

**PATTERN OF SEXUAL PRACTICES CONTRACEPTIVE USE AMONG COLLEGE
STUDENTS, IN NORTH SHOA, CENTRAL ETHIOPIA**

by

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DECLARATION

I declare that **PATTERN OF SEXUAL PRACTICES, KNOWLEDGE AND CONTRACEPTIVE USE AMONG COLLEGE STUDENTS IN NORTH SHOA, CENTRAL ETHIOPIA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

.....
SIGNATURE

TESHOME MOTUMA ROBI

.....
March 2014

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AMONG COLLEGE STUDENTS IN NORTH SHOA, CENTRAL ETHIOPIA**

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ABSTRACT

In Ethiopia the number of young people going to college is steadily increasing. This predisposes them to risky sexual behaviour which leads to unwanted pregnancy, unsafe abortions and HIV. This study has aimed to determine the patterns of sexual practice and contraceptives use and risk behaviours among those students in central Ethiopia.

A descriptive cross-sectional survey was employed. Data on sexual practice, knowledge and contraceptive use were collected from 327 college students. The data were cleaned, entered and analysed using SPSS version 20.

The results revealed that despite their knowledge of the methods of safe sex, there are still considerable misconceptions regarding the effectiveness of contraceptives, their side effects and their proper use.

In terms of the sexual practice reported by the respondents, 142 (43.4%) practised sex and 110 (77.5%) of respondents had used contraceptives at least once. The age of the respondents, the number of years for which they stayed in college and their fields of study were significantly associated with their sexual practice. In conclusion, a significant number of college students practised sex without using contraceptives to prevent pregnancy, and a considerable number of their partners disapproved of the use of contraceptives.

KEY CONCEPTS knowledge of contraceptives, sexual practice, contraceptive use in college students

TABLE OF CONTENTS

Table of Contents.....	III
Table of figures-----	VI
List of Tables-----	VII
List of Acronyms	VIII
CHAPTER ONE: ORIENTATION TO THE STUDY	- 1 -
1.1 Introduction.....	- 1 -
1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM	- 1 -
1.2.1 Source of the research problem.....	-1-
1.2.2 Background to the research Problem	- 2 -
1.3 Statement of the resarch problem.....	-3-
1.4 Aim of the study.....	-4-
1.4.1 Research purpose.....	- 4 -
1.4.2 Research objectives.....	- 4 -
1.5 Significance of the study.....	-4-
1.6 Definition of terms.....	-5-
1.7 Foundation of the study.....	-5-
1.8 Research design and methods.....	-5-
1.9 Scope of the study.....	-8-
1.10 Structure of the dissertation.....	-8-
1.11 Conclusion.....	-8-
CHAPTER TWO, LITERATURE REVIEW.....	- 10 -
2.1 Introduction.....	-10-
2.2 Sexual practice.....	-10-
2.3 Knowledge and awareness regarding contraception.....	-15-
2.4 Pattern of contraception use	18
2.5 Conclusion.....	-22-
CHAPTER THREE, RESEARCH DESIGN AND METHOD	- 23 -
3.1 Introduction.....	-23-

3.2 Research design.....	-23-
3.3 Research methods.....	-24-
3.3.1 Population sampling.....	-24-
3.3.1.1 Population.....	-24-
3.3.1.2 Sample.....	-25-
3.4 Data collection.....	-26-
3.4.1 Developing and testing the data collection instrument.....	-26-
3.4.2 Data collection approach, method and process.....	-26-
3.4.3 Ethical consideration related to data collection.....	-27-
3.4.4 Data analysis.....	-27-
3.4.5 Internal and external validity of the study.....	-28-
3.4.5.1 Internal validity.....	-28-
3.4.5.2 External validity.....	-28-
CHAPTER FOUR, ANALYSIS, PRESENTATION AND DESCRIPTION OF THE RESEARCH FINDINGS.....	- 29 -
4.1 introduction.....	-29-
4.2 Data cleansing, coding and analysis.....	-29-
4.3 Research findings.....	-29-
4.3.1 Socio-demographic characteristics of respondents.....	-29-
4.3.2 Awareness regarding contraception.....	-36-
4.3.3 Pattern of sexual practice.....	-40-
4.3.4 Contraceptive practices.....	-46-
4.4 Conclusion.....	-51-
CHAPTER FIVE: CONCLUSION, RECOMMENDATIONS AND LIMITATIONS	- 52 -
5.1 introduction.....	-52-
5.2 Research design and methods.....	-52-
5.3 Summary and interpretations of the research findings.....	-52-
5.3.1 Socio-demographic characteristics of the respondents.....	-52-
5.3.2 Pattern of sexual practice.....	-53-

5.3.3 Knowledge of the respondents on contraceptive methods.....	-54-
5.3.4 Contraceptive practice among college students.....	-55-
5.4 Factors contributing to casual sex and contraceptive use.....	- 57 -
5.5 Conclusion.....	-58-
5.6 Recommendations.....	-59-
5.7 Contribution of the study.....	-60-
5.8 Limitations of the study.....	-60-
5.9 Final conclusion.....	-61-
Annexure A.....	- 63 -
Annexure B.....	- 64 -
Annexure C.....	- 65 -
Annexure D.....	- 66 -
12. REFERENCES	- 75 -

Table of Figures

Figure 1 Distribution of the respondents by age.....	30
Figure 2 Distribution of the respondents by ethnic group.....	31
Figure 3 Distribution of the respondents by religion.....	32
Figure 4 Distributions of the respondents by field of study.....	33
Figure 5 Distribution of the respondents by the duration of their stay in college.....	34
Figure 6 Distribution of the respondents by their living condition.....	35
Figure 7 Distribution of the respondents by their academic performance.....	36
Figure 8 Respondents' knowledge about what to do after having unprotected sex.....	48
Figure 9 Respondents' reasons for not using contraceptives.....	49

List of Tables

Table 1 Distribution of respondents by knowledge of contraceptive methods, n=327.....	37
Table 2 Distribution of respondents by knowledge of natural contraceptive methods, n=327.....	37
Table 3 Distribution of respondents by knowledge of contraceptive methods, n=327.....	38
Table 4 Distribution of respondents by sexual practice, n=327.....	40
Table 5 Number of sexual partners of respondents practising sex in the last 12 months and during stay in college; n=142.....	41
Table 6 Association of respondents' characteristics with their sexual practice.....	42
Table 7 Association of respondents' characteristics with their sexual practice.....	44
Table 8 Association of respondents' characteristics with their contraceptive use	50

List of Acronyms

ECA	Economic Commission for Africa
EDHS	Ethiopian Demographic Health and Survey
AYFRHS	Adolescent and Youth Friendly Reproductive Health Standards
CDC	Center for Disease Prevention and Control
CSW	Commercial Sex Workers
FDREPHCC	Federal Democratic Republic of Ethiopia Population and Housing Census Commission
HIV	Human Immuno Deficiency Virus
KAP	Knowledge, Attitude and practice
MOH	Ministry of Health
STI	Sexually Transmitted Diseases
WHO	World Health Organization

CHAPTER ONE

ORIENTATION TO THE STUDY

1.1 Introduction

Early marriage is defined as marriage before the age of 18. Ethiopia is one of the countries where early marriage is practised (DHS 2000: 73-74, 2005:80-84 and 2011: 59-60). A study has reported that 17% of young people under the age of 15 years and 30% of those between 15 and 17 years were already married (Erulkar 2013: 9-12). A series of DHS reports has indicated that a significant number of women have married below the age of 15 years. For example, Ethiopian DHS 2000 reported that 14% of girls married below the age of 15 years, while this declined to 13% in 2005. It further declined to 8% in 2011 (DHS 2000: 73-74, 2005: 80-84 and 2011: 59-60).

In addition to early marriage, early sexual debut has also been indicated as a major reproductive health problem of the youth in the country. As college students come out of this community they may reflect the norms of their community.

1.2 Background information about the research problem

1.2.1 Source of the research problem

It has been reported that sexual activity during adolescence puts adolescents at risk of sexual and reproductive health problems. These include early pregnancy (intended or otherwise), unsafe abortion, and sexually transmitted infections (STIs) including HIV. It also puts them at risk of sexual coercion and violence (Tamire and Enqueselassie 2007: 112-114).

A knowledge, attitude and practice (KAP) survey conducted on college students in the capital of the country, Addis Ababa, reported that 19.5% of the respondents were sexually active, of whom 10% had used contraceptives (Tamire and Enqueselassie 2007: 112-114). A similar study indicated that 35.1% of the sexually active students became pregnant at least once, and 71.7% had committed induced abortion (Tamire and Enqueselassie 2007:112-114). The number of students registering for college study is increasing steadily in Ethiopia (Yizengaw 2003:2-4). Their new environment predisposes them towards new experiences, and their life-style challenges include

having new relationships and being initiated into sex (Tamire and Enqueselassie 2007: 112-114).

1.2.2 Background to the research problem

According to the United Nations Economic Commission for Africa (ECA), Africa's population is the youngest in the world, with young people aged between 15 and 24 accounting for around 20% of the population, while in most African countries those aged under 25 represent over 60% of the population. These large numbers of young people are evident in cities and rural areas across the continent (ECA 2009: 7)

With 44% of its population under the age 15 years in 2006, sub-Saharan Africa is the youngest population region in the world. In Asia, Latin America and the Caribbean, about 30% of the population is under the age of 15, and in Europe only 16% are under the age of 15. While countries in other regions have experienced declines in fertility and thus have seen their populations age faster, sub-Saharan Africa has yet to see its youth population peak (Ashford 2007: 2).

According to the WHO, in 2008 about 16 million women aged 15-19 years old give birth each year, which is about 11% of all births worldwide. 95% of these births occur in low and middle income countries. The average adolescent birth rate in middle income countries is more than twice as high as that in high income countries (WHO, fact sheet 2008: 1-2). Although adolescents aged 10-19 years account for 11% of all births worldwide, they account for 23% of the overall burden of disease (disability-adjusted life years) due to pregnancy and child birth (WHO 2008: 1-2).

Globally, many adolescent pregnancies are not merely unplanned but also unwanted, as is seen by the estimated 2.2 to 4 million adolescent girls who obtain abortions each year (McIntyre 2006: 4). Because they are less likely to have access to legal and safe abortion, adolescents are estimated to account for 14% of all unsafe abortions, which are performed by people who lack the necessary skills in an environment lacking minimal medical standards (McIntyre 2006: 4)

According to the Federal Democratic Republic of Ethiopia Population and Housing Census Commission (FDREPHCC 2007), the distribution of the national population by broad age groups shows that the proportion of young population, 10-24 years,

comprised 45% in 2007. Conversely, the proportion of population in the working age group, 15-64 years, was 51.9%. Young people (10-24 years old) in Ethiopia constituted about one third of the population (FDREPHCC 2007: 32).

In Ethiopia, as in any other developing country, the number of young people moving to colleges and work places is steadily increasing. This movement of young people from their places of shelter to colleges and work places is considered to be a predisposing factor for delayed marriage and for extramarital sex, which in turn predisposes the young to health problems related to sexual behaviours (Yizengaw 2003: 2).

Early sexual debut and early marriage, in particular in rural areas, combined with the limited use of contraceptives, have been associated with unwanted pregnancy, unsafe abortion and the related consequences (AYFRHS 2010: 1). The unmet need for family planning is the greatest for young married adolescents, 15-19 years old, with a 30% unmet need for spacing pregnancy in Ethiopia. Girls aged 15-19 years are seven times more likely to be HIV positive than boys of the same age, and women 20-24 years old are four times more likely to be infected than men of the same age (AYFRHS 2010:1)

In 2008 the overall pregnancy rate in Ethiopia was estimated to be 242 per 1,000 women. Out of this number, unintended pregnancy was estimated at a rate of 101 per 1,000 women. The rate of unintended pregnancy was estimated to be extremely high in urban areas at 233 per 1,000 (Gebreselassie, Fetters, Singh, Abdella, Gebrehiwot, Tesfaye, Geressu, and KUMBI, 2010: 21-23).

1.3 Statement of the research problem

Consecutive EDHS have indicated that early sexual debut, marriage and the limited use of contraceptives are associated with unwanted pregnancy. It has also been reported that women with at least primary education delay sexual initiation by five years in comparison with women of the same age with no education (EDHS 2001: 36-46, 2005: 47-56).

The number of college students seeking for abortion services is constantly increasing in Ethiopia. Studies (Tamire and Enqueselassie 2007: 12-14; Tilahun, Assefa and Belachew: 2010: 197-200) reveal that large numbers of college students are sexually

active, but contraceptive use among college students is very infrequent. The researcher has learned from experience and from various studies that students behave in the same way in different colleges. Hence, this study was conducted to assess the factors contributing to casual sex, the failure to use contraceptives, and the associated factors contributing to the sexual practices of college students, and to compare the findings of the study with those of previous reports.

1.4 Aim of the study

The aim of the study was to assess the pattern of sexual practice, knowledge of methods of contraception and the utilization of contraceptives in the target population.

1.4.1 Research purpose

The purpose of this study was to assess the patterns of sexual practice, knowledge of methods of contraception and the use of contraceptives among college students in central Ethiopia.

1.4.2 Research objectives

1. To identify the patterns of sexual practice among college students in Ethiopia.
2. To determine the level of knowledge of contraceptives among college students in Ethiopia.
3. To determine the extent of contraceptive use among college students in Ethiopia.
4. To identify the factors associated with casual sex and contraceptive use among college students in Ethiopia.

1.5 Significance of the study

The study aims to assess the pattern of sexual practice, knowledge of the methods of contraception, and contraceptive use among college students in North Shoa central Ethiopia. Data on the socio demographic characteristics of the study population, sexual practice, their knowledge of the methods of contraception and their contraceptive use was collected and analysed. The information obtained from the study on the patterns of their sexual practice, their knowledge of the methods of contraception and their contraceptive use should help for future planning.

The information yielded by the study will also assist benefit the college students in improving their behaviour and their use of contraception to prevent unwanted pregnancy.

Furthermore, the information obtained from the study may be used to initiate the establishment aof youth-friendly reproductive health services for college students in the study area.

1.6 Definition of terms

1. **College students:** Full-time students attending a college to pursue tertiary level study (<http://en.wikipedia.org/wiki/Student>).
2. **Sexual practice:** A person's sexual behaviour — i.e., whether he/she engages in heterosexual activity.
3. **Patterns of sex:** The sexual practices of young adults categorised in various ways, including the onset of sexual activity, the number of sexual partners, the frequency of sex, participation in group sex, the use of alcohol or other drugs preceding sexual activity, sex without contraception or a condom, sex with a prostitute, and consensual sex without knowing the disease status of one's partner (Beadnell, Morrison, Wilsdon, Wells, Murowchick, Hoppe: 2005.)
4. **Contraception:** The prevention of unintended pregnancy. (CDC: 2006; WHO: 2011).
5. **Contraceptive methods:** Various means or devices, drugs or other barriers used to prevent unintended pregnancies, including the levonorgestrel-releasing intrauterine system, the hormonal contraceptive patch, the hormonal contraceptive ring, the hormonal implant, and a 91-day regimen of oral contraceptives, two new barrier methods, and a new form of female sterilization (CDC:2006; WHO:2011).

1.7 Foundation of the study

The main aim of the researcher was to determine the patterns of sexual practice, the knowledge of the methods of contraception, and the utilization of contraceptives in college students in North Shoa, central Ethiopia. As a result, the researcher utilized the health belief model (HBM) as a theoretical framework. This model was selected to identify contemporaneous links between being a student and remaining healthy or being a student and acquiring specific health-related knowledge and skills.

The HBM is based on the assumption that health behaviour is determined by personal beliefs or perceptions about disease and strategies available to decrease its occurrence. The HBM is based on four theoretical constructs, namely: (1) perceived seriousness, (2) perceived susceptibility, (3) perceived benefits, and (4) perceived barriers. According to Rosenstock, Strecher, and Becker (1988: 179-182) each of these perceptions individually or in combination can be used to explain health behaviour. The key variables of HBM are:

Perceived Threat: This consists of two parts: perceived susceptibility and the perceived severity of a health condition.

Perceived Susceptibility: This is one's subjective perception of the risk of contracting a health condition.

Perceived Severity: These are feelings concerning the seriousness of the consequences of contracting an illness or of leaving it untreated (including evaluations of both the medical and the clinical consequences, and the possible social consequences).

Perceived Benefits: The believed effectiveness of strategies designed to reduce the threat of illness.

Perceived Barriers: The potential negative consequences that may result from taking particular health actions, including physical, psychological, and financial demands.

Cues to Action: Events, either bodily (e.g., physical symptoms of a health condition) or environmental (e.g., media publicity) that motivate people to take action.

Other Variables: Diverse demographic, socio-psychological, and structural variables that affect an individual's perceptions and thus indirectly influence health-related behaviours.

Self-Efficacy: The belief in being able to successfully execute the behaviour required to produce the desired outcomes.

The HBM was used as it attempts to explain and predict health behaviours. This involved focusing on the attitudes and beliefs of the individual respondents in the research study. The HBM posits that people will take action to prevent or control ill health conditions if they regard themselves as susceptible to the condition, if they believe it would have potentially serious consequences, if they believe that a course of action available to them would be beneficial in reducing either their susceptibility to or the severity of the condition, and if they believe that the anticipated barriers to taking the action are outweighed by its benefits (http://www.utwente.nl/cw/theorieenoverzicht/Theory%20Clusters/Health%20Communication/Health_Belief_Model/).

