agreed that pregnancy would not happen to them or "their sexual partner". In addition, 85.1% agreed that dealing with unplanned pregnancies would be painful, and 86.7% disagreed that using contraception made coitus less enjoyable. Another 94.7% believed that both males and females should share the responsibility for contraception and 27.3% were of the opinion that females using effective contraceptives and/or carrying condoms with them would be deemed promiscuous.

To this end, it is evident that the youth has misconceptions with regard to contraception and its use, taking into account Netshikweta and Ehlers' (2002:76-77) and Lowe and Radius's (2004:291) findings on student nurses and college students.

2.5 SEXUAL BEHAVIOUR OF STUDENTS

Teenage pregnancy is a well-documented problem in the USA, with approximately 890,000 teenage pregnancies occurring each year, the highest teenage pregnancy rates of any industrialised country (Hoyt & Broom 2002:11). In addition, Hoyt and Broom (2002:15) found that as many as 53% of high school students reported having had intercourse. Among sexually active adolescents, 54% reported having used condoms during intercourse and 25% had used contraceptive pills at the last intercourse. These behaviours contributed to a birth rate of 56.9% births per 1,000 among 15 to 19 year-old females in 1995 in the USA. The negative outcomes of teenage childbearing for the teenage mother and her offspring include high rates of school dropout, low birth-weight infants, poor health, and poverty.

In addition, teenage childbearing results in considerable financial costs to taxpayers and society. The outcome was that there is a relationship between risky health and sexual behaviour with the rate of teenage pregnancy. Together with the community the researchers collaborated to deliver multi-component interventions that address sexual risk taking behaviours, social influences and group norms about unprotected sex, as that would provide adolescents with life skills and youth development opportunities (Paine-Andrews, Harris, Fisher, Lewis & Williams 1999:182).

In the United Kingdom (UK), Burack (1999:145) found that teenagers continued to present a challenge to the health services due to the increase in their sexual risk-taking behaviours, the earlier ages at which they started sexual activity, and a reluctance to utilise available services. In a needs assessment among 1 500 young people, focusing on sexual attitudes and behaviours of British adolescents, Burack (1999:147) found that 78% of the participants reported some form of sexual contact with a partner and 23% had sexual intercourse. Both males (38%) and females (11%) indicated that their peers pressurised them to regard sex as the most important thing in a relationship. Also, 10% of teenagers indicated that they would be embarrassed to suggest condom use to a partner and 37% were concerned about appearing clumsy when using a condom. In addition, 23% of males and 9% of females claimed they would be willing to have sexual intercourse without condoms, despite their awareness of the risks involved. Sexually active youth under 16 years of age were significantly less likely to use condoms than their older counterparts. Although teenage boys were especially at high risk of sexual promiscuity and non-use of condoms, service provision remains focused on teenage girls (Burack 1999:147).

According to Kirby, Waszak and Ziegler (1991:6), it will remain difficult to change students' risk-taking behaviours, as many of them are deeply rooted in the values and practices of the larger community. Nevertheless, by giving greater priority to reproductive health, school-based clinics may become more effective in reducing sexual risk-taking behaviours. In a study in South Africa, Boulton and Cunningham (1992b:162) revealed that 38% of the teenagers were sexually active by the age of 14 years. By the age of 15, 78% were sexually active with the mean age of 14.7 years for teenagers to become sexually active. This implied that sex education should be provided to schoolchildren before they reach the age of 14.

Olivier (1996:6) studied the actual dating behaviours of South African teenagers and found a rise in the rate of sexual involvement as relationships become serious. Of the participants, 9,7% indicated that they had had sexual intercourse on their first dates; 15,4% were sexually active after several dates; 18, 6% after going steady, and 33,2% after they had established serious relationships.

Keeton (2007:6) indicated that despite knowledge, young people still engaged in risky sexual behaviour. In a survey of a sample of 3 926 South Africans aged 15 to 24,

Keeton (2007:8) found that South African youth had unprotected sex with more than one partner at a specific time and that there was a generation gap. During group discussions young people revealed that they tended to have unsafe sex with partners for reasons ranging from thinking that they were "bullet proof" with regard to contracting HIV/AIDS, desiring the rush of unsafe sex, wanting to keep their partners to lacking the power in relationships with older or richer partners to insist on condom use. In a report in the *Sunday Times* newspaper (see annexure E), Kerry and Khopotso (2007:5) reveal that getting people to change their sexual behaviours is a complicated process and 30% of people did not control the conditions under which they had sex.

Netshikweta (1999:66) found that student nurses started sexual intercourse at ages 12, 14, 15 and 18 years, and the mean age was 14 years compared to that of the participants in a school in Texas who had a mean age of 12.8 years (Griffin 1994:217). It was also found that 84% of the student nurses in the Limpopo Province of South Africa experimented and had sex to get pregnant and make their partners responsible for them so as not to lose them. Thus, in a sense, these pregnancies could not be regarded as "unplanned".

Dlamini (2002:51) refers to Mwaikambo's (1995:10) finding that poverty could also force the teenage girls to engage in various forms of sex for survival. Some of these practices were not necessarily considered formal prostitution, as many girls depended on older men ("sugar daddies") who provided them with money for school fees, clothes, and supported their extended families in exchange for sexual favours. Netshikweta (1999:65) found that 44% of the 93 participants in her study were the breadwinners, indicating that they were from low socio-economic backgrounds. Ramalebana (1995:12) indicated that the low socio-economic status of the household was a leading reason for schoolgirls' sexual permissiveness in the Venda region of the Limpopo Province.

In South Africa, Smith (1996:135) found pregnancy rates significantly higher among adolescents with parents receiving welfare grants and those younger adolescent mothers were more likely to make longer use of welfare services than older teenage mothers. In South Africa, children under the age of seven receive social grants, used in poor households as a means of income. This might also increase the rate of teenage pregnancies in an attempt to increase the amount of grants received by the family. According to Cohen (2007:6), the Department of Social Development said there were

7,9 million beneficiaries of the state's R200 a month child support grant in South Africa in 2006.

2.6 POLICIES AND LEGISLATION IMPACTING ON CONTRACEPTIVE USE AND REPRODUCTIVE HEALTH

2.6.1 The Constitution of the RSA Act, 108 of 1996

The South African is governed by the Constitution of the country. The rights of all the people in South Africa are entrenched in chapter 2 of the Constitution, including the right to make decisions with regard to their health and reproduction. Cohen (1986) (cited by Van Bogaert 2005:32) indicates that when addressing a human right, one should examine its content, its source, its target and its possible conflicts. Van Bogaert (2005:21) emphasises that rights do not exist without corresponding obligations. As with all rights, the right to reproduce has a flip side, namely the duty and responsibility to control it and to take responsibility for one's children.

2.6.1.1 *Right to education*

According to Chapter 2, Section 29 (1) (b) of the Constitution of the Republic of South Africa, every person has the right to further education, which the state, through reasonable measures, must make available and accessible (Constitutional Assembly 1996:11).

This section may bring about controversy with regard to the handling of pregnant pupils in schools as well as in the nursing colleges. In November 2006 "Maternity leave for RSA's pregnant pupils" made front page headlines in the *Sunday Times* newspaper. According to Govender and Cullinan (2006:1), the South African government was considering a set of drastic proposals to accommodate pregnant schoolgirls – including compulsory maternity leave of six weeks. The Minister of Education, Naledi Pandor also pointed out that children are sent to school to learn and it is vital that these children complete their education and prevent pregnancies (see Annexure E).

The present Standard Operating Procedures DOD1NO19/2000 (Department of Defence 2000:11) for the SAMHS Nursing College stipulates the following guidelines:

- All female learners must realise that their rights as employees of the SANDF do not override their academic responsibilities with regard to maternity leave during training.
- Student nurses must comply with the minimum training requirements of the SANC and the relevant curriculum as stipulated by R425 of the Nursing Act, 1978 (Act No 50 of 1978 as amended).
- Student nurses must take note that their academic training will be influenced by maternity leave, which will result in an extension of their training due to outstanding course requirements.
- This implies that a female learner who becomes pregnant will have to take maternity leave as stipulated in the Standard Operating Procedures DODINO19/2000 (Department of Defence 2000:11) and automatically arrange for extension of her training.
- Female members are entitled to four consecutive calendar months' maternity leave to commence:
 - At least two weeks before the expected date of birth, or
 - On a date certified by the attending medical officer as necessary for the specific member's health or for that of the unborn child.
- Maternity leave may, in consultation with the Surgeon General, be extended by the Officer Commanding upon application by the member through
 - Granting of the normal sick leave as a result of a medical complication to a maximum of 36 working days or any number of days as needed in exceptional circumstances (such as premature births where Kangaroo care is needed).
 - Granting of up to 184 calendar days unpaid leave, or
 - Granting of annual vacation leave
- Female members who, during the third trimester of pregnancy, experience a miscarriage, stillbirth or termination of pregnancy on medical grounds, shall be eligible for six consecutive weeks' maternity leave.
- Miscarriage, stillbirth or termination of pregnancy on medical grounds during the first two trimesters shall be regarded as normal sick leave. If normal sick leave credit is exhausted, the Officer Commanding can approve temporary incapacity leave up to a maximum of 30 working days with full pay.
- Maternity leave may not be interrupted.

- A female member whose child passed away within five weeks after birth may be granted six weeks' maternity leave similar to a member who experienced a miscarriage, stillbirth or in the case of termination of pregnancy on medical grounds during the third trimester of pregnancy (SAMHS 2005:2).

The policy guidelines became necessary because of the increasing incidence of pregnancies among student nurses and the impact this has on the training programme of the student, as it was no longer possible to manage each case on merit and also that all students be treated in the same way (SAMHS 2005:1).

Applying this policy has an effect on the length of the training of the pregnant student nurse that also affects the institution financially. Identifying the challenges faced by student nurses during pregnancy and after delivery might help in formulating policy guidelines that will be considerate of the students and the institution, and promote the "education for all strategy" of the South African government.

2.6.1.2 Reproductive right

The state has the responsibility to provide reproductive health services to its population, and people have a right to reproductive health. The content of the right to reproduce ranges from women's rights to choose life and when to embark on a pregnancy to access reproductive health services (safe abortions, contraception, and safe motherhood) and the right to use womanhood as a political platform to gain rights at large.

2.6.1.3 The Choice of Termination of Pregnancy Act, 92 of 1996

The Constitution of the RSA Act, 108 of 1996 (RSA 1996) recognised and assented to the Choice on Termination of Pregnancy Act, 92 of 1996 (RSA 1996:10). The Constitution protects the right of persons to make decisions concerning the reproduction and security in and control over their bodies, recognising that both women and men have the right to be informed and to have access to safe, effective, affordable and acceptable methods of fertility regulation of their choice according to the Sterilisation Act, 44 of 1998 (RSA 1998). Women have the right of access to appropriate health care services to ensure safe pregnancies and childbirth. The decision to have

children is fundamental to women's physical, psychological and social health. Access to reproductive health care services includes family planning and contraception, termination of pregnancy, as well as sexuality education and counselling programmes and services. With the recognition of the Choice of Termination of Pregnancy Act, 92 of 1992 (RSA 1992), a person may legally terminate a pregnancy. According to Netshikweta and Ehlers (2002:77), 68% of the student nurses in their study did not plan their pregnancies, and they could have benefited from the termination of pregnancy services, although 15% of the participants considered this option, but none utilised the service.

In South Africa in accordance with the National Health Bill (DOH 2000:30-36), the Department of Health (2000:30-36) carries the financial responsibility for this nationwide service, which is provided free of charge at government clinics. The full-time services of experts in health administration, fertility control, demography, sociology, communication, nursing, training and evaluation are available (Maja 2002:62). According to the Department of Health (2000:12-18), most hospitals, health services and clinics offer contraceptive services incorporated within their health services. There is widespread information about contraceptives at institutions and community centres, and increased efforts to reach the rural areas. Nevertheless, the question is what are the factors influencing the rates of teenage/adolescent pregnancies, STIs and HIV/AIDS in South Africa.

2.7 PREGNANCY-RELATED CHALLENGES ENCOUNTERED BY STUDENT NURSES

This section discusses the problems, which might be encountered, by adolescents and students during pregnancy, childbirth and parenting. According to Williams (2005:75), adolescents generally encounter more problems during pregnancy and childbirth than older women. Adolescents might try to hide their pregnancies and then do not get early, regular prenatal care. This could lead to increased risks of medical complications among pregnant adolescents. The problems encountered may be physical, social, academic and emotional.

2.7.1 Physical

In South Africa and the USA, Buga, Amoko and Ncayiyana (1996:526), Sikes (1996:26) and Smith and Maurer (1995:581) confirmed that there are greater obstetric risks for young people (Netshikweta 1999:30), namely:

- bleeding during the first three months of pregnancy
- cephalopelvic disproportions
- pre-eclamptic toxemia and other complications during labour

Furthermore, these mothers tend to experience:

- premature labour
- prenatal deaths
- back-street abortions
- infanticide
- suicide

According to Dlamini (2002:121-125), adolescents experienced physical problems during pregnancy, birth and the postpartum period, including

- Minor discomforts associated with pregnancy, such as oedema of the lower extremities, nausea, vomiting and bleeding
- Physical trauma during birth, including episiotomies, Caesarian sections and the use of instruments to deliver the baby
- Weakness.

Netshikweta (1999:115-116) found that 89% of the participant student nurses suffered from pressure symptoms and discomfort, and experienced the following medical problems:

- tiredness
- dizziness
- oedema of the ankles

- low abdominal pains
- morning sickness.

Netshikweta and Ehlers (2002:80) found that of the 93 student nurses in their study, 66% reported that caring for their patients/clients was physically demanding during pregnancy.

2.7.2 Academic

These are the educational difficulties that pregnant students and/or young mothers might experience. In a study in the Southern Hho-Hho region of Swaziland, Dlamini (2002:163-165) found that the learners were expected to leave school once they became pregnant. Some learners returned to school after the birth of the baby, but usually had to change schools. The change impacted on the learners' emotions because of social stress relating to the change, including financial stress as they were only accepted in private schools, and educational stress as the students were at least a year behind their classmates. Netshikweta (1999:29-30) also indicated that as a result of pregnancy, students might drop out of school or fail, and make poor progress because their pace of studying may decrease. Career opportunities may be limited and the students may be forced into low paying jobs. Netshikweta (1999:30) also cited a report presented by Kaseke (1996:4) indicating that student pregnancy disrupt schooling in the following ways:

- It affects the student mother's self-esteem.
- It increases the risk of becoming HIV/AIDS positive.
- It affects the student's working abilities.

According to Goosen and Klugman (1996:241), one of the major problems facing students might be tiredness, which could result in a lack of concentration during class and clinical work. Dilorio (1996:371) (cited by Netshikweta 1999:31) found that young students who became mothers reported having lower academic abilities and lower educational aspirations than their colleagues. Regardless of background factors, early parenthood was a direct cause of "truncated" schooling or training programmes when pregnant students dropped out of the programme during or after pregnancy.

Netshikweta and Ehlers (2002:80) found that the majority of the participants (70,9%) indicated that they had been scoring above 60%. Only 17% could maintain their marks above 60% during and after their pregnancies, and most of the participants' marks during their pregnancies ranged between 50% and 55%. These statistics indicated that the students' pregnancies affected their academic achievements adversely.

2.7.3 Psychological

These problems might affect the pregnant adolescents' psychological, emotional and social relations with the people around them, including support from individuals and their different institutions. According to Dlamini (2002:178) and Williams and Mavundla (1999:62), pregnant adolescents faced the following challenges:

- The fathers of their children were not willing to support the child and/or even denied being the father of the child.
- Their mothers and grandmothers had to take care of the children.
- Non-acceptance of the pregnancy by the adolescents' parents.

In the USA, Brown, Ellis, Guerrina, Paxton and Poleno (1997:17) found that children born out of wedlock were more likely to be deprived than those longed for and expected within families. The babies might also suffer from nutritional deficiencies, especially if their caretakers could not prepare artificial feeds effectively.

According to Netshikweta and Ehlers (2002:79), 39% of the participants' parents were disappointed about their pregnancies, 16% were angry, whilst only 30,1% were happy. The majority of the participants' reported their family members were very supportive (93,5%); 40,9% of the participants' male partners were disappointed, 22, 6% were happy and 1,1% was angry. Poor relationships among pregnant student nurses and college staff members were reported by 68% and 61,3% reported having received support from their clinical tutors.

According to Kaplan and Sadock (1998:59) and Netshikweta and(Ehlers 2002:7), the emotional reactions of student nurses and pregnant adolescents that might lead to psychological problems include:

- feelings of frustration
- guilt
- anger
- depression
- loneliness
- disappointment.

2.8 MEASURES TO REDUCE PREGNANCIES AMONG STUDENT NURSES

Singh and Darroch (2000:14) note that adolescent pregnancies and birth rates in developing countries are declining, and attribute this decline to economic and social changes in most Western industrialised countries. These changes include the greater importance ascribed to educational achievements, increased motivation among young people to delay pregnancy and childbearing in order to achieve higher education levels and gain job skills before starting a family, as well as improvements in knowledge of and access to the means of preventing unplanned pregnancies (Singh & Darroch 2000:22).

According to Hoyt and Broom (2002:11) teenage birth rates in the USA are declining and school-linked programmes show positive results in delaying sexual initiation and enhancing effective contraceptive use. The following aspects were involved in this USA school-based programme:

- peers
- role-plays to young adolescents
- parent participation
- community education

According to Klerman (1993:555), the experience in the USA indicates that watered down versions usually do not work and changing teenage behaviour is expensive and time consuming.

In Canada, Wang, Davis, Robin, Collins, Coyle and Baumler (2000:154, 1017-1024) refer to "Safer Choices", a school-based curriculum designed to reduce the number of learners who have sexual intercourse during their high school years and to increase condom use among learners who do have sex. An evaluation of the programme

indicated that sexually experienced students participating in the programme were more likely to use condoms and effective pregnancy prevention methods, including birth control pills, birth control pills plus condom or condom alone, than those learners in the control group who did not participate in the school-based programme. In summary, Safer Choices was found to be a behaviourally effective, school-based, HIV/AIDS and STI, and pregnancy intervention (Wang et al 2000:1017-1024).

The above programme was based on sexual behaviour changes, of which risky sexual behaviours amongst adolescents are identified as a contributing factor in increased pregnancy rates. Netshikweta and Ehlers (2000:32-34) found a high incidence of not using condoms, not abstaining from sexual intercourse and not being faithful to one sexual partner among student nurses.

Paine-Andrews et al (1999:182) introduced a multi-component model for preventing adolescent pregnancies, including teacher training, sexuality education for learners and school-linked clinic hours as well as support groups in middle schools, and this model indicated an above 63% positive response rate.

In a study of high school learners in Cape Town, South Africa, Flisher, Lombard, Muller and Reddy (2003:537-541) found that intervention programmes to change learners' sexual behaviour should commence in primary school. In high school, many learners are sexually active already and at risk of pregnancies and STIs.

Kabir, Iliyasu, Abubakar and Kabir (2004:1-22) recommend that family life or sexuality education, starting early through primary, secondary and tertiary education, be institutionalised, as this will equip the youth with correct information to enable them to make informed choices about responsible sexual behaviour. Oye-Adeniran, Adewole, Umoh, Augustine, Fapohunda and Iwere (2004:82) maintain that young persons in school should be targeted for comprehensive sexuality education, especially in view of the HIV/AIDS pandemic.

The Department of Health has a responsibility to provide productive health services to the public. Dlamini (2002:56) points out that although services and/or facilities to provide the service of reproductive health might be available; there is a problem of under-utilisation of the services by teenagers. Adolescent mothers' reasons for not

utilising the services include the belief that health providers have judgmental attitudes; fears that someone they know might see them, their religious and cultural beliefs, and also they felt exposed because they needed this service (Mwaikambo 1995:11; Ehlers, Maja, Sellers & Gololo 2000:48).

Netshikweta (1999:119) asserts that formal programmes to teach parents to communicate with their children about human sexuality should be introduced in the Limpopo Province of SA and special attention be given to more remote areas. This will ensure parents' involvement in their children's sexuality and enable them to bridge the gap of cultural and traditional beliefs that parents cannot discuss sexual matters with their children. The following programme can help to reduce pregnancies among students (Dlamini 2002:193-202; Netshikweta 1999:118; Paine-Andrews et al 1999:182):

- **Life skills programme:** consisting of activities that will enhance students' decision-making skills:
 - set goals for their lives
 - learn how to say no to sex
 - negotiate within relationships for decisions regarding safe sexual practices
 - role-playing exercises in which students act out various situations they might encounter

- **Sexuality education:** including broad-based curricula covering a variety of sexuality related issues, from the growth and development of the human body, reproductive anatomy and physiology to the development of healthy sexual attitudes and values.

- **Contraceptive education:** where methods of contraceptives will be discussed:
 - the effectiveness of each in preventing pregnancy or STIs
 - where to obtain the different contraceptives

- **Community involvement programme:** emphasising the involvement of the community and the parents in reducing teenage pregnancy.

2.9 SERVICES NEEDED BY PREGNANT STUDENT NURSES

Various services can be put in place for student nurses to assist them in dealing with the challenges they face. The solutions to these challenges cannot be found in the activities of a single individual or service, but can be found through the coordinated effort of the nursing college and the other sectors.

2.9.1 Counselling services

According to Netshikweta (1999:97), 68 out of the 93 (73.1%) of the pregnant student nurses were not in favour of discussing their pregnancies with the lecturers of the nursing college. During pregnancy individuals experience emotions due to physiological changes as well as social and economic factors. This requires adequate support for the individuals to be able to talk about and air their concerns. During pregnancy women need different resources to be able to make decisions about their pregnancies and to talk to someone who will listen without being judgmental.

Being able to discuss the matter of pregnancy with someone outside the family might lessen the pregnant mother's sense of isolation (Boult & Cunningham 1992a:304; Gillis 1990:121; Goosen & Klugman 1996:3331 cited by Netshikweta 1999:37).

Dlamini (2002:189) found that lack of support was the biggest problem of pregnant adolescent mothers. There is thus a need that counselling services be provided in colleges and hospitals where student nurses are placed for their clinical exposure. These services should comply with issues such as confidentiality and the provision of privacy for the student nurses; the amount of space for counselling services, and transport needs to be considered (Schofield 1994:128; Goosen & Klugman 1996:333 cited by Netshikweta 1999:37).

2.9.2 School-based prenatal health care services

To ensure healthy outcomes for mother and baby, the pregnant student nurses have to attend prenatal care to be able to prevent problems in their pregnancies and deliveries. Smith and Maurer (1995:592) found that women in the USA who received pre-natal care were better able to prevent problems with their pregnancies and deliveries, and could take actions to improve their chances of having healthy babies.

Netshikweta (1999:80) supports and emphasises the need for this service. In her study, Netshikweta (1999:80) found that 24,7% of the pregnant student nurses first attended antenatal care (ANC) after 36 weeks' gestation; 7,5% commenced ANC after 30 weeks, and 18,3% chose to start ANC at 36 weeks' gestation. The reasons for late attendance included poor relationships with the antenatal staff and fearing their colleagues' reactions to their pregnancies.

2.9.3 Antenatal care and childbirth education

Adolescents are likely to get information about pregnancy, labour and delivery, which might be inadequate and/or untrue, from friends. Antenatal education prepares women physically and mentally for pregnancy and childbirth (Netshikweta 1999:40; Mukasa 1997:421; Kenny 1997:8). During antenatal education, women are taught relaxation and breathing exercises as well as different birthing positions (Mukasa 1997:421; Kenny 1997:8). Netshikweta (1999:40) found that pregnant student nurses were in need of the information provided during antenatal education.

2.10 CONCLUSION

The literature review revealed that teenagers experience many problems during pregnancy, some of which can be prevented. Various factors and reasons contribute to adolescents' and student nurses' pregnancies.

Student nurses' as well as teenage/adolescents' pregnancy-related challenges need to be viewed holistically. In order to help the student nurses with the challenges they face during and after pregnancy, it is important to find out how they experience their pregnancies/motherhood and how these challenges could be resolved. The literature review was not concerned with student nurses only, but with adolescents as well as other students at different levels of schools and universities. The literature review covered possible contributing factors to student pregnancies, prevention strategies as well as services needed by pregnant student nurses. Chapter 3 describes the research design and methodology used in this study.

CHAPTER 3

Research design and methodology

3.1 INTRODUCTION

This chapter moves on from the literature review covered in chapter 2 to describe the research design and methodology, including the population, sampling techniques, data-collection instruments and ethical considerations.

3.2 PURPOSE OF THE STUDY

The purpose of the research was to identify the challenges encountered by pregnant student nurses employed by the SANDF.

3.3 RESEARCH DESIGN

Polit et al (2001:167) define the research design as “a blueprint for conducting a study and is necessary as it maximises control over factors that interfere with the validity of the findings”. In order to achieve a goal, a strategy or plan is required to indicate how the goal will be achieved. Burns and Grove (1999:223) state that the design “guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal”.

In this study, the researcher used a quantitative, explorative and descriptive contextual survey to identify the challenges encountered by pregnant student nurses.

3.3.1 Quantitative

Burns and Grove (1997:27) describe a quantitative study as “a formal, objective; systematic process of obtaining numerical data”. Quantitative research is a formal and objective process that adheres to logical, systematic steps to generate information about the world. The purpose of quantitative research is to describe situations, using

numbers (Burns & Grove 1999:23).

In this study the researcher used a structured interview schedule to collect data from student nurses who were pregnant or had delivered their babies.

3.3.2 Exploratory

The aim of an exploratory research is “to explore the full nature of the phenomenon, the manner in which it is manifested, and its underlying processes” (Polit & Hungler 1999:17).

In this study, the researcher explored the student nurses’ life skills, challenges facing them, and their knowledge of contraceptives and safe sexual practices.

