

LUSAKA APEX MEDICAL UNIVERSITY



**SCHOOL OF MEDICINE
Department of Public health.
PROJECT REPORT**

**TITLE: TO INVESTIGATE THE FACTORS ASSOCIATED WITH THE CHOICE OF
CONTRACEPTIVES AMONG 3RD YEAR MEDICAL STUDENTS AT LUSAKA APEX MEDICAL
UNIVERSITY.**

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A research proposal submitted to the department of public health, Lusaka Apex medical university, as a requirement for the MBChB degree.

October,2022.

DECLARATIONS

STUDENT DECLARATION

I Zainab Tembo, student number MBCHB/14/02/002447, school of medicine, Lusaka Apex Medical University declare that this proposal is my original work. This research proposal has been complemented by referenced sources duly acknowledged from the internet, these are specifically accredited and references cited using Harvard System and in accordance with anti-plagiarism regulations.

Signature: Z.TEMBO

Date: OCTOBER,2022

SUPERVISOR DECLARATION

I hereby certify that this project report has been read and evaluated by me. I hereby acknowledge that this proposal has been submitted for appraisal with my approval as university supervisor.

Signature: _____



_____ Date: OCTOBER,2022

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I would like to give thanks to Allah SWA (God) for having sustained my life and for allowing me undertake this research without any eventualities.

I would also wish to specially thank my supervisor Ms Namwawa, whose guidance, encouragement, valuable advice and support led to the completion of this report.

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ACRONYMS

AIDS	: Acquired Immune Deficiency Syndrome
HIV	: Human Immune deficiency Virus
STIs	: Sexually Transmitted Infections
STDs	: Sexually Transmitted Diseases
WHO	: World Health Organization
IUCD	: Intra-uterine contraceptive device
COC	: Combined oral contraceptive

DEFINITIONS OF KEY CONCEPTS

Knowledge: In this study, this is the state of knowing about contraceptives, its advantages and its disadvantages (side effects).

Attitude: A settled way of thinking or feeling about contraceptives.

Choice: The act of selecting a certain type of contraceptive

Practice: In this study, practice means complying or understanding obstacles that prevent or promote utilization of contraceptives.

Contraception: A birth control method used by 3rd year medical students registered at Lusaka Apex Medical University.

Student: All male and female 3rd year students between the ages of 18 and 30 registered at Lusaka Apex Medical University.

Unplanned pregnancies: A pregnancy that was not planned by a student during the course of her studies

ABSTRACT

Background

The rate of premarital sexual activity, unwanted pregnancies and illegal abortions remain high among university students. This calls for understanding the knowledge, choice of contraceptives and sexual behaviors among this high-risk group if the incidence of unwanted pregnancy, sexually transmitted infections including HIV/AIDS and generally loss of school time among medical students. This study aimed to assess factors influencing choice of contraceptives and use among 3rd year medical students at Lusaka Apex Medical University.

Methods

A cross-sectional study was conducted among undergraduate 3rd year students at Lusaka Apex Medical University. A self-administered questionnaire was given to 384 students of which 107 were retrieved giving a response rate of 27.86%. Data was analyzed using Stata 2014 version which generated the summarized statistics.

Results

Results showed that (71.03%) of the students were sexually active, with 48.06% already having had their sexual debut when they were between 19-24years of age. All participants had heard or had some knowledge of contraception. 41% of the sexually active were using some contraception of some sort. 43% of the respondents preferred using condoms, pills and abstinence were the most popular methods preferred by the general respondents. It was also found that most students preferred obtaining their contraceptives by either buying their own from pharmacies or shops, from students' hostel ablutions and from the local clinic/hospital.

Conclusion

Most students had knowledge of contraception. Despite a minimal percentage of students still not using contraceptives, the rate of contraceptive use was rather high. Majority respondents were sexually active, with the majority having started sexual activity at some point while in medical school. This needs continued advocacy for reproductive health among medical students to promote safe contraceptive use and choice that will reduce unwanted pregnancies, contracting sexually transmitted infections and losing out on school time spent in medical school due to one of the reasons or the other.

CHAPTER 1

1.0 INTRODUCTION

1.1 Background

The rate of premarital sexual activity, unwanted pregnancies and unsafe illegal abortions remain higher among university students therefore this calls for understand the aspects on contraceptive use and sexual behaviors among this high-risk group if the incidence of unintended pregnancy, illegal abortions and high sexual risky behaviors are to be minimized (Somba *et al*, 2019).

Unplanned pregnancy and sexually transmitted diseases (STDs) are a social issue that severely jeopardizes the quality of life for university student (Gbagbo and Nkrumah ,2019). University students have the highest risk of unplanned pregnancies and rapid transmission of sexually transmitted diseases due to lack of proper contraceptive use and unsafe sexual practices, moreover, approximately 80% of female university students are sexually active and not prepared to become pregnant, therefore it is imperative that students are provided with effective contraceptive will prevent transmission of sexually transmitted disease, unplanned pregnancies and unsafe abortions as well as post abortive trauma (Musaba *et al*, 2022).

Contraception describes pregnancy prevention by inhibiting normal process of reproduction (ovulation, fertilization and implantation) (Mc Connell *et al*, 2021). Varied modern contraceptives methods have been advanced including male and female condoms, oral hormonal pills, intrauterine device, implants, male and female sterilization (vasectomy and tubal ligation), injectable, vaginal barriers and emergency contraception (Mc Connell *et al*, 2021). The use of modern contraception methods allows individuals to have the desired number of children, to child space, prevent pregnancy for a desired period of time, prevent unsafe abortions resulting from unplanned pregnancy and also prevent the spread of sexually transmitted diseases (Mc Connell *et al*, 2021)

Abortion related and mortality are major obstacles for the Health System. Therefore, de- stigmatization access to abortion provision and expand use of modern contraceptives can be helpful in reducing maternal mortality and morbidity (Jenny *et al*, 2019).