1.8 Research design and methods

Since the design of a study is a structured approach followed by a researcher to answer a particular research question (Joubert and Ehrich 2007:77), a descriptive cross-sectional design was used to collect data from college students on their sexual practice, their knowledge of contraceptive methods, and their use of contraceptives. The design helped the researcher to measure the frequency of certain predetermined variables. In addition it enabled the researcher to examine the statistical significance of the association of the demographic variables with variables on sexual practice, knowledge of contraception methods and utilization of contraceptives in the study population. The researcher used a structured, self-administered questionnaire to obtain the data (Joubert and Ehrich 2007: 85).

1.9 Scope of the study

Using a descriptive cross-sectional survey, data on their sexual practice, their knowledge of the methods of contraception and their use of contraceptives was collected from students at three colleges in North Shoa, central Ethiopia. The sample size was calculated using a standard formula to be representative of the target population. The study assessed the frequency of the variables under study and tried to see a significant association in the demographic and other variables. The data analysis was carried out using IBM SPSS statistical software version 20.

1.10 Structure of the dissertation

This research report is organized into the following chapters:

Chapter One: Orientation to the Study

Chapter Two: Literature Review

Chapter Three: Research Design and Methods

Chapter Four: Analysis, Presentation and Description of the Research Findings

1.11 Conclusion

Adolescents and other young people make up 30% of the Ethiopian population (FDREPHCC 2007: 32). College students belong to this cohort of the population. Of the diverse needs of the population of this cohort, reproductive health services are the most central. The number of students entering colleges and universities in Ethiopia has been increasing alarmingly, recently. Entering tertiary education is a new chapter in the life of these adolescents. They can now lead their lives beyond family control, a fact which gives them the chance to taste different behaviours, including different sexual practices.

Studies in different part of the country have reported that few college or university students have a sound knowledge of contraceptives methods and actually use them (Tamire and Enqueselassie 2007: 12-14).

Being aware of this this, the Ministry of Health of Ethiopia has delivered a national reproductive health strategy and Adolescent and Youth-Friendly Reproductive Health Service Standards to guide service delivery in this context and to attempt to reach this

segment of the population. Many universities are trying to respond to the needs of their students by providing relevant support with the help of different organizations.

Different factors affect the behaviour of different individuals, including one's knowledge, one's attitudes, and one's perception of the risks and benefits attached to particular behaviours, and this variability in behaviour patterns must be taken into account in any strategy proposed to regulate health behaviours.

This quantitative, descriptive study is designed to assess the patterns of sexual practice, knowledge of the methods of contraception and use of contraception among college students in Fitcha, central Ethiopia. The findings derived from this research can be used to design appropriate interventions or may initiate further study of the target population.

This chapter has briefly outlined the background of the research, the research problem, the aim of the study and the foundation of the study. It has also given an overview of the research design and method.

Literature relevant to the study is been presented in the next chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A literature review is the process of looking at what has previously been written on a particular subject. It is generally recommended that a critical examination and synthesis of existing reports should be performed to capture the general picture of the subject, and the state of the art in relation to research in the subject, and to convey these to the readers (Joubert and Ehrich 2007: 66; Burns and Grove 2005).

As the purpose of this study was to assess the sexual practice, knowledge of the methods of contraception and use of contraception in a particular young population, literature related to the sexual practices of adolescents and other young people and the consequences of those practices, knowledge of contraceptive methods, the utilization of contraception and related factors was reviewed. Furthermore, the researcher reviewed the literature related to the age of initiation of sexual practice, the utilization of reproductive health services, unwanted pregnancy in adolescents and its repercussions, and the available favourable conditions for the youths to mitigate challenges related to their reproductive health.

To get information on the topic the researcher consulted relevant published journals, websites, and electronic journals.

The presentation of the literature is organized in three parts. The first section concentrates on sexual practice, the second focuses on the knowledge of reproductive health services including contraceptive methods, and the third on the utilization of the available services.

2.2 Sexual practice

Globally, most people initiate sexual activity during adolescence. The rates are highest in sub-Saharan Africa where, based upon an eleven-country study, more than half of all adolescents aged 15-19 years are sexually experienced (Blanc and Way 1998).

The WHO indicates that a great number of young people engage in behaviours that jeopardize not only their current state of health but often their health for years to come. Nearly two-thirds of premature deaths and one-third of the total disease burden in adults are associated with conditions or behaviours that began in their youth, including unprotected sex or exposure to violence, among others (<http://www.who.int/mediacentre/factsheets/fs345/en/index.html>).

Information from the WHO indicates that adolescents are prone to early unwanted pregnancies, septic abortions, sexual abuse, and alcohol and substance use and abuse, and are vulnerable to the risks associated with early sexual activity (<http://www.afro.who.int/en/clusters-a-programmes/frh/child-and-adolescent-health/programme-components/adolescent-health.html>).

Adolescent sexual activity, within or outside of marriage, can lead to negative reproductive health outcomes. Unprotected sexual activity can expose young women to the risks of unintended pregnancy, unwanted childbearing and abortion, as well as to HIV and other STIs. In addition to being a human rights concern, coerced or unwanted sex is associated with these same adverse reproductive health outcomes.

Marital status and age are some of the conditions that influence sexual activity; A study investigated the links between trends in age at marriage and premarital sexual behaviour in 27 sub-Saharan countries with DHS surveys conducted between 1994 and 2003. It compared 20–24-year olds with 40–44-year olds and indicated that: (1) the prevalence of marriage by age 18 has declined significantly in 24 of 27 countries; (2) the prevalence of premarital sex by age 18 has increased significantly in 19 countries; and (3) the prevalence of sexual initiation by age 18 — whether before or after marriage — has declined significantly in 13 countries, increased significantly in 4, and not changed in 10 (Mensch, Grant, and Blanc 2005: 11-14).

Findings from a nationally representative sample of females aged 13–24 in Swaziland indicated that 33% had experienced sexual violence before the age of 18. This

prevalence falls within the reported range for other Sub-Saharan African countries (Michelle, Hindin, Adesegun, and Fatusi 2009: 58-60).

As the level of formal education has increased throughout Sub-Saharan Africa, so too has the number of students attending school after puberty begins. At the same time, age at marriage has increased and the proportion of adolescents and young adults engaging in premarital sex has generally risen (Melhado 2009:46)

Studies made in different parts of Ethiopia show that premarital sex is common among high school students. A cross-sectional studies carried out in high schools in Nekemte, in the western part of the country, reported that 21.5% of the students were sexually active, with the mean age at first sexual intercourse being 16.2 years (16.2 ± 1.5) for males and 15.2 (15.2 ± 1.7) for females. The study added that findings from the qualitative interviews indicated that adolescent sexual activity is seen as being fashionable. The driving factors for sexual activity were the attractive clothing of girls such as mini skirts, unemployment, the economic dependence of girls, the migration of adolescents including girls from rural areas to towns in search of jobs, and substance abuse (Assefa and Wirtu: 2008: 168-172). Another study, which was conducted in the Bullen rural district, indicated that 13% of the research population was sexually active (Gebre Yesus and Fantahun 2010: 92-93).

A study of university students at Haromaya University has indicated that about 355 (28% of the) students were reported to have had sexual intercourse. More male students had had sex than females (OR 4.8; 95% CI 3.4-6.8, $p < 0.001$). The mean age at the first sexual intercourse was 17.54 (SD ± 2.8) years. Most of the students (271, 77.2%) who were reported to have commenced sexual intercourse had had their first sex with a girl or boy friend. Six (2% of the) male students reported having had their first sexual intercourse with a commercial sex worker. 50% of the respondents had been sexually active in the past 12 months and 35.5% had had more than one partner (Dingeta 2012).

In another study done on university students in the capital of the country, Addis Ababa, 19.5% were reported to be sexually active (Tamire and Enqueselassie 2007: 12-14). In

addition, a risk behaviour survey done on five universities (University of Gondar, Haramaya University, Jimma University, Hawassa University and Mekele university, which are in different parts of the country) indicated that the prevalence of sexual practice (intercourse) ranged from 26.9% in Jimma University to 34.2% in Gondar University (Tegabu Belyhun, Yifru, Oljira, Dingeta, Assefa, Berhan, Hailu, Alano, Tura, Alemseged, Dejene, Abraha, Gebreegziabher, Mohamedseid, Gebremariam, Birhan, Belaynew 2012: 21-51).

On the other hand, a study to identify the sexual value system at Jimma University revealed that 178 (25%) of the population were relativist and 136 (19%) hedonist. The two values are believed to predispose the students towards casual sexual practice (Anbaw 2008: 110-114).

Similar study to assess the sexual and reproductive behaviours of California Community College students reported different sexual practices among college students, which included having oral sex (47%) and/or vaginal sex (52.5%) within 30 days of the survey (Trieu, Bratton, and Marshak 2011: 746-749).

A study on Latino adolescent sexual risk behaviours in a school context in rural eastern Carolina reported that the school environment favours risky sexual behaviours in three major themes. The first theme was that it created an opportunity for engaging in sexual risk behaviours, and it provided a place for intimate physical contacts with little supervision. Displays of intimate behaviour were masked among the crowds, making sexual encounters difficult to monitor or control. In addition teachers were busy and reluctant to control such behaviours. The second theme was that school personnel were aware of sexual risk behaviours, but they did not have sufficient resources, preparation, or authority to address adolescent sexual health concerns. The third theme was cultural confusion regarding norms and stereotypes. Some behaviour such as dressing provocatively or having older boyfriends were considered as part of their culture (Larson and Ladelowski 2012: 233-236).

In the northern part of Ethiopia, it is reported that 51% of the surveyed youths, with an almost equal proportion between the rural and the urban (49.8% and 51.3%) had never had sex. The mean and the median age of sexual initiation in this study were 16.8 years

(SD±2.25) and 17 years respectively for the rural and urban respondents (range 8-24 years). First sex was initiated mainly (41%) with the husband or wife among rural youths, while for their urban counter parts (32%) it was with a girlfriend or a boyfriend. High-risk sexual initiation was noted among the study respondents: 2.4% and 8.7% respectively initiated their first sex with a commercial sex worker (CSW) or a casual partner. Moreover, first sexual practices were unplanned in the cases of 39% of the respondents, and among these 65% were unprotected. 61% of the respondents started having sex before the age of 18 (Mazengia and Worku 2009: 154-160).

In 2005, in Ethiopia, it was documented that 2% of males and 22% of females under the age of fifteen years had already started having sexual intercourse, but it must be borne in mind that 24% of females under the age of 15 were already married. 5% of females under the age of 15 had given birth. This figure is higher for adolescents under the age of 18 years, as 14% of the males and 49% of the females under the age of 18 years had started having sexual intercourse, respectively. It has also been documented that 49% of females at this age had married and 28% had given birth (WHO 2011: 44).

A research study among high school students in Kenya, in which 1244 male and 815 female students participated, reported that 69% of the male students and 27% of the female students were sexually active. Though the figures probably reflect some degree of exaggeration in male students and concealment in female students, the authors argued that the findings were consistent with previous research findings in the area (Kiragu and Zabin 1995: 109-111).

On the other hand, a research finding from Nigeria reported that out of 1655 students who provided information regarding their sexual activity, 40% responded that they had had sexual intercourse. It was pointed out that no difference was reported in the sexual activity among respondents due to their religious affiliation. Sexual activity rose from about 26% to 55% along with the age of the respondents from 14 years old to 18-19 years respectively. With regard to their age, boys were found to be more sexually active than girls at the lower age, 14-15 years. However, as age increased the proportion of sexually active girls surpassed that of similarly aged boys, starting from 17 years old substantially. It was reported that the girls' relationships involved two types of partners;

peers and old businessmen. The relationship with peers was said to be for love, whereas the relationship with older businessmen was a business relationship (Amazigo, Silva, Kauman, and Obikeze 1997: 30-32).

2.3 Knowledge and Awareness regarding contraceptives

In the Lancet series it is stressed that the most basic needs of adolescents, regardless of culture, age, and marital status, are for accurate and complete information about their bodily functions, sex, safer sex, reproduction, and sexual negotiation and refusal skills. Without information, adolescents are forced to make poorly informed decisions that may have profoundly negative effects on their lives (Bearinger, Sieving, Ferguson, and Sharma 2007: 1226).

In the era of HIV/AIDS, different messages pass through different media targeting the youth and other segments of the population, to bring about behavioural changes in their sexual and reproductive health. Globally it has been reported that different programmes targeting the youth with the purpose of providing information and services have yielded positive outcomes in the knowledge and attitude of the adolescents regarding reproductive health. These programmes include some that use the mass media, health promotion sites on the Internet, social marketing programmes for condoms, and community events and entertainment to advertise key messages such as HIV prevention (WHO 2011: 10-12).

It has also been reported that the evolving capacity of youths is determined by both biological changes and social norms. Apart from skills relating to academic and vocational endeavours, a young person needs to acquire life skills in complementary and mutually reinforcing categories: (1) *cognitive skills*, including problem-solving, understanding consequences, decision-making, critical thinking, and self-evaluation; (2) *social or interpersonal skills*, including communication, negotiation/refusal skills, assertiveness, cooperation, and empathy; and (3) *emotional coping skills*, including the management of feelings, stress, and impulses. Skills such as these are essential in translating younger adolescents' sexual and reproductive health knowledge into practice (WHO 2011: 12).

Considering knowledge of contraceptives as a prerequisite for utilization, different interventions have been implemented by government and non-government organizations in Ethiopia. Sometimes messages pass through mass media like TV, radio, and written media on reproductive health services like the provision of contraceptives. An assessment of the awareness of the adolescents had indicated that almost all women and men know at least one method of contraceptives - 97% and 98% respectively. Unmarried sexually active women and men have a better knowledge than the rest of the population - 99.8% and 99.9% respectively (DHS 2011: 93-94).

A community-based study on reproductive health knowledge and attitude among adolescents in south west Ethiopia has revealed that despite their good knowledge and attitude to reproductive health services including family planning, 97% of the respondents intended to use the services in the future rather than at the time of the study (Tegegn, Yazachew and Gelaw 2008: 145-149).

The summary report on the reproductive health needs of the young in selected urban areas of the Oromia, Amhara, and Tigray regional states and the Southern Nations, Nationalities and People's Region indicates that the knowledge of the young (both in-school youth and out-of-school youth) about the available reproductive health services differed according to their areas of residence, in that the urban youth know more than the rural youth (FMOH 2006: 19-24).

The same survey finds that, the respondents identified their common reproductive health problems as being the different STIs (sexually transmitted diseases), unwanted pregnancies, and unsafe abortions. It indicates that though it was previously assumed that females in school are less affected by reproductive health problems, they have started to become more and more affected by unwanted pregnancies and related problems. Unemployment and economic problems are identified as underlying cause for most out-of-school and some in-school youth being predisposed to unwanted pregnancies and the related problems (FMOH 2006: 19-24).

In addition, the survey reports that female students from rural areas who commonly rent homes in groups are commonly affected by reproductive health problems including STIs (sexually transmitted diseases) and pregnancies due to their exposure to their age peers and also to adults. Rape has also been reported as a common problem by in-school youth (FMOH 2006: 19-24).

An assessment of their knowledge of reproductive health and contraceptives methods revealed that students had inadequate knowledge of how pregnancy occurs and how to prevent it. The authors reported that only a few students knew about contraceptive pills. 33% of the male and 26% of the female respondents gave correct answers to questions related to the pill (Kiragu and Zabin 1995: 109-111).

According to the findings of different studies on students' knowledge of contraceptives, only 42.5% of the respondents of a survey conducted among female students of Arba Minch University (Southern Ethiopia) had heard about emergency contraceptives, with an overall summary index for knowledge disclosing that only 21.9% of them had good knowledge (Worku 2011: 176-183, Tamire and Enqueselassie 2007: 12-14, Tilahun, Assefa, and Belachew 2010: 197-200, Desta, and Regassa 2011: 1106-1117). Underscoring this issue would not be considered overemphasizing, even when the data seem to be readily available on the topic. An earlier cross-sectional survey conducted among female students of Addis Ababa University and Unity University College (both in the Capital) in 2005 showed that there was low level of knowledge and practice of emergency contraceptives among female university students (Tamire and Enqueselassie 2007: 12-14). A similar study done in 2009 among female students of Adama University (Central Ethiopia) also showed a lack of knowledge as one of the significant predictors of the non-use of emergency contraception (Tilahun, Assefa, and Belachew 2010: 197-200). Also, more recently a study involving 572 female students in Haramaya University (Eastern Ethiopia) revealed that 47.6% of the respondents had never heard about emergency contraceptives, with only 25.7% having good knowledge of the issue (Desta, and Regassa 2011: 1106-1117).

2.4 Pattern of contraceptive use

According to the WHO, adolescents are often unable to obtain the health services they need. In many places, health services such as the provision of emergency contraception are not available to anyone, either adolescents or adults. In other places where these health services are available, adolescents may be unable to use them because of restrictive laws and policies (e.g. laws that forbid the provision of contraceptives to unmarried adolescents) or because of the way in which they are delivered (the cost of health services is beyond their reach). Even where adolescents are able to obtain the health services they need, they may be discouraged from doing so because of the way they are delivered. Common reasons for this include fear that health workers will ask them difficult questions, put them through unpleasant procedures, or scold them; or that health workers will not maintain confidentiality (Hyman, Alyson G. and Laura Castleman 2005: 1-7, Ashton, Dickson, and Pleaner 2009: 10-11). In addition, a study has identified many factors associated with a pattern of contraceptive use in a population, including peer pressure, community pressure, ethnicity, educational aspirations, relationship and sexual experiences, sexual beliefs, and the family's attitude (Kirby 2002).

Studies have revealed that about 75% of sexually active adolescents in developing countries do not use contraceptives. In 25 countries where appropriate data are available, roughly 25% of all young women, on average, had used contraceptives by the age of 19 (Blanc, Tsui, Croft, Jamie and Trevitt 2009).