3.3.3 Descriptive

According to Brink and Wood (1998:289), descriptive studies describe aspects of a situation as they occur naturally. Somekh and Lewin (2005:224) state that descriptive designs are helpful for providing a picture of the sample. The main objective of descriptive research is to accurately portray the characteristics of persons, situations, or groups and/or the frequency with which certain phenomena occur (Polit & Hungler 2001:460).

In this study, pregnancy-related challenges faced by student nurses at the SAMHS Nursing College, factors contributing to their pregnancies and the implications thereof for the profession were identified, described, and documented.

3.3.4 Contextual

A contextual design focuses on the context of the study, which could be a certain time period, geographical area and/or specific phenomenon (Neuman 1997:331). In addition, Saks and Allsop (2007:6) define contextual research as “providing current information or intelligence on a problem”. This study was contextual in nature as it was conducted in the context of the four-year training of the military student nurses in the Gauteng Province and the phenomenon under study was pregnant nurses who had not yet

completed their training. Thus the findings of the research cannot be generalised to other groups of student nurses even if they should be undergoing the same training. This limitation is discussed in chapter 5.

3.4 RESEARCH POPULATION

A population is “the entire aggregation of cases that meets a designated set of criteria” (Polit & Hungler 1997:223; Somekh & Lewin 2005:216-217). In this study the population comprised all the student nurses at the SAMHS Nursing College registered with the SANC as students who were employed by the SANDF during the period 1 January 2002 to 31 July 2007.

3.4.1 Sample

A sample is a subset of population selected to participate in a research study through the sampling process (Polit & Hungler 1997:468). Social sciences research can focus on a specific population or complete set of units being studied (for example, all nursing colleges in one country or all nurses who are working in a region) when time, costs and accessibility prohibit the collection of data from every member or about every item. In such circumstances, according to Somekh and Lewin (2005:217), it is necessary to select a representative sample of the population; one in which the same range of characteristics or attributes can be found in similar proportions as in the population.

In this study, the student nurses at the SAMHS Nursing College who bore children from 1 January 2002 to 31 July 2007 from all levels of training comprised the purposive sample. They were selected according to certain inclusion criteria.

3.4.2 Inclusion criteria

To be included in this study, the participants had to be the following:

- Student nurses employed by the SANDF
- Pregnant or mothers of a child/children born during training
- From the main campus at Thaba Tshwane

The researcher obtained all the names of the students who bore children from 1 January 2002 to 31 July 2007 from the student nurses' maternity leave records; the sample was selected by placing their names in a hat and 30 names selected randomly. The selected participants were contacted and informed of the objectives of the planned study and their role in the study. The participants were informed of their ethical rights and asked to sign a consent form (see Annexure C). All the selected participants agreed and signed consent forms.

3.5 DATA COLLECTION

Data were collected through conducting structured interviews (see Annexure D).

Thirty student nurses agreed to be interviewed during November and December, 2007. A structured interview schedule, designed to capture data relevant to the study, was used to collect data. Some of the interviews were conducted over the telephone as some of the participants were in Bloemfontein and in the Northern Cape Province at the time and could not be accessed in any other way.

3.5.1 Structured interviews

An interview involves verbal communication between the researcher and the participant during which information is provided to the researcher (Burns & Grove 1993:284). Structured interviews tend to examine questions that are both descriptive and analytical, although they have limitations in relation to exploring specific causal influences (Saks & Allsop 2007:177).

Structured interviews were conducted using interview schedules. Every participant was asked the same questions in the same order as this allowed the comparison of the participants' answers and facilitated the computation of statistics. The researcher wrote down the answers. The interviews were conducted in English as all student nurses at SAMHS Nursing College study in English.

3.5.2 Research instrument

The interview schedule was developed with main and sub-questions, to focus on the research problem during the structured interviews. The interview schedule consisted of open-ended and closed questions. Adequate space was provided for the researcher to write participants' exact words in answering the open-ended questions. The closed questions provided fixed alternatives and the participants were required to choose the most suitable option in their opinion.

The interview schedule had eight (8) sections, namely:

- Section A: Biographical data
- Section B: Sex and pregnancy
- Section C: Knowledge of and attitude towards contraceptives
- Section D: Physical challenges during pregnancy
- Section E: Emotional reaction to pregnancy
- Section F: Social reaction to pregnancy
- Section G: Academic records
- Section H: Views on support

3.6 RELIABILITY AND VALIDITY OF THE STUDY

3.6.1 Reliability

Reliability is "a matter of whether a particular technique, applied repeatedly to the same object, would yield the same results each time" (Babbie & Mouton 2003:119). In addition, Saks and Allsop (2007:414) refer to reliability as "the extent to which research instruments yield measurements that do not vary in quantitative or qualitative research". In quantitative research, test-retest reliability measures show the same result when repeated after a short interval.

Polit and Hungler (1997:297) define reliability as "the degree of consistency or dependability with which an instrument measures the attribute it is designed to measure". The reliability of a quantitative measure is a major criterion for assessing its quality (Brink 1996:171). A reliable measurement is one that, if repeated a second time,

will give the same results as it did the first time (Fisher & Foreit 2002:45).

In this study, the researcher ensured the reliability of the instrument by making use of simple language that was easily understood by the participants. In addition, the questions were relevant and specific to them and the questioning technique very clear. The reliability of the interview schedule was tested by the following:

- Pre-testing the tool, which is a means of assessing its reliability, for accuracy and dependability
- Using established measures.

3.6.2 Validity

According to Brink (1996:167), validity refers to "the degree to which an instrument measures what it is supposed to measure given the context in which it is applied". Validity testing actually validates the use of an instrument for a specific group or purpose (Burns & Grove 2003:342). In addition, validity also refers to the "truthfulness" or accuracy of the research findings (Saks & Allsop 2007:416).

The research's supervisors assisted in the formulation of the interview schedule and it was given to an independent expert and a statistician to evaluate for face and content validity, as well as for conceptual clarity and investigative bias.

- *Face validity* refers to that quality of an indicator that makes it seem a reasonable measure of some variable (Babbie & Mouton 2003:642; Saks & Allsop 2007:416). In this study, validity was ensured because all the sections of the interview schedule focused the participants' challenges during and after pregnancy, including their socio-economic circumstances. The researcher also drew up operational definitions of concepts used, to ensure that the concepts had the same meanings for all the participants.
- *Content validity* refers to how much a measure covers the range of meanings included in the concept (Babbie & Mouton 2003:123; Saks & Allsop 2007:416). It is concerned with the sampling adequacy of the content area being measured. Areas covered by the tool should represent a wide area of the topic under study. This is considered a subjective exercise because the researcher or people

designing the tests determine the content to be included in the study. The interview schedule was given to the promoter to assess the content for appropriateness.

- *Construct validity* refers to the outcome measure or finding that has been confirmed in previous studies (Saks & Allsop 2007:416). A literature control of previous research was used to compare the findings of this study.

3.7 PRETESTING OF THE RESEARCH INSTRUMENT

A pre-test (pilot study) was conducted with five students from the pupil-enrolled nurses who met the eligibility criteria to participate in the study, but were excluded from participating in the actual study. The aim of the pre-test was to give the researcher an opportunity to practise conducting the interviews and to assess the following areas:

- Practice of the interview techniques
- The flow of the interview, based on the participants' responses and comments
- The time taken for the interview
- The recording procedure

3.8 DATA ANALYSIS

According to Saks and Allsop (2007:410), data analysis refers to what is done with qualitative and quantitative research information once it has been collected.

In this study, a statistician assisted the researcher with the data analysis through coding of the information recorded on the interview schedules. The Statistical Package for Social Sciences (SPSS) Version 14 was used to analyse the data (Field 2000:12-18). Frequencies and basic statistics were calculated and presented in tables and graphs.

3.9 ETHICAL CONSIDERATIONS

According to Burns and Grove (2001:191), in order to maintain a high standard of research, the conduct of nursing research requires not only expertise and diligence, but also honesty and integrity. Ethical research is also essential to generate sound

knowledge for practice. Polit and Beck (2004:141) emphasise that ethical guidelines are set to direct researchers in order to ensure a high standard of research.

The researcher upheld the following ethical principles: permission to conduct the study, informed consent, confidentiality, anonymity, and privacy.

3.9.1 Permission

Permission to conduct the study was sought and obtained from the Ethics and Research Committee of the SANDF and SAMHS and of the Department of Health Studies, UNISA (see Annexure A and B for letters requesting and granting permission). In addition, written consent from the participants was obtained after the process and purpose of the study had been explained (see Annexure C for consent form).

3.9.2 Informed consent

According to Neuman (1997:450), the fundamental ethical principle of social research is never to coerce anyone into participating, and that participation must be voluntary. Consent also means participating in a research study out of one's own free will, without any pressure or intimidation, after having received all the necessary information relating to the study. The researcher explained the nature, purpose, and significance of the study to the participants. Each participant received a scheduled date for the interview after she agreed to participate. Written informed consent was obtained from each participant. The consent forms were kept in a secure place by the researcher and destroyed after the research report had been completed successfully (see annexure C for consent form).

3.9.3 Confidentiality

Confidentiality is the management of private information shared by a subject (Burns & Grove 1999:163). In this study, only the researcher kept the documents for data collection; no person except those actively involved in the analysis of the data had access to the data.

3.9.4 Anonymity

Burns and Grove (2001:790) refer to anonymity as meaning “of unknown name”. In this study, anonymity was assured as the participants’ names were not written anywhere and their names were never revealed in anyway whatsoever. Code names or pseudonyms were used to reflect the number of the participant interviewed. The identity of the participants remained anonymous in reports and publications of the study.

3.9.4 Privacy

Privacy is the freedom of an individual to determine the time, extent and general circumstances under which private information will be shared with or withheld from others (Burns & Grove 1993:342). According to Neumann (1997:264), the invasion of privacy is a major ethical issue in most studies.

In this study, a private room was used for the interviews, with no interference from any source. The participants were informed of the purpose of the study and voluntarily shared the information with the researcher. Each participant also had the right to decide whether she wanted to reveal personal information and to what extent (Neuman 1997:264). Each participant was also informed that she could refuse to answer specific questions. The participants were treated with respect and dignity, and privacy was ensured at all times.

3.10 CONCLUSION

This chapter described the research design and methodology of the study. A quantitative, descriptive, exploratory, contextual research design was chosen and a structured interview schedule used to collect data.

The validity and reliability of the instrument and the ethical considerations were discussed, including permission to conduct the study.

Chapter 4 discusses the data analysis and interpretation.

CHAPTER 4

Data analysis and interpretation

4.1 INTRODUCTION

This chapter discusses the data analysis and interpretation, and presents the results. The researcher undertook an exploratory descriptive study for the purpose of identifying challenges encountered by pregnant student nurses employed by the SANDF.

The findings are discussed according to the sections of the structured interview schedule. The eight sections of the interview schedule were:

- Section A: Biographical data
- Section B: Opinions about sex and pregnancy
- Section C: Knowledge of and attitudes towards contraceptives
- Section D: Physical challenges encountered during pregnancy
- Section E: Emotional reaction towards the pregnancy
- Section F: Social reaction towards the pregnancy
- Section G: Academic records
- Section G: Views on support during and after the pregnancy

4.2 BIOGRAPHICAL DATA

The biographical data included the participants' age, race, home language, marital status, religion, number of children, person(s) living with the child, father's and mother's employment, the level of training, the family's main source of income as well as the participant's position in the family (breadwinner).

4.2.1 Participants' age

Figure 4.1 depicts the participants' age distribution. The participants were aged between 16 and 35. Of the participants, 53% (n=16) were between 21 and 25 years old; 37% (n=11) were between 26 and 30; 7% (n=3) were between 31 and 35, and 3% (n=1) was between 16 and 20. In her study, Netshikweta (1999:57) found that 45% of the participants were between of 16 and 17; 38.3% were 18 to 19 and 16.7% were 20 to 21 years of age. Netshikweta (1999:57) found that the majority were teenagers, which might indicate a lack of knowledge and immaturity, and no participants became pregnant after 22. This was contradictory to the findings of this study. The reason could be the fact that, in the military, recruits must be between 18 and 22 to be employed by the SANDF, which also applies to the entry age of student nurses. It might also explain why none of the participants became pregnant before the age of 18 years.

In this study, the majority of the participants fell pregnant after they were 21 years old. This might be attributed to the fact that enrolled nurses may also do the four-year (R425) diploma, and the majority of them may be older than 21 years of age.

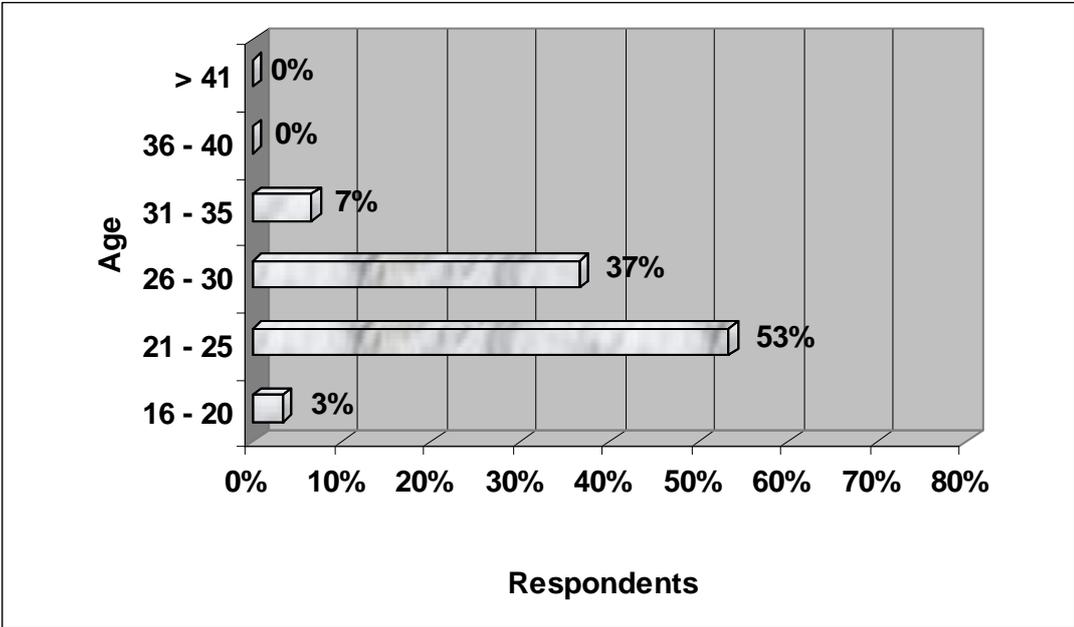


Figure 4.1 Participants' age (N=30)

4.2.2 Participants' race

Figure 4.2 indicates the participants' race distribution. Of the 30 participants, 70%

(n=21) were Black; 20% (n=6) were Coloured; 7% (n=2) were Indian, and 3% (n=1) was White. These findings indicate the proportion of races among recruits joining the military. This signifies that the percentage of Black student nurses employed by the SANDF is higher than the other races, followed by the Coloured population.

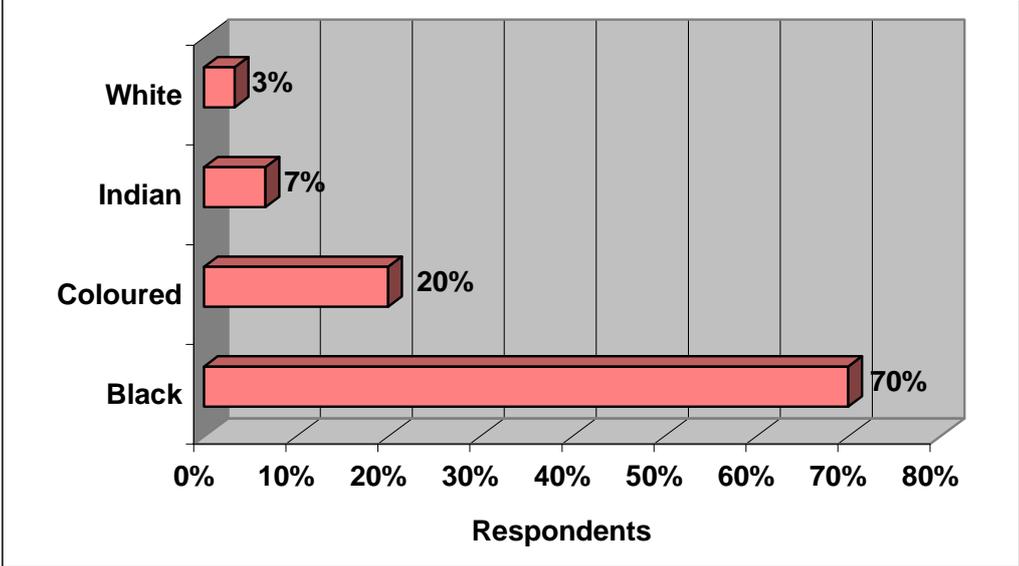


Figure 4.2 Participants' race distribution (N=30)

4.2.3 Participants' home language

The graph given in figure 4.3 indicates the participants' home language distribution. Of the participants, 23% (n=7) were Afrikaans speaking; 20% (n=6) were Setswana speaking; 17% (n=5) Sepedi speaking; 13% (n=4) were Zulu speaking; 10% (n=3) were Xhosa speaking, 7% (n=2) were English speaking; 7% (n=2) were Sotho speaking, and 3% (n=1) was Swati speaking. According to these findings, many languages are spoken in the SAHMS Nursing College, indicating possible cultures, which could have an impact on how they conduct themselves.

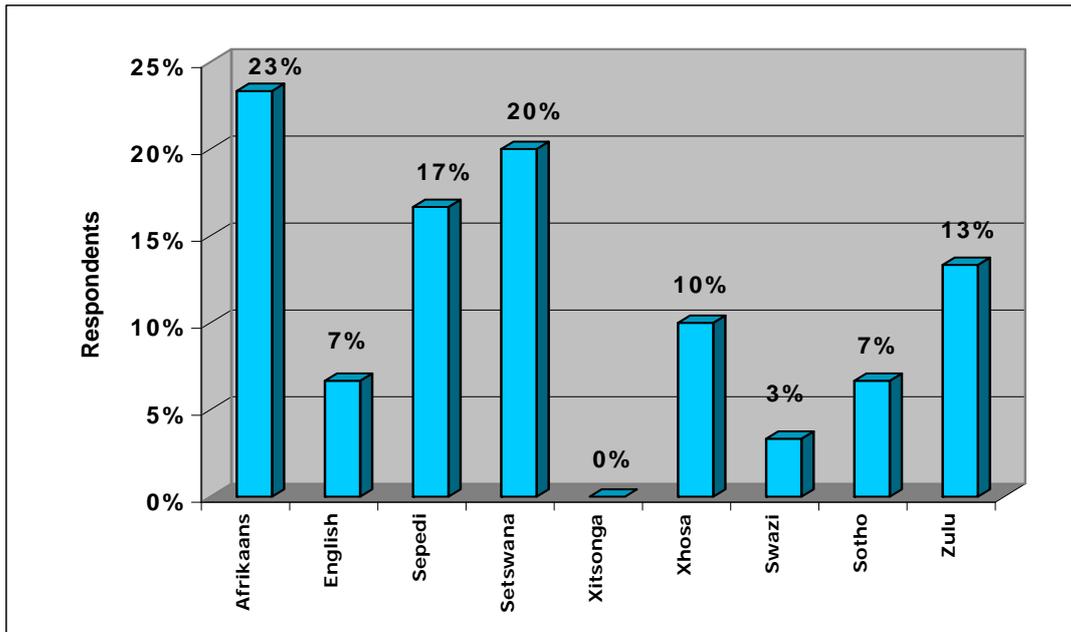


Figure 4.3 Participants' home language (N=30)

4.2.4 Participants' marital status

In certain cultures, an individual's marital status might indicate little or no choice on issues relating to childbirth, as these women might not have any say in the number of children to be born (Ehlers 1999:53, cited by Mbokane 2004:102).

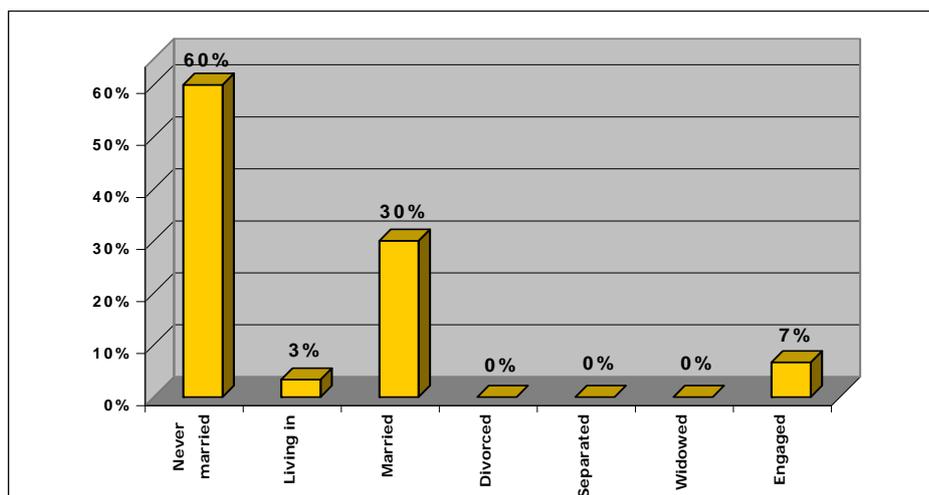


Figure 4.4 Participants' marital status (N=30)

According to figure 4.4, 60% (n=18) of the participants were never married; 30% (n=9) were married; 7% (n=2) were engaged, and 3% (n=1) was living in with her boyfriend.

These findings were to be expected, as the participants were student nurses. Netshikweta and Ehlers (2002:74) reported that 68.8% of the student nurses they studied were unmarried. Netshikweta (1999:60) found that of the participants, 30% were married and 1% was separated, and the majority of the participants believed that a girl must prove her fertility before marriage.

4.2.5 Participants' religion

As depicted in figure 4.4, all the participants in this study indicated that they were Christians.

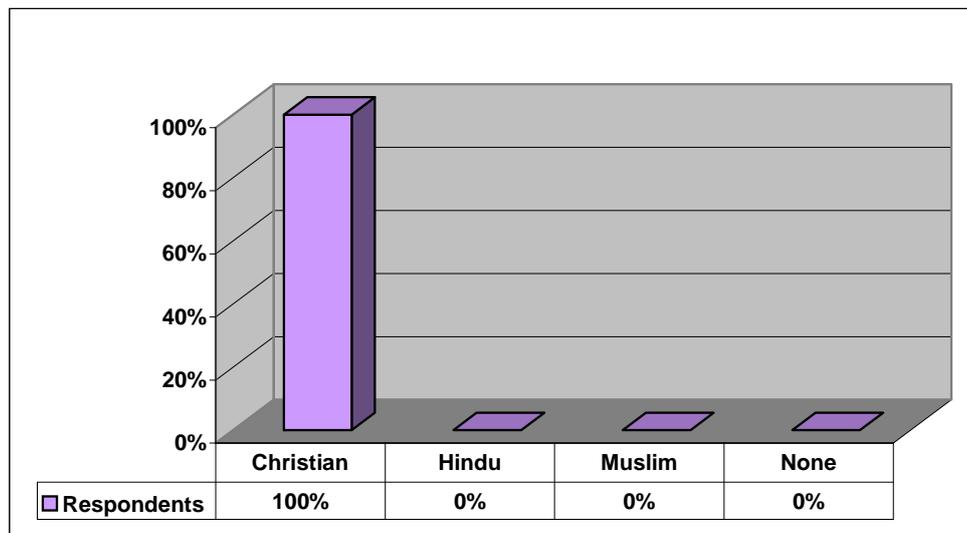


Figure 4.5 Participants' religion (N=30)

4.2.6 Participants' number of pregnancies

Figure 4.6 presents the participants' number of pregnancies. Of the participants, 73% (n=22) indicated that this was their first pregnancy and 27% (n=8) indicated the second or subsequent pregnancies.

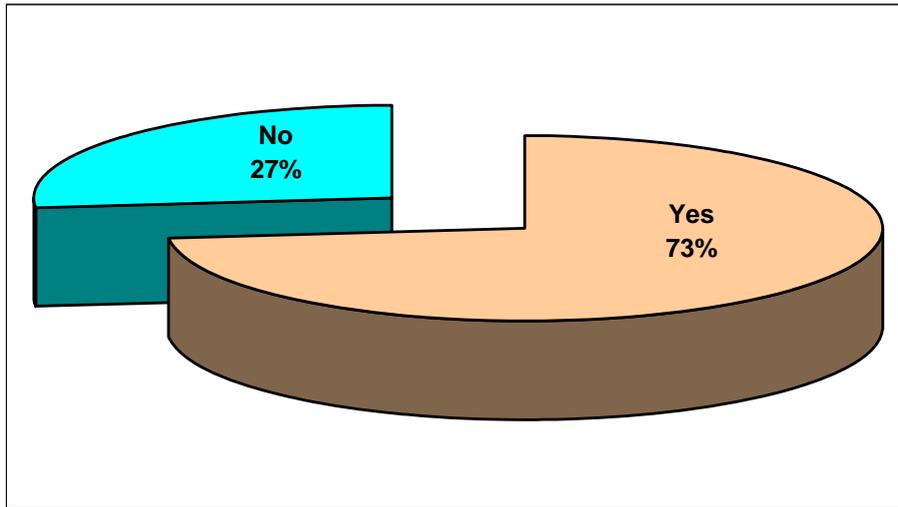


Figure 4.6 Participants' number of pregnancies (N=30)

4.2.7 Participants' number of children

Figure 4.7 indicates that of the participants, 73% (n=22) had one child, 17% (n=5) had two children, 7% (n=2) were still pregnant and 3% (n=1) had no children. In her study, Netshikweta (1999:58) found that 30% (n=28) of the participants had no children; 38, 7% (n=36) had one child; 21, 5% (n=21) had two children, and 9.7% (n=9) had more than two children. Of the participants, 61% had been pregnant more than once, only 27% (n=8) were pregnant more than once (see figure 4.6).