Access to sexual and reproductive health information enables young women to make appropriate decisions (Musaba *et al*, 2021). Medical students are at high risk of unwanted pregnancy as well as unsafe abortions due to improper use of contraceptives, that is discontinuation of contraceptives, failure to use any contraceptive methods despite being sexually active (Gbagbo and Nkrumah, 2019). Positive sexual behavior and practices of university students, such as delaying their sexual debut and avoiding risky sexual behavior are cardinal in the fight against HIV/AIDS and HIV preventive efforts can have a large effect on halting the spread of HIV if they are successful with young adults (Musaba *et al*, 2021).

According to Caetano, Linhares and Pinoth ,(2019) reproductive health, health workers and professionals advocate for the use of contraceptives both for males and females classified as permanent, temporary and barrier methods. In general, with the exception of male and female sterilization, all methods that are appropriate for healthy adults are also potentially appropriate for medical students. However, as adults, informed contraceptive decision-making entails consideration of more than just medical safety. Before discussing contraceptive options, students must be given the opportunity to express their needs and to decide freely whether they want to protect against pregnancy or need to protect against STI/HIV. Once a decision is made for protection, sexually active students should be presented with options and knowledge that, if used consistently and correctly, will prevent pregnancy and, depending upon an individual's circumstances, prevent sexually transmissible diseases (Caetano, Linhares and Pinoth, 2019). When selecting a method, each student, male or female should consider the nature of his/ her sexual relationship(s), sexual behaviors engaged in, frequency of intercourse, risk of STIs/HIV, efficacy of the method, ability to comply with use, ability to tolerate side-effects, services available, cost, convenience, religious beliefs, partner(s) attitudes, and additional personal factors such as stress that may influence the decision and method compliance. When sexual activity is infrequent or if multiple partners are likely, condoms may be a priority (Caetano, Linhare and Pinoth, 2019).

Several aspects have been associated with non-use of a condom during sexual intercourse (Szucs *et al*, 2019). Their cost often poses a barrier to condom use for the poor, even in developed countries. In many communities, moral values, ethnic and religious factors also play a role. Among other social factors, gender inequality, lack of a dialogue among partners with regard to condom use, and the stigma attached to the condom could all lead to unprotected sexual intercourse. Personal factors such as aversion to the condom, consumption of alcohol or use of drugs prior to sexual intercourse, and anxiety and depression all are negatively associated with condom use (Szcucs *et al*, 2019).

Sexual identity and behavior are challenging issues for individuals, families, and society (Brittany *et al*, 2021). According to Brittany *et al*, 2021 homosexuals are half as likely to use contraceptives while other sexual minority subgroups (e.g., bisexuals) were more likely to use contraceptives, particularly long-acting reversible contraceptives. The resulting tensions can be particularly trying when an idealized concept of normal denies the sexual variation that exists within every population. Although the formation of sexual identity is a key developmental task of young adults, parents and clinicians rarely discuss it openly with teenagers. Parents, wanting their children to grow without undue social scrutiny or pressure, may be alarmed by any deviation from an assumed social norm (Brittany *et al*, 2021)). A Psychology annual review report on young adults' behavior carried out in the U.S.A reviews that behavioral risks involve drug, alcohol, and substance use and abuse; unsafe sex, teenage pregnancy, and teenage parenting among other things confirms some of the cosmopolitan existing

problems affecting young people, which puts them at high risk of contracting STDs and HIV. Poverty among youth exacerbates these risks and the Zambian student and youth is not spared (Lasong, Zhang and Zhang, 2020).

1.2 Problem statement

Every year throughout the world the rate of unplanned pregnancies, unsafe abortions, and spread of sexually transmitted infections and HIV among students at higher educational institutions continues to increase (Simon *et al*,2020). This is despite the availability of free condoms (type of contraceptive) given in hospitals and universities.

Lack of knowledge, awareness and stigmatization around contraceptives has greatly contributed to failure of utilization (Molelekwa *et al*,2020).

Recent and current studies carried out show that sexual behavior among people both in universities and out of universities, aged between 12 and 25, maybe vital in influencing the spread of HIV/AIDS in Zambia. Studies about knowledge of contraceptives have been conducted, but in the recent past (3-4years) (Silumbwe, Nkole and Munakampe, 2018). there has not been any inquiry in this regard.

The global health system is impacted by the implications of improper contraception use. If this issue is not resolved, a sizable portion of the population of the nation will experience complications of unsafe abortions and mental health problems as a result of traumatic experiences related to unsafe abortions, contracting STIs, HIV and quitting school to care for the unplanned children.

1.3 Rationale

To help provide medical students with effective contraceptive options and minimize the complications (unwanted pregnancy, sexually transmitted disease and psychological trauma from unsafe abortions) of improper contraceptive use.

1.4 STUDY OBJECTIVES

1.4-1General objective

To explore the factors associated with contraceptive choice among medical students from the faculty of medicine (3rd year MBChB) at Lusaka Apex Medical University (LUMU).