On the other hand, there are studies which have reported that the use of contraceptives has increased among adolescents, with condoms and the pill being the most popular methods. Among teenagers, the most common method reported at first intercourse is the condom (Wendy, Manning, Monica, Longmore, Peggy and Giordano 2000).

Large numbers of college students use contraceptives in California Community College, the condom being the most commonly used method (49.7%) followed by contraceptive pills (46.1%). 21.7% of the students reported that they used of withdrawal as a method of contraception, and 19.8% that they used emergency contraceptives (Trieue *et al* 2011).

It has been reported that educated women use contraceptives more than uneducated women do. According to EDHS (2011), 68% of women in the general Ethiopian population with secondary education were using contraceptives, whereas only 22% of non-educated women were using contraceptives (EDHS 2011).

A study conducted to assess sexual experience among Jimma University students, in the south west of the country, revealed that their first coitus occurred at an average age of 18.1 years with an age range of 10-24 years; that the majority (123 - 71.7%) had not had a regular sexual partner, and that only 80 (46.2%) of them used a condom consistently (Kassaye 2002).

A national survey conducted by the Ministry of Health in Ethiopia tried to identify where youth prefer to go for reproductive health services. The youth responded that their preference was determined by different factors including the type of the problem, accessibility, the affordability of the services, the availability of alternate health facilities, their living location, and the level of hospitality and medical care they receive from the service providers (FMOH 2006: 19-27).

The youth preferred private service providers to the public health facilities due to the long waiting time in public facilities, the poor hospitality of providers, and the inadequate drugs and attention given them by the providers (FMOH 2006: 19-27).

Service affordability was indicated as a barrier against visiting public health facilities, Those who could not afford the cost of the regular abortion services and wanted to terminate their pregnancy had reported as an option that they could go to village aborters or try traditional methods like using different herbs orally or inserting them into their wombs (the birth canal). They would take large doses of drugs like ampicillin. Sometimes friends would contribute money towards the cost of the services required (FMOH 2006: 19-27).

A study in one district in southern Ethiopia conducted to identify unmet needs, to measure the use of contraceptives, and to identify determinants among married women reported that 78% of the respondents and 68% of their partners supported the use of contraceptives (Mekonnen and Work 2011). The same study reported the unmet need for contraception to be 52.4%. 74.8% of the unmet need attributed to spacing while the

rest for limiting. The study also indicated that the unmet needs significantly differed between urban and rural dwellers (Mekonnen and Work 2011).

The reasons for contraception being identified by the respondents as an unmet need were the inaccessibility of the method of their choice unless they walked a long distance (43.1%), the fact that they expected rejection by their religious leaders and their community if they practiced contraception (22.2%), the unavailability of all methods or their preferred method in health facilities (12.6%), a fear of Side effects and contraindications against the available methods, which included heart burn, excessive bleeding, or their presumption of the requirement of having a balanced diet and optimum workload (16.8%), and problems related to service providers competence (4.8%) (Mekonnen and Work 2011).

Furthermore, the research report indicated that the educational status of the women and their partners and their ability to discuss contraception with their partners were positively associated with contraceptive use, in that educated and those who discussed using contraceptives were more likely to do so (Mekonnen and Work 2011).

Another study, which was conducted to assess access to and the utilization of reproductive health services in Jimma town, in the south west of Ethiopia, reported that 95% of the respondents could easily access information, education and communication services. However, the authors reported that 465 (43%) of adolescents had difficulty in accessing abortion care. Though the report doesn't include a statement of the proportion of sexually active adolescents among the study subjects, it does say that only 190 (17.6%) of the subjects utilized family planning services out of the 1082 respondents. Among socio-demographic and economic predictors, age and the availability of a means of communication, the availability of radio, Television and telephone in the households showed a positive association with the utilization of reproductive health services (Ayalew and Gelaw 2004).

It has been reported that more than half (about 52%) of high school students in Kenya were sexually active in 1995, but only 10% of sexually active students used contraception regularly. Many reasons are forwarded as to the probable reasons for the rare use of contraceptives, which include the spontaneity of the sexual activity of

adolescents, a lack of knowledge, partners' objections to the use of contraceptives, and barriers related to service delivery like the costs of contraceptive supplies, which students may not obtain regularly, a fear of the side-effects of some methods, and the failure of the health system in that it is not accommodative to adolescents (Kiragu and Zabin: 1995).

Research has reported that more than half or 52% of high school students have been found to be sexually active in Nigeria, but only about 20% of the sexually active adolescents use contraceptives. With regard to the methods of contraception used, condoms take the larger portion with 15%, abstinence 2%, pills 2%, injectables 1%, and 10% reported using nothing (Amazigo, Silva, Kauman, and Obikeze 1997).

The authors reported that they identified a slight difference between urban and rural adolescents in condom use; urban adolescents use more likely to use them than their rural counterparts - 17% and 11% respectively. Similar differences were observed between young men and girls, with 17% and 13% respectively (Amazigo, Silva, Kauman, and Obikeze 1997).

Students with multiple sexual partners were more likely to use contraceptives than those with a single partner (20% and 14%), and a similar difference in the numbers of those who practise condom use was found between students with multiple partners and students with a single partner (19% and 12% respectively). It was also noted that contraceptive utilization increased with the age of the respondents, as did sexual activity (Amazigo, Silva, Kauman, and Obikeze 1997).

A study in Uganda grouped the factors that limit the utilization of contraceptives among young people as those related to service delivery, a provider-focused approach WHAT IS THIS?, the structure of service delivery, and client-specific factors (Nalwadda et al 2011: 4-9). The report further elaborated that contraceptive use and their provision to young people were constrained by the sporadic availability of contraceptive stocks, poor service organization, the limited number of trained health personnel, the high costs of service, and unfriendly service provision. Most providers were not competent to provide long-acting methods. According to the report, there were significant differences in providers' self-rated competence by facility type; private for-profit providers' competence

was limited for most contraceptives Nalwadda *et al* 2011: 4-9). Providers had misconceptions about contraceptives, they had negative attitudes towards the provision of contraceptives to young people, and they imposed non-evidence-based age restrictions and consent requirements. Thus, most providers were not prepared or were hesitant to give young people contraceptives. Short-acting methods were, however, considered acceptable for young married women and those with children (Nalwadda *et al* 2011: 4-9).

2.5 Conclusion

In this review, literature pertaining to sexual practice, knowledge and the utilization of contraception among young people including high school and college students has been reviewed and presented.

The review identified that sexual practice is common among young people. In some schools the magnitude extends beyond 50% of the students. According to some literature, most adolescents initiate sexual practice at an age younger than 18 years. The factors that urge adolescents to engage in sex include the attractive clothing of girls (like miniskirts), unemployment, the economic dependence of girls, the migration of adolescents (including girls) from rural areas to towns in search of jobs, and substance abuse (FMOH 2006: 41, Seme, Wirtu 2008: 170-171).

Research revealed that in 2010 in Ethiopia the proportions of teenagers (15-19 years) that had given birth at least once prior to the survey and that were pregnant at the time of interview were 13.6% (443) and 4.1% (133) respectively. This exceeds the global estimate of 11% (Alemayehu, Haider, Habte 2010: 33).

Adolescents were found to have little knowledge about contraceptives. In addition, many factors were identified which limited the utilization of contraception, which included a shortage of supplies, providers' attitudes to adolescents, economic barriers and others. As a result most sexual practices were unprotected, putting the young people engaged in sex at risk of experiencing unwanted pregnancy, the consequences of which could be unsafe abortion and the related health and social problems.

CHAPTER THREE

RESEARCH DESIGN AND METHOD

3.1 Introduction

In Chapter Two literature relevant to the study was discussed. This chapter outlines the more important procedures that were followed to obtain the data that would enable the researcher to answer the research objectives.

3.2 Research design

A cross-sectional descriptive study was undertaken to determine the patterns of sexual practice and contraceptive use among college students in North Shoa, central Ethiopia.

As a study design is the structured approach to be followed by a researcher to answer a research questions (Joubert and Ehrlich 2007: 77-93), it can be described as the end result of a series of decisions made by the researcher concerning how the study will be performed (Burns and Grove 2005).

Descriptive studies are designed to gain information about characteristics within a particular field of study. Their purpose is to provide a picture of situations as they naturally happen (Burns and Grove 2005). This research project is descriptive in nature, as it studied the pattern of sexual practice and contraceptive use among college students in a particular population. Data on sexual practice, contraceptive knowledge and use were collected and analysed, and the findings were compared with the findings in similar studies.

A cross-sectional study such as this can measure the prevalence of health-related events, both exposure and effect, at the same time. The design is also believed to be suitable or useful for investigating the fixed characteristics of individuals such as their gender, ethnicity and socio-economic status (Bonita, Beaglehole, Kjellstrom 1993:33).

According to Babbie (2011: 102) cross-sectional studies involve observations of a sample or a cross-section of a population made at one point in time.

A descriptive study can examine the pattern of health-related events by age, gender and ethnicity at a specified time, in a specified area or in various places (Bonita *et al*

1993: 30). Hence, this type of design was preferred as being appropriate for the study. Data on sexual practice, knowledge of the methods of contraception and contraceptive use were collected from a representative sample of college students. A pre-tested and validated structured questionnaire was used to collect the data. This enabled the researcher to gather data on the pre-determined variables from the study population.

The data were analysed and interpreted by the researcher and the findings are available to be used by the target population, planners and service providers.

3.3 Research methods

3.3.1 Population sampling

Sampling is the process of selecting a group of people, events or behaviours or other elements with which to conduct a study. There are several different probability and non-probability sampling methods which may be used (Burns and Grove 2005).

Random sampling is a specific selection technique which can ensure that the sample is representative of the population. Each individual in the study population has a probability (a known chance) of being included in the sample (Joubert and Ehlich 2007: 95).

A version of random sampling is systematic random sampling, in which individuals are selected at fixed intervals from some list (Joubert and Ehlich 2007:100). According to Babbie (2006: 205) both simple random and systematic sampling are identical, provided that the list of elements is randomized before sampling.

Respondents were selected by the systematic random sampling technique. A sampling frame is defined by both Babbie and Joubert (2006: 99; 2007: 95) as a list or some representation of the study population, either of individuals or groups, depending on the specific type of sampling used, which contains all the individuals in the study population. For this study the unit was individual students. Hence, the rosters of students were used as a sampling frame to draw the sample.

3.3.1.1 Population

A study population is a group of people about whom we want to gather information and draw conclusions (Joubert and Ehlich 2007). It has also been defined as all of the

elements (individuals, objects, or substances) that meet certain criteria for inclusion in a given universe (Burns and Grove 2005). The target population for this study was college students registered in the academic year. There were three colleges in the study area; all were included in the study. A total of 1287 students were registered in the year at the three colleges, of whom 600,130 were registered at Fitch Health Science College, tropical medicine of Nursing school and 557 at Muger College.

3.3.1.2 Sample

A sample is the subset of the population that is selected for a particular study and the members of sample are the subjects (Burns and Grove 2005). A minimum sample size for the study was calculated using a standard formula for a known population size for a cross-sectional study. The formula is given below (Reid and Boore, 1991):

$$n = \frac{N}{[(1 + N(e))^2]}$$

where n = the sample size of the adjusted population, N = the population size and e = the accepted level of error, taking alpha as 0.05.

The calculated sample size according to the statistical formula was 305. Considering a 10% expected non-response rate, the minimum sample size was determined to be 336.

Subjects were drawn from each college proportional to the total number of registrations at the colleges, as indicated below: Fitch Health Science College, 600 students.

Sample size = 157 Nursing School of Tropical Medicine, 130 students. Sample size = 34

Muger College, 557 students. Sample size = 145

From the sampling frame in the three colleges, every third student was selected to participate in the study until the required sample had been obtained. The first subject in each list was selected randomly using a lottery method.

3.4 Data collection

3.4.1 Developing and testing the data collection instrument

Previously structured standard questionnaires were developed to assess contraceptive and other sexual practices among university students in Botswana in 2010 (Ntsipe 2010). Some of these questionnaires were adapted to the context of the study area and population, and used to collect data from the study subjects. Information bias was prevented by ensuring that the variables were measured in the same way for all respondents. To ensure validity, the questionnaires were pre-tested with 20 respondents from college students from colleges other than the participating sites. This was done to clarify and refine the instrument. The study was piloted using the data collected from these 20 respondents.

3.4.2 Data collection approach, method and process

A structured, self-administered questionnaire was distributed to the study subjects in the college set up. College community members or staffs who know the respondents were requested to be away or stay out of campus for the time to help respondents fill in the questionnaires free of pressure from study area.

Following the approval of the research proposal by the HDC of UNISA, the Oromia Regional Health Bureau was asked for permission to conduct the research in the three colleges in North Shoa. The proposal was presented to and obtained approval from the Human Research Development Committee of the Oromia Regional Health Bureau, Ethiopia. Through a letter from the Oromia Regional Health Bureau, the three colleges were contacted to get their permission to conduct the research in those colleges.

Three supervisors were recruited and oriented on the data collection process. They were to supervise the process. A sample of 336 respondents was selected using systematic random sampling, and the selected students were requested to participate in the study.

Individual consent was obtained from each participant, after the purpose of the study and their right to participate or refuse had been explained to the student. The students had been provided with consent forms on which to confirm their agreement by their

signatures. During this process seven potential respondents initially declined to participate, and two later returned empty questionnaires.

The colleges provided free classrooms where the respondents gave their responses on the self-administered questionnaires in the college set-up. The questionnaires were distributed to the respondents in a class and they left the questionnaires on their tables after providing their responses. The college staff stayed outside until the students had given their responses. The questionnaires were collected by the supervisors after all the respondents had left the class.

3.4.3 Ethical consideration related to data collection

The respondents were informed that the research was for academic purpose, as a requirement for a master's course at the University of South Africa. They were informed that the findings derived from the study might not benefit them directly but might be used for future programme development. However, bound copies of the completed project would be given to the colleges for future reference.

They were requested to individually sign a consent form and informed of their right to refuse to participate or withdraw from the study without any penalty at any time. Their autonomy and dignity were respected. Furthermore, they were informed that confidentiality was to be guaranteed by the use of identification codes instead of their names. In addition they were told that if a paper based on the research project were to be written and submitted for publication, their personal details would not be revealed.

3.4.4 Data analysis

The data were entered, cleaned and analysed using IBM SPSS statistical computer software version 20.0. Descriptive statistics such as the mean, the standard deviation, the median and the range were used for the continuous variables, while frequency listings were used for the categorical variables. The chi-square test was also used to assess the associations between the categorical variables (gender, sexual practice, religion, ethnicity, living conditions, the duration of the subject's stay in college, knowledge of contraceptive methods, contraceptive use and field of study). A P-value of 0.05 was used to check for statistical significance.

3.4.5 Internal and external validity of the study

3.4.5.1 Internal validity

A field-tested and validated structured standard questionnaire was adapted to collect data from the subjects. To ensure validity the questionnaire was pre-tested with 20 respondents from a district different from the participating sites. This was done to clarify and refine the instrument.

3.4.5.2 External validity

External validity has to do with the extent to which a study's results can be generalized or applied to other people or settings. The respondents in this study were a sample of college students in North Shoa, Oromia region, central Ethiopia. The sample size was determined using a standard statistical formula to be representative of the target population, and the study subjects were selected using random sampling to ensure external validity.

CHAPTER FOUR

ANALYSIS, PRESENTATION AND DESCRIPTION OF RESEARCH FINDINGS

4.1 Introduction

This section of the dissertation discusses the data analysis, research results and overview of the research findings and summarises the major findings. As the purpose of the study was to assess the patterns of sexual practice, the knowledge about contraceptives, contraceptives use and factors affecting their sexual behaviours among college students in central Ethiopia, the findings are organized and presented as:

- Socio-demographic characteristics of respondents
- Pattern of sexual practices
- Knowledge regarding contraceptives
- Contraceptive practices and
- Contributing factors

4.2 Data cleaning, coding and analysis

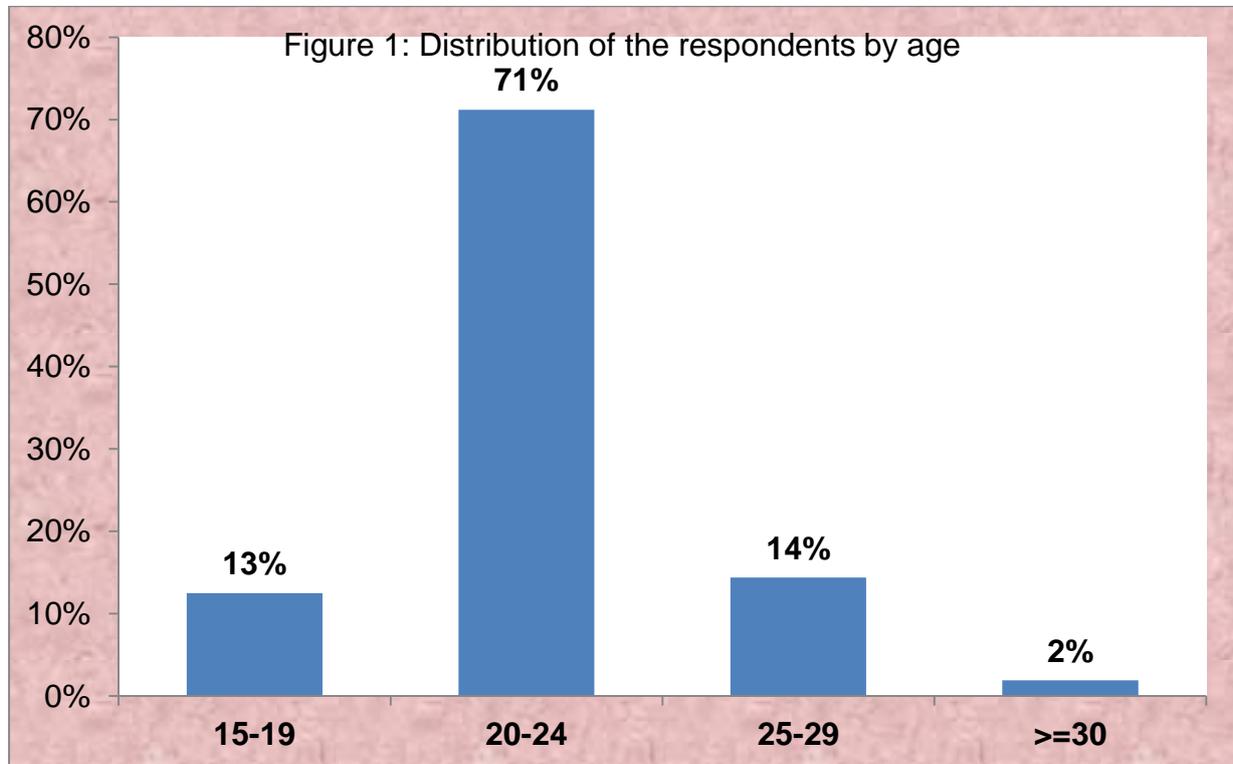
The data were collected via self-administered questionnaires. Using IBM SPSS statistical software version 20, the data were entered, cleaned and analysed. The univariate and bivariate analyses of sexual practice and contraceptive use were carried out against the respondents' age, sex, religion, ethnicity, living conditions, duration of stay in college, knowledge of contraceptive methods and field of study. Descriptive statistics such as the mean, standard deviation, median and range were used for the continuous variables, while frequency listings were used for categorical variables. The chi-square test was also used to assess the statistical significance of the associations between the categorical variables.