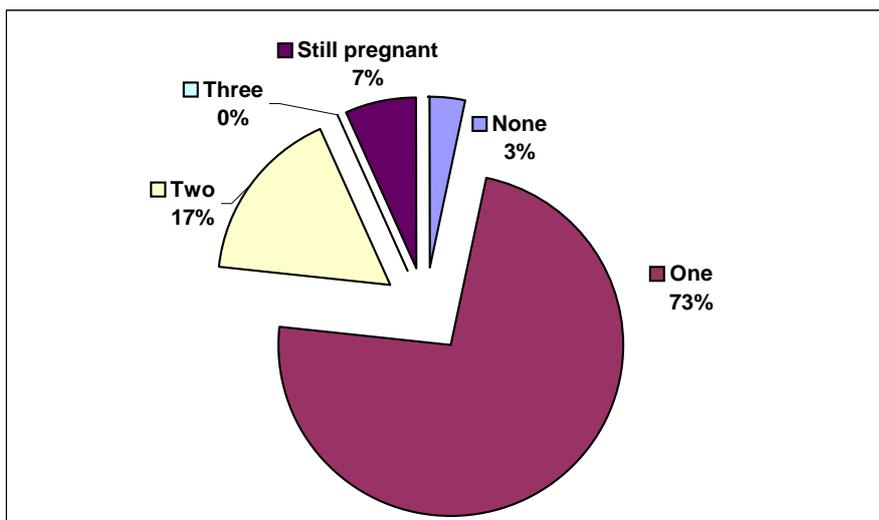


Figure 4.7 Participants' number of children (N=30)

4.2.8 Person living with the child(ren)

When the participants were asked who cared for their children, 44% (n=12) indicated that their mothers lived with and looked after their children; 33% (n=9) indicated that they lived with and looked after their children with the help of a nanny; 7% (n=2) indicated their in-laws; 7% (n=2) indicated the fathers of the children, and another 7% (n=2) indicated that their grandmothers were living with them and looking after the children. The remaining 10% (n=3) were still pregnant and did not respond to this question.

In her study, Netshikweta (1999:59) reported that 57,6% (n=53) of the participants indicated that their mothers looked after their babies; 10,2% indicated their grandmother, and 32% had other unspecified people looking after their babies.

In this study, however, 33% of the participants lived with and looked after their babies.

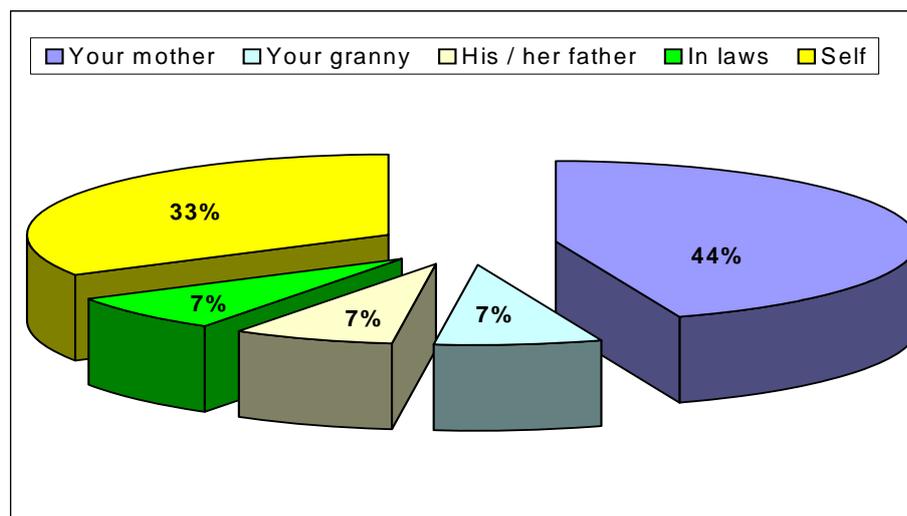


Figure 4.8: Person living with the child(ren) (N=27)

4.2.9 Participants' accommodation

Figure 4.9 depicts the participants' accommodation.

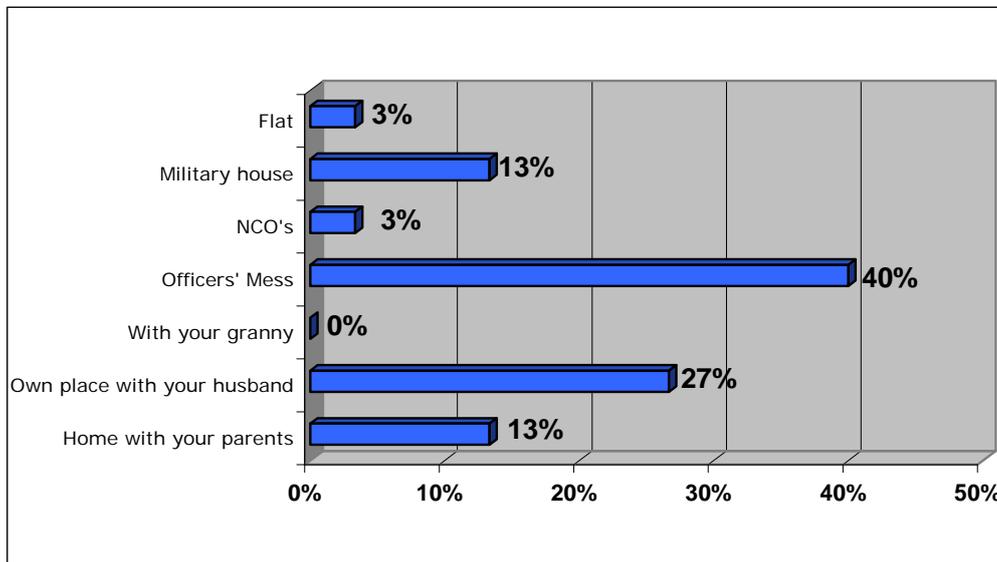


Figure 4.9 Participants' accommodation (N=30)

Of the participants, 40% (n=12) were staying at the Officer's Mess; 27% (n=8) lived with their husbands at their own homes; 13% (n=4) lived in military houses; 13% (n=4) lived with their parents; 3% (n=1) lived in a flat, and 3% (n=1) lived at the Officer's Mess. The majority lived in the military residence for students, where strict discipline and good behaviour should be observed at all times.

4.2.10 Participants' fathers' employment status

Figure 4.10 indicates the participants' fathers' employment status.

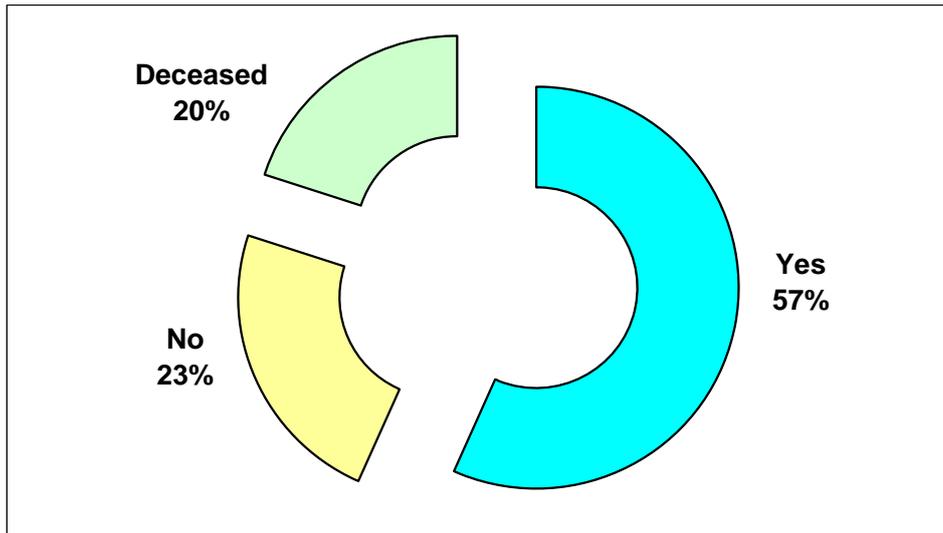


Figure 4.10 Participants' fathers' employment status

According to figure 4.10, 57% (n=17) of the participants' fathers were employed; 23% (n=7) were unemployed, and 20% (n=6) were deceased.

4.2.11 Participants' mothers' employment status

Figure 4.11 indicates the participants' mothers' employment status.

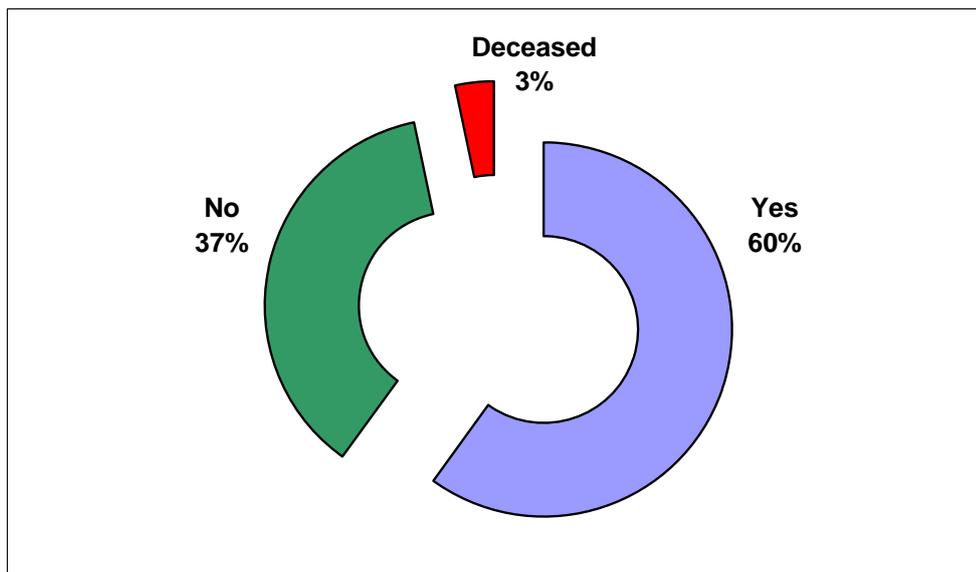


Figure 4.11 Participants' mothers' employment status (N=30)

According to figure 4.11, 60% (n=18) of the participants' mothers were employed; 37% (n=11) were unemployed and 3% (n=1) had been deceased.

4.2.12 Participants' level of training

According to figure 4.12, 33% (n=10) of the participants were in their fourth year of training; 27% (n=8) third-year students; 20% (n=6) already completed training by the time they were interviewed, 13% (n=4) were second-year students, and 7% (n=2) terminated their training. None of the participants were first-year students. Of the participants in Netshikweta's (1999:57) study, the majority were in their second year of training.

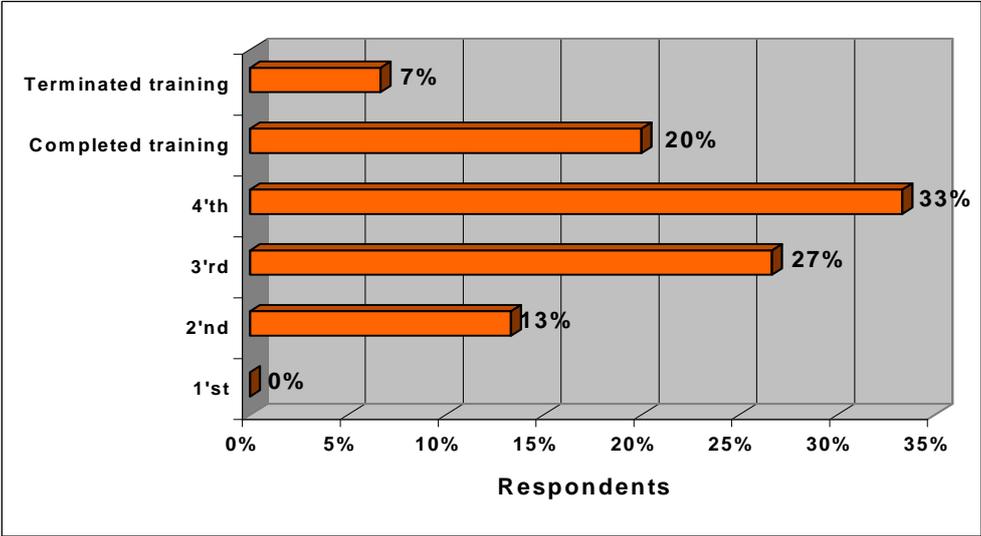


Figure 4.12 Participants' level of training (N=30)

4.2.13 Participants' family source of income

Figure 4.13 indicates the respondent's family source of income.

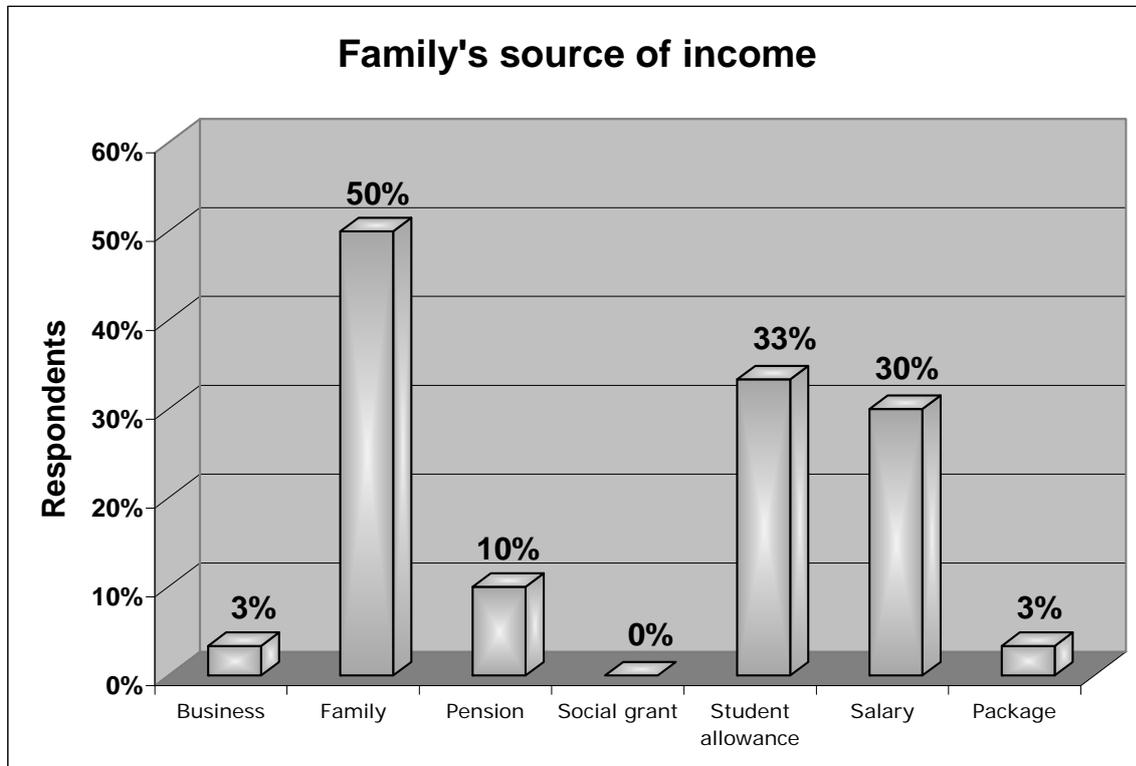


Figure 4.13 Family source of income (N=30)

According to figure 4.13, 50% (n=15) of the participants indicated their entire family composition contributed to the income, 33% (n=10) indicated that their student allowance was the source of income, 30% (n=9) indicated salary from their parents to be the family source of income, 10% (n=3) indicated that their parents' pension was the source of income, 3% (n=1) indicated business as a source of income and another 3% (n=1) indicated their parents severance package as the source of income. Some participants indicated more than one source of income and that explains the percentage total differences.

4.2.14 Respondents' family total income per month

Figure 4. 14 indicate the family's total income per month.

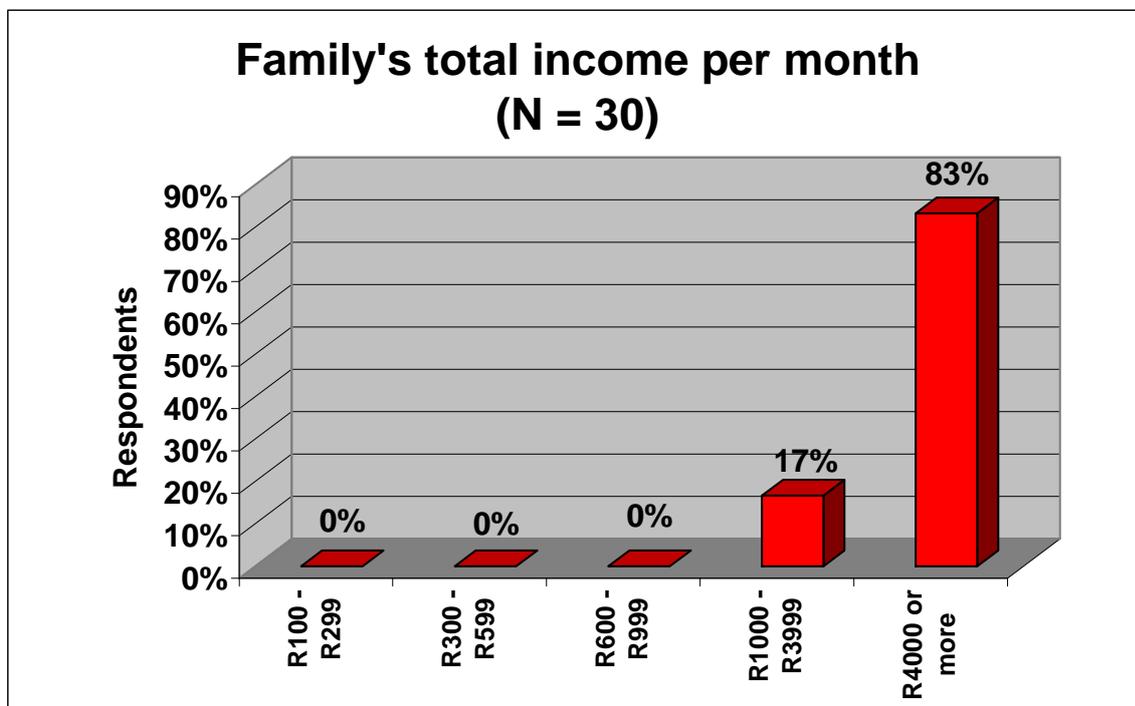


Figure 4.14 Respondents' family income per month (N=30)

Of the respondents, 83% (n=25) indicated that the total income for the family was more than R4000 and only 17% (n=5) had a total income of between R1000 and R3999.

It is important to know the family's income per month for if its not enough, it might lead to sexual permissiveness in order to increase the household income if no one else was providing for the family, or the income was not sufficient for the household (Nkosi 2006:67).

4.2.15 Household provider

With regard to the family source of income, 53% (n=16) of the participants indicated that their parents provided for their families; 20% (n=6) indicated their husbands; 17% (n=5) provided for their families, and 3% (n=1) indicated that relatives provided for their households (see figure 4.13).

Netshikweta (1999:64) found that 44% of the participants in her study were independent without any other source of support.

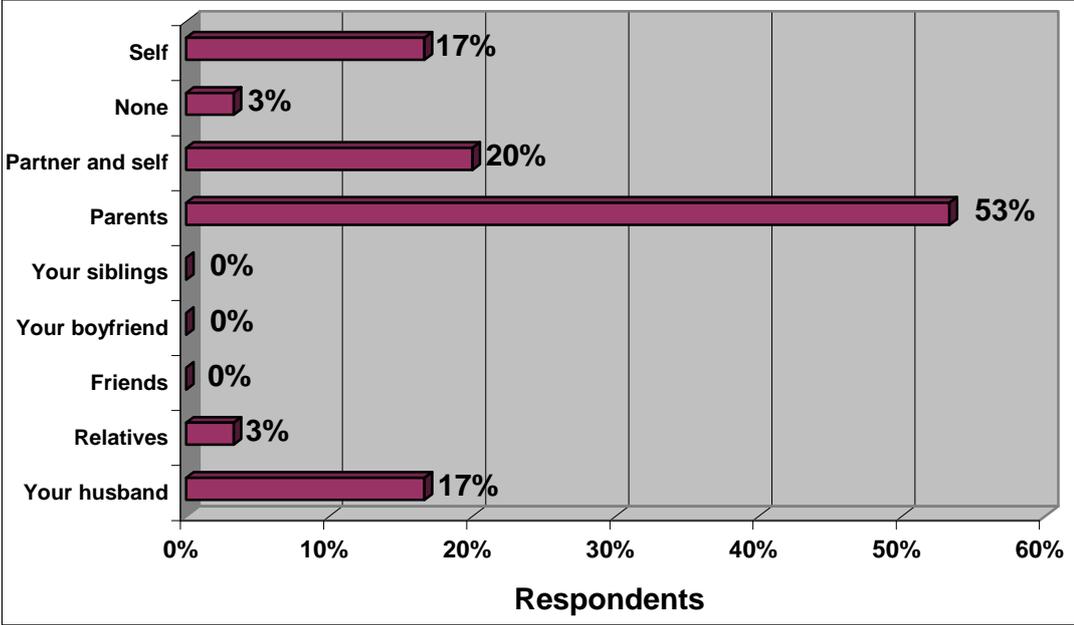


Figure 4.15 Participants' household providers (N=30)

4.2.16 Sole breadwinner

Figure 4.14 indicates whether the pregnant participants were the sole breadwinner or not.

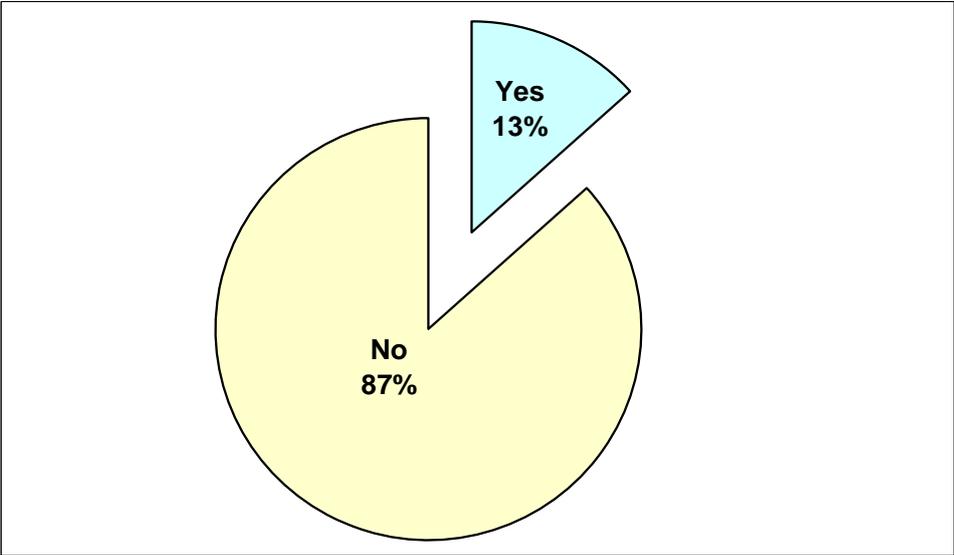


Figure 4.16 Sole breadwinner (N=30)

Of the participants, 87% (n=26) were not the sole breadwinners, while 13% (n=4) were the sole breadwinners. These findings appeared to be consistent with those in item 4.2.13, namely that 53% of the participants' parents provided for the families, and 17% of the participants' husbands did so. It is important to assess participants' socio-economic status, as it might lead to sexual permissiveness in order to increase the household income if no one else was providing for the family, or the income was not sufficient for the household (Nkosi 2006:67).

4.3 PARTICIPANTS' EXPERIENCE OF SEX AND PREGNANCY

This section consisted of eight questions about the participants' experience of sex and pregnancy.

4.3.1 Participants' age at first sexual intercourse

Figure 4.17 indicates the participants' age at first sexual intercourse.

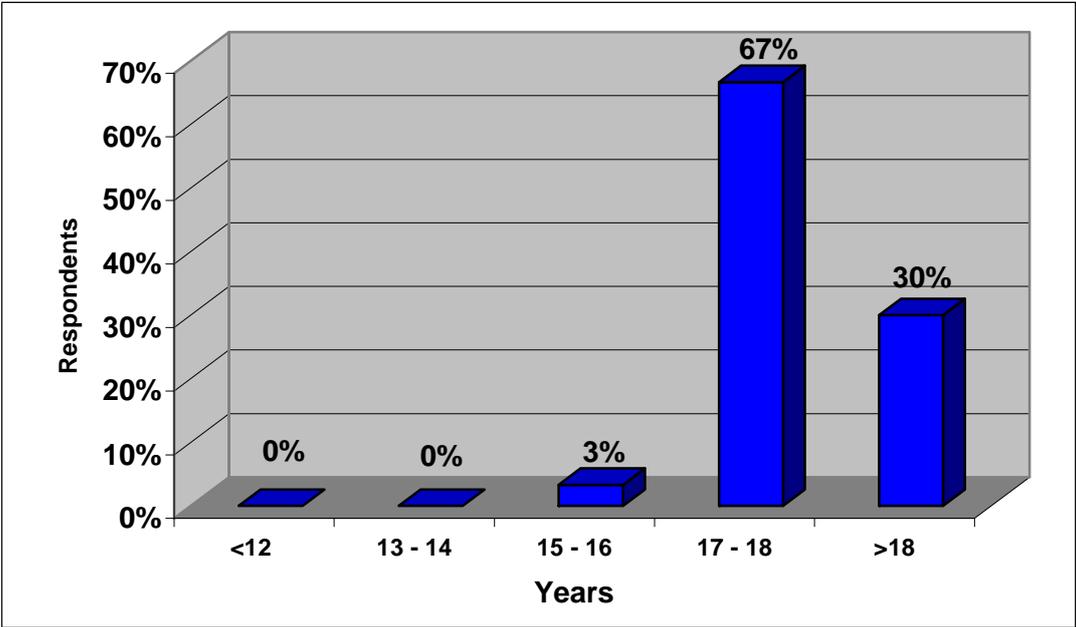


Figure 4.17 Participants' age at first sexual intercourse(N=30)

According to Mbambo (2006:52), knowing the age at which the participants first had sexual intercourse is important, as it indicates at what age sex education as well as contraceptive information should be provided.

