

**TEENAGERS' KNOWLEDGE ABOUT CONTRACEPTION AND PREGNANCY
- AGED BETWEEN THIRTEEN AND NINETEEN YEARS**

MOTHWANA MMULE THEKISO

**A Research Report Submitted to the Faculty of Health Sciences,
University of the Witwatersrand, Johannesburg, in Partial Fulfilment of the
Requirements for the Degree of Masters of Science Nursing**

September 1998

I, Mothwana Mmule Thekiso declare that this report is my own work. It is being submitted for partial fulfilment of the requirements for a Masters degree in Nursing Sciences (Midwifery) at the University of the Witwatersrand. It has not been submitted before for any degree or examination at this or any other University.

M. Thekiso

on 16 day of 09 1998

DEDICATION

Dedicated to my mother, brother and daughter for their support and patience
during my years of study.

ACKNOWLEDGEMENTS

I would like to express my thanks to all people who contributed to the successful completion of this research.

- World Health Organization (W.H.O.) for their financial support towards this research project.
- Schools for granting permission to conduct the study.
- Parents for granting permission to include their children in the study.
- Students for participating in the study by filling in the questionnaires.
- Mr Themba Mohoto who assisted the researcher with statistical analysis of data.
- Miss Patricia McInerney and Professor B. Robertson who supervised and guided the researcher throughout the research project.
- Mrs Beverley Noble and Mrs Patricia Sibaya who did all the typing of the research project.

ABSTRACT

Teenage pregnancy is a major problem in Botswana.

The purpose of the study was to find out to what extent teenagers are knowledgeable about the use of contraceptives and pregnancy. The sample comprised subjects aged 13-19 years from five secondary schools in the Central District, Botswana. One hundred-and-thirty-two students completed self-administered questionnaires. The type of research methodology used was a descriptive survey.

Information obtained included: demographic data, socio-economic status, religious background, marital status of parents, knowledge on contraception and pregnancy.

The results showed that 61.4% of participants were females, 96.3% of participants were Batswana and 59.2% were aged 17-19 years. The majority of participants (61.4%) were from Form I and Form II. The results also showed that 69% of participants were from a family of five and more, 52.3% indicated that they have been staying in their current residential area for 7 years and more. The results also show that 59% indicated that the breadwinners in their families were their fathers.

21.5% of the respondents indicated that they belonged to the Zion Christian Church. From 64% of participants who indicated that their parents were married, 55.3% indicated that their parents were still staying together.

The majority of participants (81.8%) in this study indicated that they had knowledge about contraception and 31.8% of participants listed one method of contraceptive they knew. The results showed that the majority of participants (85.6%) had knowledge on the use of contraceptives but 53% of sexually active teenagers indicated that they did not use contraceptives. The results showed that 81.7% indicated that they knew how pregnancy occurs.

TABLE OF CONTENTS

	Page
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
TABLE OF CONTENTS	vi
LIST OF FIGURES	xi
LIST OF TABLES	xi
<u>CHAPTER ONE</u>	
1.1 INTRODUCTION	1
1.2 BACKGROUND OF THE STUDY	1
1.3 PROBLEM STATEMENT	3
1.4 RESEARCH QUESTION	4
1.5 OBJECTIVES OF THE STUDY	4
1.6 SIGNIFICANCE OF THE STUDY	4
1.7 OPERATIONAL DEFINITIONS	5
1.8 CONCLUSION	5
<u>CHAPTER TWO</u> LITERATURE REVIEW	
2.1 PUBERTY	7
2.2 ADOLESCENCE	8
2.3 SEXUALITY	9

	Page
2.4 DEVELOPMENT IN NORMAL ADOLESCENTS	9
2.4.1 Male Sexual Development	10
2.4.2 Female Sexual Development	10
2.5 THE PROCESS OF ADOLESCENCE	11
2.6 CONTRACEPTION AND CONTRACEPTIVE METHODS	12
2.7 CONTRACEPTION AND RELIGION	14
2.7.1 Sex and Contraception	16
2.8 FACTORS WHICH INFLUENCE THE USE OF CONTRACEPTIVES	16
2.8.1 Age	19
2.8.2 Size of Families	19
2.8.3 Communication	20
2.8.4 Knowledge	21
2.8.5 Fears and Beliefs	22
2.8.6 Previous Pregnancies	23
2.8.7 Education and Contraception	23
2.8.8 Experience	24
2.8.9 Gender Inequality	24
2.8.10 Social and Cultural Factors	25
2.8.11 Availability and Accessibility of Family Planning Services	26
2.9 TEENAGER AND PREGNANCY	27

	Page
2.10 DETERMINANTS OF TEENAGE PREGNANCY	28
2.10.1 Cultural Beliefs	29
2.10.2 Knowledge of Contraception and Fertile Period	29
2.10.3 Sexual Activity	30
2.10.4 Common Myths About Youth and Sexuality	30
2.11 CONCLUSION	31
 <u>CHAPTER THREE: METHODOLOGY</u>	 32
3.1 INTRODUCTION	32
3.2 RESEARCH DESIGN	32
3.2.1 Reasons for the Survey Design	32
3.3 SETTING OF THE STUDY	33
3.4 SAMPLING PROCEDURE	35
3.5 TARGET POPULATION	36
3.6 SAMPLE	36
3.7 INSTRUMENT	37
3.7.1 Reasons for a Structured Questionnaire Schedule	37
3.7.2 Reasons for Developing Open- and Close-Ended Questionnaire	37
3.7.3 Development of a Structured Instrument	38
3.7.4 Validity and Reliability of Instrument	38
3.8 DATA COLLECTION	38
3.9 PILOT TESTING	39

	Page
3.10 ETHICAL CONSIDERATIONS	40
3.11 DATA ANALYSIS	41
3.12 CONCLUSION	41

CHAPTER FOUR FINDINGS AND DISCUSSIONS OF FINDINGS

4.1 DEMOGRAPHIC DATA	42
4.2 EDUCATIONAL BACKGROUND	44
4.3 SOCIO-ECONOMIC STATUS	45
4.4 RELIGIOUS BACKGROUND	49
4.5 MARITAL STATUS OF PARENTS	50
4.6 KNOWLEDGE ON CONTRACEPTIVES/FAMILY PLANNING	50
4.7 KNOWLEDGE ABOUT PREGNANCY	55
4.8 BIVARIATE ANALYSIS OF VARIABLES	56
4.9 DISCUSSIONS OF FINDINGS	57
4.10 CONCLUSION	63

CHAPTER FIVE SUMMARY, LIMITATIONS, RECOMMENDATIONS

AND CONCLUSION

5.1 SUMMARY	65
5.2 LIMITATIONS	66
5.3 RECOMMENDATIONS	67
5.3.1 Nursing Education	68
5.3.2 Nursing Practice	68

	Page
5.3.3 Research	69
5.4 CONCLUSION	70
REFERENCES	71
APPENDIX A.1	83
APPENDIX A.2	84
APPENDIX A.3	85
APPENDIX A.4	86
APPENDIX B	87
APPENDIX C	88
APPENDIX D	89
APPENDIX E	90
APPENDIX F	91
APPENDIX G	92

LIST OF FIGURES

	Page
4.1 CHARACTERISTICS BY SEX	43
4.2 CURRENT LEVEL OF EDUCATION	45
4.3 RESPONDENTS BY RESIDENCE	46
4.4 INFORMATION ON PARENT'S HOME	48

LIST OF TABLES

3.1 EDUCATIONAL LEVEL	36
4.1 FREQUENCY DISTRIBUTION OF AGE	43
4.2 FREQUENCY DISTRIBUTION OF NUMBER OF FAMILY MEMBERS	46
4.3 BREADWINNERS IN THE FAMILY	48
4.4 PARTICIPANTS' RELIGIOUS GROUPS	49
4.5 NUMBER OF FAMILY PLANNING METHODS KNOWN	52
4.6 USE OF FAMILY PLANNING	53
4.7 RESPONSES INDICATING WHEN (AGE) SEXUAL ACTIVITIES WERE COMMENCED	54
4.8 DISTRIBUTION OF KNOWLEDGE ON HOW PREGNANCY OCCURS	55

CHAPTER ONE

1.1 INTRODUCTION

Teenage pregnancy and the spread of sexually transmitted diseases have been attributed very largely to lack of information on sexuality and early sexual intercourse which often begins at the age of 13. In a study conducted in Nigeria, it was found that health information is not always available even though adolescents start engaging in sexual intercourse at the age of 14 (Amazigo, Silva, Kaufman & Obikize 1997). This is a particular problem in developing countries where there is migration from rural to urban areas by young people and where traditional cultural practices are eroded.

1.2 BACKGROUND TO THE STUDY

Larson *et al* (1988), cited in a study conducted by Tihalefang (1991), state that teenage pregnancy is a major problem in Botswana. Most teenagers become pregnant because of lack of contraceptive use.

In Botswana the "1971 census found that 15.4% of girls aged 15 to 19 had been pregnant, the rate increased to 22% in 1981 and 23.5% in 1988 (with an additional 4.9% reporting themselves pregnant at the time of the survey" (Safe Motherhood Task Force 1992:18). Lack of contraceptive use is a major concern for the Botswana nation because of the increased number of

unplanned teenage pregnancies. Teenage pregnancies may result in complications of pregnancy such as post-partum haemorrhage, prolonged labour, prematurity and pre-eclampsia (Safe Motherhood 1992).

The available statistics on the incidence of induced abortions among teenagers are inaccurate and incorrect. In the researcher's experience it would appear that a large percentage of teenage pregnancies end in abortions and perinatal deaths. Unprotected sexual intercourse by teenagers results in pregnancy (Safe Motherhood Task Force 1992:19). "The proportion of women who become mothers before the age of 20 is a measure of the magnitude of teenage pregnancy, which is regarded as a major health and social problem in many countries including Botswana" (Family Health Survey 1988:27). In a study conducted by the family health division in Botswana (1988), it was reported that the majority of first births take place between the ages of 15 and 20 years (76.5%).

Safe Motherhood Task Force (1992) further states that it has been found that lack of knowledge about reproduction and contraception among teenagers and access to family planning services also contribute to the high rate of pregnancy. Reasons for not using contraceptives by adolescents are unknown even though in the Botswana Health Survey (1988) it is indicated that knowledge deficit on the use of contraceptives is one of the problems contributing to unplanned pregnancy. In addition, the Safe Motherhood Task Force (1992) found that only 47% of teenagers stated that they approve of the use of family planning.

The use of contraceptives is as old as man and has been used in ancient times by our ancestors. Methods of contraceptives used at that time were not as effective as current ones. Methods that were used included breast-feeding, withdrawal and rhythm methods.

According to the Safe Motherhood Task Force (1992) there is proof that pregnancy is a major problem in schools, with substantial dropouts because of pregnancy. In the Botswana Family Health Survey it was found that in 1985 there were three times more female dropouts than male dropouts at Junior Secondary Schools and four times more at Senior Secondary Schools.

To deal with this, family life education is being conducted at schools by Community Health Nurses, teachers and support groups from different women's organisations. In health facilities, midwives/nurses give talks on family life education, but no research has been conducted in Botswana to assess if information disseminated to teenagers has been fully understood.

1.3 PROBLEM STATEMENT

The Population Census of 1971 and 1981 cited in the National Institute of Development Research and Documentation (Botswana 1988:46) has indicated that teenage pregnancy is a major problem and an increasing one in Botswana. Teenagers' knowledge on the use of contraceptives and pregnancy has not

been fully explored among Botswana teenagers. Therefore, information is needed regarding knowledge and use of contraceptives amongst teenagers.

1.4 RESEARCH QUESTION

To what extent are teenagers knowledgeable about the use of contraceptives and pregnancy?

1.5 OBJECTIVES OF THE STUDY

The objectives of the study are:

To obtain information from female and male teenagers on knowledge concerning the use of contraceptives.

To explore factors which may influence the use of contraceptives by teenagers.

To find out if teenagers know when pregnancy can occur.

1.6 SIGNIFICANCE OF THE STUDY

The study will benefit the nursing profession by identifying the deficit in the knowledge of teenagers regarding contraception. This will enable community nurses and midwives to provide more effective counselling in clinics and schools.

1.7 OPERATIONAL DEFINITIONS

- Knowledge:** This is the range of information which guides practice as measured by questions.
- Teenagers:** Scholars whose age ranges between thirteen and nineteen years.
- Contraceptives:** Any method used during or before sexual intercourse to prevent conception by sexually active persons of opposite sex (male and female).
- Family Planning:** Is a method used in spacing children or avoiding pregnancy and this can be achieved by use of contraceptives.
- Contraception:** Is a method used to delay, space or prevent pregnancy. It facilitates the spacing of pregnancies and of children born to a woman.

1.8 CONCLUSION

This chapter covers the background of the study, the problem statement, research question, objectives of the study, the significance of the study and operational definitions.

CHAPTER TWO

LITERATURE REVIEW

This chapter covers concepts related to teenage sexuality such as puberty, adolescence and sexuality. The literature reviewed included aspects on the following:

- * Definitions of terms
- * Psycho-social development in normal adolescents
- * The process of adolescence
- * Normal physical growth and development
- * Contraception
- * Contraceptive methods
- * Contraceptive factors
- * Results of failure to use contraception
- * Teenager and pregnancy
- * Determinants of teenage pregnancy

The literature distinguishes between the concepts of puberty, adolescence and sexuality. These concepts will be discussed individually.

2.1 PUBERTY

Puberty can be defined as a transitional stage from childhood to adulthood. The term puberty refers to "not only the complete functioning of the ovarian cycle for the first time, but also to the gradual changes in the secondary sexual characteristics which precede the menarche itself" (Arnold 1980 cited in Clayton 1980:48).

The point at which reproduction is possible is called puberty (Schuster & Asburn 1980:464). Schuster and Asburn (1980) further state that it is very difficult to identify the precise point at which puberty occurs because ovulation and spermatogenesis are internal phenomena. They go on to say that all primary and secondary sexual developments that accompany endocrine changes are included in the period of change in the reproductive system.

Eighteen years ago (Schuster & Asburn 1980:464) stated that menarche is one of the developmental landmarks of female puberty and is used to identify girls while they are in their pubertal stage, while the onset of wet dreams in boys is used as an arbitrary division between prepubertal and post-pubertal boys. In addition, more recently, Neinstein (1996:34) has written that age of menarche depends on such factors as race, socio-economic status, heredity, nutrition and culture. The onset of puberty is later in higher altitudes, in rural areas and in larger families.