4.3 Research findings

4.3.1. Socio-demographic characteristics of respondents

Question 1: Age. This question addressed the age of the respondents. A total of 327 male 45 (14%) and 282 female (86%) students provided their responses, making the response rate 97.3%. The age of the respondents ranged from 18 to 38 years, with a

mean age of 22.23 and a standard deviation of ± 2.7 years. Most of the respondents were in the age category of 20-24 years.



The age distribution of the respondents accords with the age distribution of other studies conducted in universities in Ethiopia (Tegabu *et al* 2011: 22, Tamire and Enqueselassie 2007: 112).

Question 2: This question addressed the distribution of respondents by their ethnic groups.

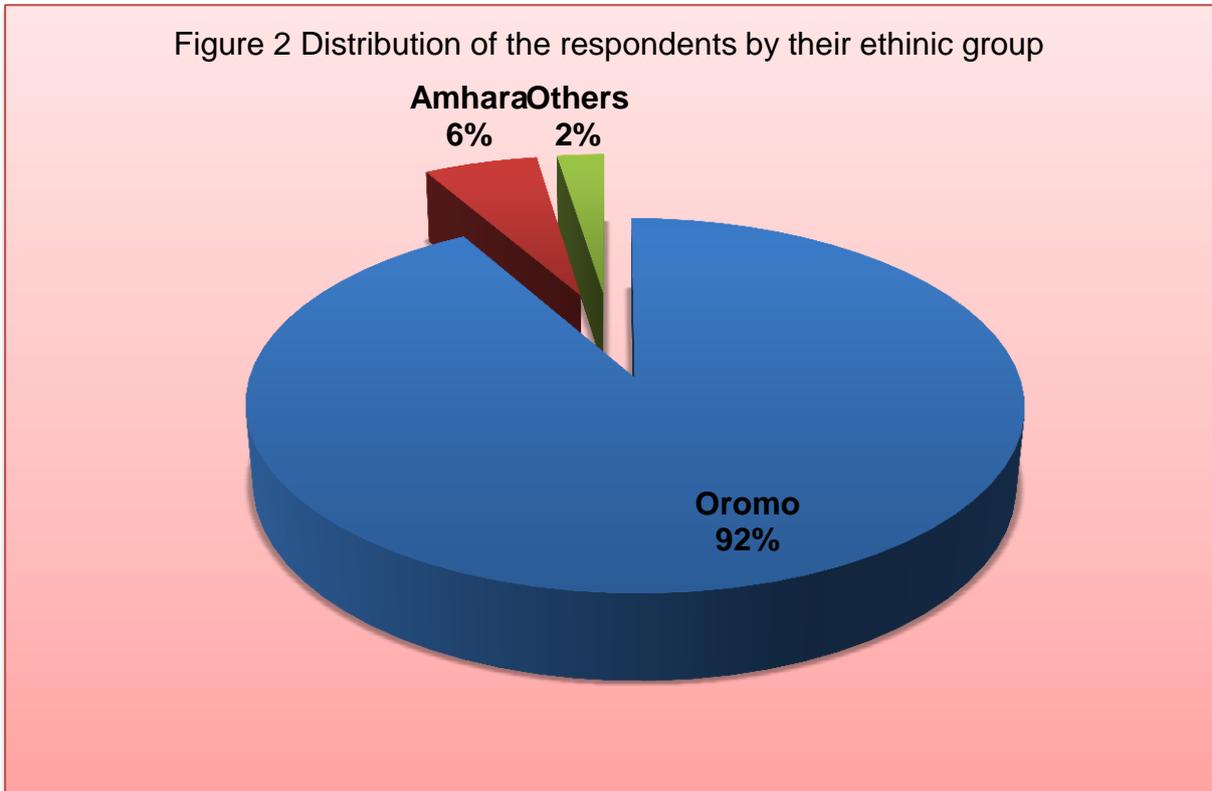


Fig2 shows the distribution of the different ethnic group in the study population. Despite the large number of ethnic groups in the country, most respondents (92%) came from the Oromo nation. The Oromo comprise about two thirds of the population of the country. In addition, the colleges from which the study population was drawn are located in the central part of the Oromia regional state. Amhara is the second largest nation in the country after the Oromo. The proportion of respondents in the study accords with the actual distribution of the ethnic groups in the area (FDREPHCC 2007:91-116).

Question 3: This question characterised the respondents by the religion they follow.

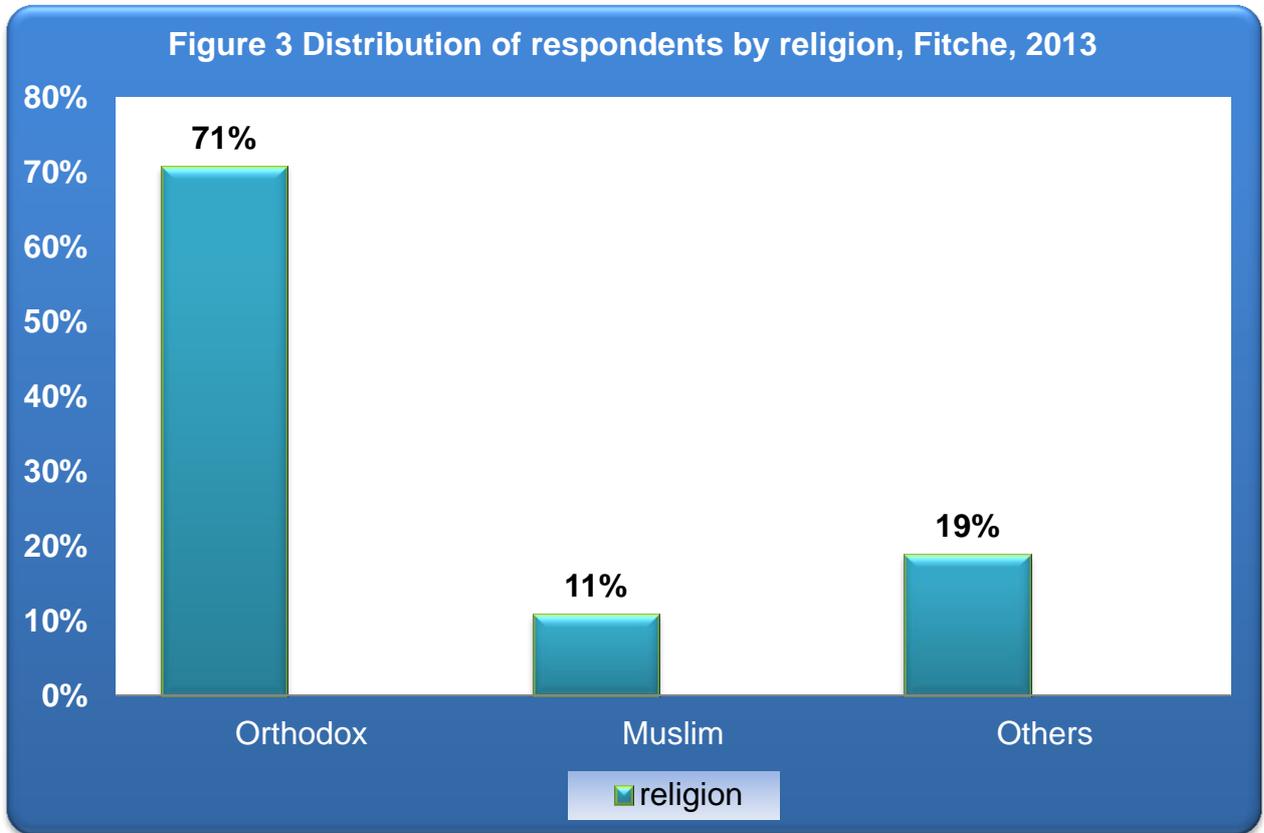
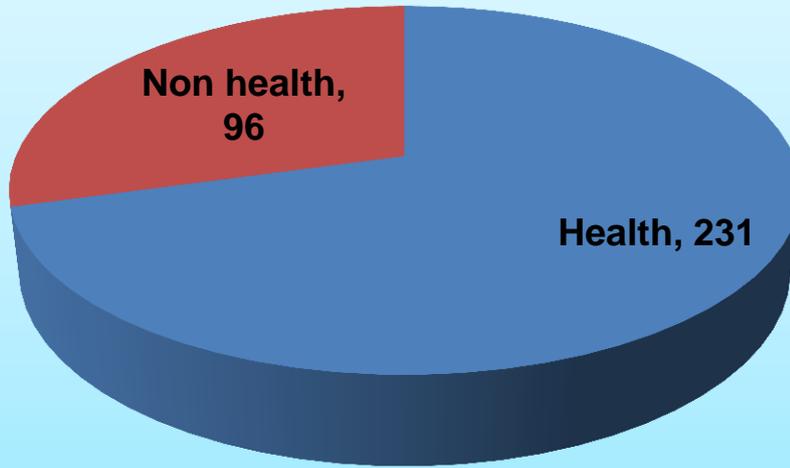


Figure 3 shows the distribution of the respondents in terms of their religions. Christianity and Islam are the two major religions in the country. Among the different types of Christianity espoused in Ethiopia, the Orthodox faith comprises the largest proportion (FDREPHCC 2007:143).

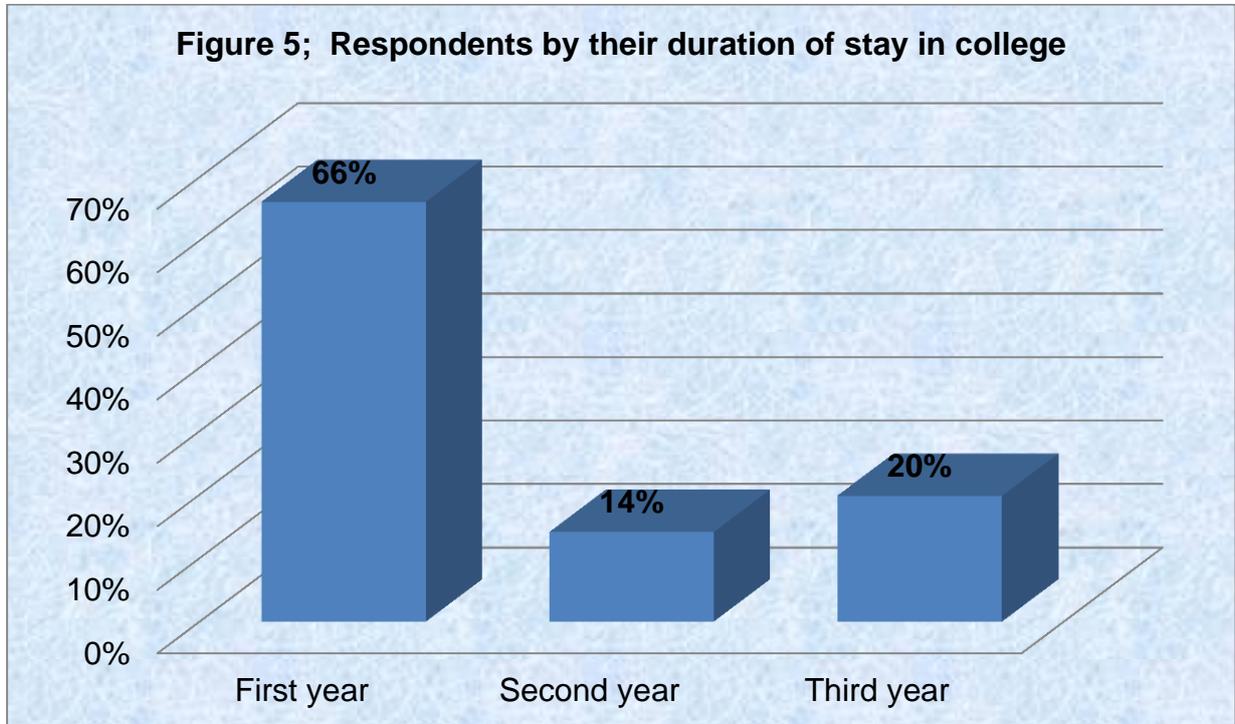
Question 4: This question was about the field of studies of the respondents. They were registered in different fields of studies in the colleges. The fields of studies in which most students were registered are indicated in Figure 4.

Figure 4, Distribution of respondents by their Field of study, Fitch, 2013



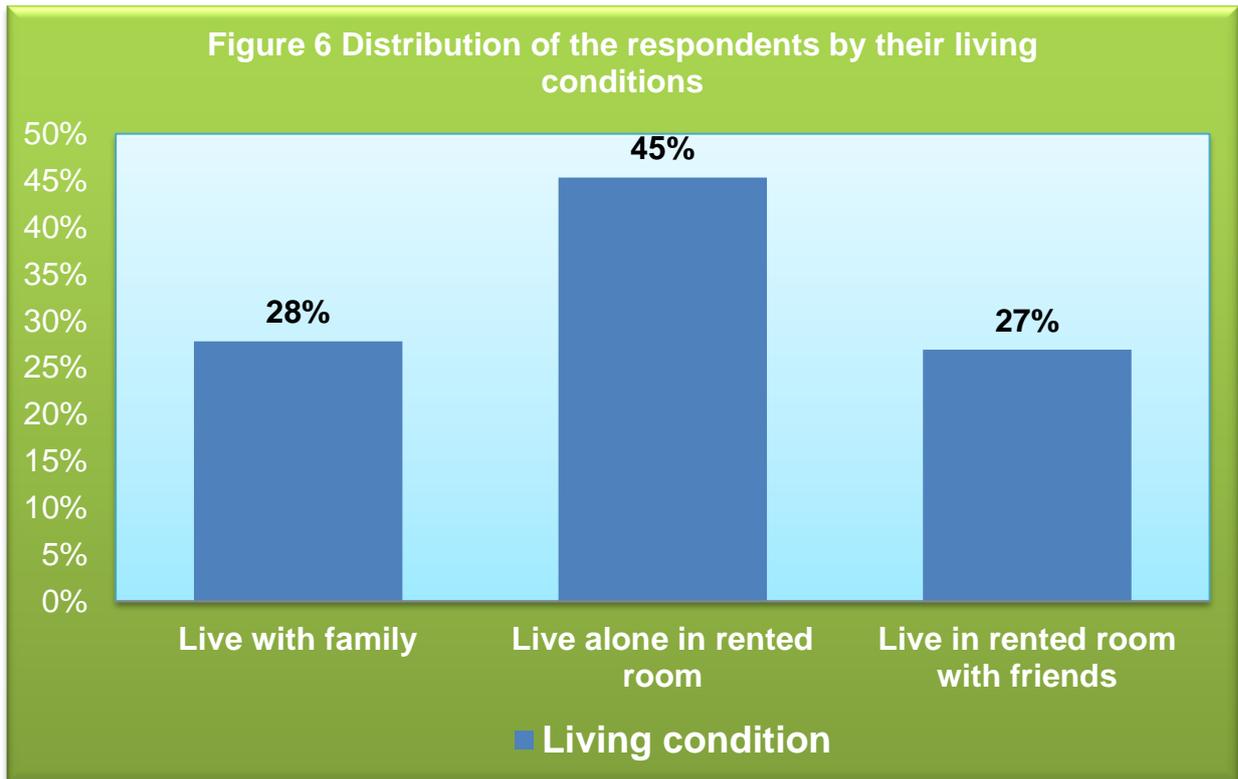
Most respondents were studying health-related sciences, which include the health extension programme, midwifery and nursing. The non-health departments from which respondents were drawn included information technology, management and secretarial science, animal health and others. A small number of respondents were sparsely distributed in each of these departments. To produce reasonable figures, the departments were merged and presented as health and non-health departments.