According to figure 4.17, of the participants, 67% (n=20) between 17 and 18 years old when they first had sexual intercourse; 30% (n=9) were older than 18, and 3% (n=1) had sex for the first time when she was between 15 and 16.

These findings were consistent with Mbambo’s (2005:52) finding that 95.33% (n=102) of the participants engaged in sexual intercourse by the age of 17. However, Netshikweta (1999:66) found that 8.8% of the participants were 13 or younger when they first had sexual intercourse.

4.3.2 Participants’ pregnancy planned or unplanned

Figure 4.18 indicates that 63% (n=19) of the participants had not planned their pregnancies, while 37% (n=11) had done so. Netshikweta (1999:72) found that 68% of the participants had planned their pregnancies and 32% had not.

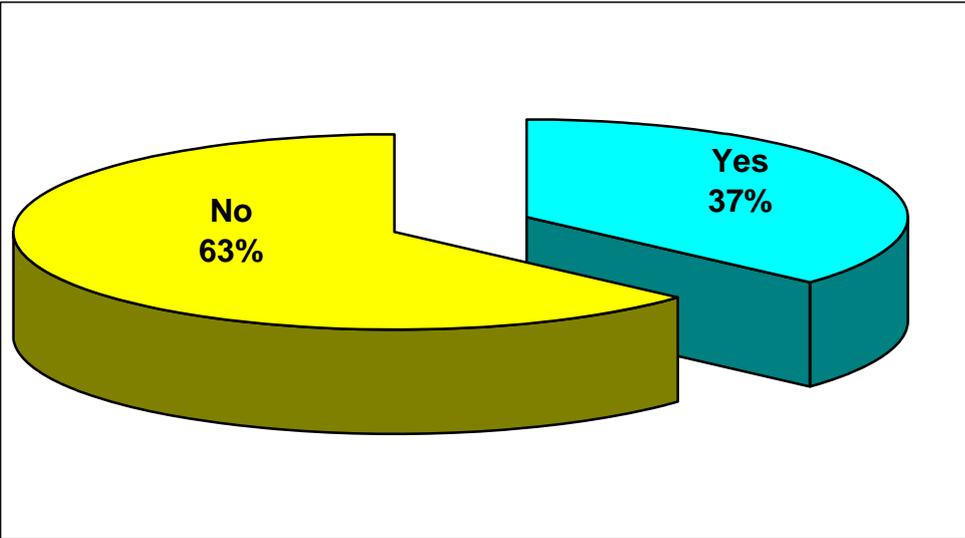


Figure 4.18 Participants’ planned or unplanned pregnancy (N=30)

4.3.3 Reasons for planning the pregnancy

Table 4.1 and figure 4.19 present the participants’ (37%; n=11) reasons for planning their pregnancies while still in training. Of the participants, 9% (n=1) indicated that the reason was to have someone to bring happiness and 91% (n=10) indicated that together with their partners they wanted to have children at that time.

In her study, Netshikweta (1999:77) found that 12.9% of the participants' partners encouraged them to become pregnant because they wanted babies to bind them as husbands and wives.

Table 4.1 Participants' reasons for falling pregnant

Reason	Number of participants
To have someone to bring happiness	1
My partner and I wanted a child	10

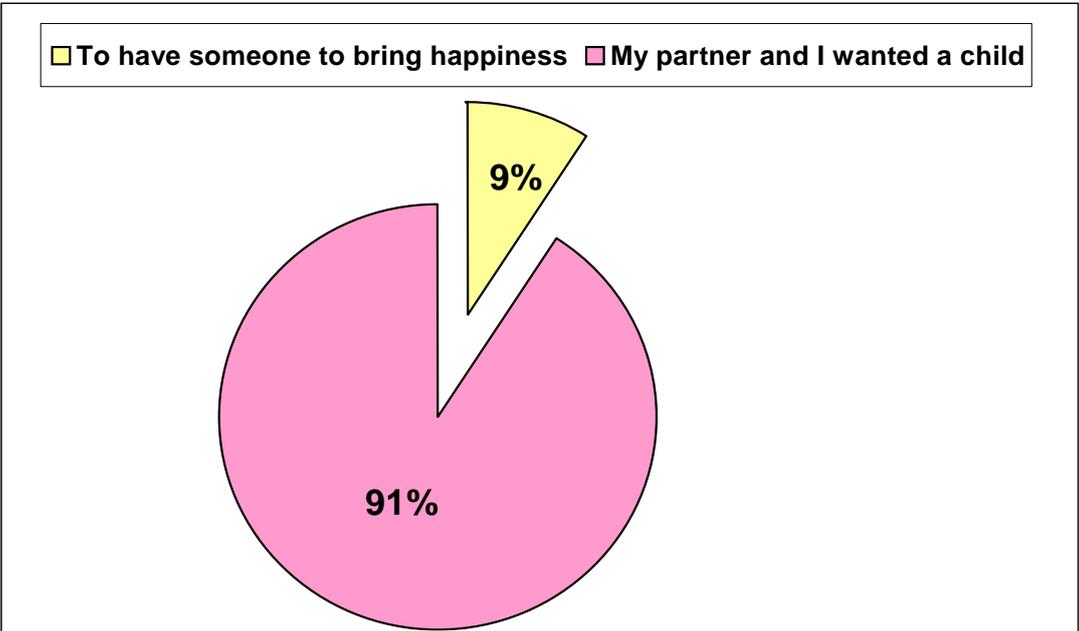


Figure 4.19 Participants' reasons for falling pregnant (N=11)

4.3.4 Participants' opinion on falling pregnant during training

In response to whether it was a good idea to fall pregnant while still in training, 80% (n=24) of the participants indicated that it was not a good idea, whilst the remaining 20% (n=6) thought it was (see figure 4.20). Table 4.2 lists the participants' reasons why it was not a good idea to be pregnant while still in training. The participants could give more than one reason.

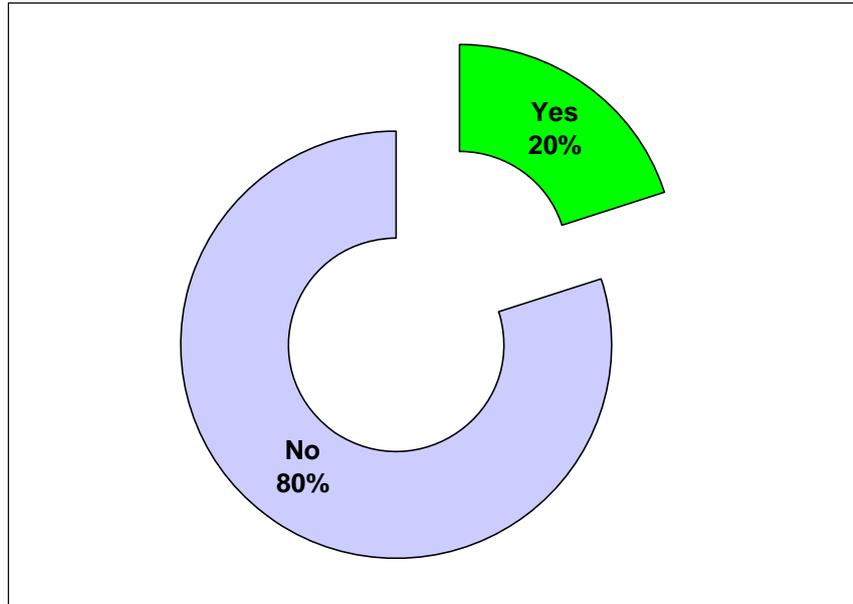


Figure 4.20 Participants' opinions on falling pregnant during training (N=30)

4.3.4.1 Participants' reasons for not falling pregnant during training

Table 4.2 presents the participants' reasons for not falling pregnant during training.

Table 4.2 Participants' reasons for not falling pregnant while during training

Reason	Number of participants
Always tired	1
Difficult to concentrate	3
It disrupts future planning	3
It delays studies	9
It is difficult to study and take care of a child	11
There are financial and social difficulties	5

Of the participants, 37% (n=11) indicated that it was difficult to study whilst taking care of a child; 30% (n=9) reported that pregnancy delayed their studies, 16% (n=5) indicated that there were financial and social difficulties related to student pregnancies, 10% (n=3) believed that pregnancy disrupted the planning of their future lives, another 10% (n=3) indicated that it was difficult to concentrate while pregnant, and 3% (n=1) reported constant tiredness to be a problem during pregnancy and also for studying.

Mbambo (2005:54) points out that it is a major challenge to cope physically, emotionally and financially with being an adolescent mother aged 19 or younger with one or more children.

4.3.5 Participants’ opinions on what level of training one should fall pregnant

Figure 4.21 indicates the participants’ opinions on the level of training to fall pregnant.

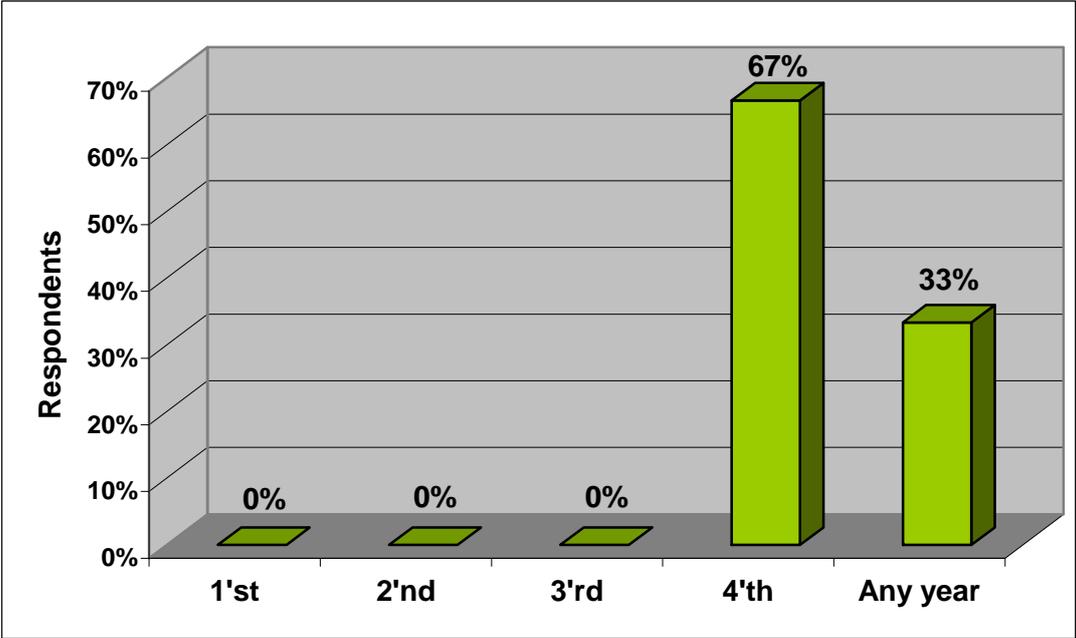


Figure 4.21 Participants’ recommended level of training to fall pregnant (n=6)

The participants (20%; n=6) who answered “yes” to item 4.3.4 were asked at what level of training they recommend falling pregnant and why. Of the participants, 67% (n=4) stated that the fourth year was the best level as there was minimal theory while 33% (n=2) indicated that any level of training was right, adding that it depended on the individual’s/student’s age as they might be getting too old to have children. Falling pregnant during the fourth year of study might not delay students’ training nor disrupt their future careers.

4.3.6 Participants’ opinions on factors contributing to student pregnancies

In figure 4.22, the participants’ opinions about factors contributing to students’ pregnancies are depicted. Of the participants, 52% (n=16) indicated that risk-taking behaviours contributed to student nurses’ pregnancies; 19% (n=6) indicated complex

unconscious factors; 16% (n=5) indicated contraceptive failure; 5% (n=2) indicated inaccessible services, and 3% (n=1) indicated cultural or religious opposition to birth control.

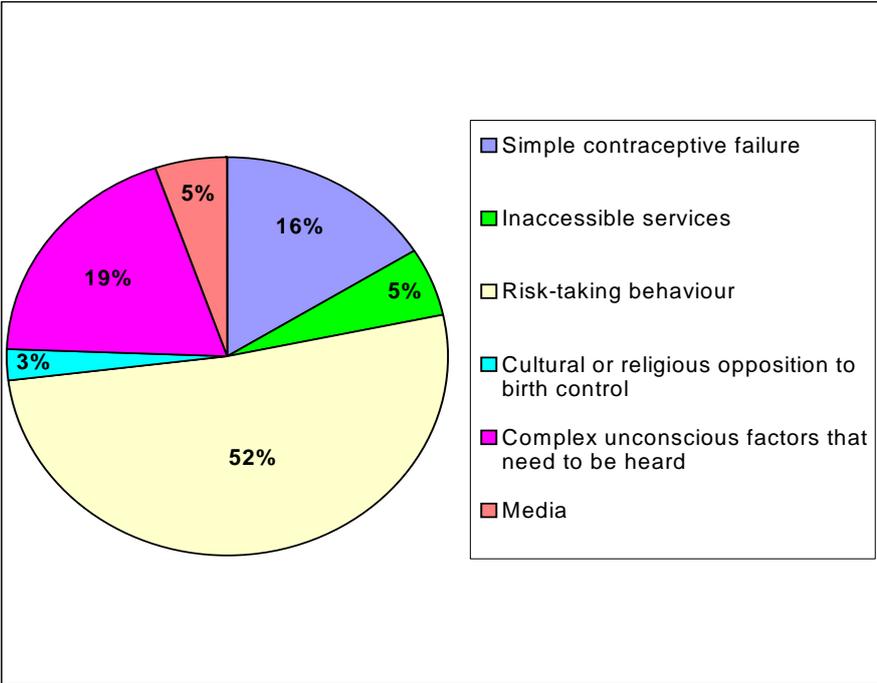


Figure 4.22 *Participants' opinions on factors contributing to student nurses' pregnancies (N=30)*

4.3.7 Factors that contributed to the participants' pregnancies

Table 4.3 indicates the factors that contributed to the participants' pregnancies.

Table 4.3 Factors that contributed to the participants' pregnancy

Contributing factors	Number of Participants	%: N=30
Didn't take contraceptive because of problems	3	10%
Risk-taking	9	30%
I wanted a child	5	17%
It was planned	8	27%
I failed a subject and felt nothing mattered anymore	1	3%
Being far from family - unsupportive conditions	1	3%
Fear of medical personnel for morning-after pill	1	3%
Cultural belief that I might not give birth	1	3%
Lack of knowledge about contraceptives	2	7%
Been sexually active for a long time and didn't think I would get pregnant	1	3%
Failure of doctor to inform me that alternative contraceptives need to be taken when on medication	1	3%

When the participants were asked what contributed to their own pregnancies, 30% (n=9) indicated that they associated their pregnancies with risk-taking behaviours; 27% (n=8) indicated the pregnancy was planned (also see section 4.3.2, although there is a discrepancy as 37% claimed to have planned their pregnancies), and 10% (n=3) indicated that they did not take contraceptives for unspecified problems.

4.3.8 Participants' reasons for falling pregnant

Table 4.4 provides the participants' reasons for falling pregnant.

Table 4.4 Participants' reasons for falling pregnant

Reasons	Number of Participants	%: N=30
Did not think I could get pregnant	13	43%
Did not have adequate knowledge about contraceptives	11	37%
Wanted to get married	7	23%
Wanted someone to love	10	33%
Wanted to prove that they can have children	13	43%
Some of their friends were pregnant	6	20%
They got drunk and did not know what they were doing	4	13%
They wanted to trap their boyfriend	1	3%
They wanted a child	1	3%
It's one's own choice to have a child or not	3	10%

Of the participants, 43% (n=13) reported that they did not think they could get pregnant, another 43% (n=13) reported that they wanted to prove that they can have children (which is inconsistent with section 4.3.2); while 37% (n=11) indicated that they did not have adequate knowledge about contraceptives. The number of respondents may not be correlating as other respondents gave more than one reason and in that way a respondent may be counted more than once.

4.4 KNOWLEDGE OF AND ATTITUDES TOWARDS USING CONTRACEPTIVES

In this section, the participants were asked questions related to their knowledge of and attitudes towards contraceptives.

4.4.1 Information about contraceptives before falling pregnant

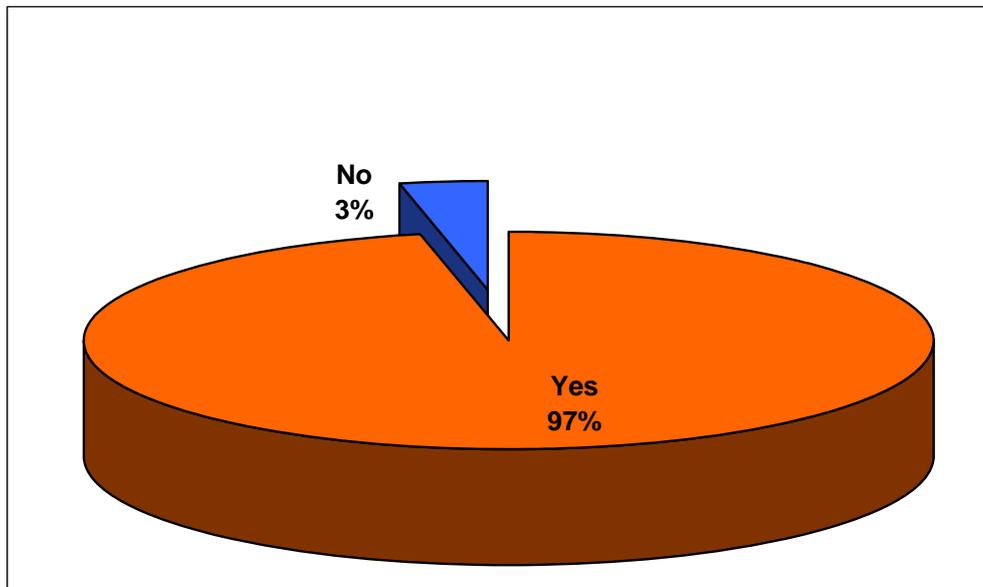


Figure 4.23 Participants' information about contraceptives before pregnancy (N=30)

Figure 4.23 indicates the extent of participants' knowledge of contraceptives before they fell pregnant. Of the participants, 97% (n=29) indicated that they had known about contraceptives, while only 3% (n=1) did not. These findings contradict Mbambo's (2005:57) finding that 19.63% (n=21) of the participants were only informed about contraceptives at the age of 16, and Netshikweta's (1999:70) finding that 66% (n=60) of the participants had no information about contraceptives prior to their pregnancies.

4.4.2 Source of contraceptive information

Figure 4.24 indicates where the participants obtained their information about contraceptives.

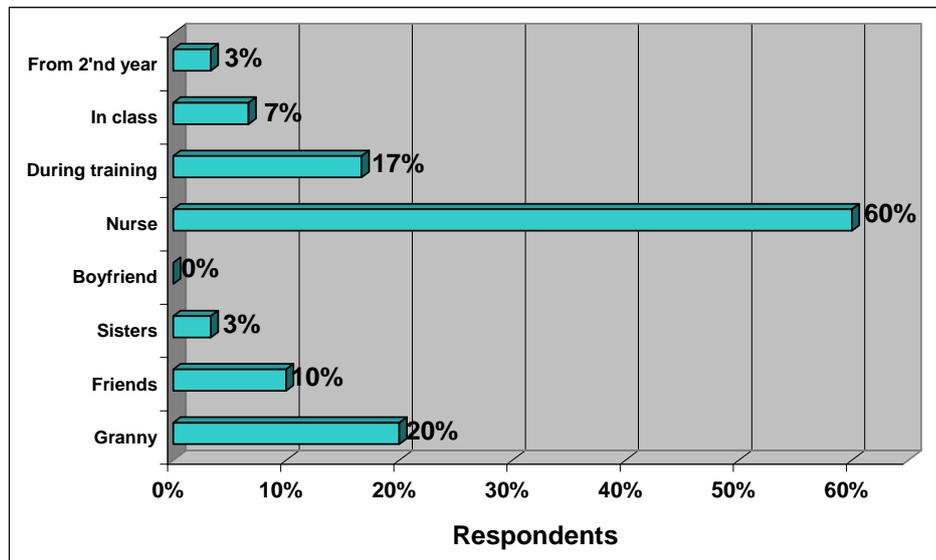


Figure 4.24 *Participants' source of contraceptive information (N=28)*

The participants who indicated that they knew about contraceptives were asked to indicate who provided this information. Each participant could indicate two or more sources of the information. Of the participants, 60% (n=17) indicated that they had obtained the information from other nurses; 20% (n=6) from their grandmothers, and 17% (n=5) from the training provided by the lecturers at the nursing college. Figure 4.24 gives no indication that parents took an active role in educating their children about contraceptives.

4.2.3 Participants' use of contraceptives prior to their pregnancies

Figure 4.25 depicts the participants' responses to whether they were using any family planning methods before falling pregnant.

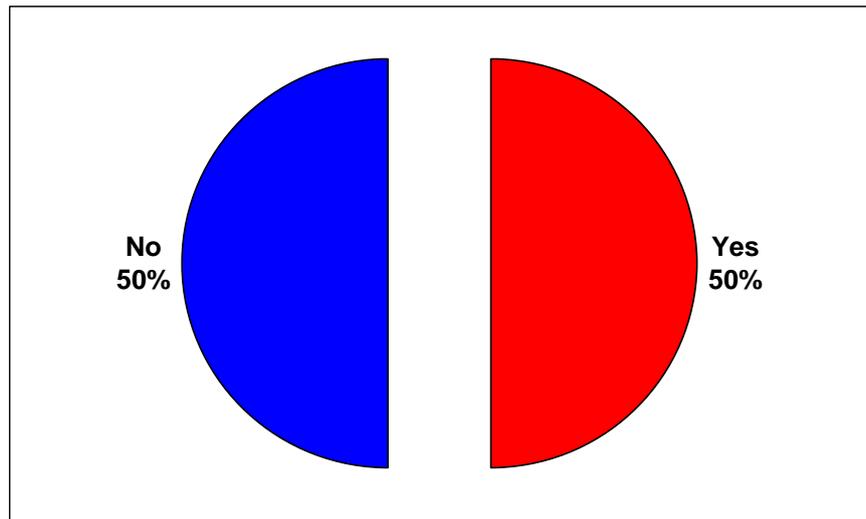


Figure 4.25 Participants' use of contraceptives prior to their pregnancies (N=30)

Figure 4.25 indicates that 50% (n=15) of the participants did not use contraceptives before falling pregnant. These findings could be indicative of ignorance as only 37% (n=11) indicated that they had planned their pregnancies. Although 50% (n=15) used family planning before falling pregnant, the fact of their pregnancy might indicate a lack adequate knowledge about the correct use of contraceptives, as 97% (n=29) indicated having information about contraceptives (see section 4.4.1). Mbambo (2005:65) indicates that factors other than knowledge may contribute to the non-utilisation of contraceptives prior to pregnancy.

4.4.4 Methods of contraception used by participants

Figure 4.26 depicts the participants' method of contraception.

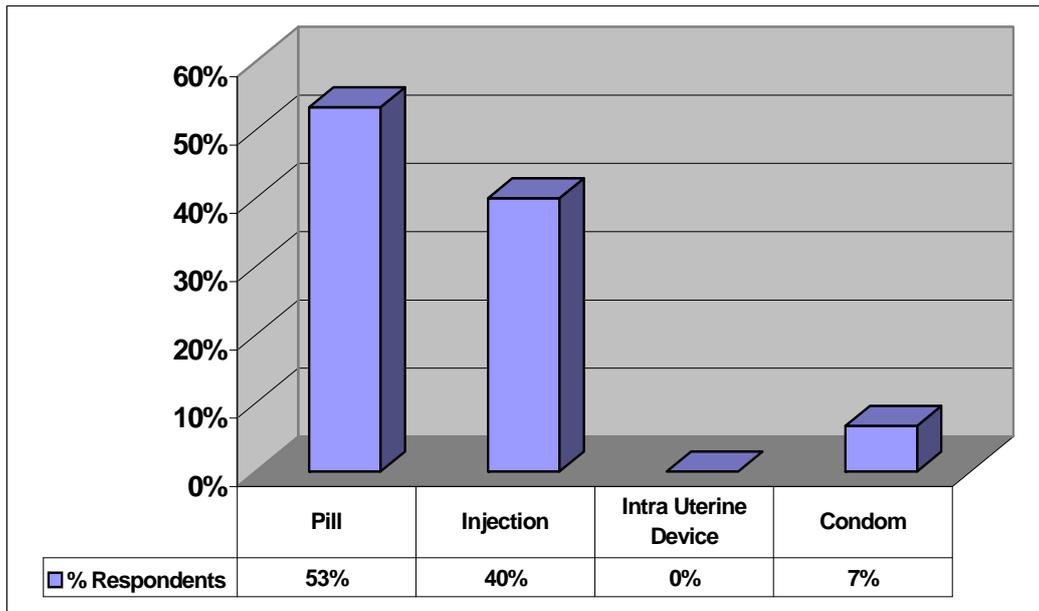


Figure 4.26 Methods of contraception used by participants (N=15)

Of the participants, 53% (n=8) indicated they were on a “pill” (oral contraceptive); 40% (n=6) were on “injections”, and 7% (n=1) used condoms. These findings are consistent with the findings reported in section 4.4.3 that indicated that the participants might not have had adequate knowledge about the correct use of contraceptives.