2.2 ADOLESCENCE

Adolescence has been defined as "a process in motion in both growth and development, where growth means growing bigger, and development means the quantitative addition of experiences and challenges beginning from infancy and ending in an abrupt qualitative change in teen age" (Block cited in Welman 1986:38). In addition it has been further described by Walton (1995:56) as a period of searching for answers to questions about who one is, what one's identity really means and on the whole a period of examining values, beliefs and practices learned in childhood. He goes on to say that adolescence generally occurs between 9 and 11 years in girls and 9 and 15 years in boys. He describes adolescence as a stormy period for the family and a time when the young adolescent may indulge in risk-taking behaviour such as unprotected sex as a challenge to the authority of his or her parents, a quest for adventure or simply as a result of peer pressure.

Girls reach the transitional stage of adolescence at an earlier age than boys. This is supported by a study conducted in the Cape Peninsula where it was found "that 70% of the subjects in the study indicated that they had started menstruating at the age of 13 years and 16% had already started before their 11th birthday. In the case of boys, 60% indicated that they had experienced their first ejaculation by the age of 13 and ten percent of boys had already reached sexual maturity by the age of eleven" (Whyte 1991:21). These findings are consistent with Neistein's (1996:40) statement that physical development in

adolescents can be defined as "the period of life beginning with the appearance of secondary sexual characteristics and terminating with the cessation of somatic growth.

2.3 SEXUALITY

Walton (1995:4) describes sexuality as a powerful and overwhelming force that can be controlled by moral and religious beliefs in the individual. He further states that the sexual instinct was thought to be an impulse where boys centre on penetration and impregnation of women and girls centre on passivity and being penetrated with the intention of having a baby.

Goosen and Klugman (1996:248) state that sexuality is a form of expression that starts at birth and continues throughout our lives, including physical, emotional, social and intellectual aspects of oneself. They further state that although one's biological sex is determined at conception, one's perception about sexuality is influenced by culture and society. If valued as people or treated unfairly because of gender this could affect our sexuality, for example, at certain stages of development people enter into relationships with expectations that as individuals they will be secure. However, they also want to develop personalities according to their choice without being rejected or judged.

Girls' physical and mental development to womanhood starts from the age of 11 onwards and these changes make girls look and feel different (Goosen & Klugman 1996:226).

2.4 DEVELOPMENT IN NORMAL ADOLESCENTS

Neinstein (1996:40) defines adolescence as a biopsychosocial process that may commence before the onset of puberty and last beyond the termination of growth.

The development of adolescence is a process. A description of this process is as follows.

2.4.1 Male Sexual Development

Testicular enlargement is the first physical sign of puberty in about 98 per cent of males. During the rest of puberty the testes, epididymus and prostate increase sevenfold and the phallus usually doubles in size (Neinstein 1996:22).

2.4.2 Female Sexual Development

Neinstein (1996:22) states that in the majority of females, breast budding is the first physical sign of puberty. The female's breasts develop during puberty and ovaries increase from five to sevenfold in size.

Goosen and Klugman (1996:228) state that at the age of 11 the female body starts changing and becoming more womanly by growing pubic hair and hair under the arms. They further state that there are hormones which are being produced by the pituitary glands (oestrogen and progesterone) and these together with ovaries are responsible for sexual development of a female.

2.5 THE PROCESS OF ADOLESCENCE

Neinstein (1996:40), writes that the transition from childhood to adulthood does not occur by a continuous, uniform synchronous process. Instead, biological, social, emotional, and intellectual growth may be totally asynchronous.

Havighurst cited in Goddard (1986:28) indicated that the developmental task of adolescence arises from individual needs and societal demands. He further states that individual needs include such things as accepting one's own body and learning to use it effectively. Societal demands call for the adolescent to achieve socially responsible behaviour which includes the achievement of independence from parents and the acquisition of appropriate masculine or feminine roles.

The following developmental tasks of adolescence have been described as (Goddard 1986 & Neinstein 1996):

- * Achieving new and more mature relationships with age mates of both

sexes.

- * Acquiring a set of values and an ethical system as a guide to behaviour.
- * Achieving a masculine or feminine social role.
- * Accepting one's physique and using the body effectively.
- * Desiring and achieving socially acceptable behaviour.
- * Developing intellectual skills and concepts necessary for civic competence.
- * Achieving emotional independence of parents and other adults.
- * Establishing sexual, ego, vocational and moral identities.
- * Conformity of the adolescent with peer values, codes and dress, in an attempt to further separate from the family.
- * Increased involvement in heterosexual relations, manifested by dating activity, sexual experimentation and intercourse.
- * A feeling of omnipotence and immorality, leading to risk-taking behaviour, which is certainly a factor in the high rate of accidents, suicides, drug use, pregnancies and sexually transmitted diseases that become prevalent at this stage.
- * Increased intellectual ability and creativity.

2.6 CONTRACEPTION AND CONTRACEPTIVE METHODS

A contraceptive is a preventative of pregnancy or of implantation of the ovum.

Contraception is the use of a contraceptive (Sykes 1987:205). "A contraceptive

is an agent used to prevent conception, for example, male sheath cap that occludes the cervix, spermicidal pessary or cream, intra-uterine device, and the oral pill (steroid hormone)" (Cape & Dobson 1974:82).

Bromwich and Parsons (1990:1) have described the evolution of contraception. They describe how throughout history humans have used some form of contraception with most sexual activity being for recreation rather than procreation. The evolution of animal husbandry over 10,000 years ago was followed by the evolution of contraception when humans changed from nomadic hunter-gatherers to settled farmers. In those days farmers were probably the first people to see children as a gift from God of which care needed to be taken. Practically it was necessary to plan for their arrival. Bromwich and Parsons (1990:1) further state that infertility worried the farmers more than unplanned pregnancy. This does mean that they were thinking about pregnancy and children. Controlling animal society by castrating male animals resulted in improved quality of meat and also stopped animals from breeding. Bromwich and Parsons (1990:1) state that controlling the number of animals led to thoughts about the possibility of controlling human society. This development grew when people settled in towns and villages.

"Contraception in those early days relied on a mixture of customs and taboos, barrier methods, breastfeeding, maquat incarnations and if those failed, abortion and infanticide" (Bromwich & Parsons 1990:1).

Contraceptive methods which are widely used by teenagers, are systemic contraception (the pill) and barrier method (condom). These two methods are mostly being used because they are readily available in health facilities in Botswana. In a study conducted in Sub-Saharan Africa it was found that the most widely available contraceptives are condoms and pills and this may indicate that the choice of contraceptives is limited in Africa (Population Growth & Policies in Sub-Saharan Africa 1986:54).

2.7 CONTRACEPTION AND RELIGION

The moral values of religion do not encourage sexual activity before marriage. Engaging in sexual activities is regarded as a sin.

In the Jewish Talmud, a guide to everyday living, the advantages of smaller families and the use of contraceptives were described as long ago as 300 BC (Theron, 1987:16). In a study conducted in a South Indian village the researcher indicated that "even before modern contraceptives were made available, villagers prevented unwanted pregnancies and births, not to limit family size, but also to fulfil social and cultural expectations and to improve the health of the baby" (Dharmalingam, 1995:100). She further states that the most commonly used methods were abortion, withdrawal and abstinence. Hogan (1982:367) states that religion has had a profound effect on sexuality throughout the history of man.

The French Jesuit, Fr Gustave Martelet (cited in Bromwich & Parsons 1990:8), explained that contraception was acceptable only when there is no love expressed during sexual intercourse. He further explained that this primarily applies to rape, but presumably also prostitution, casual sex, perhaps even marriage where one spouse is forced into sex by the other, or one or both are drunk.

The Catholic church is against the use of modern contraceptive methods except for natural ones. They only approve "natural" measures for example the rhythm method and breastfeeding measures as natural family planning.

"Many cultures prize virginity among women although few give the same respect to male virginity. Some religions prize chastity and many expect their priests to be celibate, including the monks and nuns who are features of most organized religions" (Bromwich & Parsons 1990:3). They further explain that menstruation taboos that are characteristics of some religions also have a pregnancy promoting effect and they gave an example of a Jewish belief of Niddah, which believes that women are unclean when menstruating and should abstain from coitus and that couples could resume sexual relations on the seventh day of the menstrual period onwards which is a fertile period.

In a study conducted in Guatemala, participants claimed that "the catechisms preach that family planning is murder, and that one of the principal classes is to

convince people not to use modern contraceptives" (Ward, Bertrand & Puac 1992:61).

2.7.1 Sex and Contraception

In a study conducted in Kenya, it was found that "use of contraceptives by adolescents is a sensitive issue. Kenya is a country with strong religious learnings, and young people face many difficulties when they attempt to obtain birth control" (Kiragu & Zabin 1995:108).

Kanter and Zelnik (cited in Gispert & Falk, 1978) report that in a study conducted in America, 53 % of fifteen to nineteen year old subjects failed to use any kind of contraceptive the last time they had intercourse and among the youngest group, fifteen year olds, 71 % did not use any form of contraception.

2.8 FACTORS WHICH INFLUENCE THE USE OF CONTRACEPTIVES

Factors which have been identified in the literature to influence the use of contraceptives are age, size of families, communication, knowledge, fears and beliefs, previous pregnancy, experience, education and gender.

Contraceptive knowledge and use in regard to adolescent pregnancy is an important issue. Many teenagers fail to use contraceptives because of lack of knowledge on how to use methods, where to get family planning services,

cultural and religious beliefs and practices, fear of side effects, difficult communication and poor relationships with parents and health personnel.

Reproductive health information has been found to be not always readily available to adolescents in Nigeria. According to Demographic Health Sciences only "31% of Nigerian women aged 15 - 19 know of modern methods of contraception, and 23% of these are aware of source of family planning services" (Amazigo, Silva, Kaufman & Obikeze 1997:28). They further state that it appears that reproductive education available to adolescents is based primarily on inadequate and inaccurate information from friends and peers.

In a study of 1655 adolescent students conducted in Nigerian schools, "fifteen percent (15%) of sexually active students reported having used condoms, 2% abstinence, 2% the pill and fewer than 1% the injection, 10% said they had used no method and 70% did not respond" (Amazigo *et al.* 1997:31).

In a study conducted in Nicaragua it was found that "over 80% of single adolescents are sexually active during their teenage years and this proportion continues to increase" (Allan Guttmacher Institute [AGI] 1994 cited in Felton 1996). It was also found that among women between the ages of fifteen and nineteen, the proportion reporting initiation of sexual intercourse in Nicaragua increased from 32% in 1976, to 41% in 1979 to 47% in 1982 peaking at 58% in 1988 (Harlap, Kost & Forrest 1991 cited in Felton (1996). The initiation of intercourse rises sharply with age from 20% of women age sixteen to 76% by

age nineteen (Trussel & Vaughan 1991 cited in Felton (1996). Much of this behaviour takes place without the use of contraceptives. Trussel (1988) writes that "only 33% of single adolescents report regular and consistent use of contraceptives".

In a study conducted in Nigeria, 21% of respondents indicated having had an unwanted pregnancy and 18 % said they had had induced abortions. In all 15% had never used a contraceptive method and 76% had not used the method the first time they had intercourse. Some of the students reported having used rhythm and barrier methods and some had fears resulting from their misperceptions about contraception (Amazigo *et al.* 1997:29).

According to Swenson's study (1992) conducted in the south eastern states of the U.S.A. in 1992 "40% of sexually active adolescents still did not use contraception because they were concerned about the side effects of contraceptives, running out of contraceptives and not wanting to prevent pregnancy because they thought of sexual intercourse as something natural". Swenson (1992:3) further stated that failure to use contraceptives consistently after engagement in sexual intercourse had been cited as a problem of unplanned pregnancies.

Teenagers (males and females) engagement in sexual intercourse before the use of contraception may be due to the fact that they lack knowledge or do not get enough information on family life education beforehand. This is supported

by Swenson's (1992) study which states that 25% stated that they were sexually active before coming to the clinic for the first time.

In the U.S.A. "contraceptive use among adolescents has been found to be notoriously scarce according to all published reports" (Population Report U.S.A. 1985:45).

Factors associated with contraceptive use in teenagers are as follows:

2.8.1 Age:

Contraceptive use increases with age (Hopkins 1985:M90). However, women's age is not closely linked with the knowledge of contraception in most countries (Population Report 1987). It was further reported that in many countries the youngest and very oldest women were the least knowledgeable. The lower level of knowledge among married women age 15 - 19 was not evident in the Ivory Coast, Nigeria, Zimbabwe, Peru 1981 and parts of Somalia, Zaire and Indonesia (Population Report 1985:294).

2.8.2 Size of Families:

Large families do not communicate more knowledge and guidelines that enhance responsible contraceptive behaviours when compared with families with fewer members. Smaller families also might promote consistent contraceptive use through a supportive family environment in which parental monitoring is the norm ((Dryferes 1990; Cernkonvich & Giandano 1987; Largelere & Pattersonson 1990 cited in Felton 1996:223). In addition, it has been

come from one parent families are less likely to use contraceptives, whereas those who come from two parent families are 2.5 and 3 times more likely to be responsible users of contraceptives (Felton 1996:228).

2.8.3 Communication

In a study conducted in Kenya on under 16's and sexuality, it was found that there is less communication on matters relating to sexuality and motherhood between adolescents and their mothers (Alinigumugo 1996:26). She further states that extended family members especially the grandmothers, are still the major source of information on these issues. While Whyte states that "christian parents speak approvingly of abstinence from intercourse before marriage, he goes on to say that parents seem to turn a blind eye to the probability that their children are having full sexual relations before marriage and while at school" (Whyte 1991:24).

Adolescent behaviour, including initiation of sexual activity, is influenced by communication between parents' and adolescents' marital relations (Katzner 1987; Buckloz & Gol 1986 cited in Gruber & Chambers 1987:664).

Gispert and Palk (1978:626) state that "parents rarely discussed the possibility of their daughter's sexual involvement, either with each other or with her, even when the potential for such activity was recognized by the parents, they seldom took direct action in terms of giving advice or obtaining contraceptives"

There is evidence that contraceptive use and its higher effectiveness in teens is encouraged by open and frank communication with parents (Kaster 1984; Newcomer & Nelry 1985 cited in Gruber & Chambers 1987). In addition, Polit-O'Hara and Khan (1985) state that communication between sexual partners also increases effectiveness of contraceptive use.

2.8.4 Knowledge

In a Population Report of Baltimore, U.S.A. (1987:22), it is reported that information on issues related to contraceptives, the relationship between sex and pregnancy is often not known by teenagers. It is further reported that information or knowledge which is largely drawn from the mass media and friends is frequently incomplete, misleading or wrong.

In a study conducted by the National Institute of Development Research and Documentation (1988) it was found that knowledge deficit on contraception and use in Botswana teenagers contributes to pregnancy. Knowledge about sexuality and how contraceptive methods work, remains limited among teenagers (Blaney 1993:10).