1.4-2 Specific Objectives

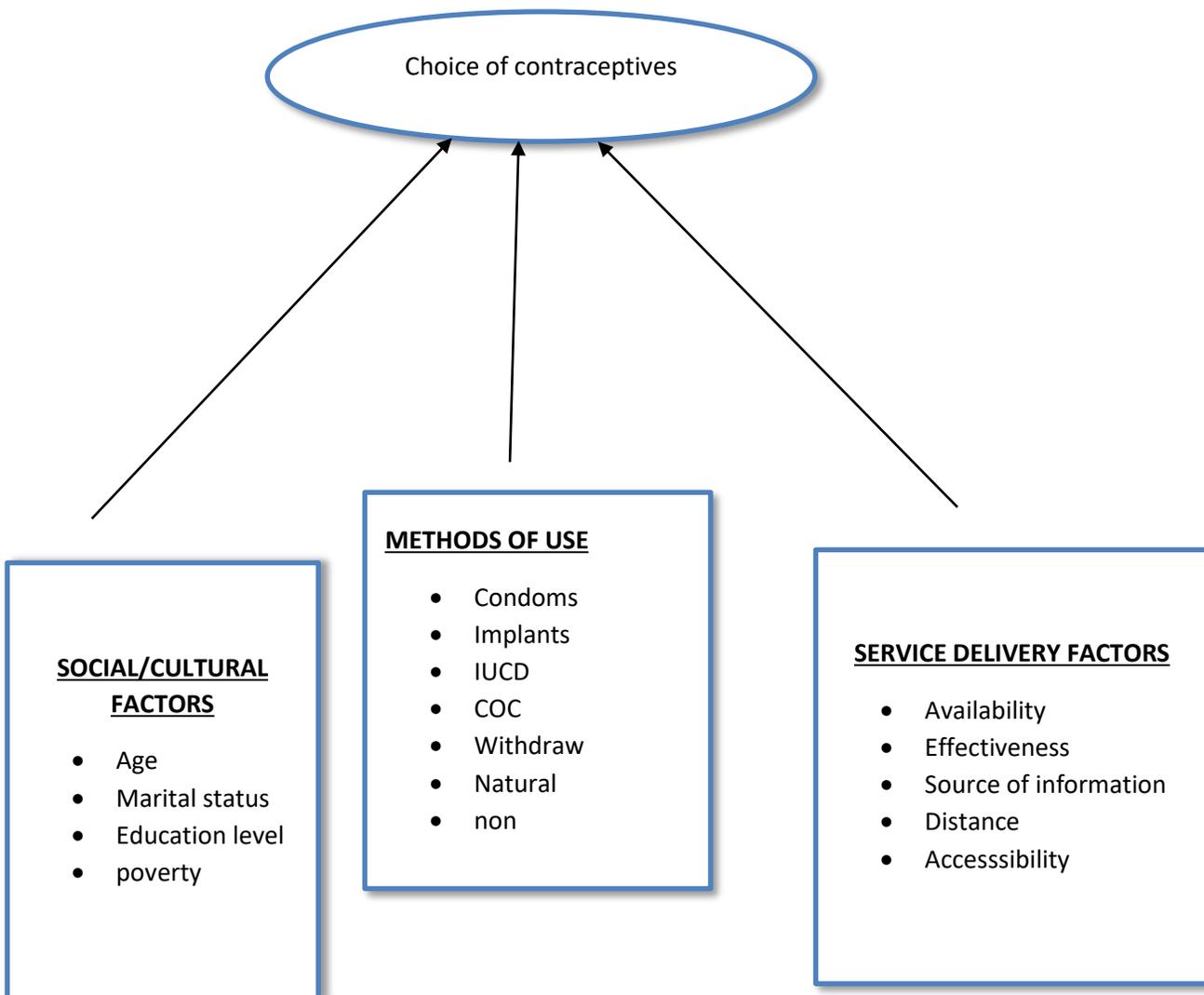
1. To explore the sources of contraceptives among medical students at LUMU.

2. To determine how many students use contraceptives.
3. To identify the factors influencing the medical students' selection of contraceptives.

1.5 Research Question

What are the factors associated with contraceptive choice among 3rd year medical students at Lusaka Apex Medical University?

1.6 Conceptual Framework



CHAPTER 2

2.0 LITERATURE REVIEW

As part of the transition from childhood to adulthood, all adolescents experience sexual feelings (Cacciatore, korteniemi and kaltaila, 2019). Some act upon these feelings by having sexual intercourse; while others don't have sexual intercourse but engage in behaviors such as: short penile/vaginal stimulation; some engage in anal intercourse or oral sex; and others deny their sexual feelings by focusing intensely on non-sexual pursuits as evidenced by a study in California USA (Berglas *et al*, 2022). Other adolescents are able to have socially acceptable intercourse through early, sometimes pre-arranged, marriages which enables these adolescents to further explore their sexual desires (Berglas *et al*, 2022). Studies have shown that modern contraceptive methods are highly used by women with higher education, families with high income, women who were exposed to mass media, women empowerment and high parity and knowledge about family planning (lasong, zhang and zhang, 2020)

In highly developed countries, the gap between age of puberty and the ability of young people to be economically independent (that is to take on the responsibilities of marriage and parenthood) has increased (Scully *et al*, 2019). Although some adults may find the idea disturbing, the reality now is that many adolescents have sexual relations before they are ready for marriage and families and research conducted by Scully *et al* (2019) shows that: Sexual and health care encompasses a broad range of services that ensure people can decide whether and when to have children, have health newborn and have a safe a satisfying sexual life. The core services that women need and use during their reproductive years include: contraceptive services, pregnancy related care, newborn care and treatment of STIS (Scully *et al*, 2019). These services are important because they enhance individual wellbeing and allow individuals to exercise their sexual and reproductive rights without the fear of unpleasant outcomes (like unintended pregnancy) (Scully *et al*, 2019).

2.1 TYPES OF CONTRACEPTIVES

Modern contraceptive remains an important public health concern, a cost-effective strategy to lower maternal mortality and unintended pregnancies (Mwanza *et al*, 2021). Contraception is the act of preventing pregnancy, which can be achieved by an intrauterine device, a medication (hormonal pills), a procedure or a behavior (Mwansa *et al*, 2021). Contraception allows a woman control of her reproductive health and affords the woman the ability to be an active participant in her family planning (Ohsin *et al*, 2021). Birth control methods are designed to prevent conception or interrupt or nullify implantation and growth (Ohsin *et al*, 2021), Conception can be prevented by hormonally disrupting the menstrual cycle (Oral contraceptive (OC) pills), by physically blocking the passageway (barrier methods or sterilization), or less successfully, by abstinence during fertile periods or

withdrawal method. Implantation is impaired via the use of a foreign body (intrauterine device {IUD}) or surgical removal (Salpingectomy or Vasectomy) (Mwansa *et al*, 2021)

2.2 LOCALLY

Rural-based students have limited access to health services including family planning compared with urban resident students (Mc Connel *et al*, 2021) . Data from the Zambian Demographic and Health Survey (ZDHS) was used to assess factors associated with modern contraceptive use among married and unmarried women in rural Zambia (Mc Connel *et al*, 2021). Identifying specific factors associated with contraceptive use among rural Zambians (women) will set the stage for prioritizing interventions aimed at improving access to reproductive health service(s), inform comprehensive family planning programs, and policy(ies) implementation on family planning (Hamoonga *et al*, 2022).