Question 5: This question was about the respondents' duration of stay in the colleges. They were in different years of their courses at the colleges, and responded in these terms. The proportion of respondents in each category is indicated in figure 5.



Respondents in their first year of study comprised the largest proportion of the research population. Similarly, most of the respondents were drawn from their first year in a study that assessed merged risk behaviour in five Ethiopian universities (Tegabu *et al* 2012: 21).

Question 6: This question related to respondents' living conditions, which were divided into three categories: living with family, living alone in a rented room, and living with friends in a rented room. The proportion of respondents living in these conditions is indicated in Figure 6.



The proportion of respondents living alone in a rented room (45%) surpasses those living in other conditions. Those who pursue their studies while living with family are the second largest proportion (28%). Those sharing rented rooms account for 27%. In another study, most of the respondents reported living in dormitories on the college campus (96.8%) (Tegabu *et al* 2012: 24).

Question 7: This question addressed the academic performance of the respondents. They were asked to rate their performance as being in the top ten, medium or the bottom ten.

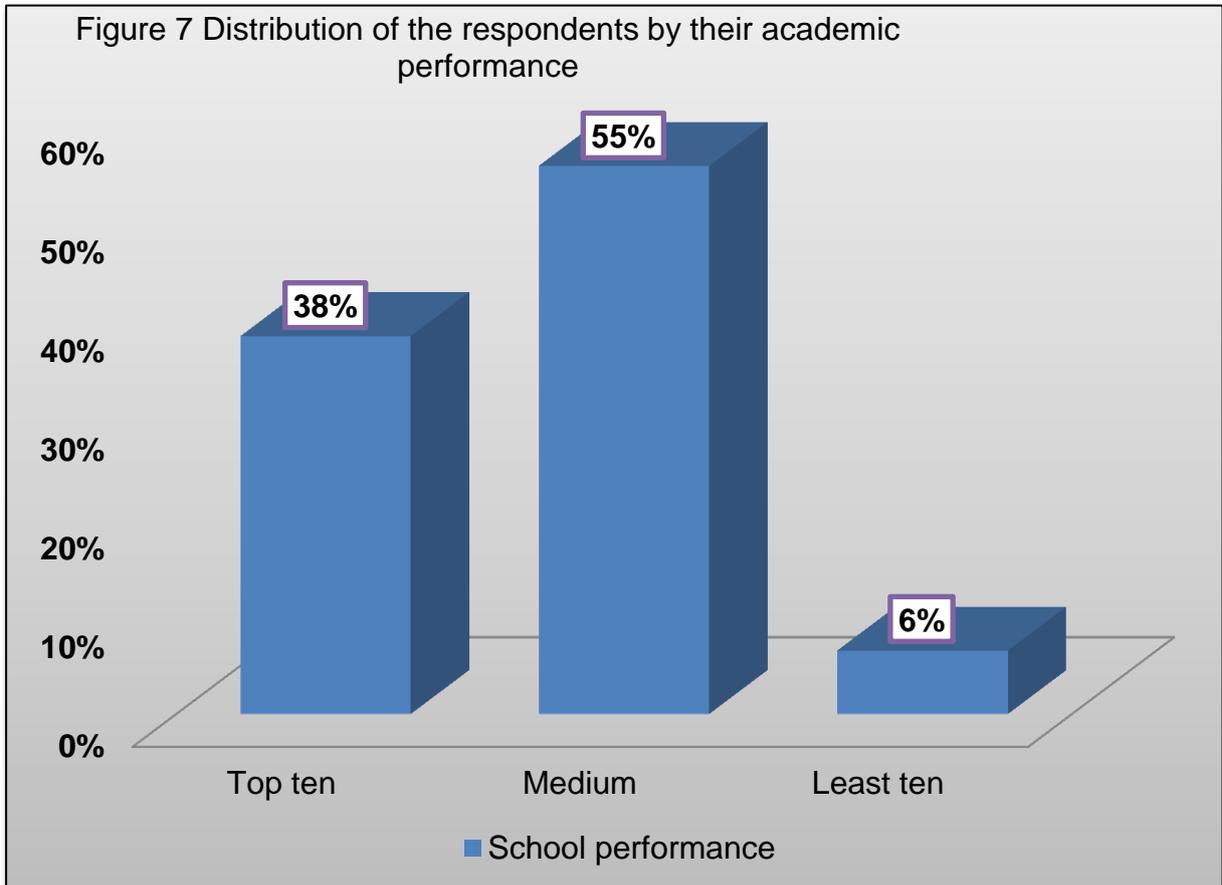


Figure 7 shows the self-reported college performance of the respondents. More than half (55%) rated their performance as medium, while 38% graded their performance as excellent. A few (6%) indicated their performance as weak.

4.3.2 Awareness regarding contraceptives

Question 10: The respondents were asked if they knew that contraceptives are provided free of charge in Ethiopia. The majority of the respondents (283; 86.5%) knew that contraceptives are free, while 16 (4.9%) reported that they were not, and the others (28; 8.6%) did not know whether they were free or not.

Question 11: They were also asked to indicate the methods of contraception they knew from the list. 128 (39.1%) of them knew only one method of contraception, while 199

(60.9%) knew two or more methods of contraception. This is comparable with results obtained in other universities (Tamire and Enqueselassie 2007; Worku 2011).

Table 1; Distribution of respondents by their knowledge of contraceptive methods.

S No	Methods	Frequency	Percentage
1	Pills	11	3.4
2	Injection	51	15.6
3	Loop	8	2.4
4	Condoms	10	3.1
5	Norplant	6	1.8
6	Natural family planning	30	9.2
7	Injection, loop, condom, Norplant	4	1.2
8	Other	12	3.7
9	Indicated all methods	190	58.1

Question 12: This question addressed the respondents' knowledge of natural methods of contraception. Breast feeding was cited by most of the respondents (182; 55.7%) and followed by calendar (safe period) methods (55; 16.5%) as natural family planning methods.

Table 2: Distribution of respondents by their knowledge of natural contraceptive methods

S No	Methods	Frequency	Percentage
1	Withdrawal	12	3.7
2	Menstruation	55	16.8
3	Breast feeding	182	55.7
4	Condom	14	4.3
5	Pregnancy	5	1.5
6	None	18	5.5
7	All	33	10.1
8	Withdrawal and breast feeding	8	2.4
9	Total	327	100.0

Question 13: This question asked for the source of their information about family planning methods. 77 (23.5%) and 34 (10.4%) of the respondents cited school and radio respectively.

Table 3, Distribution of respondents by their knowledge on contraceptives

Questions	Yes	No	I don't know
Q 14. Contraceptives are used only by married people.	35 (10.7%)	276 (84.4%)	16 (4.9%)
Q 15. Using contraceptives can result in pregnancy.	54 (16.5%)	251 (76.8%)	22 (6.7%)
Q-16. Contraceptives should be used all the time while one is sexually active.	183 (56%)	111 (33.9%)	33 (10.1%)
Q-17. After having had unprotected sex, it is not necessary to continue using contraceptives.	202 (61.8%)	81 (24.8%)	44 (13.5%)
Q.18. About 90% of women who use contraceptives do not experience unplanned pregnancy	181 (55.4%)	106 (32.4%)	40 (12.2%)
Q-19. Contraceptives are 100% effective	115(35.2%)	188 (57.5%)	24 (7.3%)
Q.20. Using contraceptives irregularly will not result in pregnancy.	54 (16.5%)	249 (76.1%)	24 (7.3%)
Q.21. Prolonged use of contraceptives results in sterility.	69 (21.1%)	224 (68.5%)	34 (10.4%)
Q.22. Once a women has been on one type of contraceptive for some time she should not be given any information about other methods	56 (17.1%)	243 (74.3%)	28 (8.6%)
Q.23. A woman who has been on contraceptives, and discontinued cannot fall pregnant	44 (13.5%)	254 (77.7%)	29 (8.9%)
Q.24. Having unprotected sexual intercourse only once would not result in pregnancy.	44 (13.5%)	257 (78.6%)	26 (8%)
Q.25. All contraceptives contain hormones.	83 (25.4%)	204 (62.4%)	40 (12.2%)

Respondents' responses to questions 14 to 25 are indicated in table 3.

Question 16: This question asked if contraceptives should be used all the time while one is sexually active. Slightly more than half (183; 56%) of the respondents knew that they should use contraceptives as long as they were engaging in sexual intercourse, while a considerable number of respondents (111; 33.9%) disagreed with this idea, and some (33; 10.1%) did not know what to do (Table 3).

Question 17: Respondents were asked whether continuing the use of contraceptives was necessary after having had unprotected sex. The majority of them (202; 61.8%) replied that continuing the use of contraceptives was not necessary after having had unprotected sex, and 44 (13.5%) said they did not know.

Question 20: This question inquired if pregnancy could be prevented by using contraceptives irregularly. 249 (76.1%) believed that pregnancy could be prevented by using contraceptives irregularly.

Question 21: This asked if the prolonged use of contraceptives resulted in sterility. 69 (21.1%) perceived that the prolonged use of contraceptives might result in sterility, and 34 (10.4%) did not know whether it causes sterility or not.

Question 23: This question addressed whether a woman who has been on a contraceptive and has discontinued it can fall pregnant. 44 (13.5%) responded that a woman who had used contraceptives and then stopped would not get pregnant, while 28 (8.9%) were not sure what would happen if a woman discontinued the use of contraceptives.

Question 24: This question asked if having unprotected sexual intercourse only once could result in pregnancy. 78 (21.4%) of the respondents did not know that a single unprotected sex act can result in an unwanted pregnancy (Table 3).

Question 51: It was also asked what they or their partner could do after having unprotected sex. 22 (6.7%) responded that they did not know, and 10 (3.1%) replied that they would wait for a month to see if they had fallen pregnant.

4.3.3 Pattern of sexual practices

Question 26: This question asked if the respondents had had sex before. Of the 327 respondents 142 (43.4%) reported that they had already initiated sexual practice.

Question 27: This question asked the age at which sexual activity started. The answers ranged from 12 to 26 years. The average age of the first sexual encounter was 19.89 ± 2.37 years. In general, of the sexually active students 39 (26.8%) started sexual practice at an age below 18 years.

Table 4 Distribution of the respondents by sexual practice N=142

Question	Yes	No	Total
Q.28. Are you currently in a sexual relationship?	114 (80.3%)	28 (19.7%)	142 (100%)
Q.29. Can you say your relationship is steady?	114 (80.3%)	28 (19.7%)	142 (100%)
Q. 31. Do you have any other partners besides him/her?	24 (16.9%)	118 (83.1%)	142 (100%)
Q. 36. Have you ever had sex for the exchange of gifts? (n=24)	14 (58.3%)	10 (41.7%)	24 (100%)
Q.38. Did you agree on all occasions to have sex?	22 (15.5%)	120 (84.5%)	142 (100%)

Question 28: This question addressed whether the respondents were currently in a sexual relationship. Of the 142 respondents who had initiated sexual practice, 114 (80.3%) reported that they were currently in a steady sexual relationship.

Question 30: This question asked how long the respondents stayed with a particular sexual partner. According to the reports of the respondents, the relationships of 112 (78.9%) lasted more than one year.

Question 31: This question asked if they had other partners in addition to their current partner, and 24 (16.9%) reported having another partner beside their current partners.

Question 35: This question inquired as to the type of the first sexual partner. Most of the respondents (135, 95.1%) started having sex with a lover, while 7 (4.9%) had started just with somebody.

Questions 32 and 37: These questions asked about the number of partners the respondents had had in the last year and during their stay in college.

Table 5 Respondents' numbers of sexual partners in the last 12 months and during their stay in college; n=142

Question	One partner	Two to three	More than three
Q. 32. How many sexual partners have you had in the last 12 months	101 (71.1%)	11(7.7%)	7(4.9%)
Q.37. During your stay in the college, with how many people have you had sex	106 (74.6%)	12 (8.5%)	6 (4.2%)

Question 33: This question inquired whether respondents had had sex with more than one partner. 11 (7.7%) reported having had two to three partners, while 7 (4.9%) reported having had more than three partners. 106 (74.6%) students reported having had sex only with only one partner during their stay in the college, while 12 (8.5%) reported having had sex with two to three partners and 6 (4.2%) reported having had sex with more than three partners.

Question 34: Different statements were provided to respondents to indicate their preferences. Accordingly they reported that 114 (80.3%) had established steady relationships with boy/girlfriends. 86 (60.6%) prefer to stay with one partner at a time. On the other hand 5 (3.5%) preferred having more than one partner at a time, and another 3 respondents enjoyed having sex regularly.

Having multiple sexual partners in the last 12 months and during their stay in college seems to be a common practice. Of the 142 respondents who reported being sexually active, 18 (12.6%) responded that they currently had more than one partner and were in the last 12 months and during their stay in college. 101 (71.1%) had kept to only one partner during the reporting year. 28.9% did not respond to this question.

Of the respondents who had more than one partner, more than half (14; 58.3%) had engaged in sex to receive gifts.

Table 6 Association of the respondents' characteristics with their sexual practice

	Have you had sex before			X ²	p-value
	Yes	No	Total		
Age					
15-19	2 (4.9%)	39 (95.1%)	41 (100%)	60.534	.000
20-24	99 (42.5%)	134 (57.5%)	233 (100%)		
25-29	35 (74.5%)	12 (25.5%)	47 (100%)		
>=30	6 (100%)	0	6 (100%)		
Total	142 (43.4%)	185 (56.6%)	327 (100%)		
Sex					
male	11 (24.4%)	34 (75.6%)	45 (100%)	6.782	.009
Female	131 (46.5%)	151 (53.5%)	282 (100%)		
Total	142 (43.4%)	185 (56.6%)	327 (100%)		
Religion					
Muslim	22 (62.9%)	13 (37.1%)	35 (100%)	8.078	.018
Orthodox	90 (39%)	141 (61%)	231 (100%)		
Others	30 (49.2%)	31 (50.8%)	61 (100%)		
Total	142 (43.4%)	185 (56.6%)	327 (100%)		
Knowledge of contraceptives					
Have Known					
one method	41 (32%)	87 (68%)	128 (100%)		
Have known					

more than one method	101 (50.8%)	98 (49.2%)	199 (100%)	10.365	.001
Total	142 (43.4%)	185 (56.6%)	327 (100%)		
Field of study					
Health	129 (55.8%)	102 (44.2%)	231 (100%)	47.690	.000
Non-health	13 (13.5%)	83 (86.5%)	96 (100%)		
Total	142 (43.4%)	185 (56.6%)	327 (100%)		

Table 6 depicts the fact that sexual practice increases along with the age of respondents, the proportion of sexual practice being smaller in the age group 15-19 and increasing with every age group. Age and sexual practice are significantly associated with X^2 60.534 and p-value 0.000.

With regard to gender, the female respondents were found to be more sexually active than their male counterparts. Gender was significantly associated with sexual practice, $X^2 = 6.782$ and p-value 0.009.

Similarly the table shows that Muslims were more sexually active than the followers of other religion. The association between religion and sexual activity is significant ($x^2= 8.078...$ with $P= 0.018$)

On the other hand it seems that knowledge of contraceptives tends to increase with sexual practice, as the respondents who knew more than one method of contraceptive practised sex more frequently than those who knew only one method. Thus, knowledge of contraceptive methods was associated with sexual activity, $X^2=10.365$ with p-value 0.001

In addition it appears that the respondents' field of study has an influence on their sexual practice. The proportion of the sexually active is higher in respondents studying health-related sciences. A strong association was seen between sexual practice and the field of study, $X^2 =47.690$, with p-value 0.000. As indicated above, the knowledge of

contraceptives was also associated with the degree of sexual activity of the respondents.

In general, age, gender, the respondents' religion, their knowledge of contraceptive methods, and their field of study was significantly associated with their sexual practice.

Logistic regression was carried out to check for a confounding relationship for the above variables, controlling for age. The age variable was an interval. Sex, religion, the knowledge of contraceptives and the field of study were nominal, which satisfies the level of measurement required for logistic regression analysis.

The valid cases were 327 and independent variables were 5. The ratio of cases to independent variables was 65.4, which satisfies the preferred requirement twenty to one.

Table 7 Association of the respondents' characteristics with their sexual practice

	Have you had sex before			X ²	p-value
	Yes	No	Total		
Age					
15-19	2 (4.9%)	39 (95.1%)	41 (100%)	25.763	0.000
20-24	99 (42.5%)	134 (57.5%)	233 (100%)		
25-29	35 (74.5%)	12 (25.5%)	47 (100%)		
>=30	6 (100%)	0	6 (100%)		
Total	142 (43.4%)	185 (56.6%)	327 (100%)		
Sex					
male	11 (24.4%)	34 (75.6%)	45 (100%)	0.015	0.904
Female	131 (46.5%)	151 (53.5%)	282 (100%)		
Total	142 (43.4%)	185 (56.6%)	327 (100%)		

Religion					
Muslim	22 (62.9%)	13 (37.1%)	35 (100%)		
Orthodox	90 (39%)	141 (61%)	231 (100%)		
Others	30 (49.2%)	31 (50.8%)	61 (100%)	0.302	0.583
Total	142 (43.4%)	185 (56.6%)	327 (100%)		
Knowledge of contraceptives					
Have known one method	41 (32%)	87 (68%)	128 (100%)		
Have known more than one method	101 (50.8%)	98 (49.2%)	199 (100%)	0.451	0.502
Total	142 (43.4%)	185 (56.6%)	327 (100%)		
Field of study					
Health	129 (55.8%)	102 (44.2%)	231 (100%)	21.620	0.000
Non-health	13 (13.5%)	83 (86.5%)	96 (100%)		
Total	142 (43.4%)	185 (56.6%)	327 (100%)		

The relationship between the dependent variable and the combination of independent variables was statistically significant by the model chi-square 57.183, p-value 0.000, which is less than the level of significance of 0.05.