Knowledge of contraception generally increases with sexual experience and is greater among White South Africans and higher economic (SES) status respondents than among Black South Africans and lower (SES) economic status respondents (Reichett & Wesley 1995; Zelnik & Kateness 1972).

McGinn, Bamba and Balma (1987:85) in a study conducted in Burkina Faso found that men who were in a focus group had limited knowledge on contraception. They further state that most of these men could only elaborate basic aspects of family planning methods and much of the information they had was inaccurate.

In a study conducted in the South Eastern States of the U.S.A., it was found that "although knowledge about use of contraceptives has increased in the last decade, 40 % of sexually active people do not use contraception" (Swenson 1992:652).

2.8.5 Fears and Beliefs

In a study conducted in Kwa-Zulu Natal, it was found that rural high school students were not using family planning methods because of fear, misconception and simple ignorance even though they understand reasons for practising family planning (Couper & Alexander 1995:669). The students believed that contraceptives usually destroy the reproductive organs of the woman, and that pills and injections expose a woman to disease. They also believed that the condom, when not used correctly, can harm girls' bladders.

Amazigo *et al.* (1997:32) conducted a study conducted in Nigeria and found that many adolescents do not have an understanding of contraception in general, but they have unwarranted fears about contraceptives. They further state that in particular many teenagers thought that condoms could harm

women. The researcher also suggested that using condoms reflects lack of love between partners.

In a study conducted in Burkina Faso, many respondents believed that "if a woman used contraceptives she would never be able to have children again. Other fears mentioned were malformations in the new-born because of the pill and possible loss of the I.U.D. in the user's body" (McGinn *et al.* 1987:85).

Traditionally it is believed that contraception interferes with the normal physiology of the body, for example there is a belief that the oral contraceptive (pill) accumulates in the woman's body which results in infection of the uterus, heavy menstruation and pelvic inflammatory disease.

2.8.6 Previous Pregnancies

In 1989 Kau (cited in Kunen 1995:36) reported that age and parity each strongly influenced contraceptive use. Adolescents who have been pregnant have a greater tendency to use contraception than those who have not. "Rates of contraceptive use increase sharply as parity rises from zero to three children but remain steady thereafter" (Population Report 1985:M303).

2.8.7 Education and Contraception

A Population Report (1985) states that in studies conducted in Botswana, Senegal, Nepal, Guatemala, and Peru some of the largest differences in knowledge about education on contraception were found. In these countries

differences in knowledge between women with no education and women who had at least primary school education ranged from 25 to 40 %. It was further reported that countries with the least widespread knowledge of contraception suggested that the most educated women are the first to learn about contraception.

Well educated women have better access to print media which reports on family planning more often than other media. Less educated women and women in rural areas depend more on radio and interpersonal channels of communication for information (Population Report 1985:M298).

2.8.8 Experience:

In the Population Report (1987) it is reported that adolescents have little experience making independent decisions. In fact deciding whether to be sexually active or not may be the first major decision they make on their own (Population Report 1987:22). Adolescents receive little guidance in decision-making whereas in many cultures adolescents often become sexually active without consciously deciding to do so (Population Report 1987:2).

2.8.9 Gender Inequality

Herx (1976) quotes several authors (Finkel & Finkel 1973, 1978; Vadies & Hale 1978; Rickel & Huggins 1980 & Cohen & Rose 1984) as saying that available information on contraceptive knowledge, attitudes and behaviour of teenagers gives an impression that males become sexually active early. In addition they

place responsibility of the use of contraceptives on their female counterparts. This is also supported by a study conducted in Guatemala City among males where it was found that men believe that the responsibility for practising contraception belonged to women (Amazigo, Silva & Obikize 1997).

2.8.10 Social and Cultural Factors

Adolescents' values and attitudes evolve out of their relationships with parents and peers, as well as their social and cultural experiences to which they have been exposed (Gruber & Chamber 1987:666). In the researcher's experience, culturally parents play little role in teaching their children about contraception. Rather, it is grandparents, aunts and uncles are the ones who play a major role in educating teenagers about contraception.

Since initiation ceremonies are no more held, young people become sexually active at a tender age. This results in teenage and unwanted pregnancies. The purpose of initiation ceremonies was to prepare people for marriage and childbearing.

In a study conducted in Sub-Saharan Africa it was found that low level of contraceptive use may also be a consequence of "socio-cultural barriers that attach a stigma to the use of contraceptives by teenagers and prevent them from having access to contraceptive methods" (Demographic Health Surveys 1992:17).

2.8.11 Availability and Accessibility of Family Planning Services

The Kenyan Government policy is to “ensure availability of contraceptive services for those men and women who are ready for and need them”, but in practice adolescents have limited access to such services (Kiragu & Zabin 1995:108). Delay in seeking contraception until there was a fear of pregnancy was explained by adolescents' fear of vaginal examinations as well as denial of the risk of pregnancy (Swenson 1992:652).

Reis, Reid, Heir and Herz (1987:958) suggest that logistic constraints such as lack of money and unfamiliarity with clinics could keep teenagers away from seeking family planning services. Many factors have been identified as constraints to adolescents' use of family planning services and are as follows (Waszak cited in Blaney (1993:10) and Heir and Berz (1987:958)):

- * rude judgemental staff
- * limited discretionary income
- * lack of familiarity with large managed care systems
- * reluctant to discuss issues of sexuality and contraception with their providers
- * lack of confidentiality,
- * lack of access to age appropriate services,
- * no broad based community programs for teens,
- * peer pressure,
- * inexperience,
- * limited transport and infrastructure,

- * inconvenient clinic hours,
- * female-orientated clinics which make male partners feel unwanted, guilty and embarrassed,
- * lack of knowledge that family planning services exist,
- * official and culture barriers:
 - mandatory pelvic examination
 - prescriptions
 - parental consent requirements

2.9 TEENAGER AND PREGNANCY

Despite the fact that most women have both direct and indirect experiences of traumatic outcomes that may follow unplanned pregnancy, exposure to the risk of becoming pregnant seems at first glance to be voluntary (Berglund, Liljerstrand, Marin, Salgado & Zelaya 1997:1).

In a study conducted in Nicaragua, it was found that "some characteristics of the typical adolescent mother indicate a link between economic deprivation and teenage pregnancies, and support the idea that these girls come from socio-economic backgrounds that normally do not favour any positive visions for the future, have poor access to education, low education aspirations, and teenage mothers who drop out of school or occupation before pregnancy" (Berglund, Liljerstrand, Martin, Salgado & Zelaya 1997:2).

Pregnancy in the teenage years and in the older women is not without complications. Rosenfeld and Everetto (1996:161) state that unplanned pregnancy also appears to be a problem to single and married women, teenagers and women over the age of 35. "The adolescent is 1.3 times more likely to suffer from nonfatal anaemia or toxemia as a result of the pregnancy or birth than older women, and infants born to adolescent mothers are twice as likely to be premature and be of low birth weight than infants born to older mothers" (Montessoro & Blixen 1996:31).

The mother faces disruption of her life. What about the child? The child born to a teenage mother because of the unreadiness of the environment in which he finds himself is susceptible to a variety of problems such as prematurity, low-birth weight, poor mothering, poor education and as did his mother, many end up as a teenage parent (Mogotlane 1993:11).

The Demographic Health Survey (DHS) data suggest that more than 40 % of teenage births in Botswana, Ghana, Kenya, Liberia and Togo were unwanted. Among these countries Botswana had the highest proportion, that is 75% of teenage births were unwanted (Brandon & Meekers 1993:17).

2.10 DETERMINANTS OF TEENAGE PREGNANCY

Determinants of teenage pregnancy are as follows:

2.10.1 Cultural Beliefs

Teenage pregnancy is related to socio-cultural perceptions. Some societies accept early pregnancy as a "confirmation of fertility while others, especially complex highly technological societies, argue that pregnancy is better delayed to the third decade of life when the girl is thought to have reached full physical and emotional maturity, has completed formal education and is capable of caring for and supporting her child" (Nash 1990:147 cited in Mogotlane 1993).

In some cultures, sex-related issues are rarely discussed between spouses and also the institution of marriage is highly valued. Engagements are entered into at an early age and take longer periods. This increases the risk of pre-marital intercourse (Mogotlane 1996:12; Bixby 1991:25).

2.10.2 Knowledge of Contraception and Fertile Period:

Rosenfeld and Everetto (1996:162) state that "knowledge of women's beliefs, expectations, and behaviours when choosing and using birth control may be an important contributing factor in unplanned pregnancies". They further state that poor adherence to use of contraceptives and dissatisfaction with contraceptives are factors which have been linked with unplanned pregnancies.

In a study conducted in Sub-Saharan Africa, it was found that few teenage women can correctly identify when they are most likely to become pregnant during the menstrual cycle. Lack of understanding of the fertile period reflects a

general deficit in basic knowledge about human reproduction (Population Report 1992:6).

In a study conducted in Navajo, it was found that out of twenty subjects, fifteen (75%) stated they did not know that menstruation is associated with fertility (Demsey & Gesse 1995:595).

2.10.3 Sexual Activity:

Premarital sexual activity is virtually absent in Burundi, where only 4% of newly married women aged 15 - 24 have had sex, while in Botswana and Liberia, more than 75% of newly married women aged 15 - 24 are sexually experienced (Brandon & Meekers 1993:15). They further state that as young adults remain single longer, the likelihood that they will engage in sexual activity increases sharply.

2.10.4 Common Myths About Youth and Sexuality

In a study on sexual and reproductive health needs of young people in Africa, statistics indicate that 4% of teenagers engage in sexual activity before the age of 10 and that girls as young as 11 years old are getting pregnant. Eighty percent (80%) of sexually active teenagers engage in unprotected sex due to ignorance (Africa Link 1995:6). This study went on to explain that due to a knowledge deficit on contraceptives, unwanted pregnancy among teenagers leads to between 20 - 50% of abortion cases. In addition, 50% of maternal deaths are associated with abortion related complications (Africa Link 1995:6).

Other factors which contribute to teenage pregnancy as indicated by Whyte (1991:36) are:

- * the lack of employment and career opportunities,
- * fear of what is perceived as the undesirable effects of contraception,
- * the relative inaccessibility of contraception,
- * disturbed family relationships,
- * nutrition,
- * lack of recreational facilities for adolescents.

2.11 CONCLUSION

In this chapter various factors concerning teenager pregnancy and contraception were reviewed. Literature reviewed includes history of contraception, contraception factors, determinants of teenage pregnancy and results and failure to use contraception. The most important factors appear to be age, size of families, communication, knowledge, fears and beliefs, education and contraception, experience, social and cultural factors, availability and accessibility of family planning services and knowledge of contraception and fertile period.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter covers information about the design of the study, setting of the study, sampling, instrument, pilot testing, response rate, data collection, and ethical considerations.

3.2 RESEARCH DESIGN

The type of study conducted was a descriptive survey. Polit and Hungler (1993:144) describe a survey as research that aims predominantly at describing phenomena rather than explaining them, whereas Burns and Grove (1993:781) describe it as a method of data collection used to describe a phenomenon by collecting data using questionnaires or personal interviews.

3.2.1 Reasons for the Survey Design

The survey was chosen because of its appropriateness to the study since a wide range of information would be obtained in order to describe the level of knowledge concerning sexuality and reproduction of teenagers.

Polit and Hungler (1991:148) state that "the flexibility and broadness of the scope of survey, focus on wide range of topics and its information can be used for many purposes".

3.3 SETTING OF THE STUDY

The study was conducted in the Central District, Botswana at four Junior and one Senior Secondary Schools. The schools included in the study have no boarding facilities.

Botswana is found in the Southern part of the African continent. It is a landlocked country with a population of 1.5 million and a population growth rate of 2.1% per annum. Youth aged between 12 to 29 years make up 36% of the population. Botswana shares borders with the following countries:

- On the northern side are Zambia and Zimbabwe
- On the eastern and southern side is South Africa.
- On the western side is Namibia.

(See Appendix A.1)

Botswana is divided into ten districts (see Appendix A.2). The capital town is Gaborone situated in the southern part of the country. Selebi-Phikwe town (see Appendix A.3), where the study was conducted, is the only town in the Central District (see Appendix A.4) and is situated in the eastern side of the country, 402 kilometres from the capital of Botswana, Gaborone. The Botswana

population is homogenous when compared to Eastern and Western countries in Africa. The highest number of Botswana population is found in the South-Eastern part of the country and the lowest number in the West and South-Western parts.

Most of Botswana citizens are members of Setswana ethnic groups. The languages which are considered to be official are English and Setswana. Other groups which are found in Botswana are Bakalanga in North East, Basarwa and other semi-nomadic groups in remoter areas and Baherero in the West and small numbers of Asian and European origin (Lesetedi, Mompoti, Khulman, Lesetedi & Rustenberg 1982:2).

In a study conducted by the Botswana Family Health Survey, Botswana (1985) it was found that the female drop-out rate at senior level was four times higher than in males. It is further reported that pregnancy was the major cause of school drop-outs.

At the time that the study was being planned there were 6 secondary schools functioning. The seventh school was still in the process of being built, and therefore it was excluded from the study. (see Appendix A3 for the map indicating the position of secondary schools in the Selebi-Phikwe town.)

3.4 SAMPLING PROCEDURE

Permission to undertake the study was requested from the Ministry of Education and the schools' principals (see Appendix B). Written permission was not obtained. Permission was granted verbally only. In addition the researcher visited the schools where data was to be collected. The principals were approached for permission. Only 5 gave permission for the study.

The researcher was unable to obtain the total number of students aged 13-19 in each class at each of the schools. The authorities at the schools refused the researcher access to records which indicated student number in each form in the 13-19 years of age group. This prevented the researcher from using a random sampling technique in the sampling process. With the permission of the school principals she then approached all those students aged 13-19 years who were present and introduced herself to them. She explained the purpose of her visit to the schools and objectives of the study. She also told them that she had permission from the ministry and principals to undertake this research.

The students were asked their permission to participate and those who agreed were given a letter and consent form to take to their parents or guardians (see Appendix C & D). Therefore convenience sampling was used. Permission was obtained from parents or guardians.

3.5 TARGET POPULATION

The target population for the study consisted of male and female teenagers, aged 13 to 19 years from six secondary schools in the Selebi-Pikwe area.

3.6 SAMPLE

The sample consisted of male and female teenagers, aged 13 to 19 years from five schools. The six secondary schools were chosen for data collection. The sample was drawn from five secondary schools because the researcher was refused permission at the sixth secondary school despite the researcher having been granted verbal permission by the Ministry of Education and the Secretary in Serowe. The authorities at the schools refused the researcher access to the records which indicated student numbers in each form in the 13-19 year age group. The sample obtained from all classes was 132. The number of students in the sample in each age in the various forms are reflected in Table 3.1. A more appropriate method of sampling would have been a simple random sampling method and getting accurate numbers from the schools.