Several studies have been undertaken in both developed and developing countries to determine factors influencing choice of contraceptives among youths. Over the last 50 years, the need for specially tailored, sexual health services for young people has become more pressing. Society changes caused by industrialization and urbanization has led to loosening of family ties and erosion of the traditional sanctions that formerly inhibited premarital sexual activity. In addition to that, there are also issues to do with younger ages of menarche combined with delayed average age of marriage means that there is longer time period between the onset of sexual maturity and marriage (Fubam, Oudukogbe and Dairo, 2019). This therefore leaves youths with more time to “explore” intersexual relationships with both their generation peers and older partners alike. According to a study carried out by the (Fubam, Oudukogbe and Dairo, 2019). In Seattle USA suggests that as the gap between generations grows, young people are increasingly forced to learn about sexual issues from their peers or from the mass media (Szucs *et al*, 2019).

Research has shown that university students tend to have specific sexual behavior for instance Zgliczynska *et al* (2019) says it is worth mentioning that not much attention has been paid to pregnancy prevention practices among medical students nor has any survey been conducted in this matter. Research was conducted in Poland as a survey to ascertain the frequency of contraceptive usage among students at Medical University of Warsaw. 52.2% of the female students and 67.2% of the male students were sexually active at the time. 43.4% of the survey participants used condoms, while 26.3% used oral contraception pill (OCP) as contraceptive methods. Only 0.5% of those participants used intrauterine device. The survey result indicates an apparent distinction between the male and female students in terms of (appropriate) choice of the following contraceptive methods: condom, OCP, withdrawal, basal body temperature and Billings' methods. It however did find that a huge proportion of medical students are having sexual intercourse in their relationships (Zgliczynska *et al*, 2019).

2.3 REGIONALLY

According to world population prospects (2019), as of 2020, one in every five people in Sub Saharan is between the ages of 15 and 24. Meeting the sexual and reproductive health needs of young people is critical to improving their overall health and outcomes, yet this age group (15 to 24) continues to have higher rates of unintended pregnancies as well as high percentage of unmet need for contraception (Ouma *et al*,2021).

Fubam, Oudukogbe and Dairo (2019) reviewed those negative factors prohibiting or reducing contraceptive use as female's misconceptions of contraceptive side-effects, male partner disapproval and social/cultural norms surrounding fertility. Whereas the positive factors included education, employment, avoid stigmatization as a result of unwanted pregnancy in a non-marital relationship and communication with male partner (Fubam, Oudukogbe and Dairo, 2019). Another study conducted at Muhimbili and Dar es Salaam Universities in Tanzania aimed to assess sexual behaviors, contraceptive knowledge and use among female undergraduates' students. It reviewed that most of the student's had knowledge of contraception. However, rate of contraception use is still low. Majority of the respondent were sexually active, with the majority started sexual activity at young age (Somba *et al*, 2019).

Previous studies conducted in Ghana by Issah, Salifu and Awal (2022) indicate that the sexual beliefs and mores of students in medical professions may influence their capacity to care for patients' sexuality and contraception issues. A study was undertaken to examine contraceptive usage patterns in North American medical students. Results reviewed that a small but significant minority of sexually active medical students do not utilize any form of contraception; other students utilize contraceptive methods of dubious efficacy, including over 10% who report using withdrawal. Further, there are significant differences in contraceptive use based on demographics, even at the highest education levels. The personal contraception choices of medical students may influence their ability to accurately convey information about contraception to their patients. In addition, medical students may personally benefit from improved knowledge of effective contraceptive practices (Issah, Salifu and Awal 2022). No information to this regard on medical students could be found about Zambia.

Several studies have shown sexual behaviors and the attended risks among university students (Gnatou *et al* 2021). In Togo majority of University Students (approximately 63%) of university students had more than one sexual partner, and among them, only 38% reported regular condom use (Gnatou *et al*, 2021). Among Kara university students 29% reported to have two or more sexual partners and only 13.5% were consistently using the condoms, In Uganda only 48.9% reported using condoms and In Tanzania surveys show those unmarried male adolescents and their female counterparts of who are university students have premarital sexual relationships. (Gnatou *et al*, 2021).

The success of any family planning programme activities is determined by the level of current use of contraceptive methods (Kara, Benedicto and Moa, 2019). In Zanzibar, according to Allison and Anuj, (2020) several factors

have been found to influence contraceptive use among young women in villages of Zanzibar. Strong Muslim beliefs (religious barriers), male dominance over females (patriarchy), and limited exposure to modern contraceptive to be obtained through higher education has been limiting the use of contraceptives among young women in Zanzibar (Allison and Anuj, 2020).

Studies in sub-Saharan Africa have demonstrated that University female students are at high risk of sexual transmitted infections including HIV, and they have high rate of unwanted pregnancy which results to high abortion rate, for instance Hamoonga, (2022) states that: despite this fact, there is limited information about sexual behaviors, contraceptive knowledge and use among female University students in Zambia.

Transactional/unplanned sex could open high possibilities of young people including university students engaging in unprotected sex which highly puts them at risk of contracting STIs and HIV. A 2007 journal of adolescent health by Zgliczynska *et al*, (2019) reveals in a study conducted on several Sub-Saharan African countries that acquired immunodeficiency syndrome (AIDS) is the leading cause of death among youth 15–29 years of age. Today, nearly 12 million youth are living with HIV worldwide, of who 9 million are in Sub-Saharan Africa. Although AIDS is clearly on the agendas of many nations in Sub-Saharan Africa, youth's role in the epidemic is often unacknowledged (Schwandt *et al*, 2021). Young people account for approximately half of all new infections. Although the overall prevalence of HIV within Sub-Saharan Africa is higher than any other region of the world, there are wide variations. Botswana has the highest proportion of infected youth with an estimated 30% of women 15-24 years who are HIV positive (Aida *et al*, 2022). In Rwanda, one study found more than 25% of pregnant women, 17 years of age and younger, were infected with the AIDS virus (Schwandt *et al*, 2021). Similarly, in Zimbabwe among pregnant girls age 15–19 years, 30% were HIV positive and Zambia revealed 14% prevalence as revealed by the Zambia Demographic Health Survey 2013.