4.4.5 Availability of contraceptives

Figure 4.27 depicts the participants’ perceived availability of contraceptives.

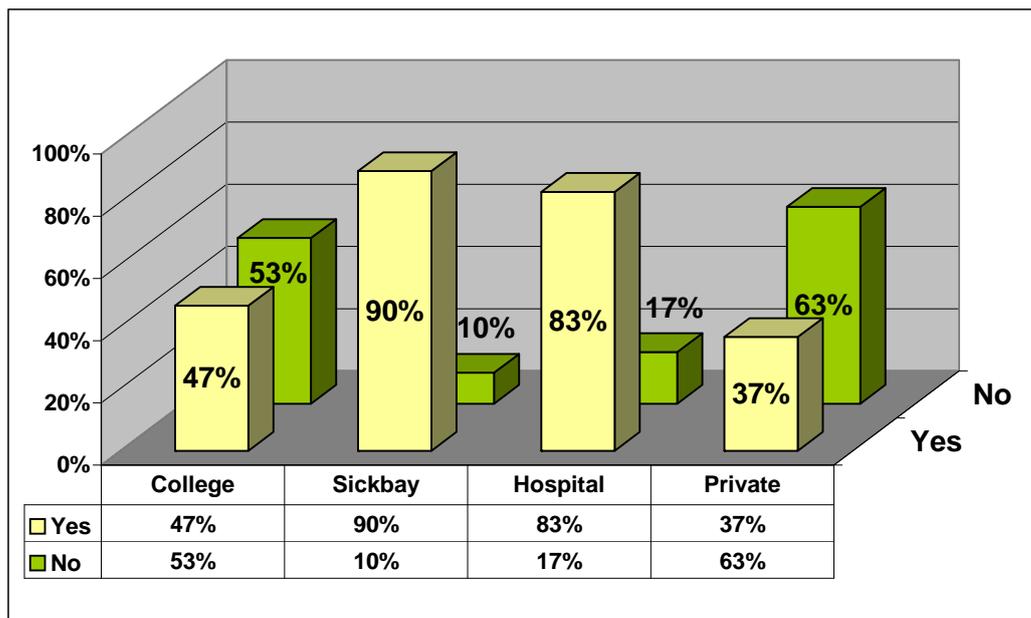


Figure 4.27 Participants' perception of availability of contraceptives (N=30)

Figure 4.27 indicates that 90% (n=27) of the participants indicated that contraceptives were readily available at the sickbay of the SANDF, situated in the complex of the nursing college, as well as the nurses' residence. These findings indicate that the participants' non-use of contraceptives was not related to non-availability of contraceptives. Even in the clinical settings, 83% (n=25) reported that contraceptives were available.

This is contradicted by Netshikweta and Ehlers' (2002:75) finding that 82.8% (n=77) of their participants indicated that contraceptives were not readily available for them at the nursing college and/or hospitals in the Limpopo Province.

4.4.6 Knowledge of contraceptives

All the participants indicated that they had adequate knowledge of contraceptives, which contradicts the finding in section 4.4.1 where one participant indicated that she did not have any information about contraceptives. These findings also indicate that the participants' pregnancies were not related to a perceived lack of knowledge about contraceptives (see figure 4.23).

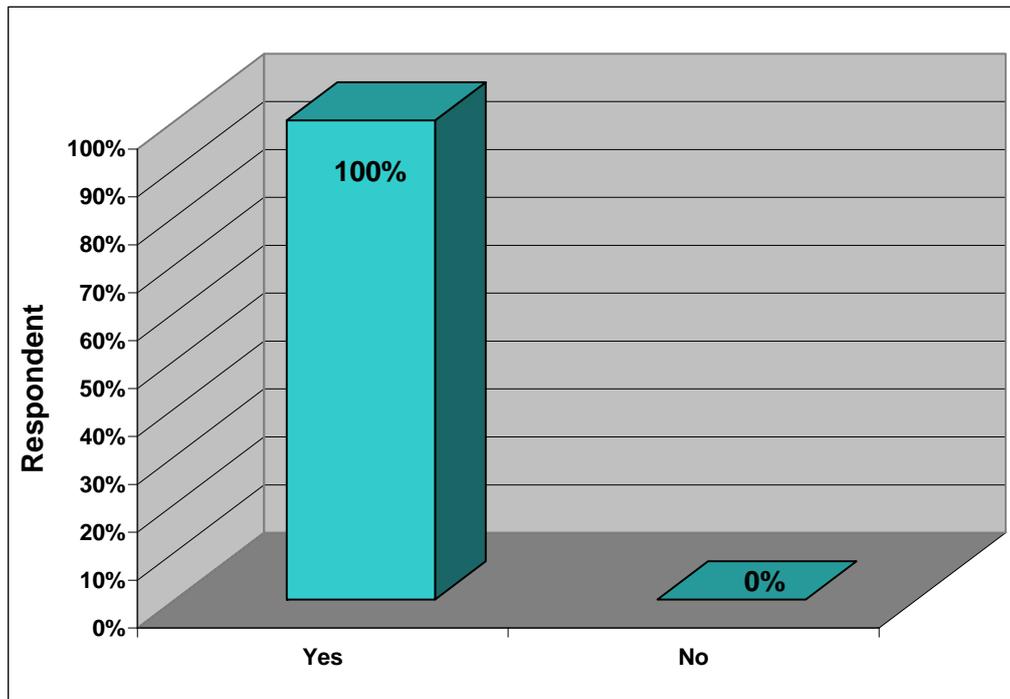


Figure 4.28 Participants' knowledge of contraceptives (N=30)

4.4.7 Prevention of pregnancy

Of the participants, the majority 87% (n=27) believed using contraceptives and condoms were the best ways to prevent pregnancy, and 50% (n=15) believed saying “No” to sex was the best way to prevent pregnancies. These findings support those in sections 4.4.1 and 4.4.6.

4.4.8 Participants' knowledge of emergency contraceptives (ECs)

Figure 4.29 presents the participants' responses related to safe sex and emergency contraceptives after unprotected sex.

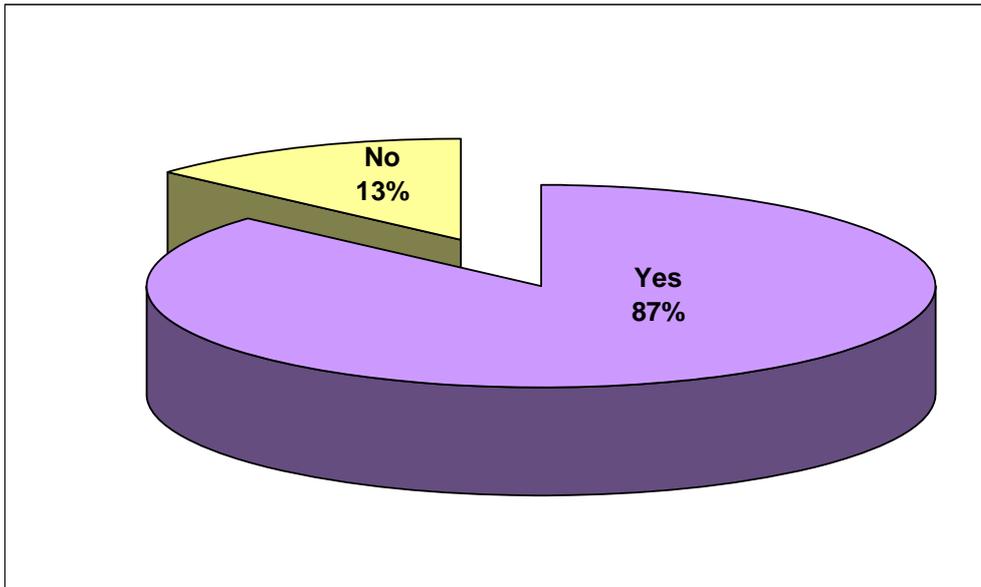


Figure 4.29 Participants' knowledge of emergency contraceptives (N=30)

Of the participants, 87% (n=26) indicated that they had knowledge of emergency contraceptives (ECs) and only 13% (n=4) indicated that they had no idea of what ECs were.

Netshikweta and Ehlers (2002:77) found that 41.9% of their participants were unfamiliar with ECs, and that only 25.8% of the pregnant student nurses knew about ECs. Mbambo (2005:66) found that only 11.76% of the adolescent mothers, who participated in her study, knew about ECs.

4.4.9 Use of ECs

Figure 4.30 depicts the responses of the participants who indicated that they knew about ECs.

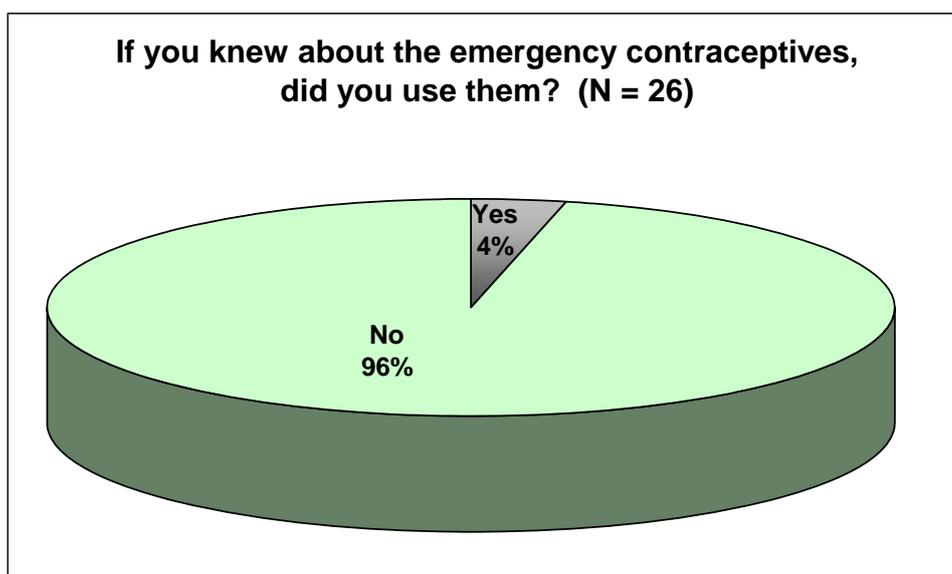


Figure 4.30 Participants' use of ECs (N=26)

Of the participants who indicated that they knew about ECs, 96% (n=25) indicated that they had not used ECs, and only 4% (n=1) indicated that they had, unlike the participants in Netshikweta and Ehlers' (2002:77) study, who stated that they never utilised ECs. This could indicate that ECs were more readily accessible to the participants in this study than to those participating in Netshikweta and Ehlers' (2002:77) study.

4.4.10 Reasons for not using ECs

Table 4.5 lists the participants' reasons for not using ECs.

Table 4.5 Participants' reasons for not using ECs

Reasons	Number of participants	%
I wanted a baby	13	43%
Don't believe in it	2	7%
Didn't think I would fall pregnant	8	27%
Pharmacist embarrassed me	1	3%
Could not get it	1	3%
No proper information on its use	2	7%

Of the participants who did not use ECs, 43% (n=13) indicated they wanted to have a baby; 27% (n=8) did not think they would fall pregnant; 7% (n=2) did not believe in ECs; 7% (n=2) did not have proper information about ECs; 3% (n=1) could not get ECs, and 3% (n=1) had been embarrassed by the pharmacist who provided ECs. This findings correspond as according to figure 4.29, 13% (n=4) had no knowledge of ECs and they could not have used it.

4.4.11 Participants’ options to terminate their pregnancies

Figure 4.31 provides the participants’ responses to whether they believed in abortion.

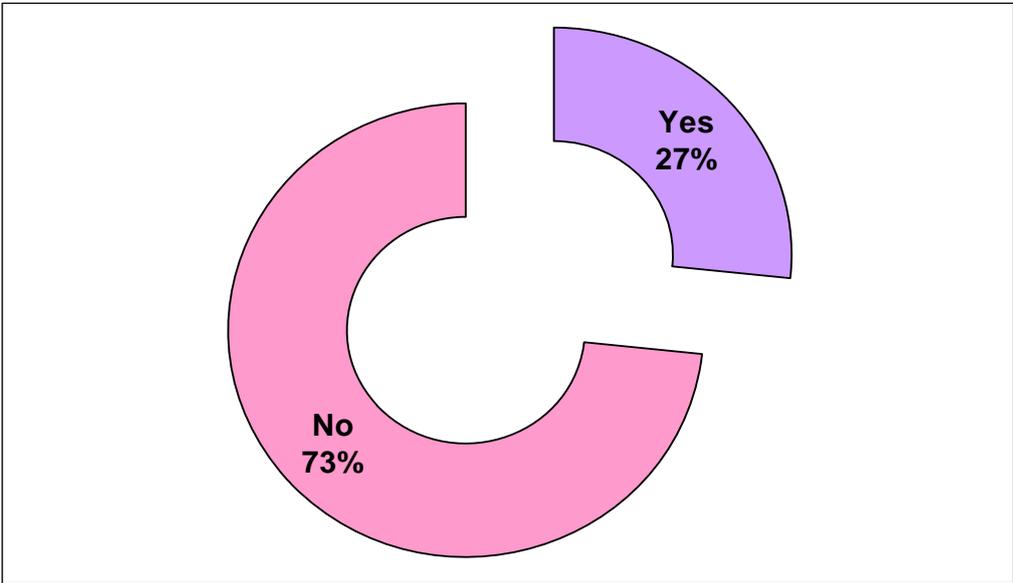


Figure 4.31 Participants’ consideration of abortion (N=30)

Of the participants, 73% (n=22) indicated that they had never considered abortion, and only 27% (n=8) indicated that they had thought about terminating their pregnancies.

Netshikweta and Ehlers (2002:77) found that 15% of the participants considered terminating their pregnancies, but none of them actually did so.

4.4.12 Participants' reasons for not considering terminating their pregnancies

Table 4.6 provides the participants' reasons for not terminating their pregnancies.

Table 4.6 Participants' reasons for not terminating their pregnancies

Reasons	Number of participants	% (N=22)
Against culture and belief	10	45%
The child was my reason for living	1	5%
Wanted to start a family	10	45%
Knew I would get support	1	5%

Of the participants, 45% (n=10) indicated that termination of pregnancy was against their culture, religion and/or beliefs, and 45% (n=10) did not consider terminating their pregnancies, as they wanted to start families. Five percent (n=1) indicated that she knew they would get support with her pregnancy, and (5%; n=1) indicated that the child was her reason for living. These findings indicate that even though termination of pregnancy has been legalised in the RSA since 1996, pregnant women do not necessarily consider TOPs.

Motlatla (2000:103) found the following factors constraints to access TOP services:

- Fear of parental reaction regarding abortion
- Lack of financial resources to seek abortion services
- Lack of knowledge about the abortion services
- Fear of dying during the procedure
- Fear of losing the "God given" baby
- Choice to keep the baby.

4.4.13 Participants’ knowledge about the right of a woman to choose keeping the baby or terminating

Figure 4.32 represents the participants’ knowledge of the rights of a woman to keep the baby or use TOP services.

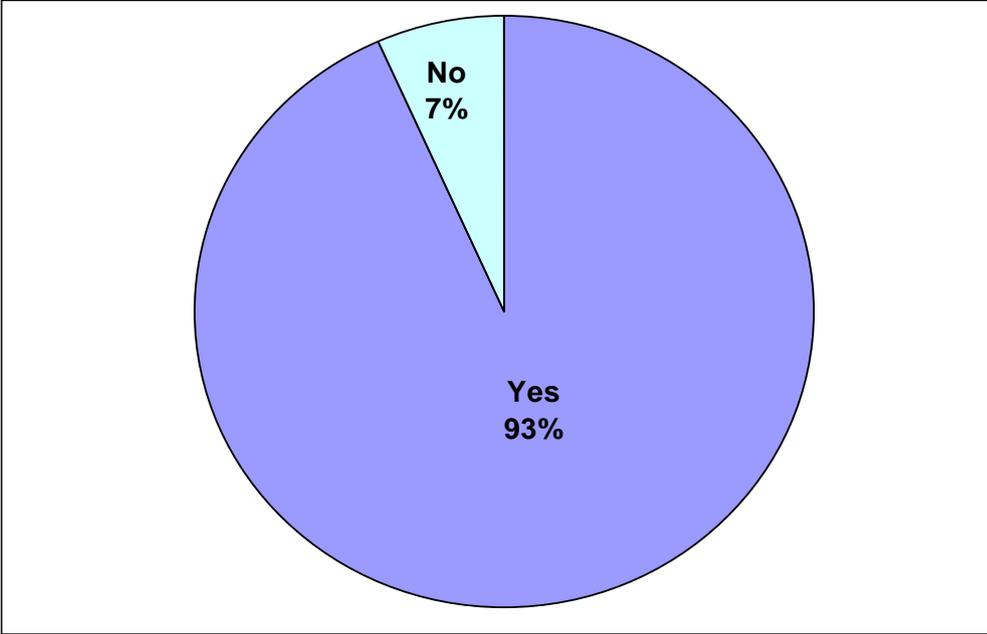


Figure 4.32 Participants’ knowledge about women’s rights to use termination of pregnancy (N=30)

Of the participants, 93% (n=28) reported that they knew about TOPs but chose not to abort the babies for various reasons (see section 4.4.12). Only 7% (n=2) of the participants did not know about these services.

4.4.14 Contraceptive methods used by the participants

Figure 4.33 presents the types of contraceptives the participants used.

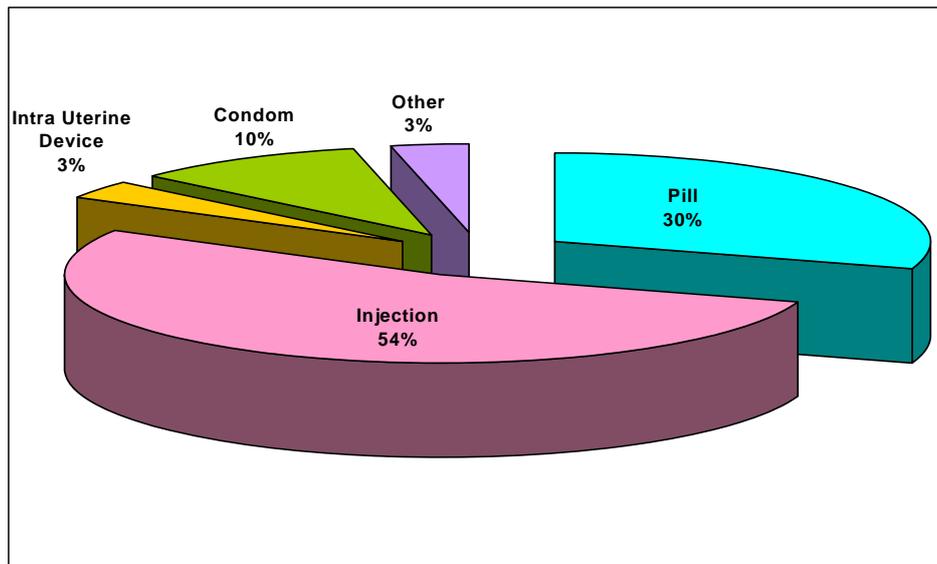


Figure 4.33 Participants' method of contraceptive (N=30)

Of the participants, 54% (n=16) indicated that they used injections; 30% (n=9) used oral contraceptives; 10% (n=3) used condoms, 3% (n=1) used an intra-uterine contraceptive device (IUCD) and another 3%(n=1) indicated the use of other methods such as coitus and or traditional medicines.

This finding confirmed that the participants had adequate knowledge about contraceptives.

4.4.15 Taking responsibility of own reproductive health

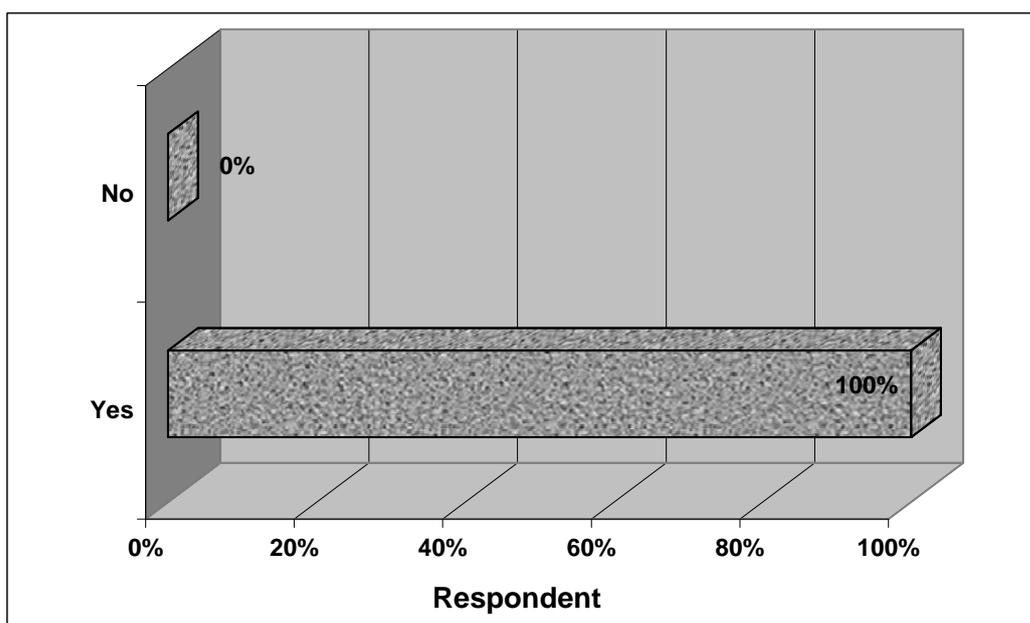


Figure 4.34 Participants' responsibility for reproductive health (N=30)

All the participants (100%; n=30) indicated that they took responsibility for their reproductive health.

4.4.16 Participants’ attitudes towards the use of condoms

Table 4.7 lists the participants’ attitudes towards the use of condoms as a method of preventing conception.

Table 4.7 Participants’ attitudes towards the use of condoms

Opinions	Number participants		% (N=30)	
	Yes	No	Yes	No
Feel that it lessens sexual pleasure	6	24	20%	80%
That condom use shows that you do not trust each other	6	24	20%	80%
That condom use can prevent diseases and pregnancy	28	2	93%	7%
It <i>can</i> be harmful to use a condom	3	27	10%	90%
It <i>is</i> harmful to use a condom	3	27	10%	90%

According to table 4.7, 93% (n=28) of the participants indicated that condoms could be used to prevent STIs and pregnancies. These findings indicate that the participants were aware of diseases related to unprotected sexual practice. However, there were still participants who had misconceptions about condom use.

4.4.17 Participants’ use of condoms

Figure 4.35 indicates whether the participants had ever used either male or female condoms.

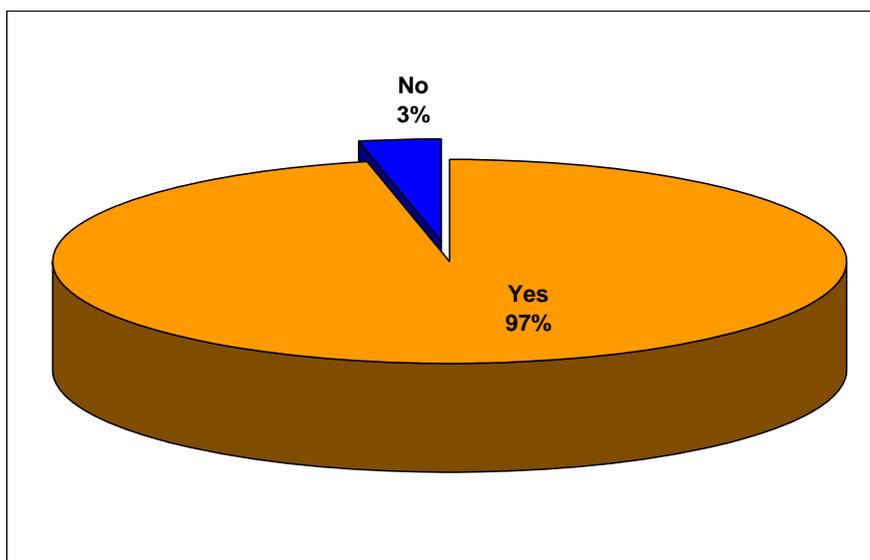


Figure 4.35 Participants' use of condoms (N=30)

Of the participants, 97% (n=29) indicated they had used condoms.

4.4.18 Participants' ability to insist that partners use condoms

Of the participants, 87% (n=26) indicated that they could insist that their partners use condoms; 10% (n=3) could not, and 3% (n=1) was uncertain. The use of condoms touches on core elements of negotiating power in heterosexual relationships. Women who ask their sex partners to use condoms might be associated with female unfaithfulness (see figure 4.36).

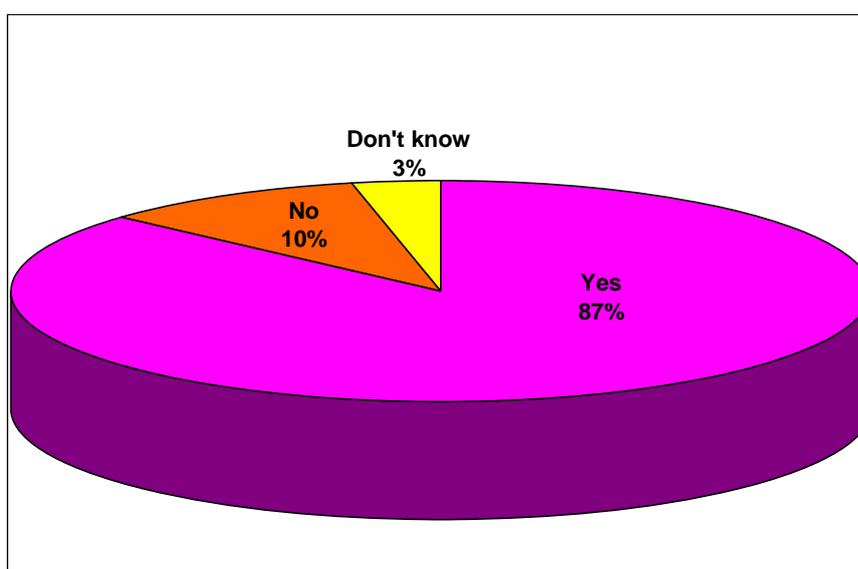


Figure 4.36 Participants' ability to insist on condom use (N=30)

4.4.19 Participants' feelings and opinions about contraceptives

Table 4.8 lists the participants' feelings and opinions about contraceptives.