Table 3.1 Educational Level (N = 132)

AGES	FORM I	FORM II	FORM III	FORM IV	FORM V
13 years	11	0	0	0	0
14 years	9	4	0	0	0
15 years	6	5	4	2	0
16 years	1	10	1	1	0
17 years	16	12	1	6	3
18 years	0	3	1	6	10
19 years	4	0	6	4	6
TOTAL	47	34	13	19	19

3.7 INSTRUMENT

The instrument chosen for data collection was a self-administered questionnaire. The questionnaire was written in English and made use of open and close-ended questions. The questionnaire was written in English since it is used as the medium of instruction in schools.

3.7.1 Reasons for a Structured Questionnaire Schedule

Survey research methods are "used to gather information on people's actions, knowledge, intentions, attitudes and values" (Polit & Hungler 1993:148).

It can be used to gather information from large numbers of subjects with comparatively less expenditure of time and money (Polit & Hungler 1993:122).

Polit and Hungler (1993) further indicate that the survey technique can take advantage of existing scales, and questionnaires can be structured so that data analysis can be attained by utilizing a computer.

3.7.2 Reasons for Developing Open- And Close-Ended Questionnaires

Close and open ended questionnaires were developed because of the following reasons (Burns & Grove 1993):

- Participants would feel free to respond to the questionnaires.
- With close-ended questions, participants who could not construct sentences or questions for themselves would be able to do so.
- Consistency of response across correspondents is enhanced.

3.7.3 Development of a Structured Instrument

A structured self-administered questionnaire was developed by the researcher. The questionnaire was organised into seven main questions (see Appendix G): Demographic data is covered in questions 1-5. Question 6 covers information relating to contraception and 7 relates to pregnancy.

3.7.4 Validity and Reliability of Instrument

Face validity of the questionnaire was obtained by using peer review and opinion of the questionnaire. Reliability of the questionnaire was tested by pilot testing the questionnaire. The researcher administered the questionnaire herself.

3.8 DATA COLLECTION

The proposed time for data collection was July 1997.

On arrival to Selebi-Phikwe, Botswana, the researcher visited all the schools where data was supposed to be collected and introduced herself to the headmasters. In some schools, she had to report to the deputy headmasters. Senior teachers and other teachers in these schools were introduced to the researcher and asked to assist the researcher in identifying the participants in the study. At the sixth school the headmaster denied permission for the researcher to administer the questionnaire. The headmaster wanted the researcher to get written permission from the Ministry of Education and

Education Secretary. Thus five schools in total were used. The researcher obtained permission from the parents.

The researcher explained to the teachers that she was going to use questionnaires to collect information from the students and that only teenagers aged 13-19 would be included in the study. Those who had a child or children were not excluded.

The researcher agreed that the time for administering the questionnaire would be in the afternoon since in the mornings their teaching schedules were tight. Dates for collecting data from each school were set.

Questionnaires were administered by the researcher, and she was present during completion of the questionnaire to answer and clarify any questions which were not clear to the participants. Data was collected over a period of ten days.

3.9 PILOT TESTING

The pilot study was conducted in June 1997 with ten (10) teenagers from one secondary school. The headmaster of a community junior secondary school in another town was contacted and permission asked for piloting of questionnaires. Permission was granted. The aim of the pilot study was to test the instrument, to measure content accuracy and clarity of questions.

There were some questions which needed to be modified or reconstructed. They were questions 5.1, 6.1, 6.2 and 6.6.

3.10 ETHICAL CONSIDERATIONS

The researcher wrote letters seeking permission to conduct the study to all headmasters of all secondary schools where the study was to be conducted. Copies were also sent to the Ministry of Education (see Appendix B).

Letters requesting permission included the questionnaire and information sheet.

The researcher introduced herself to the participants as a researcher. The researcher explained to the participants the purpose of the study before administering questionnaires (see Appendix G).

The researcher gave each participant the information sheet to read before administering the questionnaire (see Appendix G). For details included in the information sheet (see Appendix E).

She obtained consent from the parent or guardian and students (see Appendix D) a day before collecting data.

In the information sheet the participants (teenagers) were informed that they had the right to refuse to participate. They were also advised that they could

withdraw at any time if they wished to. They were assured of confidentiality and anonymity and that information given would not be divulged to their teacher or parents. They were asked not to write their names on the questionnaire.

No material rewards were given to participants who took part in the study. Participants were thanked for their co-operation and participation.

The University Committee for research on human subjects granted permission to conduct the study (Permission Number M970523) (see Appendix F).

3.11 DATA ANALYSIS

A Statistical Package (SPSS) was used to generate descriptive statistics. This helped in examining and compiling cross tables, pie charts, bar charts, histograms, graphs and frequency tables. To measure the association of dependent variables with dependent variables the chi-square tests are used to "analyse nominal data to determine significant differences between observed frequencies with the data and frequencies that were expected" (Burns & Grove 1993:763).

3.12 CONCLUSION

The research design chosen was a survey. A self-administered questionnaire was used to collect the data. Data was collected from 13-19 year old teenagers attending schools in Selebi-Phikwe, Botswana.

CHAPTER FOUR

FINDINGS AND DISCUSSION OF FINDINGS

This chapter describes the findings and includes a discussion of the findings. The results were analysed statistically and the findings are presented in the form of frequency tables, pie charts and bar charts.

The results are presented under the following headings: demographic data, educational level, socio-economic status, religious background, marital status, knowledge on contraceptives and knowledge on how pregnancy occurs.

4.1 DEMOGRAPHIC DATA

Age:

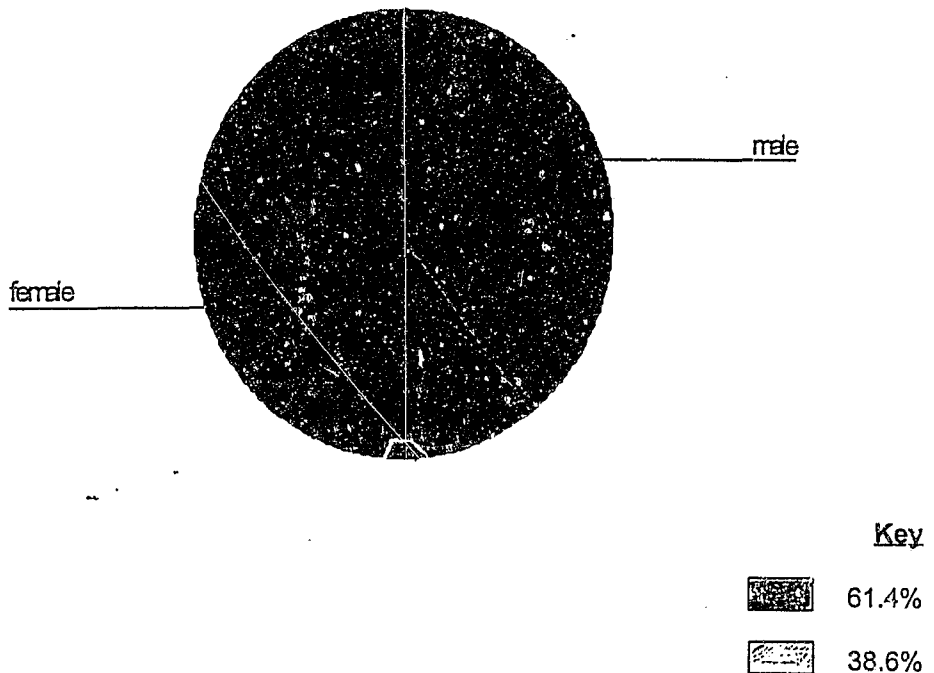
The results show that 28.3% of participants indicated that they were seventeen years, 15.2% were eighteen years and another 15.2% were nineteen years at the time of data collection. Thus the majority of the respondents were 17-19 years. The age frequencies are illustrated in Table 4.1

Table 4.1: Frequency Distribution of Age (N = 132)

Age (years)	Frequency	Percent
13	11	8.3
14	13	9.8
15	16	12.1
16	13	9.8
17	38	28.8
18	20	15.2
19	20	15.2
No response	1	.8
Total	132	100

Sex

In this study 61.4% (No 81) of respondents were females and 38.6% (No 51) were males. Figure 4.1 illustrates characteristics of participants by sex.

Figure 4.1: Characteristics by Sex (N = 132)

- **Number of Children**

The results show that 91.7% of participants indicated that they do not have children, and 6.8% of participants (females) indicated that they have children at the time of data collection. Two (1.5%) of the participants did not respond to the question.

- **Characteristics of Participants' Ethnicity/Race**

The majority of participants in the study were Botswana (96.2%). 1.5% were Zambians, 1.5% were South Africans and .8% were from other nations.

4.2 EDUCATIONAL LEVEL

Participants were asked to indicate their current level of education. The results show that 47 (35.6%) participants were from form I, 34 (25.8%) were from form II, 13 (9.8%) were from form III and 19 (14.4%) were from form IV and V respectively. Thus the majority of respondents (61.4%) were from form I and II. Figure 4.2 shows respondents' educational level.

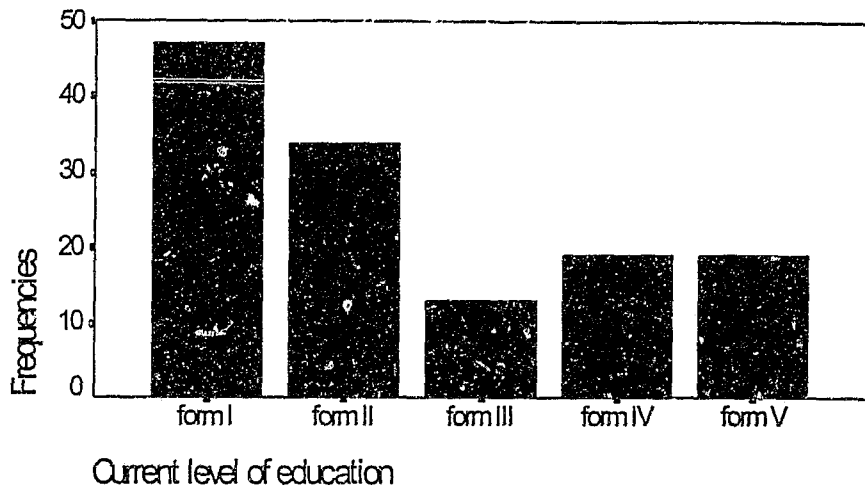


Figure 4.2: Current Level of Education (N = 132)

4.3 SOCIO-ECONOMIC STATUS

Participants were asked to indicate how many there were in their families, their present residential area, how long they had been staying in that place, how many rooms did their parent(s) house(s) have and who was the breadwinner in their families.

- Number of Family Members

The majority of participants (69%) indicated that they come from families of five or more, 17% from families of four and 11% from families of three. Table 4.2 illustrates the frequency distribution of family members.

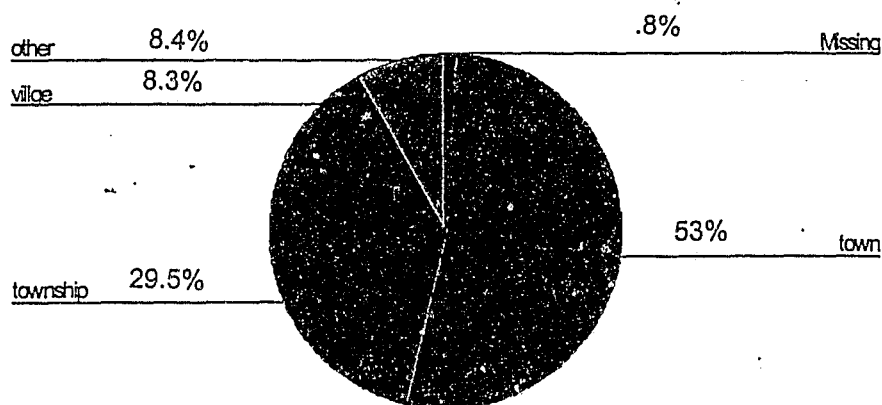
Table 4.2: Frequency Distribution of Number of Family Members

(N = 132)

Number of Family Members	Frequency	Percentage
One	1	1
Two	3	2
Three	15	11
Four	22	17
Five and more	91	69
TOTAL	132	100

• Responses Concerning Present Residential Area

At the time of data collection 53% of participants were residing in town, 29.5% in the township and 8.3% in a village. Teenagers in town have access to television, radio, newspapers and youth clubs which may be sources of information for teenagers, for example, pamphlets, radios and televisions. These are also recreational facilities. Figure 4.3 shows the distribution by residence.

Figure 4.3: Respondents by Residence (N = 132)

- **Period of Time Respondents Have Lived in Current Residential Area**

Participants were asked to indicate the length of time they had been residing in their current residential area. In this study, the results show that 52% indicated that they have been staying in their current residential area for 7 years and more, 9.1% for 5 to 6 years, 18.9% for 3 to 4 years, 12.9% 1 to 2 years, 6% for less than 10 months and 0.8% did not respond. The results show that the majority of the respondents (70.9%) lived in the area for 3 years and more. Thus it would appear that the respondents are from a fairly stable residential background.

- **Information on Participants' Parent's Home**

Bedrooms are rooms used for sleeping excluding the kitchen, sitting room and diningroom. There could be another two-roomed house in the same yard used mainly for sleeping. In this study the results show that 35 (26.5%) participants indicated that their parents house(s) were five bedroomed, 54 (40.9%) participants three bedroomed and 22 (16.7%) participants two bedroomed. Thus the majority of respondents (67.4%) lived in a three or more bedroomed house. Figure 4.4 illustrates information on parents' homes.