SPSS logistic regression models the relationship by computing the changes in the likelihood of falling into the category of the dependent variable which had the highest numerical code. The responses to “have you had sex before?” were 1= Yes and 2= No. Hence the SPSS output will model the changes in the likelihood of not practising sex. Exp(B) for age was 0.222, implying that a unit increase in age decreases the odds of not practising sex by 77.8%. Similarly Exp(B) for field of study was 6.47, which also

indicates a unit increase in studying non-health related sciences increases the odds of not practicing sex by six-and-a-half times. In addition, marital status, school performance and living conditions were also significantly associated with sexual practice. Significant relationships were not observed between gender, religion and the knowledge of contraceptives with sexual practice in this analysis.

4.3.4. Contraceptive Practices

Question 39: This was an inquiry into the use of contraceptives. Of the 142 respondents who reported being sexually active, 110 (77.5%) used different methods of contraceptives. This is better than the 10.1% (78 cases) contraceptive use reported among university students in Addis Ababa and the 61.4% (1054 cases) average condom use in different universities of the country (Tamire and Enqueselassie 2007: 114, Tegabu 2012: 40).

Question 42: This asked whether or not the respondents had used contraceptives during the last time they had sex. 87 (61.3%) had done so. This is also comparable with the use of condoms in five universities in different part of the country (Tegabu 2012: 41).

Question 43: This asked how often the respondents used contraceptives. 55 (38.7%) reported always using contraceptives, and another 47(33.1%) said that they used contraceptives sometimes, which is comparable with the findings relating to students at other universities (Tegabu 2012: 41).

Question 44: This asked about the type of contraceptive methods respondents used. They reported that they used injections (45; 31.7%), emergency pills (20; 14.1%), contraceptive pills (14; 9.9%), condoms (11; 7.7%), withdrawal (5; 3.5%). These were some of the methods used by the respondents and these methods were also reported by students in Addis Ababa (Tamire and Enqueselassie 2007: 13).

Question 45: This asked for how long respondents had been using contraceptives. 40 (28.2%) had been using their method of choice for more than one year, while 12 (8.5%), 34 (23.9%), and 16 (11.3%) had been using their method of choice for 6 months, three months and one month respectively.

Question 46: This question asked the respondents if they were satisfied with the method of contraceptive they were using. Most of them (90; 89%) were happy with the method of contraception they were using. Only 11 (7.7%) were neutral.

Question 47: This asked where the respondents were getting their free contraceptives. Hospitals were the most common source (50; 35.2%), followed by clinics (30; 21.1%), pharmacies (16; 11.3%) and youth facilities (11; 7.7%). These findings accord with those relating to university students in other areas (Tegabu *et al* 2012: 41).

Question 48: This question asked who decides on the use of contraceptives - the respondents or his or her partner. The majority of the respondents using contraceptives (102; 71.8%) decide with their partners about contraceptive use, whereas 24 (16.9%) decide on their own and 7 (4.9%) need the approval of their partners to use contraceptives.

Questions 49 and 50: These questions asked if the partners of the respondents had ever rejected contraceptive use and yet continued having sexual intercourse with the respondents. 42 (29.6%) of the respondents reported that their partners had rejected the use of contraceptives. More than half (23 out of 42) of the respondents had continued to have sex despite their partners' rejection of the use of contraceptives.

Question 51: Respondents were asked if they knew what to do after having unprotected sex and replied by describing the different measures they take.

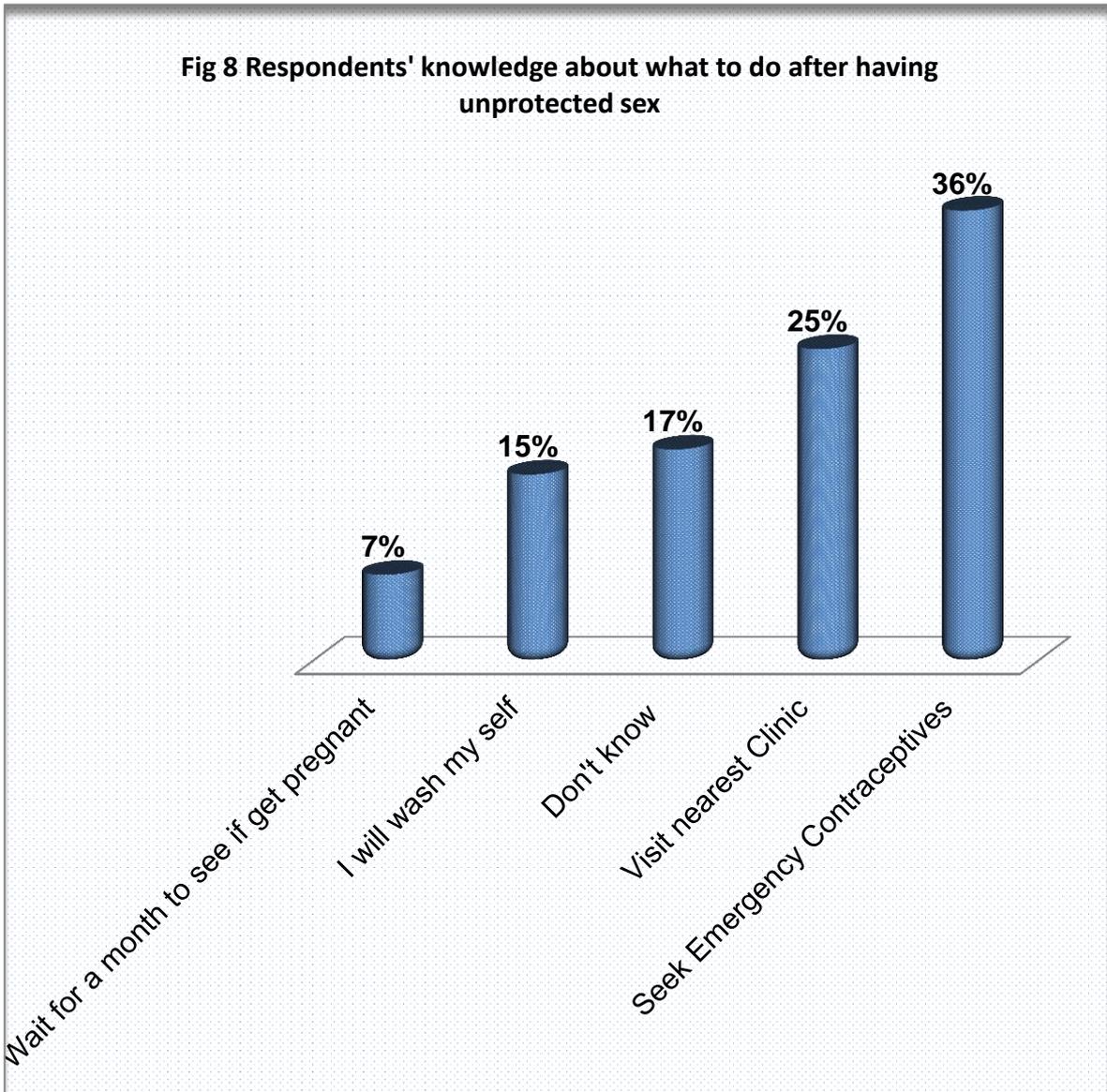


Fig 8 illustrates the responses of the respondents describing what they would do after having unprotected sex. Those who intended to visit clinics (25%) and to seek emergency contraceptives (36%) might be able to avoid unwanted pregnancy. The remaining 39% are at risk of getting unwanted pregnancies and suffering the related consequences.

Questions 40 and 41: These questions asked why some respondents did not use contraceptives and whether either the respondent or his or her partner was concerned about getting pregnant. 323 (22.5%) of the sexually active respondents reported that they were not using contraceptives. Some of the reasons for not using contraceptives

as indicated by the respondents were their partners' rejection of the practice, their failure to think about contraception during sex, and their trust in using natural methods like withdrawal and abstinence. Lack of knowledge about contraceptives and the unavailability of contraceptives were reported by only one respondent (fig 9).

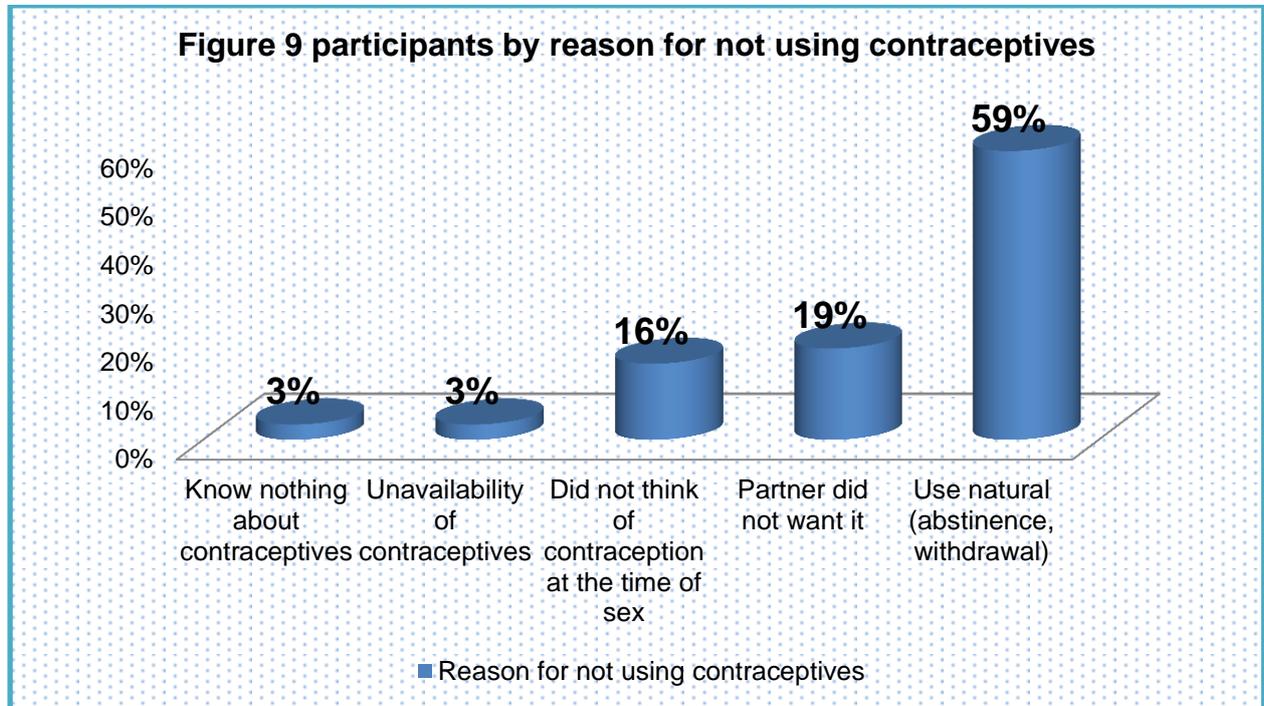


Table 8 Association of respondents' characteristics with contraceptive use

	Use Contraceptives			X ²	p-value
	Yes	No	Total		
<i>Currently in sexual relationship</i>					
Yes	94 (82.5%)	20 (17.5%)	114 (100%)	6.865	.009
No	16 (57.1%)	12 (42.9%)	28 (100%)		
Total	110 (77.5%)	32 (22.5%)	142 (100%)		
<i>Knows what respondent/partner can do after having unprotected sex</i>					
I will wash myself	17 (85%)	3 (15%)	20 (100%)	12.239	.016
I will visit the nearest clinic	28 (84.8%)	5 (7.7%)	33 (100%)		
I will wait for a month to see if I am pregnant	6 (60%)	4 (40%)	10 (100%)		
I will seek the emergency pill	40 (83.3%)	8 (16.7%)	48 (100%)		
I do not know	11 (50%)	11 (50%)	22 (100%)		
Total	102 (76.7%)	31 (23.3%)	133 (100%)		

Table 8 shows, knowing what can be done after having unprotected sex was significantly associated with contraceptive use. A higher proportion of respondents who know something that can be done after having unprotected sex, whether what they

know is wrong or right, used contraceptives than those who do not know what to do. $\chi^2=12.239$ with p-value .016.

4.4 Conclusion

The main contents in this chapter relate to the respondents' socio-demographic data, the pattern of their sexual practice, their knowledge of contraceptive methods and utilization, factors associated with their sexual practice, and their utilization of contraceptives.

The conclusions reached in the study, the recommendations made and the limitations of the study will be discussed in the next chapter.

CHAPTER FIVE

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

5.1 Introduction

Different findings have been reported in different parts of Ethiopia about college students' sexual behaviours. These people are at risk of unwanted pregnancy, sexually transmitted diseases, the consequences of unsafe abortion, and other health problems. Similar problems may occur in different part of the country with a different and/or a similar magnitude. The use of contraceptives by adolescents is affected by different factors, as reported in different parts of the country and internationally. This study was aimed at assessing the sexual practice, knowledge of and utilization of contraception among college students in North Shoa, central Ethiopia.

5.2 Research design and methods

A cross-sectional descriptive quantitative survey was conducted to collect data on the sexual practice, knowledge of and the use of contraceptives by students in the study area, the Fitcha Health Science College, the Nursing School of Tropical Medicine, and Muger College. A sample of 336 students was selected from the three colleges, using a systematic random sampling technique. A structured questionnaire used previously was adapted to collect data. The data were entered, cleaned and analysed using IBM SPSS statistical software version 20.

5.3 Summary and interpretations of the research findings

5.3.1 Socio-demographic characteristics of the respondents

The majority of the respondents (86%) were female students. The ages of the respondents ranged from 18 to 38 years, with the mean age being 22.23 SD \pm 2.7 years. Orthodox Christianity was the most widely held religion by the respondents (70.6%). Most of them were from the Oromo ethnic group (91.7%). More than half of the respondents were in their first year at college (66.1%) and most of the students were pursuing studies in health-related sciences such as midwifery, nursing, and the health extension programme, and (90%).

5.3.2 Pattern of sexual practice

As one of the aims of this study was to determine the patterns of sexual practice and contraceptives use among college students in central Ethiopia, it was necessary to attempt to establish the factors contributing to casual sex in the study population.

The prevalence of sexual activity among the study population (43.4%) seems to be in the upper range when compared with the prevalence reported in similar studies in other parts of the country. Studies of the behaviours of university students in other parts of the country have shown that the prevalence of sexual practice is be comparable with this finding. A sexual value identification study conducted at Jimma University, which is in the south-west part of the country, indicated that 46% of the students held relativist and hedonistic values that predisposed them towards sexual activity (Ambabw 2008). Another study at a similar university found the prevalence of sexual experience among students to be 41.7% among male students and 31.7% among female students (Kasaye 2002). A study aimed at identifying merged risk behaviours in college students conducted at five universities (the University of Gondar, Haromaya University, Jimma University, Hawassa University and Mekele University) in the country reported that the proportion of sexually active university students ranged from 26.9% to 34.2% in different parts of the country (Tigebu *et al* 2011).

Some studies have reported that most students start becoming sexually active at high school, but two studies on high school students in the western part of the country have reported a lower prevalence of sexual activity among high school students (13%-21.5%: Sime and Wirtu 2008, Gebre Yesus and Fantahun 2010). . The finding from this study 43.4% is almost double of the report from the high schools.

24 (16.9%) respondents reported having another partner in addition to their current partner. This figure is lower than the 33.5% reported at Haromaya University (Dingeta 2012). 14 out of the 24 (58.3%) respondents who reported having more than one partner also reported that they would have sex in exchange for gifts. This is comparable with the 52.5% sexual practice with commercial sex workers reported from Haromaya

University (Dingeta 2012). This proportion of respondents is at risk of contracting health problems related to their multiple sexual relationships.

Studies in other countries reported a higher prevalence of sexual practice than that identified in this report. A study that explored sexual and reproductive health behaviours at California Community College reported a higher prevalence of different types of sexual practice: oral 47%, vaginal 52.5% and anal 6.2% (Trieu *et al* 2011). In addition, data from eleven countries indicates that half of the adolescents 15-19 years old are sexually active (Blanc *et al* 2009).

To identify some of the factors affecting sexual behaviours, significant associations between respondents' background characteristics and sexual practice were tested, using the chi square test. Significant associations were observed with age, gender, religion, field of study, and knowledge of contraceptives. Logistic regression was carried out to control for confounding variables, and age, the duration of the respondents' stay in college, the field of study, the marital status, academic performance and the respondents' living conditions were found to be associated.

5.3.3 Knowledge of the respondents on contraceptive methods

As one of the intentions of this study was to assess level of knowledge of college students about different contraceptive methods, the respondents were asked a variety of questions about contraceptive methods, their use and their effectiveness. All of the respondents knew about at least one method of contraception, and most knew two and more methods of contraception (60.9%). This is congruent with the information from the Ethiopian DHS, which found that knowledge of contraception is nearly universal in Ethiopia. According to the DHS report, 97.2% of all women and 98.8% of sexually active unmarried women know every method of contraception. Similarly 98.4% of all men and 99.9% of sexually active unmarried men know all methods (EDHS 2011).

Though information about contraceptives is heard from different sources, the respondents' schools were the most common source of information (77; 23.5%) compared to other single sources such as radio (34; 10.4%), television (23; 7%), parents (6; 1.8%), and the printed media (3; 9%). School was indicated as the source of their information by most of the respondents, which could relate to the fact that most

of them were studying health-related fields. More than half of the respondents had heard information from a combination of media, which is more than one medium. In similar studies other media and peers are a more common source of information than school (Tamire and Enqueselassie 2007).