Table 4.8 Participants' feelings and opinions about contraceptives

Feelings and opinions	Number of participants	% (N= 0)
Nurses must give information to patients and others on contraceptives	5	17%
Teach others the use of contraceptives to prevent pregnancies	13	43%
Preventing unwanted pregnancies by using contraceptives in themselves	7	23%
Preventing pregnancy	2	7%
Birth control methods	2	7%
Sexually transmitted infections	1	3%

Regarding their feelings and opinions about contraceptives, 43% (n=13) of the participants reported that they would prefer to use contraceptives to prevent unwanted and unplanned pregnancies and 23% (n=7) emphasised the need for nurses to teach people about contraceptives and its side effects.

4.4.20 Participants' feelings about male and female condoms for preventing STIs and pregnancies

Table 4.9 summarises the participants' feelings about the use of condoms for the prevention of STIs and pregnancy.

Table 4.9 Participants' feelings about condom use for preventing STIs and pregnancy

Feelings	Number of participants	% (N=30)
Prevent unwanted pregnancies	9	30%
Assume responsibility for sexual action	5	17%
Prevent pregnancy and STIs	11	37%
Allergic to latex of condoms	2	7%
Female condoms are not available	1	3%
Using a female condom is uncomfortable	1	3%
STD's treatment is available	1	3%

Table 4.9 indicates that 37% (n=11) participants reported condom use to be an effective method for the prevention of STIs and pregnancy, and 30% (n=9) reported it was the best way to prevent an unwanted pregnancy. Of the participants, 17% (n=5) indicated that using a condom made them feel responsible for their sexual actions. Negative responses included that they were allergic to latex and thus could not use condoms during sexual intercourse (3%); the use of the female condom was uncomfortable during sexual intercourse (3%), and condom use was not necessary as treatment for STDs was available (3%).

4.5 PARTICIPANTS' PHYSICAL CHALLENGES DURING PREGNANCY

In this section, various questions were asked about the physical challenges participants experienced during their pregnancies.

4.5.1 Participants' physical discomforts during pregnancy

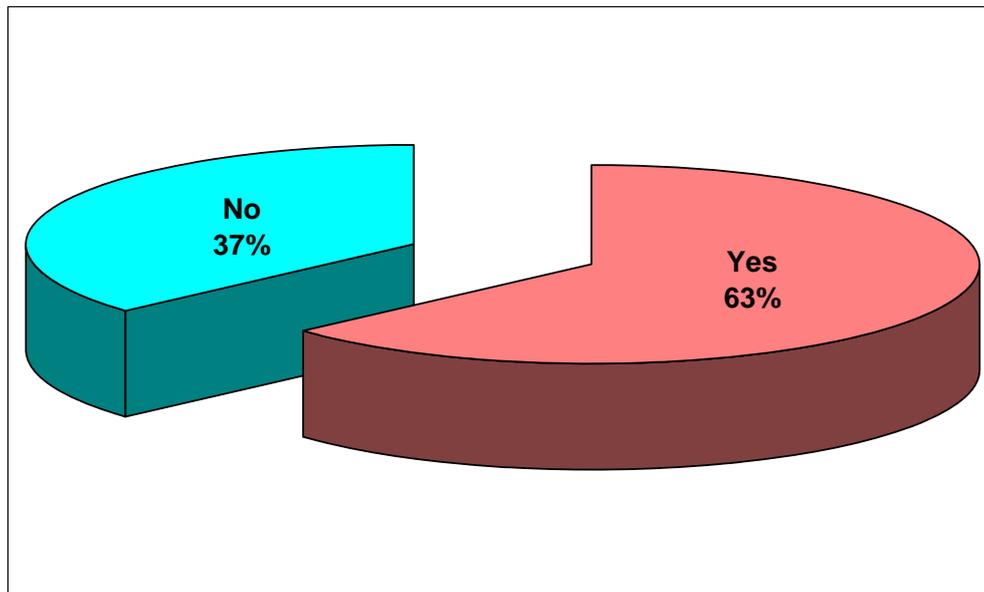


Figure 4.37 Participants' physical discomfort during pregnancy (N=30)

Of the participants, 63% (n=19) reported having had physical discomfort, and 37% (n=11) did not. Netshikweta and Ehlers (2002:78) found that the majority (89%) of their participants experienced physical discomfort during their pregnancies.

4.5.2 Type of physical discomfort experienced by the participants

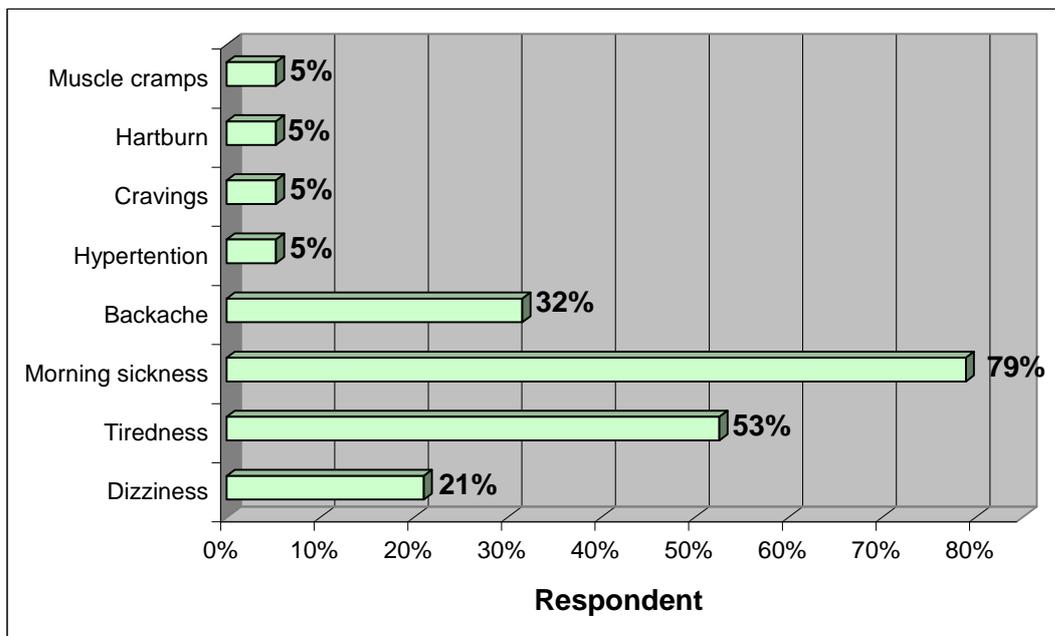


Figure 4.38 Type of physical discomfort experienced (N=30)

According to figure 4.38, all the participants experienced some physical discomfort during their pregnancies. Some participants experienced all the discomforts listed. The majority (80%; n=24) experienced morning sickness; 53% (n=16) experienced tiredness; 32% (n=10) backache; 21% (n=6) dizziness, and 5% (n=2) hypertension. Other minor complaints included cravings, heartburn and muscle cramps.

Netshikweta and Ehlers (2002:78) reported similar findings. Considering that the participants were student nurses, these findings could affect their academic performance and loss of time as they might be given sick leave if the discomfort becomes a serious disability.

4.5.3 Information about the participants' appetite

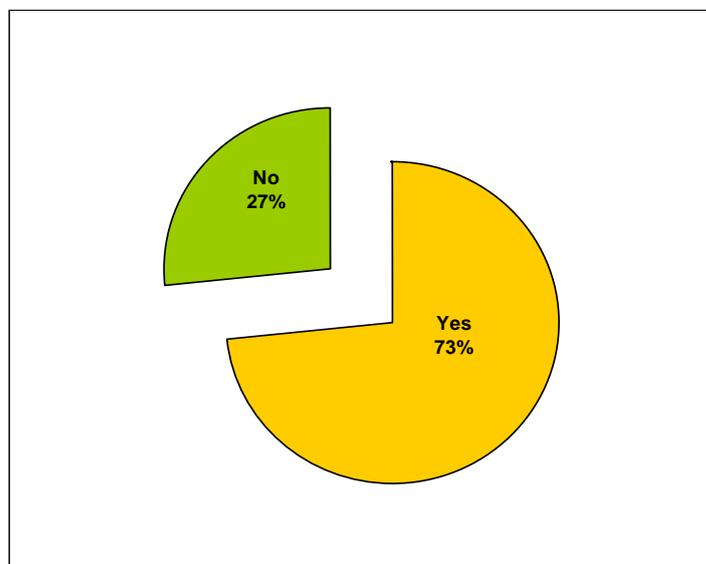


Figure 4.39 Participants' appetite (N=30)

Of the participants, 73% (n=22) reportedly had a good appetite, while 27% (n=8) did not (see figure 4.37). Poor appetite might be associated with morning sickness, food cravings and heartburn, which some of the participants had. Poor appetite affects the nutritional intakes needed during pregnancy for proper nourishment of the pregnant mother and the baby in utero. There may also be a relationship between the participants' tiredness, their nutritional intake and their haemoglobin levels.

4.5.4 Participants' feelings about foetal movements

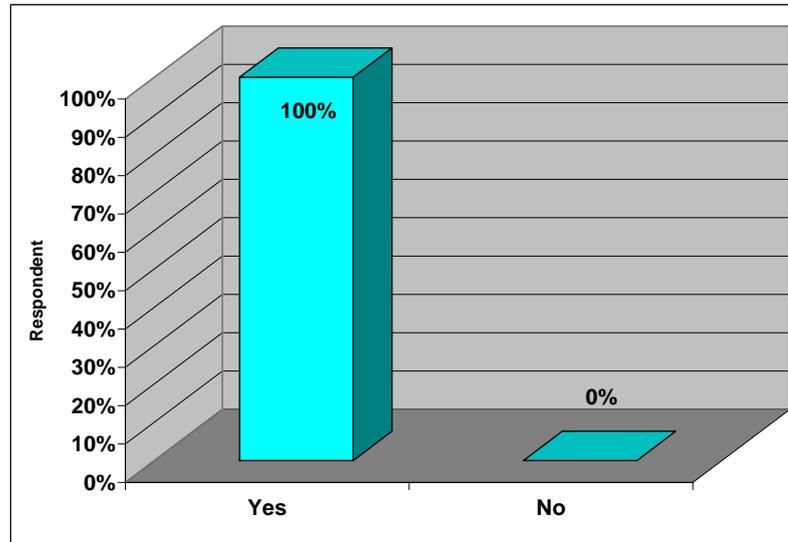


Figure 4.40 Participants' feelings about foetal movements (N=30)

Figure 4.40 depicts the participants' feelings about foetal movement. All the participants (100%) indicated that they enjoyed feeling foetal movements (see figure 4.38). This might indicate that all the participants, even those who did not plan to fall pregnant, accepted their pregnancies and bonded with their unborn babies. Thus the next question about the reasons for not enjoying foetal movements was dismissed, as all the participants enjoyed and felt good about feeling foetal movements.

4.5.5 Participants' indication of time for maternity leave

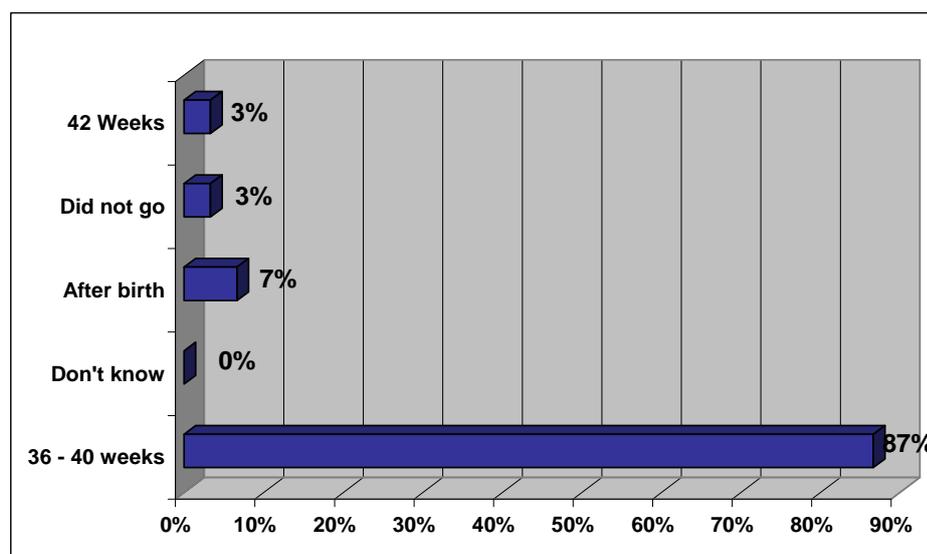


Figure 4.41 Participants' gestational age for taking maternity leave (N=30)

Figure 4.41 indicates that the majority of the participants (87%; (n=26) commenced their maternity leave at gestational age 36 to 40 weeks; 7% (n=2) went on maternity leave after the birth of their babies; 3% (n=1) went at 42 weeks' gestation, and 3% (n=1) did not go on maternity leave at all.

However, Netshikweta (1999:86) found that only 9.7% of the participants went on maternity leave at 36 weeks' gestation; 33% (n=31) went at 40 weeks, and the majority 49.5% (n=46) did not report their pregnancies and did not go on maternity leave. The difference in these studies may be policies governing the handling of pregnant student nurses in the respective nursing colleges. The SAMHS Nursing College adopted the four months' maternity leave for all employees in accordance with the Basic Conditions of Employment Act. This could be problematic for student nurses, as they are still in training and taking four months' maternity leave might imply an extension of training.

4.5.6 Participants' problems experienced during the last trimester of pregnancy

In this section, the participants were asked about the problems they experienced during the last trimester of their pregnancies.

Table 4.10 lists the participants' problems during the last trimester of pregnancy.

Table 4.10 Participants' problems during the last trimester of pregnancy

Problems	Number of participants
Never had any problems	10
Oedema of the lower extremities	7
Lower abdominal pains	6
Tiredness	8
Discomfort	1
Muscle cramps	1
High blood pressure	1
Dizziness	1
Vomiting	1

The participants were asked to report the physical problems experienced during the last trimester of their pregnancies. Some participants reported multiple problems. Of the participants, 33% (n=10) reported having had no problems at all during the last trimester; 27% (n=8) experienced tiredness, 23% (n=7) experienced oedema of the lower extremities; 20% (n=6) experienced lower abdominal pains; 3% (n=1) experienced tiredness; 3% (n=1) discomfort; 3% (n=1) muscle cramps; 3% (n=1), dizziness 3% (n=1) high blood pressure, and 3% (n=1).

These findings are essential to be able to recommend adequate rest periods and proper placements for pregnant student nurses to enhance their well-being.

4.6 PARTICIPANTS’ EMOTIONAL REACTIONS TOWARDS THEIR PREGNANCIES

This section reports the participants’ emotional reactions to the pregnancy.

4.6.1 Participants’ feelings on discovered the pregnancy

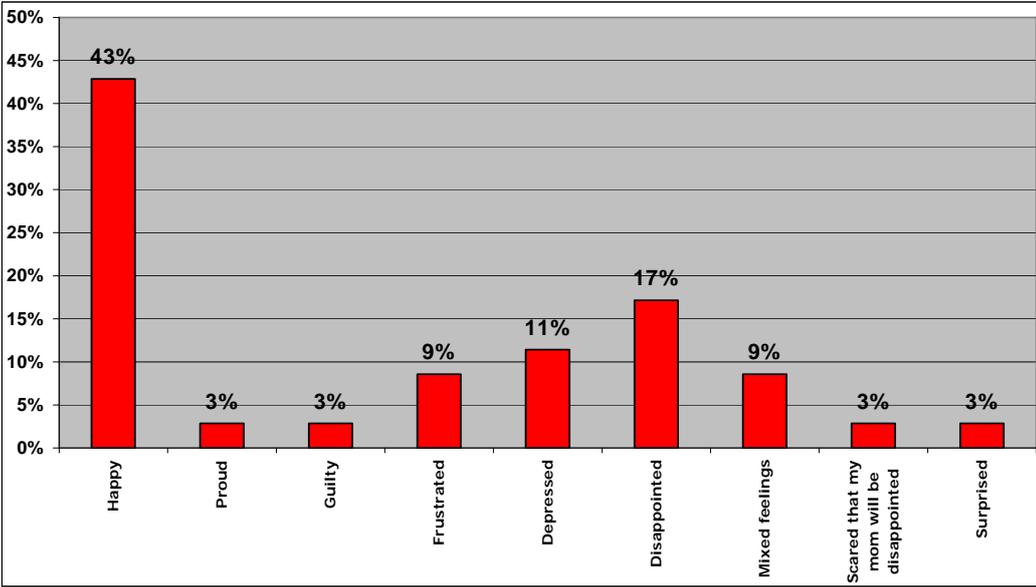


Figure 4.42 Participants’ feelings on discovering the pregnancy (N=30)

According to figure 4.42, 43% (n=13) of the participants indicated that they were happy; 17% (n=5) indicated being disappointed; 11% (n=3) were depressed; 9% (n=3) were frustrated; 9% (n=3) had mixed feelings, and 3% (n=1) indicated the following feelings separately: proud, guilty, surprised and being scared as she knew her mother would be

disappointed with her. In section 4.3.2, only 37% (n=11) of the participants had planned their pregnancies. Most of the participants, 56% (n=17) expressed feelings of frustration, guilt, depression, surprise, mixed feelings and being afraid. Netshikweta and Ehlers (2002:79) found similar reactions and feelings.

4.6.2 Feelings of loneliness

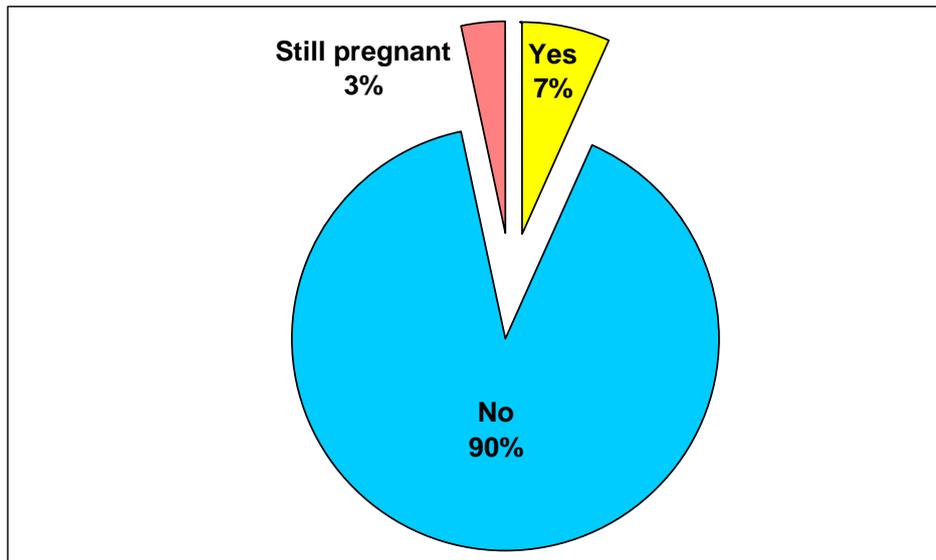


Figure 4.43 Participants' feelings of loneliness (N=29)

According to figure 4.43, 90% (n=27) of the participants did not experience any feelings of loneliness, while 7% (n=2) expressed such feelings. One participant was still pregnant and did not answer this item.

4.6.3 Participants' reasons for feelings of loneliness

The participants (7%; n=2) who expressed feeling lonely after the birth of their babies gave the following reasons for feeling lonely:

- Poor family support
- Their families were very far
- Psychological problems, which were not specified.

Netshikweta (1999:90) reported similar reasons.

The above findings emphasise the lack of support as a cause of loneliness. Pregnant student nurses need support throughout their pregnancies and after the birth of their babies to enhance their psychological coping strategies.

4.7 SOCIAL REACTIONS DURING PARTICIPANTS' PREGNANCIES

In this section, society's reaction towards participants' pregnancies was sought.

4.7.1 First person the participant told about her pregnancy

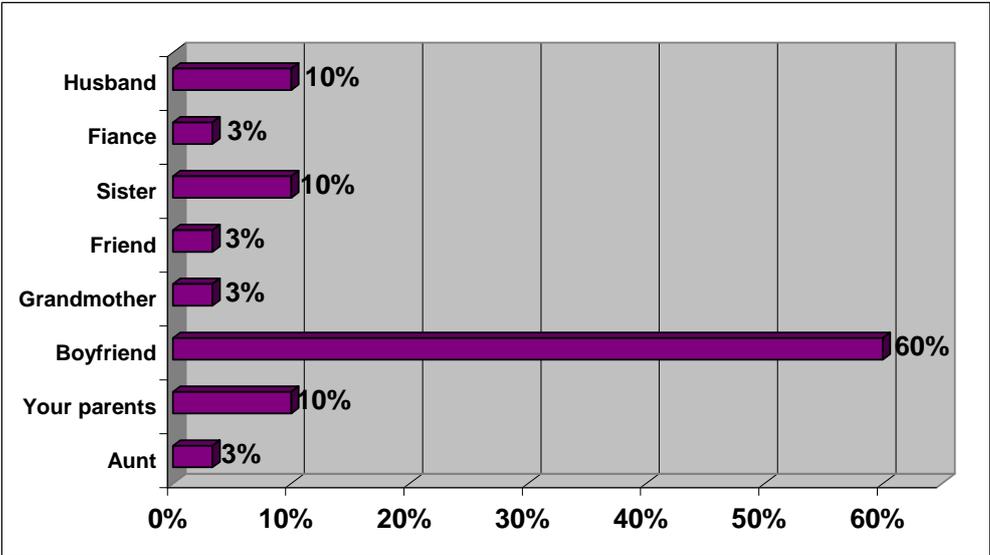


Figure 4.44: First person notified of the pregnancy (N=30)

Of the participants 60% (n=18) indicated that they notified their boyfriends first, 10% (n=3) their husbands although section 4.2.4 indicates that 30% (n=9) of the participants were married. The following participants, 10% (n=3) told their sisters, 0% (n=3) their parents, and 3% (n=1) her fiancé, 3% (n=1) her friend, 3% (n=1) her grandmother and 3% (n=1) her aunt.

4.7.2 Participants' parents reaction to pregnancy

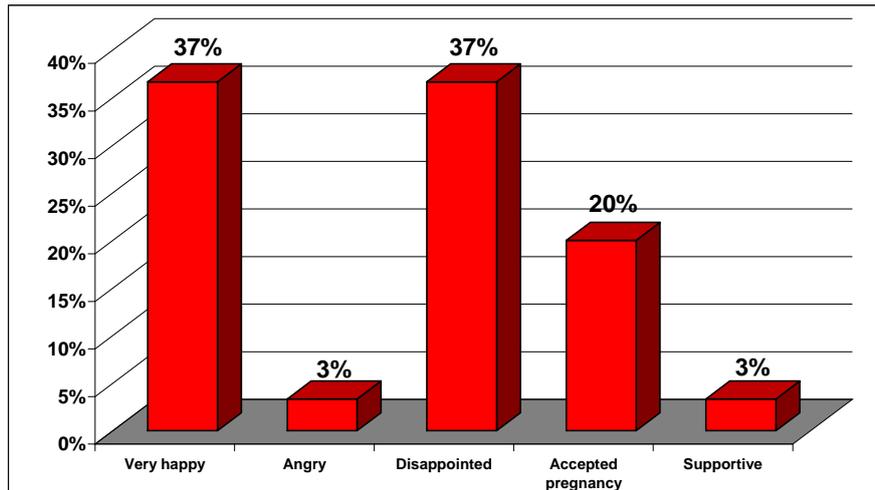


Figure 4.45: Parents reaction to pregnancy (N=30)

Figure 4.45 indicates the participants' parents' reactions to their pregnancies where 37% (n=11) of the parents were very happy, another 37% (n=11) were disappointed with the pregnancies, 20% (n=6) accepted the pregnancies, 3% (n=1) was supportive and another 3% (n=1) was angry with the participant for being pregnant.

Netshikweta and Ehlers (2002:79) found almost similar reactions of the participants' parents. These findings are also supported by Nkosi (2006:67, 69).

4.7.3 Support from the participants' families

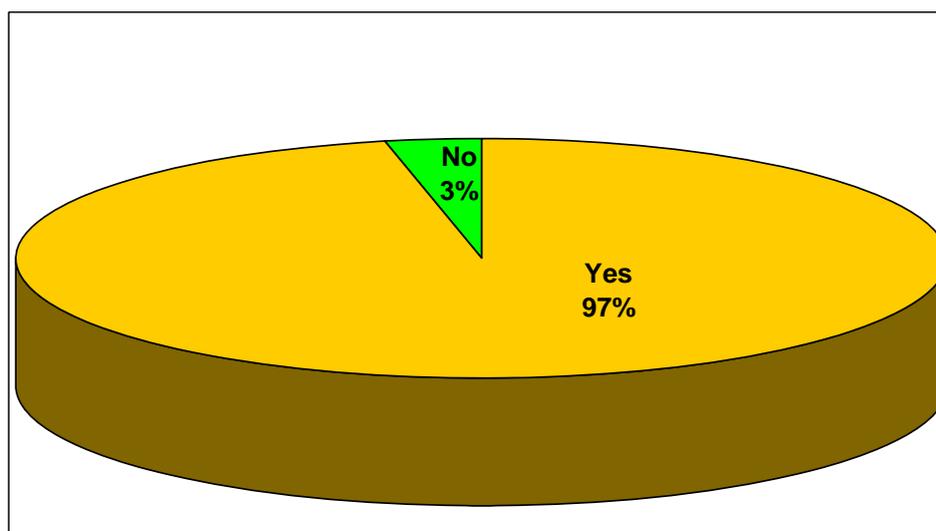


Figure 4.46: Support from the participants' families (N=30)

From figure 4.46, it is evident that the majority 97% (n=29) of the participants had support from their families in spite of the fact that 63% n=(19) of the pregnancies were not planned (see section 4.3.3), only 3% (n=1) participant did not have support from her family.