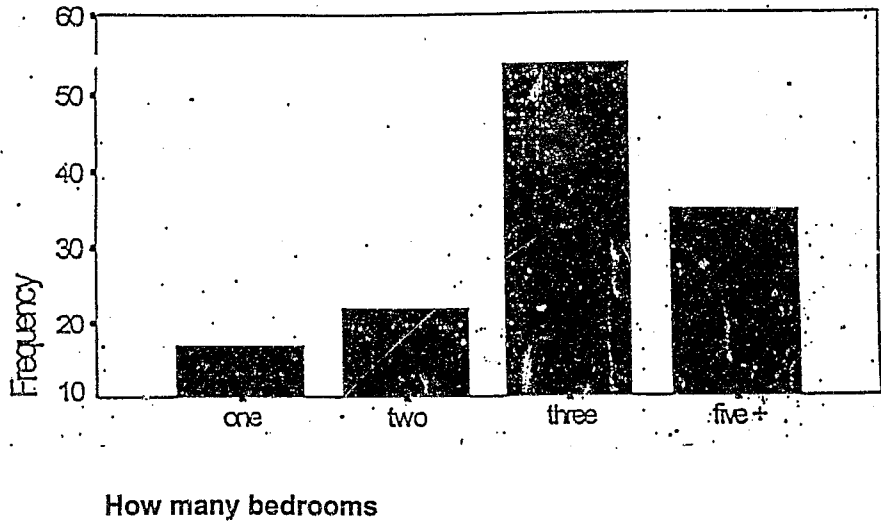


Figure 4.4: Information on Parents's Home (N = 132)

• **Participants' Response Concerning the Breadwinner**

Participants were asked to indicate the breadwinner in their family. The majority of the respondents, 59% indicated that the breadwinner in their families were their fathers, 21.2% named their mothers and 9.1% an elder sister or brother. This question did not probe further, for example, mother and father or mother and others. This may be a limitation in the study. Other family members who are bread winners are reflected in Table 4.3.

Table 4.3: Breadwinners in the Family (N = 132)

Breadwinner in the family	Frequency	Percent
Father	78	59.1
Mother	28	21.2
Elder sister/brother	12	9.1
Grandparent(s)	5	3.8
Other	5	3.8
No response	4	3.0
Total	132	100.0

4.4 RELIGIOUS BACKGROUND

Participants were asked to indicate the religious affiliation to which they belonged. Of those who stated that they had a religion the greatest frequency (20.5%) belonged to the Zion Christian Church (ZCC). Other religions most commonly quoted were Faith Mission (9.8%), 7th Day Adventist (4.5%) and Roman Catholic (3.8%). Thirty-seven point one percent belonged to other religious groups and 24.2% did not belong to any religion. Some of the religious groups mentioned under other were Naledi Union, Holy Christian and Assemble of God churches. Thus the majority of respondents (75.7%) belonged to a religious group. Zion Christian Church (ZCC), Faith Mission, Roman Catholic and Christian Churches do not approve the use of contraceptives instead they encourage abstinence. Teenagers may not use contraceptives because in some religious groups use of contraceptives is regarded as a sin, for example, committing adultery.

Table 4.4: Participants' Religious Groups (N = 132)

Name of Church	Frequency	Percent
None	32	24.2
Roman Catholic	5	3.8
7 th Day Adventist Church	6	4.5
ZCC	27	20.5
Faith Mission	13	9.8
Other	49	37.1
TOTAL	132	100.0

4.5 MARITAL STATUS OF PARENTS

Participants were asked to indicate whether their parents were married or not. Marriage could be defined either as traditional marriage or western marriage.

- **Responses Concerning Participants' Parents Marital Status**

In this study (N = 132) 64% of the participants indicated that their parents were married, 34% of participants indicated that their parents were not married and 2% did not respond.

- **Current Marital Status of Parents**

The results show that out of 64% of participants who indicated that their parents were married, 55% indicated that their parents were still staying together, 7% were widows or widowers and 2% were separated. Of the 34% who were not married, 23% of participants' parents were single, 9% were staying with a partner and 2% were legally divorced. Two percent of the respondents did not answer this question. Therefore, the majority of the respondents (55%) were from a two-parent home background.

4.6 KNOWLEDGE ON CONTRACEPTIVES/FAMILY PLANNING

This section probed the respondents' knowledge about family planning and their use of family planning. An attempt was also made to probe their sexual activities.

Participants were asked if they had heard about family planning and to list method(s) of family planning known to them. This section also probed their knowledge regarding the use of family planning, whether they use any contraceptives, age at which they started engaging in sexual activities, age at which they started using contraceptives and when they started using family planning.

- **Response Regarding Knowledge on Family Planning**

The results show that the majority of participants (81.8%; N = 108) indicated that they have heard about family planning, 17.4% (23) stated that they had not heard about it and .8% (1) did not respond.

- **Differences Between Boys and Girls on Family Planning Knowledge**

In this study 52% (69) of female and 30% (39) of male participants indicated that they had knowledge on family planning. Nine percent (12) of female and 9% (12) of male participants indicated that they did not have knowledge on contraception. This shows that there are differences in gender concerning family planning. Although there is a greater proportion of females to males in this study, it would appear that more females than males have knowledge on contraception.

- **Types of Family Planning Known to Participants**

Participants were asked to list methods of family planning they knew. The results show that 31.8% of participants listed one method of family planning, 19% of participants listed four and more and 25% of participants stated that they did not know a method. Table 4.5 illustrates the number of family planning methods known.

Table 4.5: Number of Family Planning Methods Known (N = 132)

Method	Frequency	Percent
None	32	25
One listed	42	31.8
Two listed	16	12.1
Three listed	16	12.1
Four and more listed	26	19
TOTAL	132	100

- **Knowledge on the Use of Family Planning**

Participants were asked if they had knowledge on the use of family planning. The results show that 85.6% of participants had knowledge on the use of family planning, 12.1% of participants indicated that they had no knowledge and 2.3% did not respond.

- **Use of a family planning methods**

Participants were asked whether they use a method of family planning. The results show that 53% of respondents indicated that they did not use family planning methods whereas 46.6% indicated that they were using contraceptives. Table 4.6 illustrates the use of contraceptives.

Table 4.6: Use of Family Planning Methods (N = 132)

Level	Frequency	Percent
Yes	61	46.6
No	70	53.0
No response	1	0.8
Total	132	100

- **Method of family planning used**

Of those who indicated (61) that they used family planning methods, 82% indicated that they were using condoms and 18% indicated that they were using the pill.

- **Participants' response to the time (age) when they started sexual relationships**

Participants were asked to indicate the age at which they started engaging in sexual relationships. The results show that 26.5% of participants indicated that they started engaging in sexual activities when they were 17 years and older, 12.1% when they were 16 years and 35.6% of participants did not respond. However, 25.8% 15 years and less had already engaged in sexual activities. The researcher omitted a prior question, i.e. whether participants were sexually active and this may account for why 35.6% did not respond to this question. Another possibility may be that respondents did not wish to divulge this information. This might be a limitation in this question. Table 4.7 shows the participants' responses to the question.

Table 4.7: Responses Indicating When (age) Sexual Activities Were Commenced (N = 132)

Age	Frequency	Percent
13 years	8	6.1
14 years	12	9.1
15 years	14	10.6
16 years	16	12.1
17 years and more	35	26.5
No response	47	35.6
TOTAL	132	100

- **Subjects' response to when they started using family planning (age)**

From those who responded (N = 61), 30% indicated that they started using family planning when they were 17 years and more, 14% when they were 16 years, 6% when they were 15 years, 6% when they were 14 years and 5% when they were 13 years and 39% did not respond. Those who did not respond may be because they did not want the age at which they started using family planning to be known or they were not using a contraception measure.

- **Responses on when family planning was used**

From those who responded (N = 132), 34.8% of participants indicated that they started using family planning before engaging in sexual intercourse, 18.2% after the first sexual encounter and 6.8% after having had a baby. 40.2% did not respond. The researcher does not know how many of these were not sexually active.

4.7 KNOWLEDGE ABOUT PREGNANCY

This section probed knowledge about pregnancy and its occurrence.

Participants were asked whether they knew how pregnancy occurs.

- Respondents' Knowledge on How Pregnancy Occurs

The majority (87.1%) of participants stated that they knew how pregnancy occurs. Table 4.8 shows responses regarding how pregnancy occurs.

Table 4.8: Distribution of Knowledge of How Pregnancy Occurs

Do you know how pregnancy occurs?	Frequency	Percent
Yes	115	87.1
No	15	11.4
No response	2	1.5
Total	132	100.0

- Whether pregnancy can occur during a first sexual relationship

The majority of participants (75%) indicated that it is possible to become pregnant or to impregnate someone the first time of having sexual intercourse, 24% indicated that they did not know and 1% did not respond.

- Participants knowledge concerning time or period when pregnancy can occur

The results show that 34% of participants indicated that it is possible to become pregnant when having sexual intercourse during the first menses; 26% stated that it is possible to become pregnant if intercourse occurs during the menses

and 39% stated that pregnancy occurs 10-17 days after menstruation, 1% did not respond. Thus the majority of respondents (73%) appear to have some knowledge on human reproduction.

4.8 BIVARIATE ANALYSIS OF VARIABLES

Bivariate analysis was done using the following variables: education, use of contraceptive, age, gender, number of children, number of bedrooms, number of family members and breadwinner (see Tables). The level of significance was set at $p < .05$.

Bivariate analysis of current level of education on family planning

against:

Knowledge	=	.00787 ^x
Use	=	.00788 ^x
Age	=	.03799 ^x
Gender	=	.15584
Number of children	=	.06130

Bivariate analysis of contraceptive use against:

Gender	=	.00166 ^x
Number of children	=	.00983 ^x
Number of bedrooms	=	.14083
Age	=	.00801 ^x

Number of family members = .02604^x

Breadwinner = .07701

^x indicates significance at $P = <0.05$

4.9 DISCUSSIONS OF FINDINGS

The results show that at the time of data collection, there was an association between educational level of participants and knowledge of family planning. Thus education has an influence on family planning knowledge. The higher the education level the more knowledge.

This is further evidenced in the use of contraceptives. Education was positively correlated against contraceptive use. Thus these findings are consistent with the literature. A Population Report (1985) states that in studies conducted in Botswana, Senegal, Nepal and Guatemala and Peru it was found that there were differences in knowledge concerning the difference between women with no education and women who had at least primary education. The difference ranged from 25 to 40%.

Another variable which was related to knowledge was age and what the researcher found is consistent with Hopkins' (1985) findings that contraceptive use increases with age. However, in the Population Report U.S.A. (1985) it is argued that woman's age is not linked with the use of contraceptives age in most countries.

The results show that gender influenced the use of contraceptives, with females being more likely to use contraceptives than males. This is supported by the study conducted in Guatemala City among males where it was found that men believed that the responsibility of practising contraception belonged to women (Amazigo *et al* 1997).

Use of family planning methods was subjected to further analyses against age. There was a correlation between contraceptive use and age. The older teenagers (16-19 years) were more likely to make use of contraceptives.

Reasons why older teenagers are more likely to use contraceptives may be through the influence of media, literature, peer pressure and level of education they had.

If a teenager had had a baby then she was more likely to use a contraceptive. This is consistent with the literature where Kau (1989) states that adolescents who have been pregnant have a greater tendency to use contraception than those who have not. In the Population Report (1985) it is also reported that age and parity strongly influence the use of contraceptives.

The results of this study are contradictory to Felton's (1996) findings. In his study he found that females who come from two parent families are 2.5 and three times more likely to be responsible users of contraceptives than those who come from one parent families. The results of this study also contradict Dryferes (1990) who states that large families do not communicate knowledge

and guidelines that enhance responsible contraceptive behaviours when compared with families with fewer members. Cultural issues concerning contraception and sexuality are not communicated to children because it is culturally unacceptable.

The results show that of the (N 132) teenagers included in this study, 32 participants (24.2%) listed knowing only one method of family planning. This suggests that teenagers have limited knowledge concerning contraception. In studies conducted in Botswana in 1988, Nigeria in 1979 and Burkina Faso in 1987 (Amazigo *et al* 1997:10 & McGinn *et al* 1987:85). It was found that generally adolescents do not have understanding about contraception and sexuality. The results of this study show that 53.0% indicated that they were not using contraceptives. In a study conducted in Carolina, United States of America, Kanter and Zelnik (cited in Gispert & Falk 1978:621) found that 53% of 15 to 19 year old respondents failed to use any form of family planning method the last time they engaged in sexual intercourse and among the youngest group, 15 years old, 71% did not use any form of contraception.

in this study 61 participants who indicated that they were using contraceptives, 32% indicated that they were using condoms and 18% used the pill. These findings are consistent with a study conducted in Nigeria (Amazigo *et al* 1997:31) where it was found that of 1655 adolescents, 15% of the sexually active reported having used condoms, 20% practised abstinence, 2% the pill, and fewer than 1% the injection, 10% said they had not used any method.

The results show that 49.2% of the teenagers in the study indicated that they started engaging in sexual intercourse between the ages of 15 and 17 years. Allan Guttmacher Institute (1994) found that "over 80% of single teenagers are sexually active during their teenage years and this continues to increase".

The majority of participants (87.1%) indicated that they know how pregnancy occurs. Amazigo *et al.* (1997:30) in their study conducted in Nigeria among school adolescents, found that 36% of teenagers who participated in the study had an accurate understanding of the fertile period. However, in a small study of 20 subjects conducted in the United States of America it was found that 15 of the respondents stated that they did not know that menstruation is associated with fertility (Demsey & Gesse 1995:595).

Despite the fact that most teenagers indicated that they had knowledge regarding contraception, when asked method(s) of family planning they knew, the majority of participants listed only one method. This shows that there is a lack of knowledge on available family planning methods. In a study conducted in Burkina Faso it was found that most men who participated in a study had limited knowledge on contraceptive methods and most of the information they had was inaccurate (McGinn, Mamba & Bamba 1987:85).

In this study educational level had an influence on the knowledge and use of contraceptives. This is supported by studies conducted in Botswana, Senegal, Nepal, Guatemala, and Peru where it was found that "differences in knowledge

between those women with no education and women who had at least primary school education ranged from 25% to 40%" (Population Report 1985:M298). Sathar and Zeba (1984), Brackett (1980), Carrasco (1981), and Morris (1988) cited in Madikizela (1991:4) state that the higher the level of education the greater the knowledge on contraceptive use.

In a study conducted in Ilorin, Nigeria it was found that "use of contraceptives ranges from 6% among men with no education to 53% among those with a post-secondary education and "8% among those living in the poorest areas" (Oni and McCarthy 1991:52). The educational level of participants also had an influence on the use of contraceptives. This suggests that when someone has information on available contraceptives he or she is more likely to use contraception.

This study found that the level of education influences knowledge on contraceptives ($p = .0078/$). This is consistent with Lethbridge's (1991:280) study conducted in Washington, U.S.A. where it was found that married men with higher education than others were more knowledgeable on contraceptives. In this study gender also appears to influence the use of contraceptives ($p = .00983$). The researcher noticed that female teenagers appear to be more concerned about contraceptive use. This may be related to the fear of pregnancy and dropout from school. The research findings are supported by a study conducted in Guatemala City where it was found that "among the males, the reason for not having used contraceptive methods the first time of first

premarital intercourse was the belief that the responsibility for practising contraception belongs to women: (Herold *et al.* 1988:146).