Though most respondents have information about contraceptive methods, a considerable number of respondents replied wrongly to the knowledge questions. In this regard, only about half (183; 56%) knew that they should use contraceptives as long as they are sexually active. The proportion of respondents who provided wrong responses to the knowledge questions was considerable. For instance, as depicted in Table 3 of Chapter 4, 44 (13.5%) and 29 (8.9%) replied yes and I don't know respectively to the question 'a woman who has been on contraceptives, and discontinued cannot fall pregnant'. In addition, 78 (23.8%) gave a wrong answer to the question 'Using contraceptives irregularly will not result in pregnancy'. Furthermore, 69 (21.1%) agreed that the prolonged use of contraceptives results in sterility, while 34(10.4%) did not know. About 35 (10.7%) believe that contraceptives are used only by married people.

The respondents were also asked whether they knew what to do after having unprotected sexual practice. 61% described the correct measures they should take (seeking for emergency contraceptives - 36%, and visiting nearby clinics - 25%). The responses of the remaining 36.6% of the respondents situates them as being at risk of getting unwanted pregnancies and contracting the related health risks: I wash myself (20; 14.1%); I wait for a month to see if I am pregnant (10; 7%); and don't know (22; 15.5%). In general, almost about 20-40% of the respondents responded wrongly to knowledge questions (see Table 3 of Chapter 4). This is congruent with the recent research findings from different parts of the country on college and university students, which is that only few students had good knowledge of contraceptives (Tamire and Enqueselassie 2007; Worku 2011; Desta and Regassa: 2011).

5.3.4 Contraceptive practice among college students

The other objective of the research was to ascertain the extent of contraceptive use among college students. A number of different questions were therefore posed to the respondents on the topic of the use of contraceptives. Out of the 142 sexually active students, 110 (77.5%) reported that they had used any method of contraceptives. The

rate in the research population is therefore higher than the rate in the country as a whole, as the official Contraceptive Prevalence Rate is 29%. The EDHS (2011) has reported that educated women (68%) use contraceptives more than uneducated women (22%), figures which accord very well with the findings in this report.

Contradictory reports have been written regarding adolescents' use of contraceptives. Blanc *et al* (2009) reported that 75% of sexually active adolescents in developing countries don't use contraceptives. On the other hand, it has also been reported that contraceptive use has increased among adolescents, condoms and pills being the popular methods (Wendy *et al* 2000). The findings derived from this study support the second contention, as more than 70% of the sexually active respondents reported using various methods of contraception.

The prevalence of the use of contraceptives was reported to be 10.1% among college students in Addis Ababa (Tamire and Enqusilassie 2007). This is a much lower than the figure in this report, which is 77.5%. In the former study 53 pregnancies were also reported, out of which 36 (73.5%) were unwanted. In a similar study 38 cases of abortion were reported, which was 71.7% of all the pregnancies. The abortions had been self-inflicted or performed by people who lack the requisite formal training. This exceeds the global estimate that one out of every ten pregnancies ends in unsafe abortion (WHO: 2011:28). Unsafe abortion is among the top five causes of maternal deaths in Ethiopia (Abdella 2010: 116-122).

The measure of the utilisation of contraceptive methods (77.5%) in this study is also better than the 41.1% reproductive health service utilisation in Jimma Town in the southwest of Ethiopia (Ayalew and Gelaw 2004: 92-99). Family planning utilisation was 17.6% in the town. The 41.1% reproductive health service utilisation includes medical check-ups, the Treatment of Sexually Transmitted Infections, HIV voluntary counselling and testing, family planning, and abortion care. In addition, among sexually active students at Jimma University only 46.2% used condom consistently, which figure is lower than that found in this study (Kassaye 2002). In 2009 very few (6.8%) of the students at Jimma University reported using emergency contraceptives (Tajure 2010).

As against the findings in other studies (Ahmed, Moussa, Petterson and Asamoah 2012; Tajure 2010; Kassaye 2002) in which condoms and emergency contraceptives were found to be popular among college students, most of the students in this study reported using injectable contraceptives.

The decision to use contraceptives is made by both partners in 102 cases (71.8% of the respondents), while 24 of the respondents (16.9%) decided by themselves. This could be the reason for the better utilisation of contraceptive methods. 7 respondents (4.9%) needed the permission of their partners to use contraceptives.

5.4 Factors contributing to casual sex and contraceptive use

Age, the duration of the stay in college, and the field of study were significantly associated with sexual behaviour.

Various factors are reported in another study to be associated with contraceptive utilisation among adolescents, including peer influence, community pressure, ethnicity, educational aspirations, the nature of the relationship and the sexual experience, sexual beliefs, and family attitudes (Kirby *et al* 2002). In this study two factors - currently being in a sexual relationship and knowledge of what to do after having unprotected sex - are significantly associated with contraceptive utilisation.

One of the intentions of this study was to identify the factors affecting contraceptive use. Some of the factors reported by the respondents were their preference for natural methods like abstinence and withdrawal, partner rejection of the use of contraceptives (4.2%), and difficulty of thinking about contraceptives during sex (3.5%). Ashton *et al* (2009) reported that existence of restrictive laws, the unpleasant way in which services are provided (including the providers' censorious approach and the difficulty of the administrative procedures at the clinics), and the cost of accessing the services of offer services as some of the factors reported to discourage adolescents from utilizing contraceptives.

5.5 Conclusion

The study was conducted with the purpose of assessing the patterns of sexual practice, the knowledge of methods of contraception, and the use of contraceptives among college students in central Ethiopia.

The results indicate that a comparable proportion (43.4%) of the respondents are sexually active and that 39 (26.8%) initiated sexual practice before the age of 18 years. 24 (16.9%) of the sexually active respondents reported having multiple sexual partners. Furthermore, 14 (58.3%) of them practised sex for exchange of gifts. Hence, an important number of students evinced behaviours which make them vulnerable to health risks: unwanted pregnancies, unsafe abortions, and sexually transmitted diseases including HIV, among others.

The respondents have a good knowledge of contraceptive methods, as all know at least one method, and 199 (61%) have known two and more methods.

Despite knowledge of contraceptive methods, only about half (183; 56%) of the respondents held the opinion that they should use contraceptives because they are sexually active.

With regard to misconceptions, a large proportion of respondents had a variety of different misunderstandings. For instance, 78 (21.4%) did not know that a single unprotected sex act can give rise to pregnancy, and a large proportion (249; 76.1%) believed that pregnancy could be prevented by the irregular use of contraceptives. On the other hand, 69 (21.1%) thought that the prolonged use of contraceptives results in sterility.

Furthermore, 202 (62%) believed that there is no need to continue with contraceptives after having unprotected sex, and 44 (13.5%) of the respondents did not know what to do. Fewer than 30% knew that continuing contraceptives after unprotected sex is necessary.

About 10% of the respondents responded either that they did not know what to do after having unprotected sex or would wait to see if pregnancy occurred (7% did not know and 3% would wait for the pregnancy to occur).

Hence, it is possible to conclude that there is a considerable knowledge gap and many misconceptions in the research population regarding the effectiveness, use and side-effects of contraception.

Though contraceptive use among the members of the study population was encouraging, 43 (33.1%) reported that they use contraceptives only sometimes. In addition, a considerable proportion perceived the irregular use of contraceptives as preventing pregnancy. 32 (22.5%) of the sexually active respondents were not using contraceptive methods at all, which is notable number. Among the reasons given for not using contraceptives were the partner's rejection of contraception (19%) and not thinking about contraceptives during sex (16%).

The findings of the study therefore indicate that a remarkable number of respondents do not use contraceptives.

5.6 Recommendations

The findings of this study indicate that despite the respondents' knowledge of contraceptive methods there was a significant degree of misconception of the effectiveness of contraception, its proper utilisation, and its side effects.

Health education aimed at the young should therefore communicate how each method of contraception works, its effectiveness and proper utilisation, to help the learners benefit from the methods.

Among the reasons given for not using contraceptives was the difficulty of thinking about contraception during one's involvement in the sex act. In addition, a remarkable proportion of the respondents did not know what they or their partner could do after having unprotected sex. Adolescents need to know how to protect themselves before and after having casual sex. Interventions which are tailored to the needs of adolescents and which address their knowledge and skill gaps need to be available to each college student.

A partner's objection to the use of contraception was another of the reasons given for not practising safe sex, as indicated in this report. Therefore any intervention which

targets adolescents' sexual and reproductive health needs should take the attitudes of male partners into account.

Ideally, college students are eligible for the provision of a range of contraceptive methods, but many research reports on contraceptive use among college students in the country have focused on the use of condoms and emergency contraception. Medium- and long-acting contraceptive methods may benefit students more by the reducing the number of their repetitive visits to health facilities and the related service delivery problems.

In addition, long-acting contraceptive methods are also more effective than emergency contraception and condoms (WHO 2011). Condoms may be advised as effective contraceptive methods to prevent sexually transmitted infections.

It is recommended that the findings derived from this study should be consolidated with the findings from other similar studies, and used to address the health risks of the Ethiopian student population thereby identified.

5.7 Contribution of the study

This study has contributed the knowledge of the sexual practice and contraceptive use of Ethiopian college students, especially those engaged in health-affiliated studies. A slightly better use of contraceptives has been observed in this research population than in other Ethiopian populations similarly studied.

5.8 Limitations of the study

As indicated in the earlier analysis, certain attributes of the study subjects dominated over the others, particularly certain socio-demographic characteristics. Greater numbers of female students than male were included in the study. However, there is no reason to believe that the findings could not be generalised to other college students in similar areas.

The information gathered relied on self-reporting. It may therefore have been skewed by the over-reporting or under reporting of some behaviours of the respondents.

The use of a contrasting research paradigm such as qualitative research could have elicited different findings.

5.9 Final conclusion

This chapter has covered the conclusion and recommendation of the study. The purpose of the study was to assess the patterns of sexual practice, and knowledge of contraceptives, and extent of their use among college students in central Ethiopia. The findings derived from this study have revealed the sexual practices and contraceptive use among college students in largely health-affiliated colleges in central Ethiopia.

The sexual practices described in this study are comparable with those described in other studies on college students, but in this study most respondents reported that their relationship with their partners was steady. In addition, more respondents preferred staying with one partner at a time. Very few respondents preferred enjoying sex with different partners, but the proportion of respondents practising multi-sexuality cannot be overlooked.”

The knowledge of contraceptive methods among this cohort of college students is comparable with that described in similar previous Ethiopian studies. The students seem to know what the methods of contraception are, but their knowledge of the effectiveness, safety and side effects of the methods and their proper utilisation leaves a great deal to be desired.

As knowledge and a sense of safety determines the utilization of the different contraceptive methods, this may need attention and further work in the future, to increase the confident utilisation of subjects’ contraceptive methods of choice.

With regard to contraceptive utilisation - despite the fact that their knowledge levels were comparable, a better proportion of respondents in this study reported contraceptive use than in other studies in the country. The challenges related to contraceptive utilization identified in other previous studies were also reported here, though the proportion was lower. They included the unavailability of particular methods, a lack of knowledge, a desire for spontaneity leading to not thinking about contraception at the time of sex, and a partner’s adamant rejection of the use of contraception.

The commitment to addressing adolescents' reproductive health needs should therefore be realised in practice through addressing obstacles identified as limiting adolescents' utilization of the services provided.

Annexure A



**UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE**

HS HDC/110/2012

Date: 29/11/2012

Student No: 44928599

Project Title: **Patterns of sexual practices and contraceptive use among college students, in North Shoa, central Ethiopia**

Researcher: ROBI. T. M.

Degree: **Masters in Public Health**

Code: DIS4986

Supervisor: Dr **Mathilda Mokgatle**

Qualification: PhD

Joint Supervisor: N/A

DECISION OF COMMITTEE

Approved

Conditionally Approved

Prof L Roets

CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

Dr MM Moleki

ACTING ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

Annexure B

Date: 3 December 2012

Oromia Regional Health Bureau

Finfine

Subject: Request for permission to conduct research in Fitcha Town

Dear Sir/Madam,

I am, Teshome Motuma and I am MA Public Health student at University of South Africa. My degree requires that I conduct research around Public Health issues in my country

And I am kindly requesting your esteemed Bureau to give me permissions to conduct research in Fitcha Town of North Shoa zone. I have included a copy of the research proposal and ethical clearance.

The title of my research is the Patterns of sex and contraceptive use among college students, in North Shoa, central Ethiopia. The aim of this study is to determine the patterns of sexual practices and contraceptives use among college students in central Ethiopia. The research approach involves collecting data using a self-administered structured questionnaire from respondents while studying at college during the time period stipulated above. I have already received ethical clearance from the department of health studies UNISA.

I promise that if granted such permission, I will observe all ethical rules of good practice as pertinent to the Department of Health.

I also attach hereto a copy of my research protocol, and undertake to disseminate research results to the health district.

Thanking you for the anticipated favorable response.

Yours faithfully,

Signature of Researcher

Annexure C

BIIROO EEGUMSA FAYYAA
OROMIYAA



OROMIA HEALTH BUREAU

የኦሮሚያ ጤና ጥበቃ ቢሮ

Lakk/Ref. No. BE/20/43772/1-2/2005

Guyyaa /Date 26-3-2005

Kolleejjii Saaynisii Fayyaa Fiicheetiif
Kolleejjii Mogoriif
Kolleejjii "Nursing School of tropical Medicine" tiiff

Fiichee

Dhimmi: Xalayaa deeggarsaa ilaala

Akkuma beekamu Biiron keenya ogeeyyii, dhaabbilee akkasumas namoota qorannoo gaggeessuuf piropoozaala dhiyeeffatan piropoozaala isaanii madaaluun akkanumas iddoo biraatti ilaalchisanii fudhatama argatee (approved) dhiyaateef, piropoozaala isaanii ilaaludhaan waraqaa deeggarsaa nikkenna. Haaluma kanaan mata-duree" **Patterns of Sexual practices and contraceptive use among college students in North Shoa, Central Ethiopia**" jedhurratti **obbo Tashoomaa Mootummaa Roobii Kolleejjii keessan** keessan keessatti hojjachuuf piropoozaalii isaanii Koree "Health Research Ethical Review Committee" **Unarsiitii Aafrikaa Kibbaatiin (UNISA)** mirkaneessisanii dhiyeeffataniiru. Haaluma kanaan Biiron keenyaa piropoozaala kana ilaaluun qorannoon kun akka hojiirra oolu murteesse jira. Waan kana ta'eef hojii qorannoo kanarratti deeggarsa barbaachisaa ta'e akka gootaniif jechaa, **obbo Tashoomaa Mootummaa Roobii** wayitii qorannoon kun qaaceffamee xumurame fiiriisaa kooppii tokko Biiroo Eegumsa Fayyaa Oromiyaatiif akka galii godhu garagalchaa xalayaa kanaatiin isaan beeksifna.

Anis, obbo Tashoomaa Mootummaa Roobii wayitii qorannoon kun qaaceffamee xumurame fiiriisaa kooppii tokko Biiroo Eegumsa Fayyaa Oromiyaatiif akka galii godhu mallattoo kiyaan mirkaneessa.

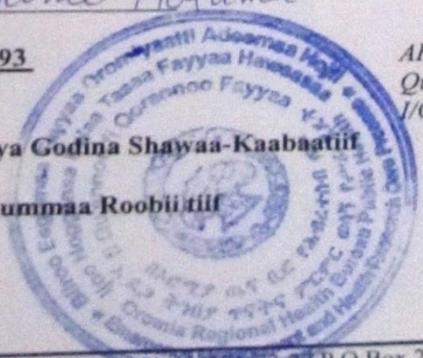
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Guyyaa 26/03/2005
Lakk. Bilbilaa 0911474193

Nagaa wajjin

Tummaa Guutaa

AHIH/Balaa Tasa Fayyaa Hawaasaa
Qu'annoo fi Qorannoo
I/G/ A Adeemsa xiqqaa Q/Qorannoo

G/G
Waajjira Eegumsa Fayyaa Godina Shawaa-Kaabaatiif
Fiichee
Obbo Tashoomaa Mootummaa Roobii tiif
Bakka jiranitti



Tecssoo: Tel:+251-11-371-72-77,Fax:+251-11-371-72-77 P.O.Box.24341 E-mail: ohbhead@telecom.net.et
Address: ADDIS ABABA/FINFINNE-ETHIOPIA

Annexure D

1.1 Questionnaire

UNISA (University of South Africa) Department of Health studies

Self-Administered Questionnaire for the assessment of the pattern of sex and contraceptive use among college students

This study is designed to assess factors affecting the pattern of sex and contraceptive use among college students. Your responses are very important and valuable to the successful completion of this study.

Please be honest in filling this questionnaire, as it will be solely used for research purpose. Your and your facility information details and the responses you provided will not be disclosed.

You may not be directly benefited participating on the research but the finding of the study may be used by concerned body as base line data for further study or plan intervention.