4.7.4 Reaction of the participants’ partner

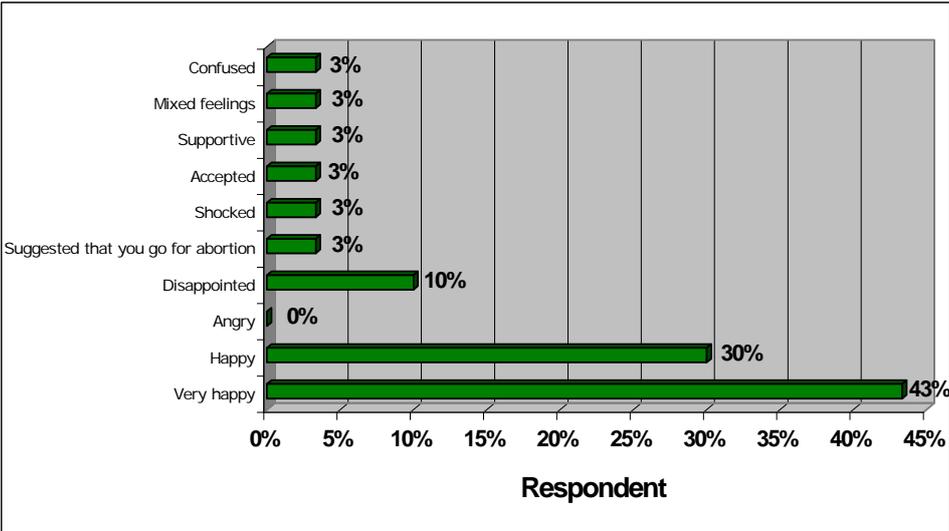


Figure 4.47: Reactions of the participants’ partners (N=30)

The reactions to the pregnancies are depicted in figure 4.47. The following were the reactions of the participants’ partners when they found out about the pregnancies, 43% (n=13) were very happy, 30% (n=9) were happy, 10% (n=3) were disappointed, 3% (n=1) suggested that the participant go for termination of the pregnancy, 3% (n=1) was shocked, 3% (n=1) accepted it, 3% (n=1) was supportive, 3% (n=1) had mixed feelings and 3% (n=1) was confused.

4.7.5 The relationship of the participants and partners during the pregnancies

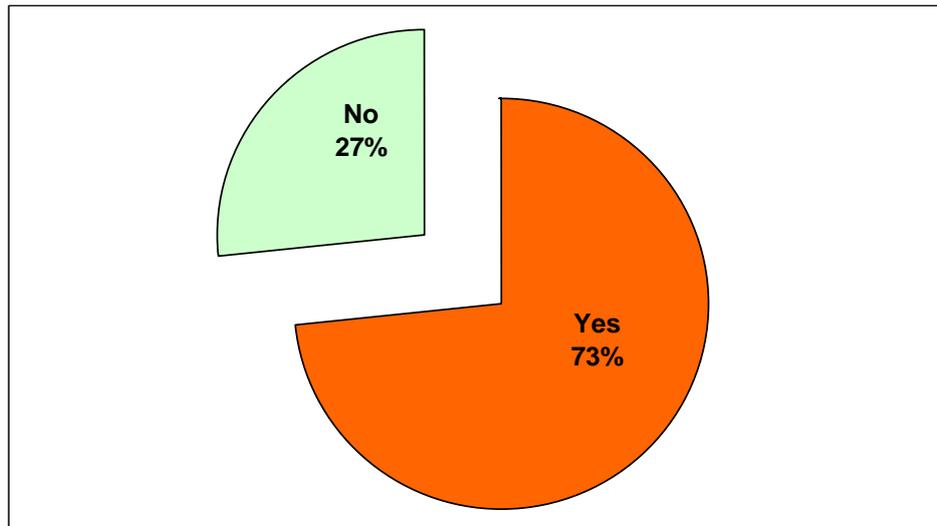


Figure 4.48: Relations with their partners (N=30)

The participants were asked if the pregnancy brought them closer to their partners. As many as 73% (n=22) of the participants indicated that they became closer and only 27% (n=8) indicated that they were not closer to their partners after their pregnancies.

These findings differ from those of Netshikweta (1999:95) where 61.3% of the participants reported to have been rejected by their male partners.

4.7.6 Reasons for the lack of closeness with partners

Table 4.11 provides the reasons for the lack of closeness with partners during pregnancy.

Table 4.11: Reasons for lack of closeness with partners

Problems	Number of participants	%: (N=6)
I do not understand him	1	13%
Don't know why	2	25%
He is immature and irresponsible	1	13%
Were close already	1	13%
We were constantly arguing	1	13%

Table 4.11 shows the reasons for the participants and their partners to be not close, the reasons ranging from the unknown, not understanding the partner, constant arguing to the partner being immature and irresponsible. These findings differ from Netshikweta’s (1999:96) findings where the reasons for lack of closeness of the participants and their male partners were that

- male partners were married
- male partners were still young
- partners not faithful, having other girlfriends
- distance relationships between the student nurses and their male partners

4.7.7 Discussions of their pregnancies with the college staff

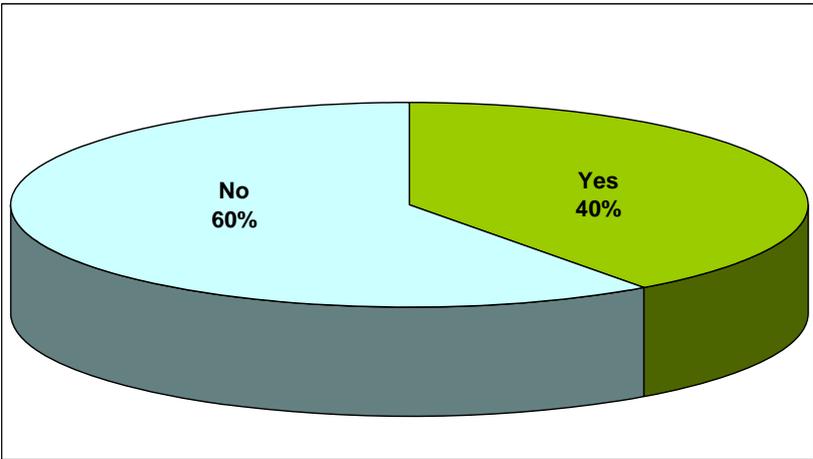


Figure 4.49: Discussions of their pregnancies with the college staff (N=30)

When the participants were asked whether they had discussed their pregnancies with the staff of the SAHMS Nursing College, 60% (n=18) indicated that they did not and only 40% (n=12) had discussed their pregnancies with the college staff. Similar findings were reported by Netshikweta (1999:97).

4.7.8 Reasons non-discussion with college staff

Table 4.12 provides the reasons why the student nurses did not discuss their pregnancies with the SAHMS Nursing College staff.

Table 4.12: Reasons for not discussing with the college staff

Problems	Number of participants
They are not friendly	5
They are not supportive	12
They talk bad about you	4
It was out of choice	1
They are not comfortable	1
They are judgmental	1
Not approachable	1

Most prominently, pregnant student nurses experienced SAHMS Nursing College staff as not being supportive (n=12) and not being friendly (n=5). The participants also indicated various other reasons for not discussing their pregnancies with the college staff as tabulated in table 4.12 such as not being approachable and being judgmental.

4.7.9 Support and acceptance from clinical staff

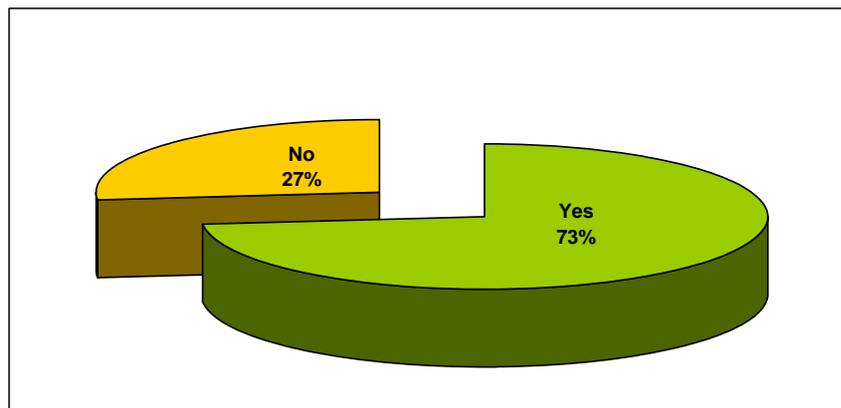


Figure 4.50: Experience of acceptance and support from clinical staff (N=30)

Figure 4.50 provides an indication of the experiences of pregnant student nurses with regard to the acceptance and support during their pregnancy from the clinical facilitators of the SAHMS Nursing College. Of the participants, 73% (n=22) reported acceptance and support from the clinical staff and only 27% (n=8) reported that they were not supported and/or accepted by the clinical staff.

4.7.10 Plans to resume their training after their babies' births

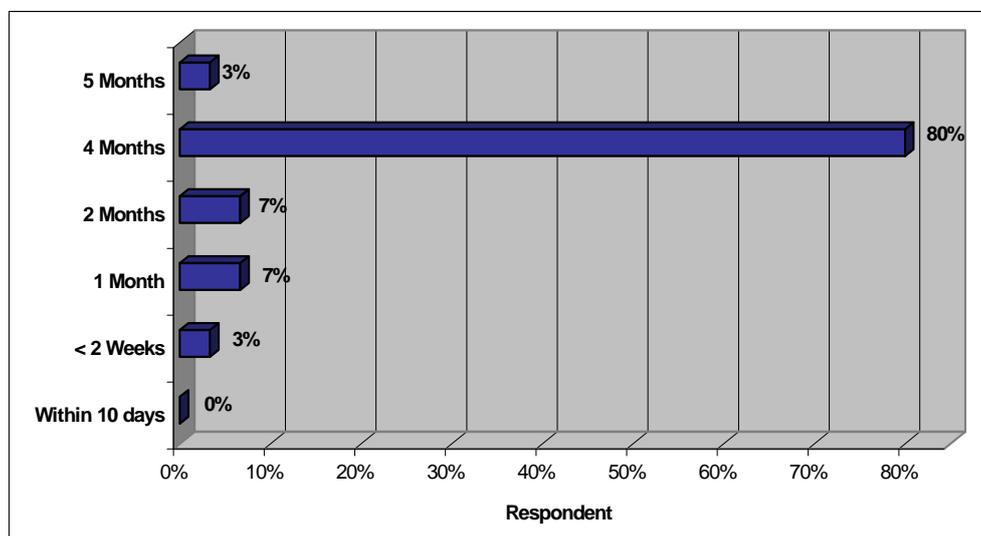


Figure 4.51: Plans to resume their training after their babies' births (N=30)

The participants' intentions to resume their training are depicted in figure 4.51. The majority 80% (n=24) had already delivered and had taken four months' maternity leave as stipulated by the Basic Condition of Employment as well as the SAMHS Nursing College's maternity leave Standard Operating Procedures prescriptions. Seven percent

(n=2) came back two months after the delivery of their babies, 7% (n=2) after one month, 3% (n=1) after 5 months and another 3% (n=1) planned to go back two weeks after delivery.

4.8 ACADEMIC RECORDS

In this section, the students, academic achievements were reported.

4.8.1 Coping with studies during participants' pregnancies

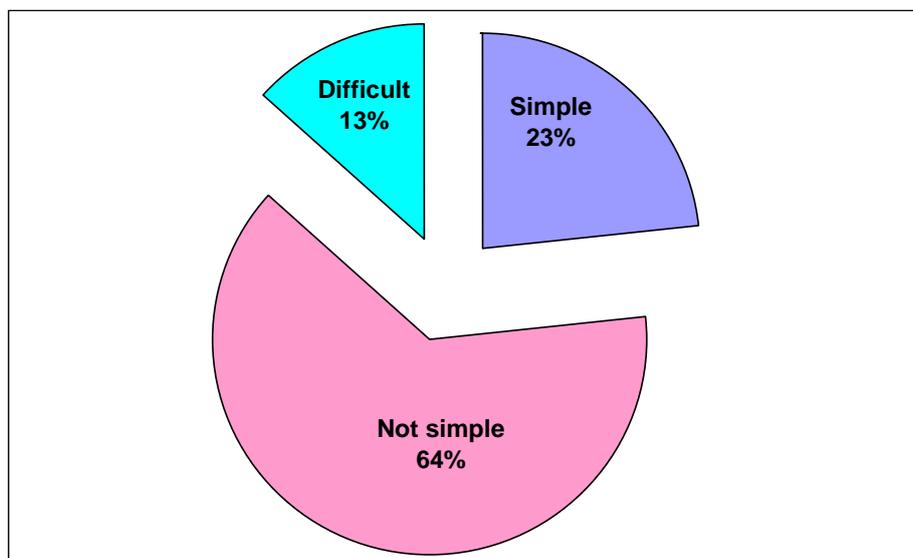


Figure 4.52: Coping with studies during participants' pregnancies (N=30)

Figure 4.52 indicates that 64% (n=19) of the participants indicated it was not simple to cope with studies and their pregnancies, 23% (n=7) reported that it was simple to cope and 13% (n=4) that it was difficult to cope with their pregnancies and their studies. These findings indicate that falling pregnant while in training could pose a major challenge as one has to cope with the physical changes due to the pregnancy as well coping with the studies. This might lead dropouts of students who cannot cope with all these demands.

4.8.2 Coping with studies after delivery of their babies

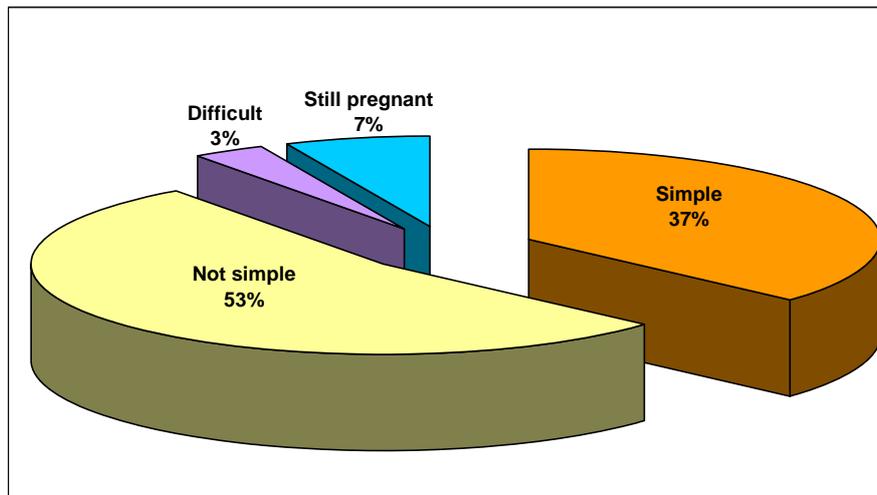


Figure 4.53: Coping with studies after delivery of their babies (N=29)

Figure 4.53 indicates that 53% (n=16) participants reported that it was not simple to cope with the studies and taking care of their babies, 37% (n=11) reported that it was simple for them to cope, 7% (n=2) were still pregnant and only 3% (n=1) reported that it was difficult to cope with the studies and the baby.

4.8.3 Coping with caring of patients/clients in the clinical settings during pregnancy

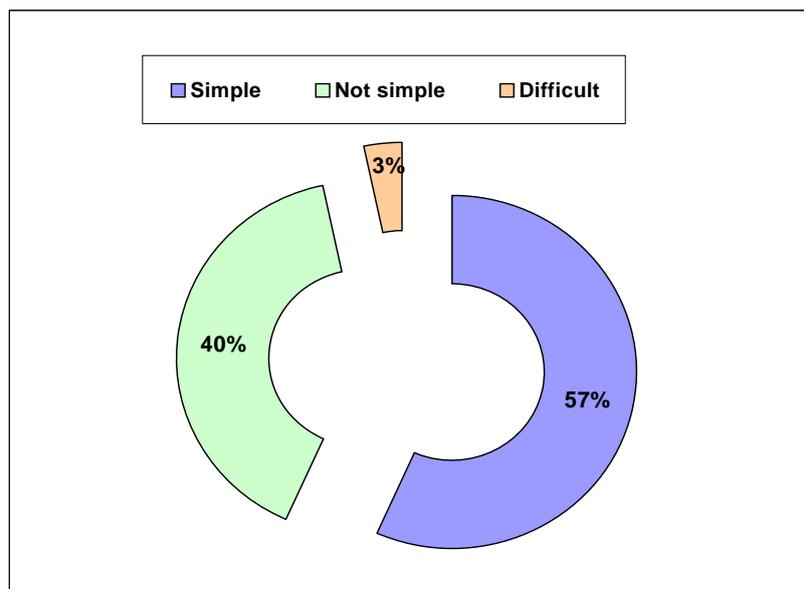


Figure 4.54: Coping in the clinical environment during pregnancy (N=30)

In figure 4.54, 57% (n=17) participants reported that it was simple, 40% (n=12) reported that it was not simple and 3% (n=1) reported that it was difficult to care for their patients during their pregnancies. In sections 4.5.1 and 4.5.2 63% of the participants reportedly had physical discomforts including morning sickness, tiredness, backache, dizziness and hypertension. These physical symptoms might account for the finding that 43% of the participants reportedly did not find it easy to care for patients during their pregnancies.

4.8.4 Coping with patient care after delivery

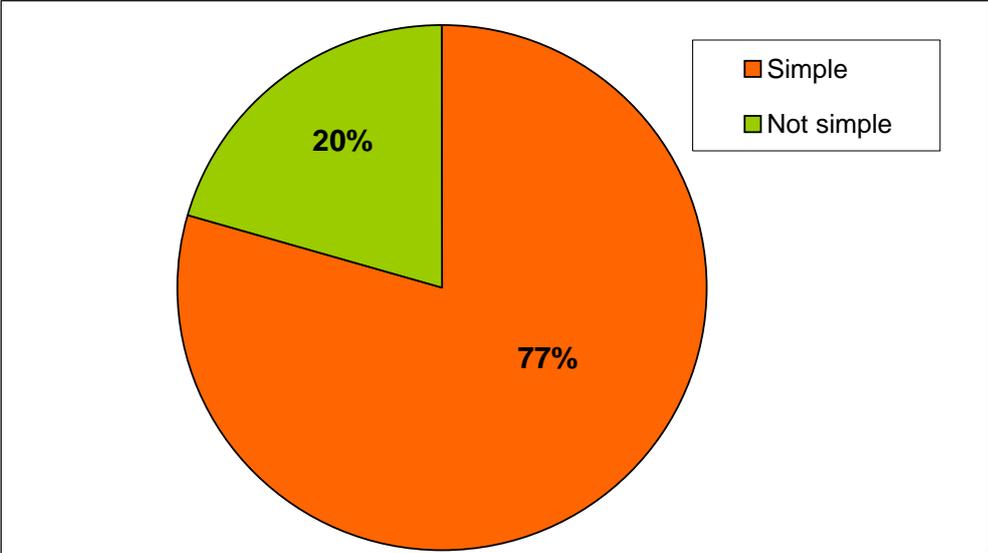


Figure 4.55: Coping with patient care after delivery (N=29)

The majority of the participants 77% (n=23) reported that caring for the patients clients in the clinical setting after delivery has been simple and only 20% (n=6) who reported that it was not simple.

4.8.5 Change in the pace of studying

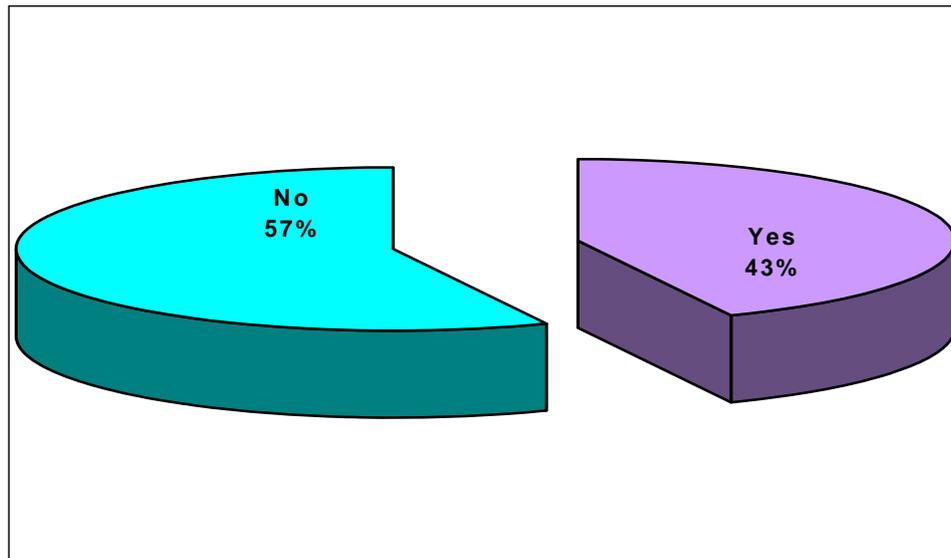


Figure 4.56: Change in the pace of studying (N=30)

Figure 4.56 shows that 57% (n=17) of the participants reported changes in their pace of studying. The remaining 43% (n=13) did not experienced any changes in their pace of studying.

4.8.6 Participants' average test scores before their pregnancies

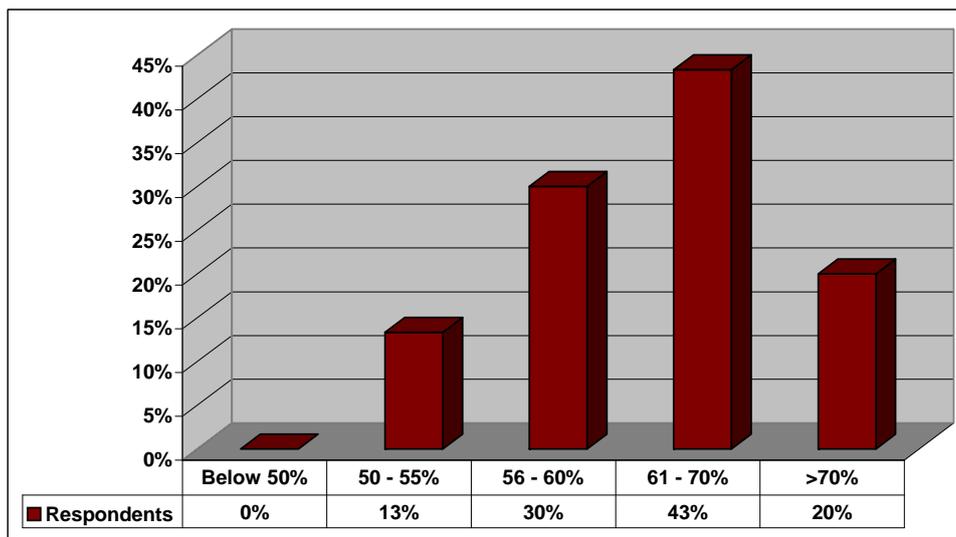


Figure 4.57: Participants' average test scores before their pregnancies (N=30)

Figure 4.57 shows that 43% (n=13) were scoring between 61-70% in their tests and examinations; 30% (n=9) were scoring between 56-60% in summative and formative

assessments; 20% (n=6) were scoring above 70% for academic and clinical experiential learning; 13% (n=4) were scoring between 50-55% for tests and examinations and there were no participants scoring below 50%. From this illustration, it appears that there were no participants who experienced difficulties with their studies before their pregnancies. These results are depicted in figure 4.55.

4.8.7 Participants' average test scores during pregnancies

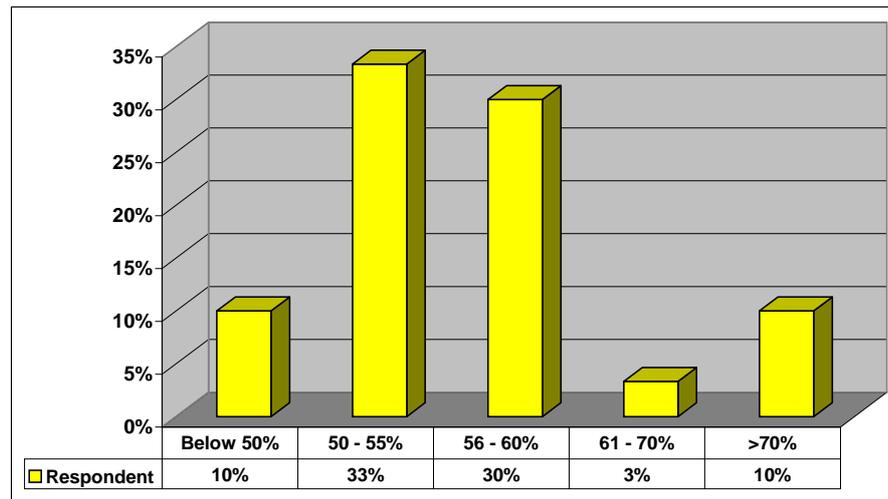


Figure 4.58: Participants' average test scores during pregnancies (N=30)

Figure 4.58 shows that 33% (n=10) of the participants scored between 50-55%; 30% (n=9) scoring between 56-60%; 10% (n=3) scored below 50% and 10% (n=3) scored above 70%. These results indicate an increase in the number of participants scoring between 50-55%, a decrease in the number of participants scoring between 61-70%, a decrease of about 10% of participants scoring above 70% and there were participants who scored below 50% during their pregnancies.