In a study conducted in the south eastern states of the United States of America, Swenson (1992) found that 40% of sexually active adolescents did not use family planning methods because they were concerned about contraceptives' side effects, running out of contraceptives and not wanting to prevent pregnancy because of the spontaneous nature of a sexual relationship. While this aspect was not probed, this study found that fears of contraceptives' side effects and not wanting to be pregnant contributed to the use of contraceptives by teenagers ($p = .03799$). This study suggests that as someone matures, he or she tends to be more responsible for his or her life and as such tends to plan for her future. In addition, the study also found that parity has an influence on the use of contraceptives. The researcher found that those adolescents who have children, tend to use contraceptives more than those who do not have children ($p = .00983$). This is supported by findings reported in the Population Report where it was found that age and parity have been found to be factors which strongly influenced each other in the use of contraceptives (Population Report 1985:M90). The research findings are also consistent with findings reported in the Population Report where it was found that "rates of contraceptive use increases sharply as parity rises from zero to three children but remains steadily thereafter" (Population Report 1985:M3033). Kau (1989) argues that adolescents who have been pregnant make a greater use of contraceptives than those who have not.

The number of members in the family had an influence on the use of contraceptives ($p = .02604$). In a study conducted in Kenya on under 16's and sexually active, Alingumugo (1996:26) argues that there is little communication between adolescent girls and their mothers on issues relating to sexuality and womanhood.

The results show that there was an association between when pregnancy could occur and marital status of parents ($p = .00857$). This suggests that because of the joint responsibility of parents, teenagers from homes with two parents are more likely to have knowledge on contraception and reproduction than those who come from a single parent home.

4.10 CONCLUSION

In this chapter the findings were discussed using frequency tables, bar charts and pie charts.

Results of bivariate analysis showed that age, education, gender, number of children and number of family members are important variables in the use of contraceptives.

The findings show that participants have knowledge concerning contraception and human reproduction. The majority of participants did not indicate the time

at which they started engaging in sexual intercourse. This may be explained by the fact that sexuality is a sensitive issue.

The findings that were consistent with the literature were educational level, age, number of family members, gender, use of contraceptives, use types of contraceptive methods commonly used by teenagers.

CHAPTER FIVE

SUMMARY, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 SUMMARY

Teenage pregnancy is a problem in Botswana. Teenage pregnancy carries health risks for example pre-eclampsia and pre-term labour. Sexual activity and the use of contraceptives in teenagers may be associated with problems, for example, unplanned pregnancies and sexually transmitted diseases.

The objectives of the study were:

- To obtain information from female and male teenagers on knowledge concerning the use of contraceptives.
- To explore factors which may influence the use of contraceptives by teenagers.
- To find out if teenagers know when pregnancy can occur.

The findings of the study revealed that the majority of respondents were 17 to 19 years and 61.4% were in form I and II. 64.4% were sexually active and 46.2% used contraceptives. Knowledge of types and use of contraceptives was limited.

Use of contraceptives was more likely to be influenced by age, education, gender, number of family members and previous pregnancy.

The majority of participants exhibited a knowledge deficit on available family planning methods. Less than one-third (31.8%) of the sample listed only one method of family planning that they knew at the time of data collection. Teenagers' limited knowledge of family planning methods may be due to a lack of information on contraceptives and conception.

Questions which were not responded to by participants were questions 6.2, 6.6, 6.7 and 6.8. These questions may not have been answered because teenagers did not want to reveal that they were sexually active or may have not yet started engaging in sexual intercourse.

5.2 LIMITATIONS

Limitations of the study may be identified as follows:

- * The researcher could not obtain total numbers of students from schools which were included in the study because authorities refused her access to the records. This prevented the researcher from using a random sampling method.
- * The researcher, prior to data collection, had visited headmasters of the chosen secondary schools to make sure that permission had been granted. She made this follow-up because she did not receive letters from principals granting permission after handing in letters requesting permission to conduct the study.

- * The time allocation for data collection was problematic in that data had to be collected during the vacation period.
- * There is a limitation in question 6.4 which was not evident in the pilot study. The researcher did not determine how many teenagers were sexually active before she asked participants the type of family planning method they were using.
- * Question 3.5, which was not evident in the pilot study, was also limiting in that it did not probe mother and father contributing together as breadwinners.
- * The results cannot be generalized because the study was limited to teenagers in the Selebi-Phikwe area so it is not representative of all teenagers in Botswana.
- * Analysis of data failed to distinguish between males and females.
- * Yes and no answers only were obtained and this does not reflect students' knowledge.

5.3 RECOMMENDATIONS

In this section recommendations are made with reference to the following:

Nursing education in relation to schools and areas working with schools in Selebi-Phikwe.

Nursing practice.

Nursing research.

5.3.1 Nursing Education

- * Nursing students should be taught different strategies which could be used to disseminate information to different people of different ages.
- * In nursing schools, role models should be used when teaching family planning courses. This will enable the nursing students to see the importance of family planning.
- * Understanding of cultural values and their importance to communities needs to be addressed in education of nursing.

5.3.2 Nursing Practice

- * There should be family planning clinics for teenagers in hospitals and clinics so that they have free access to information on contraception and be able to use family planning measures.
- * Access to family planning information should be made everyone's right regardless of her age starting from the age of 13 to adulthood.
- * Information on family planning methods should cover all available modern family planning methods and traditional methods. Advantages and disadvantages of each method should be well explained by health workers (midwives, nurses and doctors). This would assist teenagers to make informed decision on the type of method she/he would like to use.
- * Teenagers must be provided with information concerning advantages of not engaging in sexual activities. For example, better education means a brighter future and the chances of having unwanted pregnancies

would be reduced. Dangers associated with early sexual intercourse needs to be addressed that is pregnancy, abortions and also cancer of the cervix.

- * There should be seminars/workshops and refresher courses for health workers on family planning.
- * Midwives and community health nurses in the clinics should be encouraged to go out into the community and disseminate information on family planning and reproduction to teenagers.

5.3.3 Research

Further research is recommended.

- * Larger samples should be drawn from a more representative sample to include other areas such as primary schools, vocational training centre, colleges of education and those not attending schools, both in rural, peri-urban and urban areas be included so that the results could be generalised.
- * Equal numbers of both males and females should be included when conducting research on this topic.
- * On data analysis the results should be broken into males and females so as to be able to distinguish the difference.

5.4 CONCLUSION

The researcher concludes that participants had limited knowledge on contraceptive use and on how pregnancy occurs. From the results it shows that teenagers engage in sexual intercourse at an early age. Pupils at schools should be educated on cultural values and sex education. Nurses need to recognize the importance of grandmothers as sources of information on these issues. As communities become more westernized cultural values are eroded and often lost. In health information sessions, nurses and midwives need to reinforce the information which is passed on by grandmothers and recognize their value in health promotion. It should be ensured by nurses, midwives and community health workers that teenagers have knowledge on contraception by educating them. From the results of this study, it was found that the pill and the condom were the most common methods of family planning which were being used by teenagers. Nurses and midwives need to explain to teenagers that there are other methods which can be used, for example, the injectables.

Factors which influence teenagers' knowledge on the use of contraceptives were identified as educational level, age, sex, and number of children each participant had.

REFERENCES

1. Aeress, L. 1985. Teenage pregnancy. A contemporary problem of adolescence. Curationis. Vol. 8, No. 4, pp. 21-23.
2. Alinigumugo A. 1996. Under 16 and sexually active in Kenya. Family International Health. Vol 3, No. 6, pp. 25-30.
3. Adolescent women in Sub-Saharan Africa. 1992. Demographic Health Survey. Washington, D.C.
4. Africa Link. 1995. Sexual and reproductive health needs of young people. International Planned Parenthood Federation. Africa region.
5. Amazigo, U., Silva, N., Kaufman, J. & Obikize, D. 1997. Sexual activity and contraceptive knowledge use among in-school adolescents in Nigeria. International Family Planning Perspectives. Vol. 23, No. 4, pp. 28-33.
6. Bajos, N., Ducot, B., Spencer, B., Spira, A. & Group A. 1997. Sex risking taking, socio-sexual, biographies and sex interaction elements of the French National Survey on sexual behaviour. Soc Sci Med. Vol. 44, No. 1, pp. 25-40.

7. Bannerman, R.H. 1983. Traditional Medicine and Health Care Coverage. Geneva: Chen Wen-Cheh.
8. Berglund, S., Litjestrang, J. Marín, F., Salgado, N. & Zelaya, E. 1997. The background by adolescents' pregnancies in Nicaragua: A qualitative approach. Soc Sci Med. Vol. 44, No. 1, pp. 1-12.
9. Bixby, L.R. 1991. Premarital sex in Costa Rica: Incidence, trends and determinants. International Family Planning Perspectives. Vol. 17, No. 1, pp. 25-29.
10. Blaney, C.L. 1993. Sex education leads to safer sex. Family Health International. Vol. 14, No. 2, pp. 7-11.
11. Brandon, A. & Meekers, D. 1993. Sex, contraception and childbearing before marriage in Sub-Saharan Africa. International Family Planning Perspectives. Vol. 13, No. 1, pp. 14-18.
12. Burns, N. & Grove, K. 1993. The Practice of Nursing Research. Conduct, critique and utilization. 2nd edition. Philadelphia: W.B. Saunders Company.
13. Bromwich, P. & Parsons, T. 1990. Contraception: The Facts. Oxford: Oxford University Press.

14. Campbell, O. 1993. "Under 20" Clubs after straight talk about sex. Family Health International. Vol. 14, No. 2, pp. 30-31.

15. Cape, B.F. & Dobson, P. 1974. Ed. Baillieres Nurses dictionary. London: The English Language Society and Bailliere Tindal, p. 85.

16. Chourhary, P. 1993. Youth and sexuality. Family International Health. Vol. 14, No. 2, pp. 20-23.

17. Clayton, G.S. 1980. Gynaecology by Ten Teachers. London: Edward Arnold.

18. Couper, I.D. & Alexander, T.J.D. 1995. Family planning attitudes of rural high school students. S.A. Family Life Practice. Vol. 6, No. 9, pp. 602-609.

19. Dan, C.O. 1996. Contraceptive prevalence in rural South Africa. International family Planning Perspectives. Vol. 22, No. 22, pp. 4-8.

20. Demsey, M.O. 1972. The development of body image in adolescents. Nursing Clinics of North America. Vol. 7, No. 4, pp. 609-615.

21. Dharmalingam, A. 1995. The social context of family planning in south Indian village. International Family Planning Perspectives. Vol. 21, No. 3, pp. 98-103.

22. Felton, G.F. 1996. Female contraceptive use or non-use at first and most recent coitus. Public Health Nursing. Vol. 13, No. 3, pp. 223-229.

23. Fink, A. 1995. How to Ask Survey Questions. Thousand Oaks: Sage Publications.

24. Fort, A.L. 1989. Investigating the social context of fertility and family planing. A qualitative study in Peru. International Family Planning Perspectives. Vol. 15, No. 3, pp. 88-95.

25. Gholahan, A.O. & MCarthy, J. 1991. Family planning knowledge, attitudes and practices of males in Ilorin, Nigeria. International Family Planning Perspectives. Vol. 17, No. 2, pp. 50-54.

26. Gispert, M.D. & Falk, R. 1978. Adolescent sexual activity: contraception and abortion. Am J Obstet Gynaecology. Vol. 132, No. 6, pp. 620-628.

27. Goddard, J. 1986. Adolescents in perspectives. Nursing R.S.A. Vol. 1, No. 6, pp. 25-27.

28. Goosen, M. & Klugman, B. 1996. The South African Woman's Health Book. Oxford University Press: Cape Town.

29. Gruber, E. Y. & Chambers, C.V. 1987. Adolescence. Vol. XXII, No. 87, pp. 661-669.

30. Herold, J., Monterroso, E., Morris, L., Castellanos, G., Conde, K. & Spitz, A. 1988. Sexuality and contraceptive use among young adults in Guatemala City. International Family Planning Perspectives. Vol. 14, No. 4, pp. 143-156.

31. Hogan, M.R. 1982. Influences of culture on sexuality. Nursing Clinics of North America. Vol. 17, No. 3, pp. 365-375.

32. Hopkins, J. 1985. Family Planning Programmes. Population Reports. Baltimore.

33. Kaunitz, A. 1979. Contraception for the adolescent patient. Int J Fertil. Vol. 42, No. 1, pp. 30-42.

34. Kiragu, K. & Zabin, L. 1995. Contraceptive use among high school students in Kenya. International Family Planning Perspectives. Vol. 21, No. 3, pp. 108-112.

35. Kunene, J. 1995. Teenagers' knowledge of human sexuality and their views on teenage pregnancies. Curationis. Vol. 18, No. 3, pp. 30-40.

36. Kuss, T. 1997. Family planning experience of Vietnamese women. Journal of Community Health Nursing. Vol. 4, No. 3, pp. 155-168.

37. Lesetedinyana, T., Mompoti, G.G., Khulumani, P., Lesetedi, G. & Rustenburg, N. 1988. Botswana Health Survey II. Columbia: Macro Systems Inf.

38. Lethbridge, D. 1991. Choosing and using contraception towards a theory of women contraceptive self-care. Nursing Research. Vol 40., No. 6, pp. 276-280.

39. McGinn, T. Bamba, A. & Balma, M. 1987. Male knowledge, use and attitudes regarding family planning in Burkino Faso. International Family Planning Perspectives. Vol. 15, No. 3, pp. 84-87.

40. MacIntosh, D. 1985. Sex education, fact or fiction. Curationis. Vol. 8, No. 4, pp. 24-26.

41. MacLaren, A. 1990. A History of Contraception From Antiquity to Present Day. Oxford: Blackwell.

42. Madikizela, V.Z. 1991. Socio demographic factors influencing knowledge, attitudes and use of contraception among female students of reproductive age in Umtata (Transkei). Unpublished.

43. Mogotlane, S. 1993. Teenage pregnancy: an unresolved issue. Curationis. Vol. 16, No. 1, pp. 11-14.

44. Mompati, D., Lesetedi, L. Khulumani, P. Lesetedi, G. & Rutenberg, H. 1988. Botswana Health Survey 11.

45. Montessoro, C.A. 1996. Public policy and adolescent pregnancy: a re-examination of issues. Nursing Outlook. Vol. 44, No. 1, pp. 31-36.

46. Moreno, L. 1993. Differences by residence and education in contraceptive failure rate in developing countries. International Family Planning Perspectives. Vol. 19, No. 2, pp. 54-60.

47. Morris, D. & Shacklee, E. 1990. Poor contraceptive use in the teenage years: situational and developmental interpretations. Advances in Adolescent Mental Health. Vol. 4, pp. 51-69.

48. National Institute of Development Research and Documentation. 1988. Teenage Pregnancy in Botswana. How big is the problem and what are the implications? Gaborone: University of Botswana.