2.4 Global Unmet Need for Contraception

As of 2017, 1.6 billion women of reproductive age (15–49) live in developing regions. About half of them (885 million women) want to avoid a pregnancy; of this subset of women, about three-quarters (671 million) are using modern contraceptives. (Darroch and Sully 2019). Kantorova *et al* (2020) revealed that in 2019, women of reproductive age group (15-49 years) were 1.9 billion, 1.1 billion of them had a need for family planning, out of these, 270 million had an unmet need for contraceptive while 800 million relied on contraception.

CHAPTER 3

3.0 METHODOLOGY

3.1 Study design

A cross sectional study was carried out by simple random sampling on students from the faculty of medicine at the university. The descriptive survey research design was used in this study. The research intended to study the trends and factors associated with the choice of contraception use among 3rd year students on campus. In the survey, a representative sample was chosen from a population and studied. Findings made from the representative sample were used to generalize for the whole population.

3.2 Study Setting

The survey made use of respondents which were samples from the student population of Lusaka apex medical university which was founded in 2008 by Professor E. M. Njelesani, Professor L. Mukanje, Professor J. Lambert, Professor J. Mudenda, Dr J. M. Kasonde, Late Dr C. J. Shinondo, Mr. V. Musowe and Mr. Y. Dodia. It is located in Chalala along Lusaka – Kasama Road. The respondents are 3rd year students from the faculty of medicine, at Mutandwe campus.

3.3 Target population

The study targeted registered full time undergraduate 3rd year medical students at Lusaka Apex Medical University.

3.3.1 Inclusion criteria

The study included only registered full time undergraduate 3rd year medical students at the Lusaka apex medical university. Only those that had consented to participate, are sexually active and use contraceptives.

3.3.2 Exclusion Criteria

Non-Undergraduate students not in 3rd year MBChB, students that did not consent and are not sexually active and don't use contraceptives.

3.4 Sample size

Using the formula

$n = Z^2P(1-P)/e^2$: where

N = sample size

Z value = degree of precision which will be at 95% C.I that is 1.96

P = prevalence approximately 50%

e = marginal error = 0.05

$n = 1.96^2 \times 0.5 (1-0.5) / 0.05^2 =$ approximately 384.

The ideal sample size for this research would be **384 participants**.

3.5 Variables

Table 1.1 table of variables

INDEPENDENT VALUABLES	DEPENDENT VALUABLES
SOCIAL DEMOGRAPHICS: (age, gender, marital status, school year). METHODS OF USE: (condoms, IUCD, withdrawal, pills, injectable) SERVICE DELIVERY FACTORS: (availability, accessibility, effectiveness, source of information)	CHOICE OF CONTRACEPTIVES

3.6 Data Collection Tools

A validated questionnaire was used to collect data from participants. The aims of the study were explained in detail to the participants. Confidentiality and voluntariness were also explained. Each participant was required to sign a consent form before participating in the study. Each questionnaire was completed by the participant where Open ended questions in questionnaires were answered and responses used to analyze findings.

3.7 Data Management

Before the data was analyzed, all transcripts were transcribed. The process of transcribing allowed the researcher to become acquainted with the data. Microsoft Word files for the transcripts were created. All files were protected by setting a password. All files were saved in the portable computer for which there was limited access. The researcher used the meaning of analysis context as the unit of analysis for coding and also looked for description. This means that the data was not coded sentence by sentence or paragraph by paragraph, but coded for meaning. The researcher used the qualitative software Atlas.ti 4.52 program for data management and analysis.

Trustworthiness

The researcher used the step-by-step guidelines. Which included; (1) familiarizing oneself with the data, (2) generating initial codes, (3) The researcher, read throughout each transcript to immerse in the data, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report.

Validation and reliability

As the area of qualitative research increases, social and behavioral scientists' critique on the validity of studies that use such methodology. Thus, qualitative researchers utilize various validation strategies to make their studies credible and rigorous.

Credibility

Credibility for this study was achieved using the validation strategies of triangulation and researcher reflexivity. The data was triangulated with the various forms of data that were collected in this study.

Dependability

Dissemination of findings was documented and public in articles and school library.

Conformability

The participants (Lusaka Apex 3rd year- MBChB medical students) were urged to verify the data before submission and the researcher checked for biased data using the inclusive and exclusive criteria.

3.8 Data Analysis

A cross section study was carried out using a questionnaire and the data collected was entered in Excel spread sheet and exported to STATA by which it was analyzed. This was then presented as proportions and percentages and summarized using graphs and charts.

3.9 Ethical Consideration

Consent was obtained from Lusaka apex medical university Undergraduate Research Ethics committee.

Informed consent was obtained from all participants of the study. This was done once the purpose and objectives of the study had been transparently shared with the participants

- The research was explained in detail to the respondents and proprietors what was required of them, as well as assuring them that they had the rights to decide not to be part of the study either before or during the study without reason. Moreover, participants were informed that refusal to participate in the study would have reduced health care consequences.
- Anonymity was maintained.

CHAPTER FOUR: RESULTS

DATA ANALYSIS, PRESENTATION AND FINDINGS

4.0 Introduction

This chapter focuses on the data analysis with the view of establishing the main findings with respect to the research questions. The analysis of the data was guided by the following research objective: To explore the factors associated with contraceptive choice among medical students from the faculty of medicine (3rd year MBCHB) at Lusaka Apex Medical University. The data was analyzed using STATA while the visual descriptions showing the graphical presentation of data were analyzed using Microsoft excel.

4.1 Social Demographic characteristics

The study had 107 participants, and all gave written consent to participate in the study. The study was carried out at Lusaka Apex Medical University – Mutandwe Campus. The table below summaries the description and social demographic characteristics of participants who took part in the study

Table 1: social demographic characteristic of participants

LOCATION OF STUDY	3 RD YEAR STUDY SEMESTER	GENDER	TOTAL	PERCENTAGE
Mutandwe campus	1 st and 2nd Semester	male	46	7.1%
Mutandwe campus	1 st and 2 nd Semester	female	61	21.4%
		Total	107	

4.1.1 Response Rate

Research questionnaires were distributed randomly to the 3rd year medical students at the Lusaka Apex Medical University. The total number of potential respondents was 384 students. Interestingly, 390 questionnaires were given to the respondents. Unfortunately, 107 questionnaires were completed out of the targeted 384. Thus, the calculated sample size was 384 but a total of 107 questionnaires were completed. The response rate which is $[(107/384) \times 100]$ came to 27.86%

4.1.2 Age of Respondents

The findings in the figure 4.1.2 revealed that the majority of the respondents fell in the 21-30 years age category with 103 respondents representing 96.3%. followed by, the respondents who were between 18-20 years category

with 3 respondents representing 2.8% and then, those between 31-40 years representing about 0.9%. This clearly shows that most of the respondents were in their health reproductive age.