From this it appears that during pregnancy the participants experienced difficulties with their studies. These findings were similar to those of Netshikweta and Ehlers (2002:80).

4.8.8 Participants' average test scores after their pregnancies

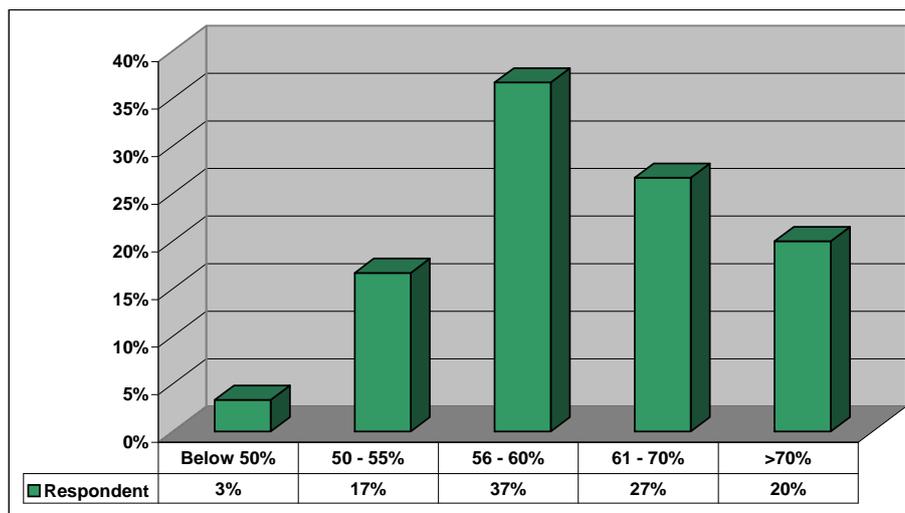


Figure 4.59: Participants' average test scores after their pregnancies (N=30)

Figure 4.59 shows that 37% (n=11) participants scored between 56-60% while 27% (n=8) scored between 61-70%, 20% (n=6) scored above 70%, 17% (n=5) scored between 50-55% and only 3% (n=1) scored below 50%.

From these findings there appears to be an increase in the number of participants scoring between 56-70% and 61-70%; and also those who scored above 70% after delivery of their babies. This may be an indication that there was less pressure after the deliveries of their babies than during their pregnancies.

4.8.9 Summary of sections 4.8.6; 4.8.7 and 4.8.8

In this section, a summary is given of the results discussed in sections 4.8.6, 4.8.7 and 4.8.8. From the comparisons between the score marks before, during and after pregnancy, it is evident that there was a decrease in the marks scored of between 61-70% after the pregnancy and delivery. However, no other significant changes were noted.

Table 4.13: Summary of test scores

Average test scores	Pregnancy		
	Before:	During:	After:
Below 50%	0%	10%	3%
50 - 55%	13%	33%	17%
56 - 60%	30%	30%	37%
61 - 70%	43%	3%	27%
>70%	20%	10%	20%

4.8.10 Participants' abilities to attend to clinical procedures during pregnancy

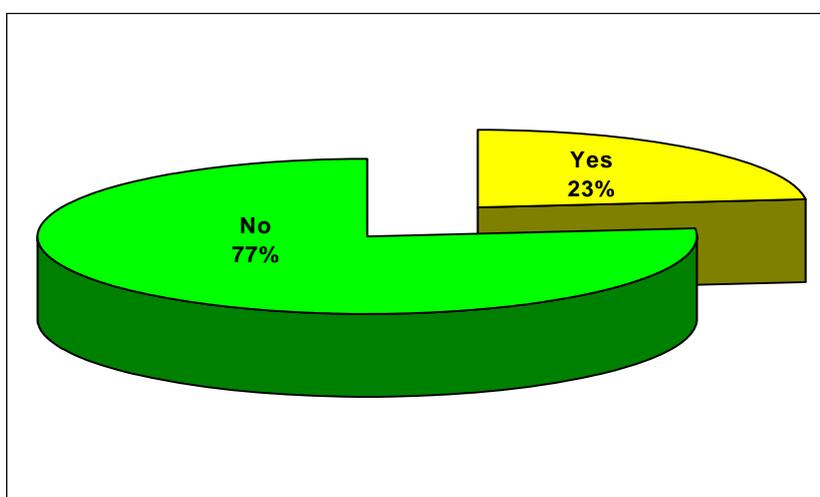


Figure 4.60: Participants' abilities to attend to clinical procedures during pregnancy (N=30)

Figure 4.60 shows that 77% (n=23) participants did not experience any problems attending to procedures in the clinical area during pregnancy while 23% (n=7) had difficulties doing so.

4.8.11 Problems experienced by participants when attending clinical procedures during pregnancy

In this section, the challenges of attending clinical learning sessions/procedures during their pregnancies were recorded.

Table 4.14 indicates the results of the problems that participants experienced in the clinical areas during their pregnancies.

Table 4.14: Problems experienced by the participants

Problems	Number of participants
Tiredness	6
Feel sick	3
Lack of interest	3
Other	0

The participants indicated that tiredness, feeling sick and lack of interest posed difficulties in attending to clinical procedures during their pregnancies.

4.8.12 Problems of concentration in the class after participants’ deliveries

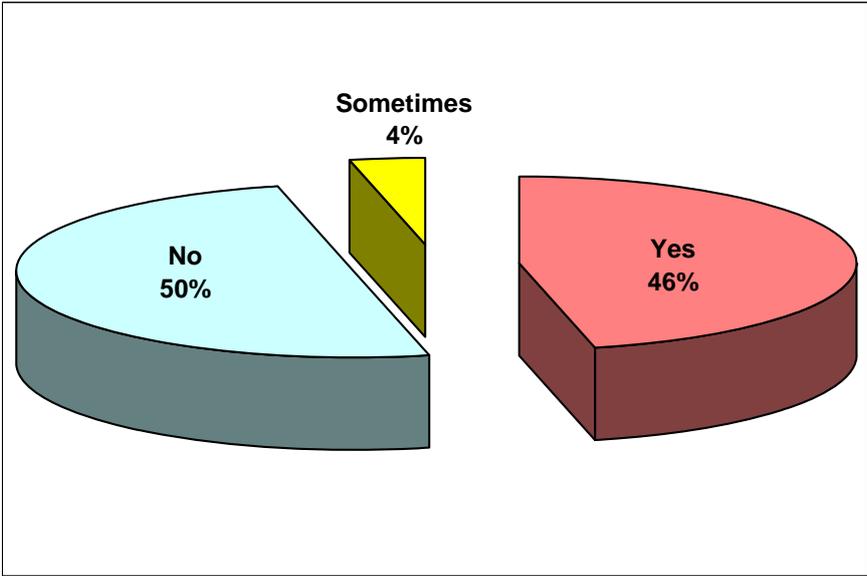


Figure 4.61: Concentration problem in class after participants’ deliveries (N=30)

The participants were asked if they experienced any concentration problems in class after their babies’ deliveries, and 50% (n=15) reported no problems, but 46% (n=14) encountered concentration problems and 4% (n=1) sometimes had such problems.

4.8.13 Possible causes for short concentration spans

In table 4.15, the causes for a lack of concentration are provided.

Table 4.15 Causes for short concentration spans

Causes	Number of participants
Worry about sick baby	9
Baby away form me	1
Didn't sleep well	4
Family problems	2

Of the participants 56% (n=9) indicated that they had short concentration problems because they were worrying about sick babies, slept poorly and had family problems.

4.9 OPINIONS ABOUT SUPPORT

In this section, the nurses' opinions about support during and after their pregnancies are supplied.

4.9.1 Participants' rating of counselling services

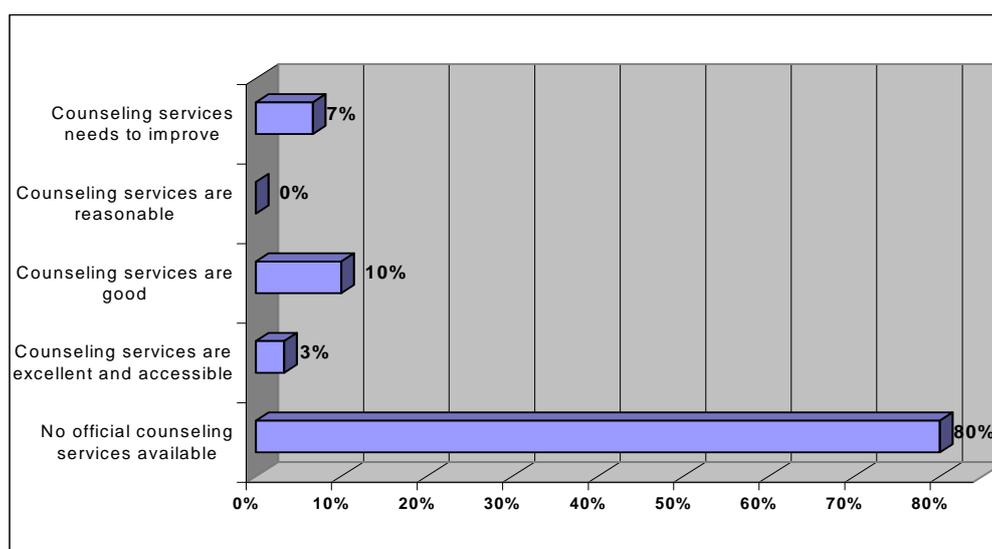


Figure 4.62: Rating of the counselling services (N=30)

When the participants were asked to rate the counselling services they received from their nursing college, 80% (n=24) reported that there were no official counselling services available, 10% (n=3) rated the counselling services as good, 7% (n=2) were not impressed with these services, while 3% (n=1) reported that the services need to improve and only 3% (n=1) rated the services as being excellent and accessible.

4.9.2 The support student nurse gets from the college

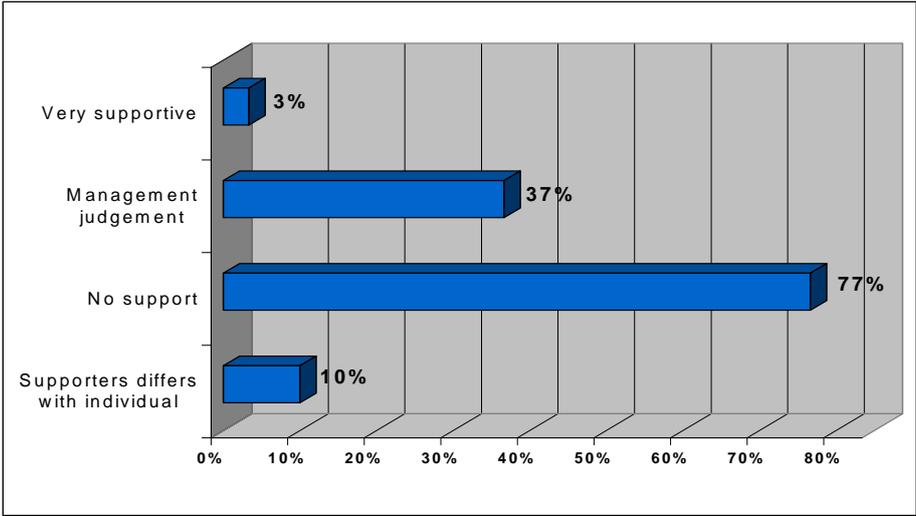


Figure 4.63: Support from college management (N=30)

Figure 4.63 shows the different types of support that the participants received from the nursing college management from the time they reported their pregnancies to the deliveries of their babies. The majority of the participants 77% (n=23) reported that they were not given any support. 37% (n=11) reported that management was judgmental, 10% (n=3) reported that they got varied support from different individuals and only 3% (n=1) reported a very supportive attitude from management.

These findings may be indicative of poor relationships of the college management and college staff with the students.

4.9.3 Support the participants expected from the college staff

In this section, the students' responses with regard to their expectations from the SAHMS Nursing College are given.

Table 4.16: Support participants expected from the college staff

Type of support	Number of participants	:%: (N=30)
To provide adequate counselling services	23	77%
To give extra tuition with regard to life skills	12	40%
To provide a policy to deal with pregnant learners	22	73%
To be a bit harsh on those learners who fall pregnant while in training	0	0%
Understanding and consideration	5	17%

From the data in table 4.16, 77% (n=23) of the participants expected the college to provide them with adequate counselling services, 73% (n=22) expected the college to provide a policy to deal with pregnant student nurses fairly and equally considering their right to learning as students, 40% (n=12) expected the college to give extra tuition to the student nurses with regard to life skills and 17% (n=5) expected the college, its management and personnel to be understanding of and considerate towards pregnant student nurses.

4.9.4 Rating of support from groups

In this section, the rating of support groups is provided by the nurses who fell pregnant during their training at the SAHMS Nursing College.

Table 4.17: Rating of support from groups

Support groups	Excellent		Good		Acceptable		Poor		Very poor		No support	
From your family	20	67%	9	30%	1	3%	0	0%	0	0%	0	0%
From your partner	19	63%	8	27%	1	3%	2	7%	0	0%	0	0%
From your facilitators	3	10%	7	23%	7	23%	8	27%	3	10%	2	7%
From your colleagues	5	17%	7	23%	15	50%	2	7%	0	0%	1	3%
From your LRC	0	0%	1	3%	1	3%	4	13%	4	13%	20	67%

Table 4.17 shows the rating of support the participants got from various groups of individuals, 67% (n=20) of the participants reportedly had excellent support from their

families, 63% (n=19) from their partners, 17% (n=5) from their colleagues, 10% (n=3) from the college facilitators but no support from the LRC had the highest rating (67%; n=20).

4.9.5 Participants' comments on pregnancy while still in training

Table 4.18 reflects the comments and opinions of the participants regarding their pregnancies while in training.

Table 4.18: Participants' comments on pregnancy while in training

Comments	Number of participants
It delays your studies	12
Leads to concentration problems	2
Better to wait until finished with studies	21
Whatever reason for falling pregnant, the student needs guidance, support and love	5
Not a problem with students falling pregnant while in training but student must have support	6
Students must not be forced to go on 4 months' maternity leave	2
Student must make informed decisions	1

The participants were asked to give their comments and opinions on pregnancy while still in training, 21 of the participants felt it was better to wait until finished with one's studies, 12 felt that falling pregnant delayed their studies, 6 felt that it was no problem, but the student needs support to cope with the pregnancy, studies, student nurses must not be forced to take four months' maternity leave and student nurses must be given the opportunity to make informed decisions.

4.9.6 Participants' comments on reducing risky/and or unsafe sexual practices amongst student nurses at SAMHS Nursing College

In table 4.19 the comments that the participants provided to reduce risky and unsafe practices are provided.

Table 4.19: Participants' comments on reducing risky and unsafe sexual practices

Comments	Number of participants
More recreational activities to keep students busy	5
Unity, loyalty and support from nursing college	1
Educating students on life skills	13
Give students practical scenarios to learn how to handle pregnancy	1
Counselling services for students at all times not only when there are problems	2
Teaching students about STDs, AIDS, condoms, pregnancy and contraceptives	7
Provide HIV/ AIDS course for students continuously	1
Referral of students who are at risk to multidisciplinary teams	1
Enforce the use of condoms to reduce STDs and pregnancies	5
No comment	1
Get those who were pregnant to tell their stories	1
Teach sexual education to students	1
Students have to take responsibility for their actions	5

As shown in table 4.19 the participants' comments on ways they believed might help to reduce risky and/or unsafe sexual practices among student nurses at SAMHS Nursing College. The overall reflections from these comments are that education is the most prominent factor to reduce risky sexual practices.

4.10 CONCLUSION

This chapter discussed the data analysis and results. Unsafe sexual practices and risk-taking behaviours occur in colleges and universities. The study found that the majority of the participants were aged between 21 and 25, Blacks, unmarried, and Christians residing in the military residential areas where the college is situated. Moreover, the majority were pregnant for the first time and came from families where both parents were employed and provided for their families. Most of the participants (67%) reported having had their first sexual intercourse between 17 and 18.

The findings suggested that 63% of the pregnancies were not planned. The participants suggested that falling pregnant during training was not a good idea due to the physical, social and academic challenges encountered throughout their pregnancies. Risk-taking, ignorance, cultural factors and lack of support have been indicated as contributory factors causing pregnancies amongst student nurses.

The results of the study reveal that the participants had adequate knowledge about contraceptives, but did not use contraceptives effectively. They knew about ECs but had never used them; also knew about TOPs, which likewise they never utilised.

The study further revealed physical challenges experienced by the participants, which reduced their coping strategies in their studies as well as in the clinical setting when taking care of their patients and clients. The majority of the participants' experienced morning sickness, dizziness, backache, heartburn, tiredness, hypertension, and muscle cramps. Some of the participants experienced loneliness after their babies' births, which was related to poor family support.

The results suggest that the participants did not cope academically during their pregnancies. Some had short concentration spans, which they associated with worries about their babies as well as lack of sleep. Some participants had problems taking care of their patients and doing procedures in the clinical setting during their pregnancies.

There were poor relationships between the participants, college management and personnel, so that the participants were uncomfortable discussing their pregnancies as the college staff was not supportive and approachable, but judgmental. The participants also indicated a lack of official counselling services.

Chapter 5 concludes the study, discusses the limitations and conclusions, and makes recommendations for practice and future research.

CHAPTER 5

Conclusions, limitations and recommendations

5.1 INTRODUCTION

The purpose of the study was to identify challenges encountered by pregnant student nurses at the SAMHS Nursing College, employed by the SANDF. This chapter concludes the study and discusses its conclusions with reference to the objectives and findings, as well as its limitations and makes recommendations for practice and further research. The set objectives are evaluated to determine whether they have been achieved.

5.2 OBJECTIVES

Each objective and its associated conclusions will be discussed.

- **Describe the factors contributing to unplanned pregnancies among student nurses employed by the SANDF**

The study revealed as many as 63% of the participants' pregnancies had not been planned, while 52% of the participants related their pregnancies to risk-taking, as they were engaging in sex without using contraceptives. Nineteen percent indicated that complex unconscious factors contributed to their pregnancies, while 16% mentioned simple contraceptive failure; 5% indicated inaccessible services, and 2% indicated cultural and religious opposition as factors contributing to their pregnancies.

- It is recommended that formal programmes for students to communicate about issues of sexuality, reproductive health issues, life skills, unwanted pregnancy, contraceptives as well as risky behaviours should be taught at the beginning of the course.

- **Identify the challenges encountered by student nurses employed by the SANDF who become pregnant during their training**

The challenges encountered by the participants were classified as physical, emotional, social, and academic challenges. The majority of the participants experienced physical challenges including dizziness, backache, morning sickness, tiredness, muscle cramps, heartburn and hypertension. During the last trimester some of the participants experienced swelling of the lower extremities, lower abdominal pains and hypertension.

Of the participants, 56% expressed feelings of frustration, fear, guilt, depression, and surprise and had mixed feelings when they discovered that they were pregnant, and 7% expressed feelings of loneliness after the delivery of their babies.

Socially, 37% of the participants had to face angry parents, and 22% had to cope with disappointed, shocked and confused partners. Of the participants, 77% indicated lack of support from the college staff, manifested by no discussion about their pregnancies, and lack of support from the college management, as management was not approachable but judgmental towards them (see chapter 4, figure 4.62).

Academically, the participants experienced difficulties coping with the theoretical and clinical demands of their training during their pregnancies (see table 4.13 regarding a drop in the participants' academic performance during pregnancy). The participants also indicated difficulty in coping with procedures in the clinical setting, related to tiredness, feeling sick and lack of interest (see figure 4.60). After delivery, 46% of the participants experienced concentration problems in class associated with lack of sleep and worrying about their babies.

It is recommended that student nurses be informed about social, emotional and physical challenges encountered by pregnant student nurses. Student nurses, who were pregnant during training, should be encouraged to share their stories; in other words; that is, institute peer counselling programmes among student nurses in the military.

- **Explore and describe the participants' attitudes towards using contraceptives**

Of the participants, 43% (n=13) and 23% (n=7) preferred to use contraceptives to prevent future unplanned pregnancies. Although 97% were knowledgeable about contraceptives, 87% did not know about ECs, and only 50% used contraceptives prior to their pregnancies. The participants indicated that contraception was available to them and recommended the use of contraceptives, including condoms, for preventing unplanned and unwanted pregnancies. Of the participants, 93% recommended the use of condoms and 87% indicated that they could insist that their partners use condoms (see figure 4.34).

However, only 37% (n=11) of the participants indicated that condom use was effective for the prevention of STIs and pregnancy, and 30% (n=9) reported condoms to be the best way to prevent unwanted pregnancy. Furthermore, 17% (n=5) indicated that using condoms made them feel responsible for their sexual actions.

The participants knew about contraceptives and had positive attitudes towards using them to prevent unplanned and unwanted pregnancy.

- It is recommended that student nurses are taught about ECs and TOPs, and where to access these services.
- Female condoms should be made easily accessible to female student nurses, and their use encouraged, thereby giving them responsibility for their reproductive health.
- **Develop strategies to minimise unplanned pregnancies of student nurses employed by the SANDF**

From the findings of the research, the researcher makes the following recommendations to minimise the number of unplanned pregnancies among SANDF student nurses:

- Actively (openly) encourage the use of condoms and other methods of contraception to reduce unplanned pregnancies.
- Educate student nurses on life skills.

- Provide recreational facilities.
- Provide counselling services.
- Provide support.

5.3 LIMITATIONS OF THE STUDY

The researcher identified the following limitations of the study:

- Literature on student nurses' pregnancies is limited, especially in the military environment in the RSA.
- The findings cannot be generalised as the study was done in a military setting, which is not necessarily the same as other public and private nursing colleges in South Africa.
- Participants who had already completed the course were not easily accessible.
- The findings cannot be generalised to all the student nurses in the SANDF, as only those on the main campus could be interviewed.
- The study was limited to the R425 Diploma students.
- A larger sample could not be obtained as, unlike other nursing colleges, the military nursing college does not recruit a large number of student nurses.
- Some of the information required by the structured interview was private and confidential, so great care had to be exercised to not intrude on the participants' privacy.
- Structured interviews were conducted yielding quantitative data. More in-depth information could be obtained by conducting qualitative research.

The findings and recommendations of this study should be viewed against the above limitations.

5.4 RECOMMENDATIONS BASED ON THE CONCLUSIONS OF THE STUDY

In addressing this problem of student nurses' pregnancies, the collaboration of all role players attempting to increase the social life, economy and education of student nurses in the military; should aim at educating the students to postpone sexuality until they are 25 years of age, postpone marriage until nursing college is completed, and place high

value on being educationally and economically independent before anything else. The following recommendations, if implemented, could minimise unplanned pregnancies amongst student nurses in the SANDF:

- The college administrators and the personnel should adopt an open, approachable attitude towards student nurses who are pregnant, while trying to prevent increased pregnancies among student nurses.
- Formal programmes to teach students to communicate about issues of sexuality, reproductive health issues, life skills, unwanted pregnancies, contraceptives as well as risky behaviours should be taught at the beginning of the course.
- Inform student nurses about social, emotional and physical challenges encountered by pregnant student nurses.
- Give sexual education to students. The education should be positive, focusing on attitudes, values and feelings, thereby equipping the student nurses with sufficient knowledge to enable them to make informed decisions concerning their own sexual behaviours and to choose the best option available at all times.
- Introduce student to youth centres where people who are non-judgmental, approachable and understanding may address student sexual matters.
- Get students who were pregnant during training to share their stories. In other words, institute peer counselling programmes among student nurses in the military.
- Review the present policy on student nurses' maternity leave, trying to accommodate them during pregnancy and after childbirth, ensuring that the students' training is not extended by up to a year. Counselling services should assist pregnant student nurses to take optimum maternity leave, depending on individual circumstances.
- Make female condoms easily accessible to female student nurses and encourage their use, thereby giving them responsibility for their reproductive health.
- Provide recreational facilities for student nurses
- Encourage student nurses to take control of their lives, by being able to say 'No' to sex until they feel mature enough to be able to handle the pressure from sexual activities.

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

While conducting the research, it became apparent that further research is required into

- Student nurses' knowledge of and attitudes towards emergency contraceptives
- Student nurses' attitudes towards and perceptions of female condoms.
- Culture and religion as a possible barrier to communication on contraception and reproductive health issues
- Factors contributing to ignorance and risky behaviours among student nurses
- Factors contributing to poor support for and poor relationships between student nurses, college personnel and the college management
- Ways to support pregnant student nurses during theory and in the clinical settings
- The attitudes of student nurses towards condom use as a method of preventing HIV/AIDS as well as unplanned pregnancies
- Utilisation of the termination of pregnancies services (TOPs) in the military.

5.6 CONCLUSION

Since abstinence is impossible for many women, including student nurses, perfect contraception becomes the most effective solution to the problem of unwanted pregnancy. There is, however, no perfect contraception. All contraceptive methods have side effects. Thus, we have a duty to empower student nurses with knowledge enabling them to make informed decisions.

By providing knowledge about contraceptives, ECs and TOPs at the beginning of student nurses' training, the SANDF would enable them to make informed decisions. By ensuring the accessibility of contraceptives, the SANDF would make it possible for student nurses to use these services.

However, the participants in this study lacked specific information about potential contraceptive failure, ECs and TOPs. Empowering student nurses with this additional information might enable them to postpone pregnancy until they have completed their training.

ANNEXURE A

**Letter requesting permission to
conduct the study**

ANNEXURE B

**Letter granting permission to
conduct the study**

ANNEXURE C

Consent form

ANNEXURE D

Interview schedule

ANNEXURE E

Newspaper references

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