49. Neinstein, L.S. 1996. Adolescent Health Care. A Practical Guide. 3rd edition. Williams & Wilkins: Baltimore.

50. Oni, S.A. & McCarthy, J. 1991. Family knowledge, attitudes and practices of males in Ilorin, Nigeria. International Family Planning Perspective. Vol. 17, No. 2, pp. 50-79.

51. Osofsky, H. 1971. Adolescent sexual behaviour: current status and anticipated trends for the future. Clinical Obstetrics and Gynaecology. Vol. 14, No. 2, pp. 383-407.

52. Polit, D.F. & Hungler, P.B. 1993. Essentials of Nursing Research Methods, Appraisal and Utilization. 3rd edition. Philadelphia: Lippincott.

53. Polit, D.F. & Hungler, P.B. 1991. Nursing Research, Principles and Methods. 4th edition. Philadelphia: Lippincott.

54. Polivka, J.B. 1996. Rural sex education: assessment of programs and interagency collaboration. Public Health Nursing. Vol. 13, No. 6, pp. 425-433.

55. Population growth and policies in Sub-Sahara African. 1986. The World Bank. Washington D.C.

56. Population Report. 1995. Meeting needs of young adults. Family Planning Programme. Vol. XXIII, No. 88, pp. 161-172.
57. Population Report. 1987. Family Planning Programs. Series J, No. 35.
58. Population Report. 1985. Family Planning Programs. Vol. XII, No. 4, pp. M290-M347.
59. Rannie, K. 1997. Adolescent females' attitudes, subjective norms, perceived behavioural control and intention to use latex condoms. Public Health Nursing. Vol. 14, No. 1, pp. 51-57.
60. Reis, J. Reid, R.J. & Herz, E. 1987. Family planning for inner city adolescent males. Adolescence. Vol. XXII, No. 88, pp. 953-959.
61. Rockey, T. 1986. Teenage pregnancy. Nursing R.S.A. Vol. 1, No. 11, pp. 16-17.
62. Rosenfeld, A.J. & Everetto, . . 1996. Factors related to planned and unplanned pregnancies. Journal of Family Practice. Vol. 43, No. 2, pp. 161-206.

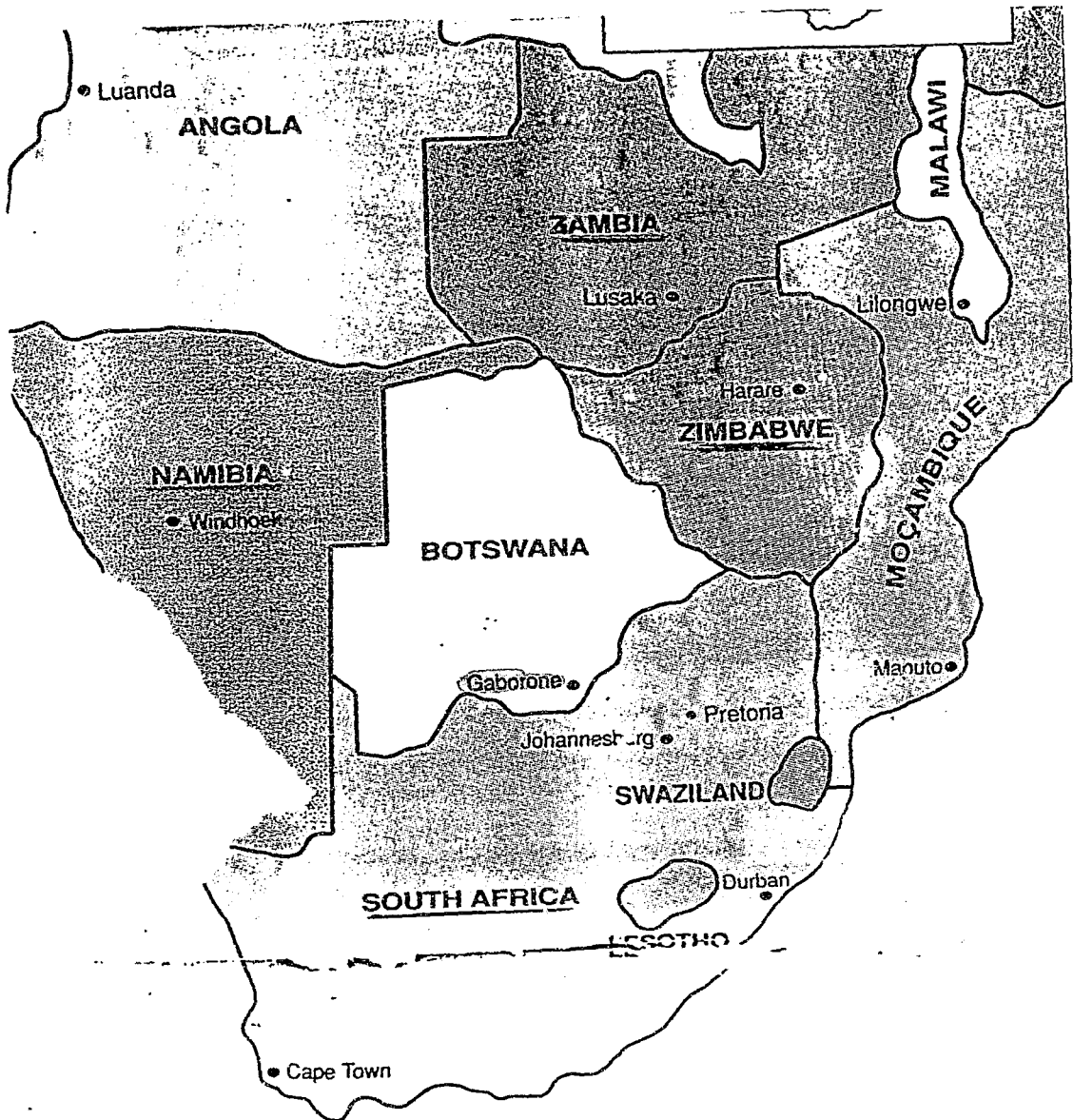
63. Ronsenfeld, A.J., Zahonk, P.M., Saint, W. & Murphy, G. 1993. Women's satisfaction with birth control. Journal of Family Practice. Vol. 38, No. 2, pp. 169-172.
64. Safe Motherhood Task Force. 1992. Safe Motherhood in Botswana: A Situational Analysis. Geneva: WHO.
65. Schuster, C.S. & Asburn, 1980. The Process of Human Development: A Holistic Approach. Boston: Little Brown & Company.
66. Shea, J.A., Baron, R.H. & Furstenberg, F. 1984. Factors associated with adolescent use of family planning clinics. AJH. Vol. 74, No. 11, pp. 1227-1230.
67. Smith, P.B., Nenney, S.W., Weinman, M.L. & Mumford, D. 1982. Factors affecting perception of pregnancy risk in adolescents. Journal of Youth and Adolescence. Vol. 11, No. 3, pp. 207-214.
68. Swenson, I.E. 1992. A profile of young adolescents attending a teen family planning clinic. Adolescence. Vol. 27, No. 107, pp. 647-663.
69. Swenson, I., Oakley, D., Swanson, J. & March, S. 1991. Community health nurses knowledge of attitudes toward and involvement with

adolescent contraceptive services. Adolescence. Vol. 26, No. 101, pp. 6-11.

70. Sykes, J.B. Ed. 1987. The Concise Oxford Dictionary of Current English. Avon: Bath Press. p. 205.
71. Theron, F. 1987. Contraception Theory and Practice. Pretoria: Academia.
72. Thalefang, J. 1991. Teenage pregnancy in Botswana, what are its causes? Unpublished.
73. Vanderpost, C. 1995. Pre-conditions for population policy in Botswana. International Family Planning Perspectives. Vol. 21, No. 2, pp. 70-73.
74. Walton, A. 1995. Puberty. Philadelphia: Lippincott.
75. Ward, V.M., Bertrand, J.T. & Puac, F. 1992. Exploring sociocultural barriers of family planning among Mayans in Guatemala. International Family Planning Perspectives. Vol. 18, No. 2, pp. 59-64.
76. Whyte, P.E.M. 1991. Teenage Pregnancy in Selected Coloured and Black Communities. Pretoria: Human Resources.