TABLE 2: Age of respondents

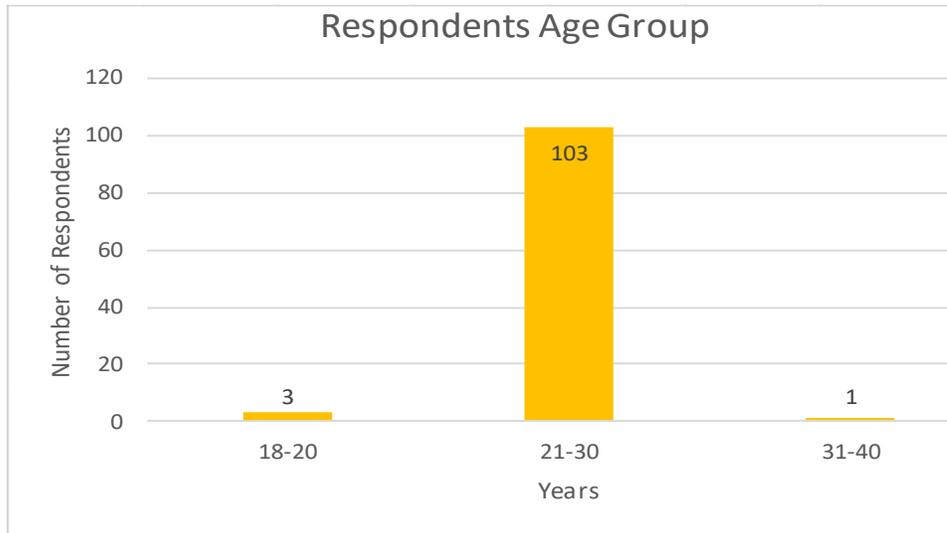


Figure 4.1.2 distribution by age.

4.1.3 Distribution of Respondents by Sex

The majority of the respondent's 61 students representing 57% were females while 46 students representing 43% were males. As shown by the figure below.

TABELE 3:Distribution by Sex of respondents

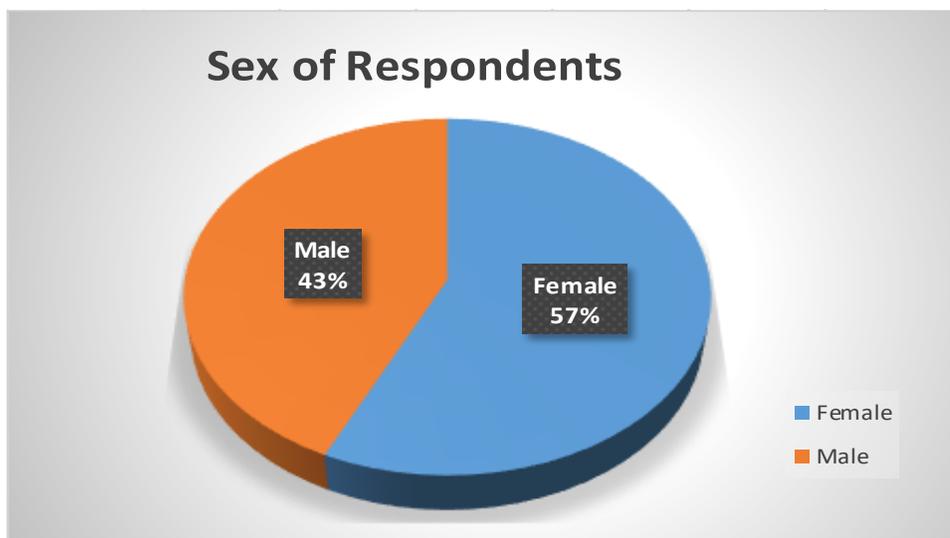


Figure 4.1.3 Distribution by sex of respondents

The majority of the respondents 105 students representing 98% were Christians, while 2 (2%) were Moslems. Since Zambia is a Christian nation, the participants give their knowledge on use of contraceptive among learning institutions based on their Christianity beliefs. The figure below shows the results

TABLE 4: Distribution of respondents by religion

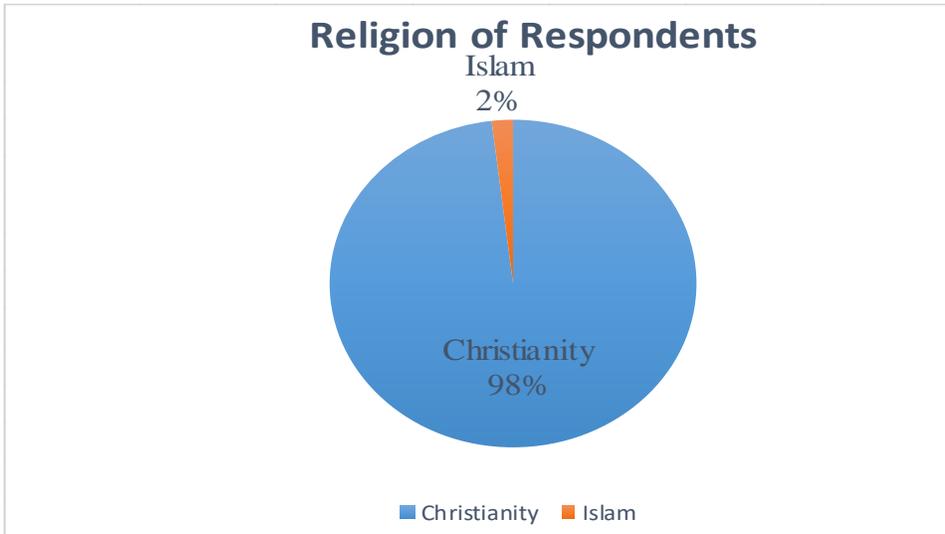
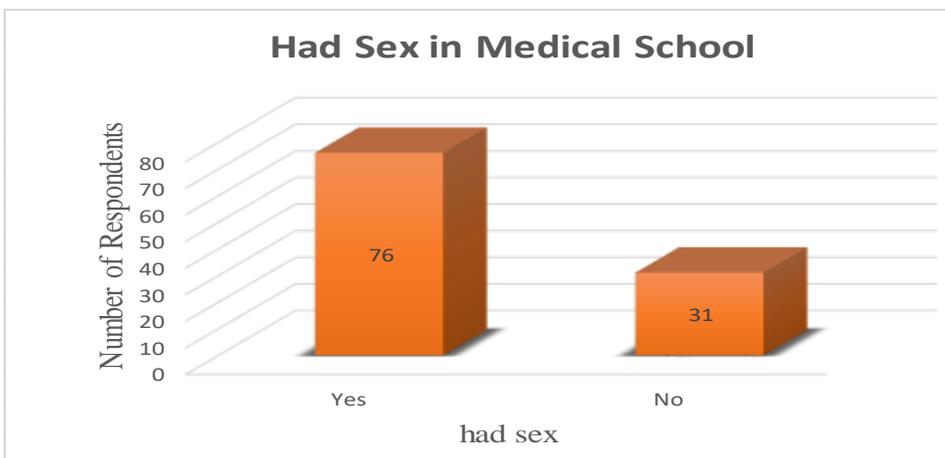