I. Socio-demographic Characteristics			
No	Question and Filters	Coding Categories	Skip
1	Age (Years): ____ Years		
2	Gender:	Male-----1 Female-----2	
3	Marital Status	Single.....1 Married.....2 Divorced.....3 Widowed.....4	
4	Religion	Orthodox-----1 Muslim-----2 Catholic-----3 Protestant-----4 Other specify----99	
5	Ethnicity	Oromo-----1 Amhara-----2 Other specify----99	
6	Field of study	IT-----1 Nursing-----2 Mid wifery-.....-3 Health extension program-----4 Other specify-----99	
7	Total year (s) of stay in the college: ----- Years	One year-----1 Two years-----2 Three years-----4 More than 3 years-----5	

8	Living condition	Live with both parents-----1 Live with mother only-----2 Live with father only-----3 Live in rented room alone----4 Live in rented rooms with friends-5	
9	How do explain your performance at the college	Top ten-----1 Medium-----2 Least ten-----3	
II. Awareness Regarding Contraceptives			
10	Contraceptives are free of charge in Ethiopia	Yes -----1 No-----2 I don't know-----3	
11	Which ones are methods of contraception? (Tick all the methods you know)	Pill-----1 Injection-----2 Loop-----3 Condoms-----4 Norplant-----5 Natural family planning-----6 Others specify-----99	
12	Which ones are regarded as natural family planning methods?	Withdrawal-----1 Menstruation-----2 Breastfeeding-----3 Condom-----4 Pregnancy-----5	

		None-----6	
13	Which one is/are your source of information (tick what's applicable)	Radio-----1 Television-----2 School-----3 Parents-----4 Printed material-----5 Others specify-----99	
14	Contraceptives are only used by married people.	Yes -----1 No-----2 I don't know-----3	
15	Using contraceptives can result in pregnancy.	Yes -----1 No-----2 I don't know-----3	
16	Contraceptives should be used all the time as long as one is sexually active.	Yes -----1 No-----2 I don't know-----3	
17	After having had unprotected sex, it is not necessary to continue using contraceptives.	Yes -----1 No-----2 I don't know-----3	
18	About 90% of women who use contraceptives do not experience unplanned pregnancy.	Yes -----1 No-----2 I don't know-----3	
19	Contraceptives are 100% effective.	Yes -----1 No-----2 I don't know-----3	

20	Using contraceptives irregularly will not result in pregnancy.	Yes -----1 No-----2 I don't know-----3	
21	Prolonged use of contraceptives results into sterility.	Yes -----1 No-----2 I don't know-----3	
22	Once a women has been on one type of contraceptives for some time they should not be given any information about other methods	Yes -----1 No-----2 I don't know-----3	
23	A woman who has been on contraceptives, and discontinued cannot fall pregnant	Yes -----1 No-----2 I don't know-----3	
24	Having unprotected sexual intercourse only once would not result in pregnancy.	Yes -----1 No-----2 I don't know-----3	
25	All contraceptives contain hormones.	Yes -----1 No-----2 I don't know-----3	
III. SEXUAL PRACTICES			
26	Have you had sex before?	Yes -----1 No-----2	→ Stop here
27	At what age did you have sex first?	At age _____ (in years).	

28	Are you currently in a sexual relationship?	Yes -----1 No-----2	
29	Can you say your relationship is steady?	Yes -----1 No-----2	
30	How long have you been with your partner?_	_____	
31	Do you have any other partners besides him/her?	Yes -----1 No-----2	Skip to Q33 →
32	How many sexual partners have you had in the last 12 months?	_____	
33	Do you have sex with more than one partner?	Yes -----1 No-----2	
34	Which statements below are true? (You may answer more than one)	I have a steady boy/girlfriend-----1 I prefer to stay with one partner at a time -----2 It's better to have more than one partners at a time-----3 Indicate the number of partners you prefer _____ I enjoy having sex regularly--4	
35	My first intercourse was with	A Lover-----1 Just somebody-----2	
36	Have you ever had sex for the exchange of gifts?	Yes-----1	

		No-----2	
37	During your stay in the college, with how many people have you had sex with?	1 person-----1 2 – 3 people-----2 4 – 5 people-----3 6 or more people -----4	
38	Did you agree in all occasions to have sex?	Yes-----1 No-----2	
IV. CONTRACEPTIVE PRACTICES			
39	Do you use contraceptives?	Yes-----1 No-----2	→Go to Q-42
40	Why didn't you use contraceptives? (If said no to question 39)	Know nothing about contraceptives-----1 Unavailability of contraceptives-----2 Partner did not want it -----3 Did not think of contraception at the time of sexual-----4 Other (Specify) -----99	
41	Were you/your partner not concerned that you/your partner may fall pregnant?	Very scared -----1 Scared-----2 Not at all-----3 Very pleased-----4	
42	Did you use contraceptive last	Yes-----1	

	time you had sex?	No-----2	
43	How often do you use contraceptives?	Always-----1 Sometimes-----2 Never-----3	
44	What type of contraceptives do you/your partner use? (Tick all that you use)	Condom-----1 Emergency pills-----2 Injection-----3 Contraceptive pill-----4 Loop-----5 Withdrawal method-----6 Other specify-----99	
45	How long have you used that contraception?	1 month-----1 3 months-----2 6 months-----3 More than 1 year-----4	
46	Are you satisfied with the method you use?	Very satisfied-----1 Satisfied-----2 Neutral-----3	
47	Where can you freely get contraceptives?	University clinic-----1 Clinics-----2 Youth facilities-----3	

		Pharmacies-----4 Hospitals-----5 Others (specify-----99	
48	From you or your partner, Who is the decision maker on contraceptive use?	Me-----1 Both of us-----2 My Partner-----3	
49	Has your partner ever objected to using contraception?	Yes-----1 No-----2	
50	If yes, did you continue having sexual intercourse that particular time?	Yes-----1 No-----2	
51	Do you know what you/or your partner can do if you had unprotected sex?	I will wash myself-----1 Visit the nearest clinic-----2 Wait for a month to see if I am pregnant-----3 Seek emergency pill-----4 Do not know_____5	

Thank you for your participation

12. REFERENCES

- Abdella. A. 2010. Maternal Mortality Trend in Ethiopia. [Ethiop. J. Health Dev. 2010;24 Special Issue 1:115-122]
- Ahmed. F, Moussa. K, Petterson. K and Asamoah. B. 2012. Assessing knowledge, attitude, and practice of emergency contraception: a cross-sectional study among Ethiopian undergraduate female students. <http://www.biomedcentral.com/1471-2458/12/110>
- Amazigo U, Silva N, Kauman J, Obikeze D. 1997. Sexual activity and Contraceptive knowledge and use among in-school Adolescents in Nigeria, International Family planning perspectives. Vol.23, No1.
- Ambaw F.2008. Predictors of Sexual Value Systems among Jimma University Students, Southwest Ethiopia. Ethiop J Health Sci. Vol. 18, No.3 November 2008
- Ambaw. F, Mossie. A, Gobena. T. 2010. Sexual Practices and their Development Pattern among Jimma University Students, Ethiop J Health Sci.
- Ashton, J, Dickson, K., and Pleaner. M. 2009. Evolution of the national adolescent friendly clinic initiative in South Africa, WHO.
- Ayalew, T. and Gelaw, Y. 2004. Adolescent Reproductive Health Service in Jimma City: Accessibility and utilisation. Ethiop J Health Sci. Vol.19 No.2
- Babbie, ER and Mouton, J. 2007. The practice of social research. 11th edition. Cape Town: Oxford University Press.
- Beadnell, B, Morrison, D. M, Wilsdon, A, Wells, E. A, Murowchick, E, Hoppe, M, 2005. Condom use, frequency of sex and number of partners: Multidimensional characterization of adolescent sexual risk-taking. Journal of Sex Research, 42, 192-202.
- Bearinger L, Sieving R, Ferguson J, and Sharma V. 2007. Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential. www.thelancet.com Vol 369 April 7, 2007
- Blum, Robert, W, Kristin, Nelson and Mmari. Risk and protective factors affecting adolescent reproductive health in developing countries.

Bonita, R., Beaglehole, R. and Kjellström. 2nd edition 2006. Basic Epidemiology. World Organization. Geneva

Burns, N and Grove, SK. 2005: The practice of nursing research: conduct, critique and utilization. 5th edition. St Louis: Elsevier/Saunders.

Centers for Disease Control and Prevention. (2006a). Sexual risk behaviors (National Center for Chronic Disease Prevention and Health Promotion). Retrieved May 1, 2007, from <http://www.cdc.gov/HealthyYouth/sexualbehaviors/index.htm>

Centers for Disease Control and Prevention. (2006b). Trends in the prevalence of sexual behaviors (National Center for Chronic Disease Prevention and Health Promotion). Retrieved May 1, 2007, from <http://www.cdc.gov/yrbss>

Central Statistical Agency (Ethiopia) and ORC Macro. 2001. Ethiopia Demographic and Health Survey, 2000, Addis Ababa, Ethiopia: Central Statistical Agency; and Calverton, MD, USA: ORC Macro.

Central Statistical Agency [Ethiopia] and ICF International. 2012. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ICF International.

Central Statistical Agency [Ethiopia] and ORC Macro. 2006. Ethiopia Demographic and Health Survey 2005. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ORC Macro.

Desta B, Regassa N. 2011. On emergency contraception among female students of Haramaya University, Ethiopia: Surveying the level of knowledge and attitude. Educational Research; 2(4):1106-1117.

Diguests. 2009. Countries with a Reputation for Strong Leadership On AIDS Policies Usually Deserve Their Standing, International Perspectives on Sexual and Reproductive Health

Dingeta T, Oljira L, and Assefa, N. 2012. Patterns of sexual risk behavior among undergraduate university students in Ethiopia: a cross-sectional study, Pan African Medical Journal. 12:33, <http://www.panafricanmedjournal.com/content/article/12/33/full/> accessed on Dec, 6 2012.

ECA.2009. African Youth Report, Expanding opportunities for and with Young people in Africa.

Erulkar. A, Ferede. A, Ambelu.W, Girma. W, Amdemikael. H, GebreMedhin. B, Legesse. B, Tameru. A, Teferi. M. 2010. Ethiopia Young Adult Survey A Study In Seven Regions, The Population Council, Inc.

Erulkar.2013.Early Marriage, Marital Relations and Intimate Partner Violence in Ethiopia International Perspectives on Sexual and Reproductive Health, 2013, 39(1):6–13, doi: 10.1363/3900613

Federal Democratic Republic of Ethiopia Population Census Commission. 2008. Summary and Statistical Report of the 2007 Population and Housing Census– Population Size by Age and Sex, Addis Ababa, Ethiopia: Population Census Commission.

Federal Ministry of Health.2006.Reproductive Health Needs and Youth Health service Assessment in selected areas of the Oromia, Amhara, Southern people, and Tigray regional states (Summary findings). Addis Ababa, Ethiopia.

GebreYesus, D. and Fantahun, M.2010. Assessing communication on sexual and reproductive health issues among high school students with their parents, Bullen Woreda, BenishangulGumuz Region, North West Ethiopia, Ethiopian Journal of Health Development: 24(2)

Gessesew, A. Unwanted pregnancy and it's impact on maternal health and utilization of health services in Tigray Region (Adigrat Hospital).Ethiop.J.Health Dev. ;47(1)

<http://www.thefreelibrary.com/Relations+among+religiousness,+spirituality,+and+sexual+practices.-a0207540416> accessed April 25, 2012

Joubert, G. and Ehrlich, R (ed).Katzenellenbogen, J. and Karim, SA. (contributing ed). 2007. Epidemiology. A research manual for South Africa. Oxford University Press. Southern Africa.

K.Blanc, A, O.Tsui, A, N.Croft, T. and Jamie L.Trevitt,J. 2009. Patterns and Trends in Adolescents'ContraceptiveUse and Discontinuation inDeveloping Countries and

Comparisons With Adult Women, International Perspectives on Sexual and Reproductive Health, 35(2):63–71

Kassaye, Z. 2002. Sexual experiences and their correlates among Jimma University students, Jimma, Ethiopia.

Kiragu K, and Zabin L. 1995. Contraceptive use among high school students in Kenya, International Family planning perspective vol. 21 No. 3.

Kirby, D. (2002). "Antecedents of adolescent initiation of sex, contraceptive use, and pregnancy." American Journal of Health Behaviour 26(6): 473-485.

L. Melhado. 2009. In Africa, Adolescents Who Have Premarital Sex Show Higher Dropout Rates. International Perspectives on Sexual and Reproductive Health. 35(1)

Larson, K, Sandelowski, M. 2012. "It's a touchy subject": Latino adolescent sexual risk behaviours in school context. Applied Nursing research 25(2012) 231-238. Available online at www.sciencedirect.com

Mazengia. F. and Worku. A. 2009. Age at sexual initiation and factors associated with it among youths in North East Ethiopia: [Ethiop. J. Health Dev. 23(2):154-162]

McIntyre. 2006. Pregnant Adolescents: Delivering on Global Promises of Hope. WHO, Geneva, Switzerland.

Mekonnen, W. and Worku A, 2011. Determinants of low family planning use and high unmet need in Butajira District, South central Ethiopia. Reproductive health Journal. Available at: <http://www.reproductive-health-journal.com/content/8/1/37>

Mensch, B, Grant, M. and Blanc A. 2005. The changing context of sexual initiation in sub-Saharan Africa. New York, USA: Population Council Inc. Available at www.popcouncil.org/publications/wp/prd/rdwplist.html

Michelle J. Hindin and Adesegun O. Fatusi. 2009. Adolescent Sexual and Reproductive Health in Developing Countries: An Overview of Trends and Interventions.

MOH. 2010. Adolescent and Youth Friendly Reproductive Health (AYFRH) Service Standards in ETHIOPIA. Addis Ababa

Nalwadda G, Mirembe F, Tumwesigye N, Byamugisha J, and Faxelid E. 2011. Constraints and prospects for contraceptive service provision to young people in Uganda: providers' perspectives BMC Health Services Research 2011, 11:220. <http://www.biomedcentral.com/1472-6963/11/220>

Ntsipe T. 2010. Contraceptives and sexual practices among university students in Botswana.

Rosenstock. I, Strecher. V, Becker. M.1988. Social Learning Theory and the Health Belief Model, Health education quarterly (Summer 1988), SOPHE, John Willey and Sons, inc.

Seme, A. and Wirtu, D.2008. Premarital sexual practice among school adolescents in Nekemte town, East Wollega. Ethiopian Journal of health development, 22(2):3

Singh, S, Fetters, T, Gebreselassie, H, Abdella, A., Gebrehiwot, Y, Kumbi, S. and Audam S.2010.The Estimated Incidence of Induced Abortion In Ethiopia, 2008. International Perspectives on Sexual and Reproductive Health: 36(1):16–25

Tajure. N. 2010. Knowledge, Attitude and Practice of Emergency contraception among graduating female students of Jimma University, Southest Ethiopia. Ethiop J Health Sci. Vol. 94 20, No. 2.

Tamire.W, Enqueselassie. F. 2007. Knowledge, attitude, and practice on emergency contraceptives among female university students in Addis Ababa, Ethiopia.

Tegabu, D, Belyhun,Y,Yifru, S, Oljira, L, Dingeta, T, Assefa, N., Berhan, Y, Hailu, D., Alano, A, Tura, G, Alemseged, F, Dejene, S, Abraha, A, Gebreegziabher, T, Mohamedseid, A, Gebremariam, S, Birhan, E, Belaynew, M. 2011.Risky Sexual Behaviors and Predisposing Factors among Ethiopian University Students. <http://ddhapco.org/implement%20map/BSS%20research%20Presentation/Merged%20Risk%20Behavior%20Survey%20Report-%20May%2013%202011.doc> accessed on 27, 11, 2012

Tegegn A. & Gelaw Y.2004. Adolescent Reproductive Health services in Jimma city: Accessibility and utilization. Ethiop J Health Sci. Vol.19 No.2 July 2009

Tegegn, A, Yazachew, M. and Gelaw, Y. 2008. Reproductive Health Knowledge and Attitude among Adolescents: A community based study in Jimma Town, Southwest Ethiopia, *Ethiop.J.Health Dev.* ;22(3)

Terre Blanche, M. Durrheim, K. 2002. *Research in practice: Applied methods for social sciences*, Cape Town. University of Cape Town Press.

Tilahun D, Assefa T, Belachew T. 2010. Predictors of emergency contraceptive use among regular female students at Adama University, Central Ethiopia. *Ethiop J Health Sci*; 20(3):195-202.

Tilahun. D, Assefa. T, Belachew. T. 2010. Knowledge, Attitude, and Practice of Emergency contraceptives among Adama University Female students. *Ethiop J Health Sci*.

Trieu, Bratton, HoppMarshak. 2011. Sexual and Reproductive Health Behaviors of California Community College Students. *Journal of American College Health*, 59:8, 744-750

Varkevisser, Pathmanathan and Brownlee.2003. *Designing and conducting health systems research volume 1*.

Wendy D. Manning, Monica A. Longmore and Peggy C. Giordano. 2000. The Relationship Context of Contraceptive Use At First Intercourse, family planning perspective:32(3)

WHO. 2011. *Family planning, A global handbook for providers, 2011 update*. Geneva. [http://www.fphandbook.org/.](http://www.fphandbook.org/))

WHO.2011. *The sexual and reproductive Health of younger adolescents: Research issues in developing countries*: Geneva, Switzerland. WHO.

WHO/RHR. 2011. *Annual Technical Report of 2011*

WHO.2011. *Young people: health risks and solutions*. 2011. Fact sheet 345. From <http://www.who.int/mediacentre/factsheets/fs345/en/index.html> accessed on August 3, 2013

WHO.2008. Why is giving special attention to adolescents important for achieving Millennium Development Goal 5, WHO, Fact sheet

WHO.2006. Pregnant Adolescent, Delivering on Global Promises of Hope.. WHO

Worku A. 2011. Knowledge, attitude and practice of emergency contraceptives among female college students in Arba Minch Town, Southern Ethiopia. Ethiop J Health Dev. (3):176-183.

Yamane, Taro. 1967. Statistics, an Introductory Analysis, 2nd Ed., New York: Harper and Row.

Yizengaw, T. 2003. Transformations in Higher Education: Experiences with Reform and Expansion in Ethiopian Higher Education System