77. Wilson, H.S. 1993. Introducing Research in Nursing. 2nd edition.
Redwood City: Addison Wesley Nursing.

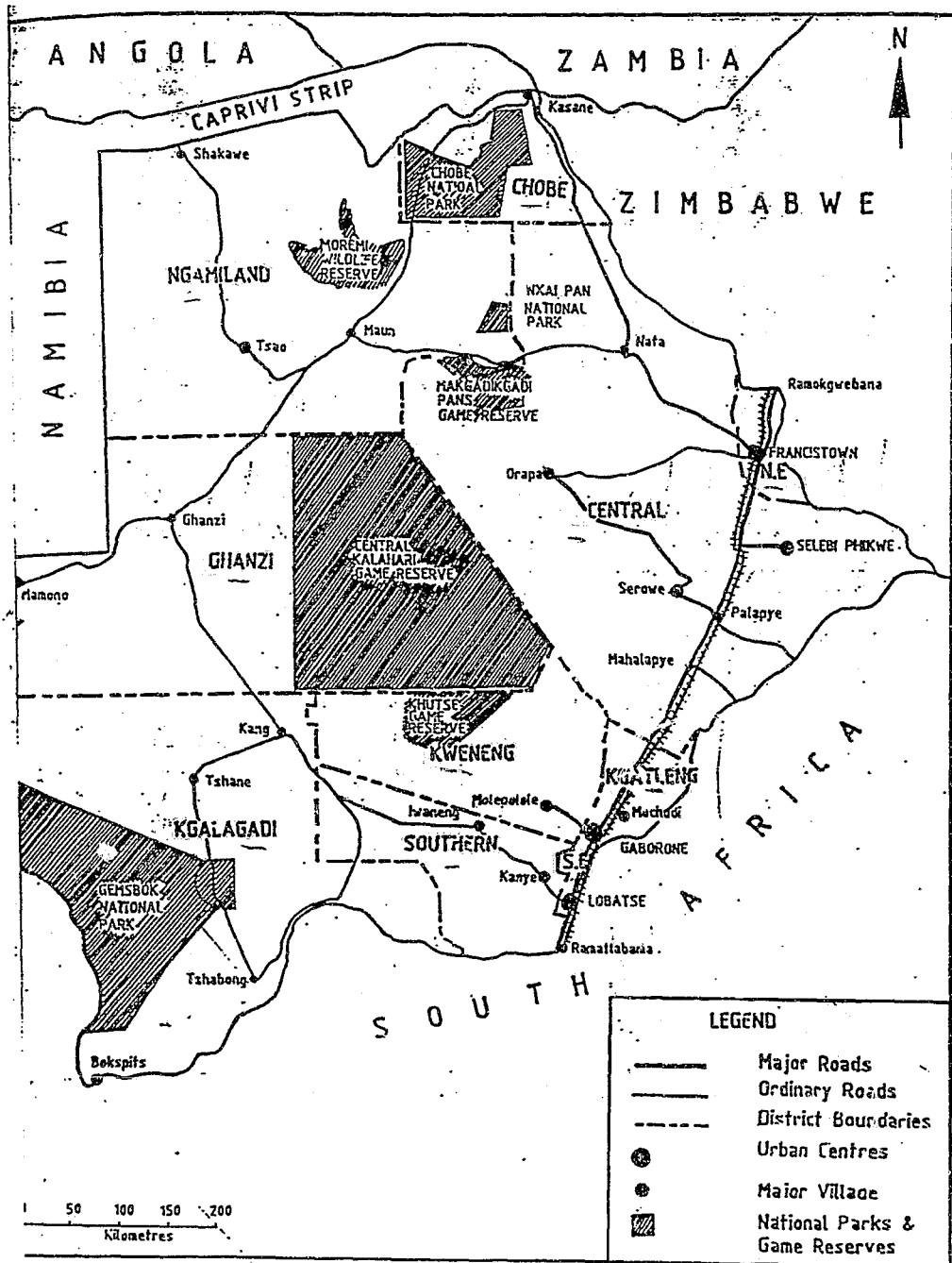
APPENDIX A.1



□ Capital City of Botswana

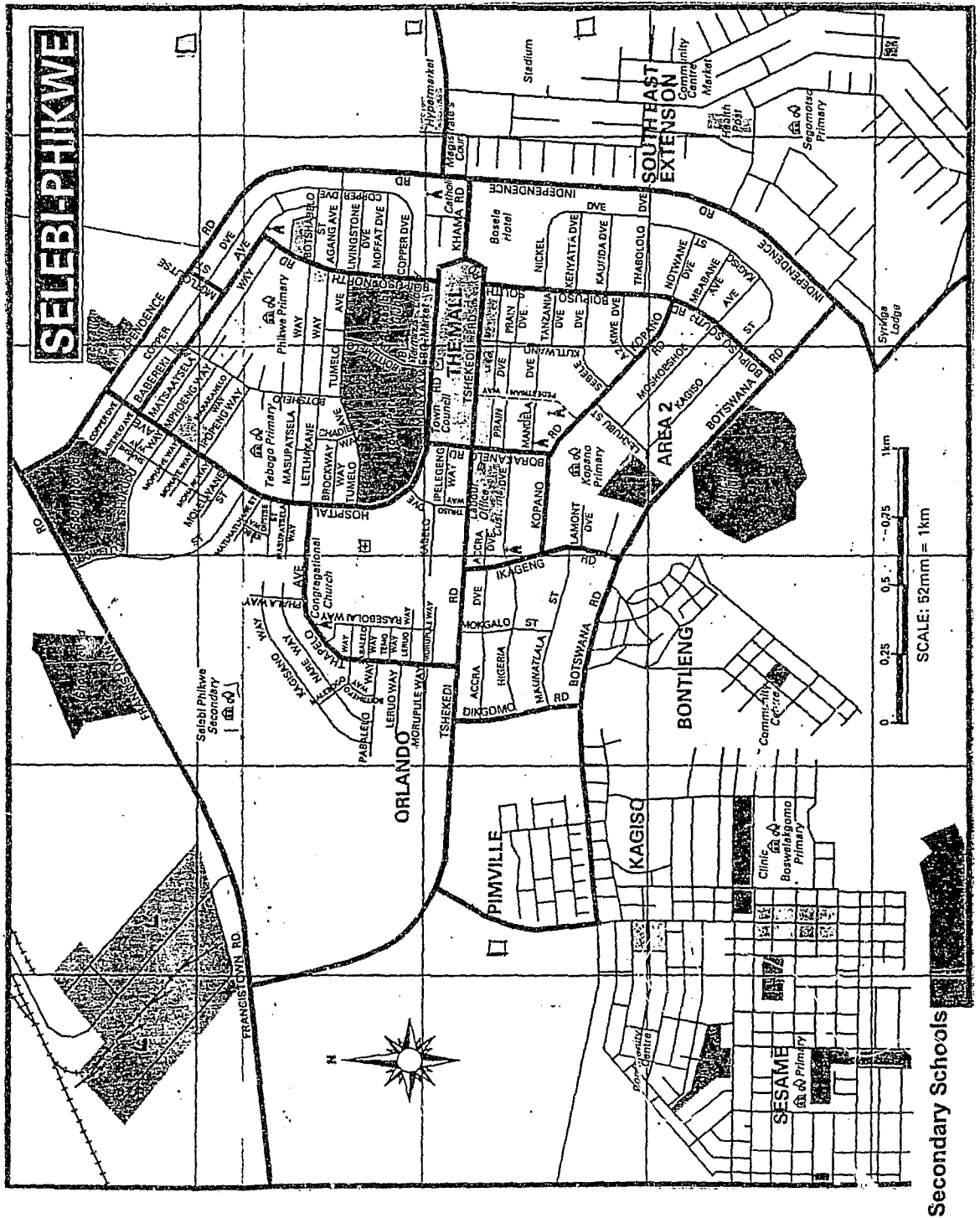
APPENDIX A.2

Republic of Botswana



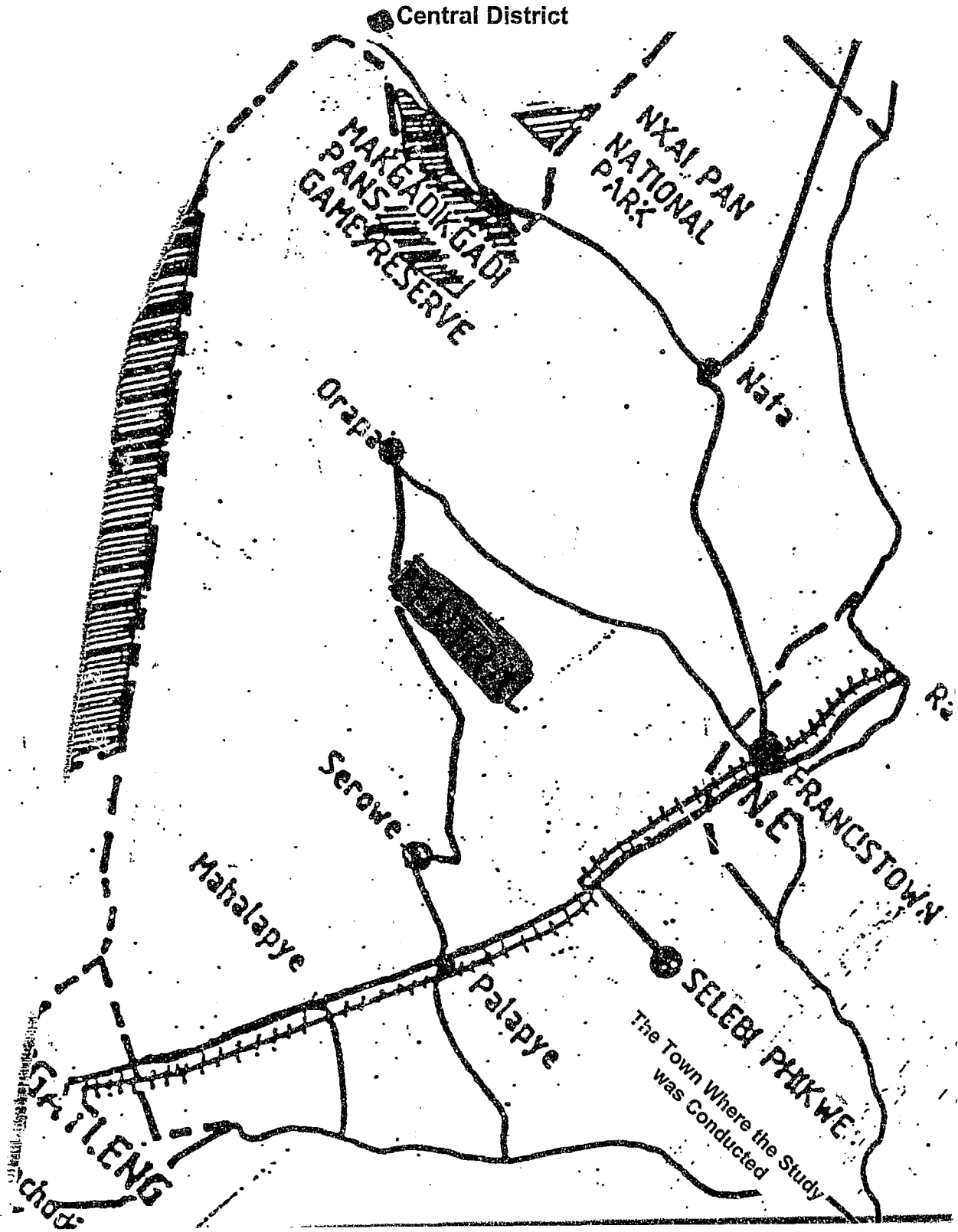
Districts

APPENDIX A.3



Secondary Schools

APPENDIX A.4



APPENDIX B

University of the Witwatersrand
 Faculty of Health Sciences
 Department of Nursing
 7 York Road
 PARKTOWN
 2193

25 March 1997

The Headmaster
 Phatsimo Junior Community Sec School
 Private Bag 0058
 SELEBI-PHIKWE
 BOTSWANA

Dear Sir/Madam

RE: APPLICATION TO CONDUCT A RESEARCH

I am a second year Motswana speaking student studying towards the Masters of Science in Nursing degree at the above University, under the supervision of P A McInerney. I am asking permission to conduct collection of data at your school. I intend to collect data in July, 1997.

The title of the study is:

**TEENAGERS KNOWLEDGE ABOUT CONTRACEPTION AND PREGNANCY
 AGED BETWEEN 13 AND 19**

The purpose of the study is to find out as:

- to what extend are teenagers knowledgeable on the use of contraceptive;
- to what knowledge do teenagers possess concerning the use of contraceptive and pregnancy;
- to how knowledgeable are teenagers regarding the risk of falling pregnant at an early age.

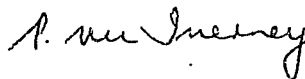
Your consideration to this matter will be highly appreciated.

Yours faithfully

MOTHWANA MMULE THEKISO (Miss)

PARKTOWN
 JOHANNESBURG 2193

Supervisor: Ms P A McInerney



cc. Permanent Secretary, Ministry of Education

NB: ENCLOSED PLEASE FIND A COPY OF THE QUESTIONNAIRE

APPENDIX C**UNIVERSITY OF THE WITWATERSRAND****DEPARTMENT OF NURSING EDUCATION****INFORMATION SHEET**

Dear Parent/Guardian

I am a second year student studying for my Masters degree in Nursing Sciences (Midwifery) at the University of the Witwatersrand, South Africa, and have to carry out a research project. The title of my research is "Teenage knowledge about contraception and pregnancy".

Teenage pregnancy is a major problem among young people and disrupts schooling and family life. The purpose of my study is to collect information on the knowledge of 13 - 19 year old school children on contraception (family planning) and pregnancy. It is hoped that this information will assist health workers in understanding the problem and enabling them to improve their education program for young people.

I would like your child to be part of the study and would be grateful if you could complete the attached consent sheet. Participation is voluntary and he/she has the right to refuse to participate or refuse to answer any of the questions. He/she will not be identified in any way. Any information will not be disclosed to his/her teachers.

Permission has been obtained from the University Ethics and Postgraduate Committees to conduct the research.

Thank you for your co-operation.

Yours faithfully

MOTHWANA MMULE THEKISO
MSc Nursing Student (Midwifery)

NB: This information will be translated into Setswana

APPENDIX D

Consent sheet for inclusion in the study for teenage knowledge about contraception and pregnancy

**I _____ consent
for my son/daughter to participate in the study.**

Parent/Guardian signature _____

Date _____

APPENDIX E**UNIVERSITY OF THE WITWATERSRAND.****DEPARTMENT OF NURSING EDUCATION**

Dear Student

I am a second year Motswana student studying for my Masters degree in Nursing Sciences (Midwifery) at the University of the Witwatersrand, South Africa. I am doing a research on teenage sexuality. The purpose of the study is to obtain information from male and female teenagers on knowledge concerning the use of contraceptives (family planning), unplanned and unwanted pregnancies.

I would like you to be part of the study and would be grateful if you complete the attached questionnaire.

Participation is voluntary and you have the right to refuse to participate or to answer any of the questions. You will not be identified in any way.

Any information given will not be divulged to your teachers or parents.

Permission has been obtained from the University Ethics and Postgraduate Committees to conduct the research.

Thank you in advance for your participation.

M. M. THEKISO

MOTHWANA MMULE THEKISO Msc(Nursing)(Midwifery)

APPENDIX F**UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG**Division of the Deputy Registrar (Research)**COMMITTEE FOR RESEARCH ON HUMAN SUBJECTS (MEDICAL)**

Ref: R14/49 Thekiso

CLEARANCE CERTIFICATE**PROTOCOL NUMBER M970523****PROJECT**

Teenagers knowledge about contraception and pregnancy aged between thirteen and nineteen years

INVESTIGATORS

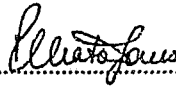
Miss M M Thekiso

DEPARTMENT

Nursing Education, Johannesburg Hospital

DATE CONSIDERED

970530

DECISION OF THE COMMITTEE *Approved unconditionally
Amendment 01, Information sheet**DATE** 971125**CHAIRMAN**.....

(Professor P E Cleaton-Jones)

* Guidelines for written "informed consent" attached where applicable.

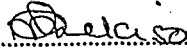
c c Supervisor: Ms P A McInemey

Dept of Nursing Education, Johannesburg Hospital

Works2\ain0015\HumE\h97.wdb\LM 970523 *

DECLARATION OF INVESTIGATOR(S)To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10001, 10th Floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

DATE 22.01.98 **SIGNATURE** **PROTOCOL NO.: M 970523**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX G

QUESTIONNAIRE

Please do not write your name on this questionnaire.

You are requested to answer the following questions. Place a (✓) along the answer of your choice.

1. DEMOGRAPHIC DATA

1.1 How old are you?

- (a) 13 years
- (b) 14 years
- (c) 15 years
- (d) 16 years
- (e) 17 years
- (f) 18 years
- (g) 19 years

1.2 Sex:

- (a) male
- (b) female

1.3 How many children do you have?

- (a) none
- (b) one
- (c) two

1.4 Tick one for race/ethnicity that you consider yourself to be:

- (a) Botswana
- (b) South African
- (c) Indian
- (d) Zimbabwean
- (e) Zambian
- (f) Other (specify)

2. EDUCATIONAL BACKGROUND

Tick (✓) the current level of education you have registered for:

- (a) Form I
- (b) Form II
- (c) Form III
- (d) Form IV
- (e) Form V

3. SOCIO-ECONOMIC STATUS**3.1 How many are you in your family?**

- (a) One
- (b) Two
- (c) Three
- (d) Four
- (e) Five or more

3.2 Present residential area:

- (a) Town
- (b) Township
- (c) Village
- (d) Other (specify)

3.3 How long have you been staying in this place?

- (a) Less than 10 months
- (b) One to two years
- (c) Three to four years
- (d) Five to six years
- (e) Seven or more years

3.4 How many rooms does your parent's home have or how many thatched houses do you have?

- (a) One bed-roomed house or one thatched house
- (b) Two bed-roomed house or two thatched houses

- (c) Three bed-roomed house or three thatched houses
- (d) Five bed-roomed house and more or five thatched houses and more

3.5 Who is the bread-winner in your family?

- (a) Father
- (b) Mother
- (c) Elder sister/brother
- (d) Grandparents
- (e) Other (specify)

4. RELIGIOUS BACKGROUND

Which church do you go to?

- (a) None
- (b) Roman Catholic
- (c) Lutheran
- (d) Seventh Apostolic
- (e) Zion Christian Church
- (f) Faith Mission
- (g) Other (specify)

5. MARITAL STATUS OF PARENTS

5.1 Are your parents married? (It could be according to traditional or western custom)

- (a) Yes
- (b) No

5.2 Is/are your parent(s)

- (a) Single
- (b) Married
- (c) In separation
- (d) Divorced
- (e) Staying together but not married
- (f) Widow/widower

6. KNOWLEDGE ON CONTRACEPTIVES/FAMILY PLANNING

6.1 Have you every heard about family planning?

- (a) Yes
- (b) No

6.2 If yes, please list method(s) of family planning you know:

6.3 In relation to your answer above do you have knowledge regarding the use of family planning?

- (a) Yes
- (b) No

6.4 Do you use any family planning method?

- (a) Yes
- (b) No

6.5. If yes, which one? _____

6.6 At what age did you start sleeping with a girl or boy?

- (a) 13 years
- (b) 14 years
- (c) 15 years
- (d) 16 years
- (e) 17 years or more

6.7 At what age did you start using family planning?

- (a) 13 years
- (b) 14 years
- (c) 15 years
- (d) 16 years
- (e) 17 years or more

6.8 When did you start using family planning?

- (a) Before engaging in sexual relationship/intercourse
- (b) After first sexual relationship/intercourse
- (c) After having a baby

7. KNOWLEDGE ABOUT PREGNANCY**7.1 Do you know how pregnancy occurs?**

- (a) Yes
- (b) No

7.2 Is it possible to become pregnant or to impregnate someone the first time you have sexual relationship/intercourse?

- (a) Yes
- (b) No

7.3 Is it possible for someone to be pregnant when sleeping with a boy or girl (having sexual intercourse)?

- (a) At first menstruation/period (menarche)
- (b) During menstruation/period
- (c) When you have sex from 10-17 days of menstruation/period

CONCLUSION

Thank you for your participation in this research project by filling in the questionnaire.

Author Thekiso M M

Name of thesis Teenagers' Knowledge About Contraception And Pregnancy - Aged Between Thirteen And Nineteen Years
Thekiso M M 1998

PUBLISHER:

University of the Witwatersrand, Johannesburg

©2013

LEGAL NOTICES:

Copyright Notice: All materials on the University of the Witwatersrand, Johannesburg Library website are protected by South African copyright law and may not be distributed, transmitted, displayed, or otherwise published in any format, without the prior written permission of the copyright owner.

Disclaimer and Terms of Use: Provided that you maintain all copyright and other notices contained therein, you may download material (one machine readable copy and one print copy per page) for your personal and/or educational non-commercial use only.

The University of the Witwatersrand, Johannesburg, is not responsible for any errors or omissions and excludes any and all liability for any errors in or omissions from the information on the Library website.