Figure 4.1.4 Distribution of respondents by Religion.

4.1.5 Had Sex in Medical School

The figure below shows the highest percentage of respondents who agreed to have had sex in medical school; this is represented by 76 respondents (71.03%). The minority did not agree, and were represented by 31 respondents (28.97%). From this information, it can be eluded that the majority engage in sexual activities and hence there is need for prevention measures to be applied in order to avoid unplanned pregnancies and sexual transmitted diseases.

TABLE 5: Respondents who had sex in medical school



Contraceptive use among sexually active students

4.2.1 Contraceptive use before

The figure below depicts respondent's response regarding the use of contraceptives before. 41% agreed to the use of contraceptive while 59% did not agree. This shows that there is high risk for unplanned pregnancies and sexual transmitted diseases.

TABLE 6: Contraceptive use among sexually active students

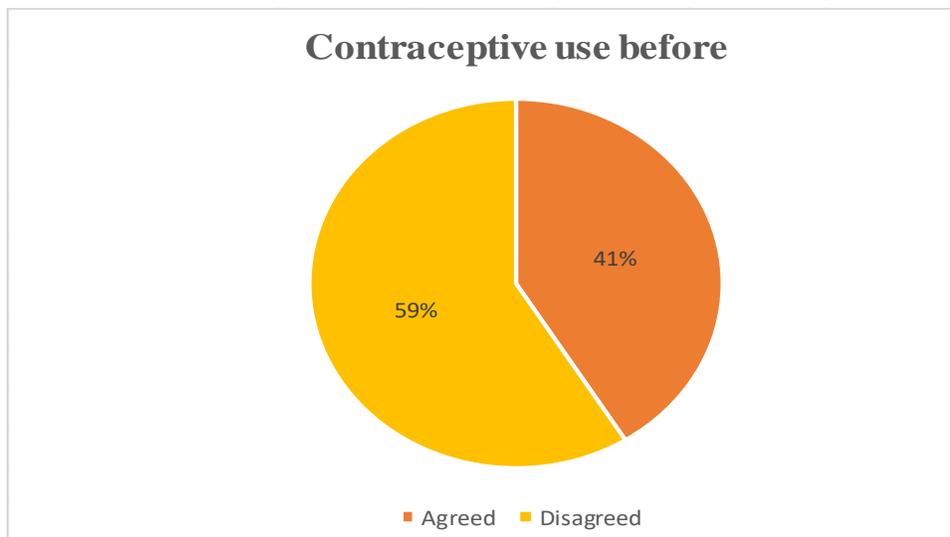


Figure 4.2.1 Contraceptive use before

4.2.2 Preferred Contraceptives among Students

In terms of contraceptives method suitable for college students, 43% of the respondents ascertained that male condom are favorable. 25% of the respondents were favoring oral contraceptive pills, 4% said that Norplant. However, 5% expressed the opinion that cycle method is ideal, 14% chose intrauterine device, 8% responded in favor of withdraw method and 1% chose contraceptive vaginal ring. As shown by figure 4.2.2 and the sources of the contraceptives are illustrated by table 4.2.2 below.

TABLE 7: Preferred contraceptive among students

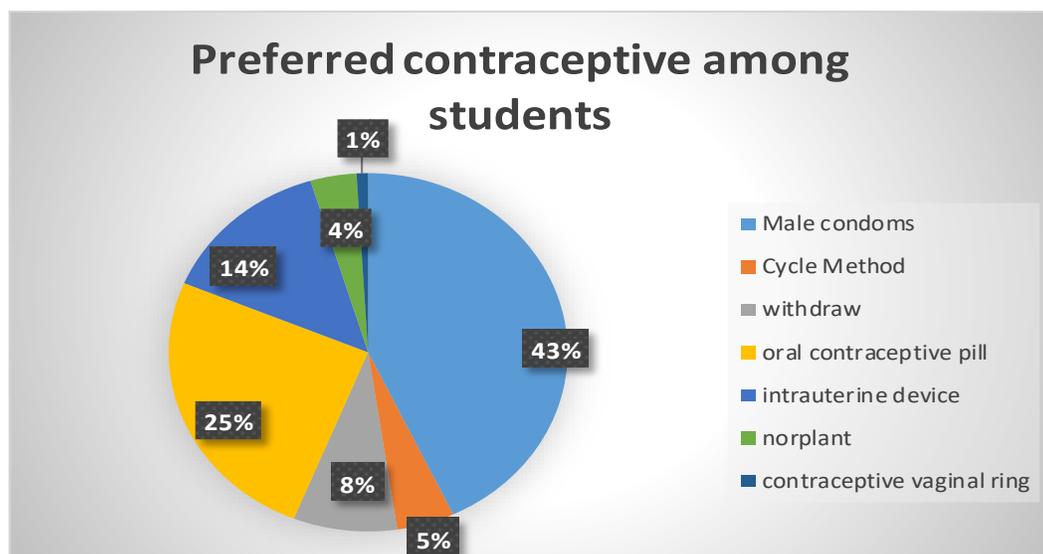


Figure 4.2.2 Preferred contraceptive among students

TABLE 8: Source of contraceptives

Variable	Response	Percentage
Source of Contraceptive services	Campus hostel convenience rooms	13.08
	Friends	5.61
	Campus pressure groups	5.61
	Local clinic/hospital	11.21
	Counselling center	0.93
	N.G.O's	1.87
	Buy my own (from pharmacy, shop, etc.)	34.58

	Various places	10.28
	Not applicable	16.82

Table 4.2.2 source of contraceptives

4.3. Priority consideration of choosing contraceptive method

The figure below depicts the priority consideration of choosing contraceptive methods. It was ascertained that, 29.7% considered safety of contraceptive methods as the main determining factor in choosing the contraceptive method, 8.6% considered the convenience of buying or using contraceptives tools. Whilst the majority of the respondents considered contraceptive effectiveness and it was represented by 61.7%. This information alludes to the fact that most of the users of contraceptives mainly considers the ultimate outcome, which is the effectiveness of the contraceptives. Hence, the safety of the contraceptive methods is often underestimated.

TABLE 9: Factors associated with contraceptive choice among medical students

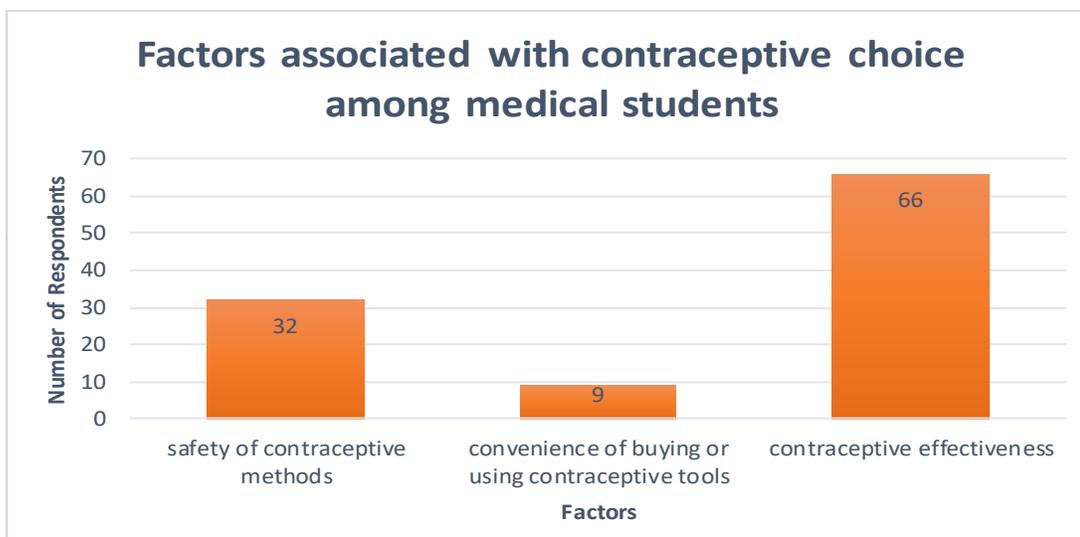


Figure 4.3 factors associated with contraceptive choice among medical students.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This study investigated the factors associated with contraceptive choice among medical students from the faculty of medicine (3rd year MBCHB) at Lusaka Apex Medical University. This chapter gives a recap of the purpose and objectives of the study, it highlights on the research findings and further presents the conclusion and recommendations of the whole study.

5.1 Discussion

In this study, it was found that the majority of the respondents (96.3%) were in the age group of 21-30 years and 2.8% of the respondents were in the age group of 18-20 years and this correlates with a study done in Sub-Saharan Africa by (Akinkorah et al 2021), where the average age of entry into medical school was found to be 21-24 years at which most students have attained sexual maturity.

The large proportion of participants in this study had sex while in medical school (71.03%) and the majority of the sexually active participants were females and this is consistent with findings reported elsewhere. A study conducted at Muhimbili and Dares Salaam Universities in Tanzania showed that the majority of the respondents were sexually active, with the majority starting sexual activity at a young age (Somba *et al* 2019) while another study done in Sub-Saharan Africa, reported that with the African culture, there is a very high probability that all medical students, irrespective of gender, religion, social setup, etc. must have had sexual interactions (Akinkorah *et al*, 2021). A study by (Gbagbo and Nkrumah, 2019) reported that approximately 80% of female university students are sexually active. A study done in Poland reported that a huge proportion of medical students are having sexual intercourse in their relationships (Zyliczynska *et al*, 2019).

The study also further found that a large proportion of participants were not using contraceptives (59%) and only the minority (41%) were using, this showed that there is a high risk for unplanned pregnancies and sexually transmitted diseases. It was found that 43% of the total respondents using contraceptives, ascertained that male condoms are favorable. 25% of the respondents were favoring oral contraceptive pills, 4% said that Norplant. However, 5% expressed the opinion that the cycle method is ideal, 14% chose an intrauterine device, 8% responded in favor of the withdrawal method and 1% chose a contraceptive vaginal ring. These findings correlate with the findings by other studies elsewhere. A study conducted at Muhimbili and Dar es Salaam Universities in Tanzania aimed to assess sexual behavior, contraceptive knowledge and use among female undergraduates' students. It reported that most of the students had knowledge of contraception. However, the rate of contraception use is still low (Somba *et al*, 2019). A study done in Poland as a survey to ascertain the frequency of contraceptive usage

among students at Medical University of Warsaw. Showed that 43.4% of the survey participants used condoms, while 26.3% used oral contraception pill (OCP) as contraceptive methods. Only 0.5% of those participants used intrauterine device.

The study found that a huge proportion of participants (61.7%) considered the effectiveness of the contraceptives as the main determining factor in choosing the contraceptive method, then followed by 29.7% and 8.6% considered the safety of the contraceptive methods and convenience of buying or using contraceptive tools respectively as the main determining factors. The majority of the participants 105 (98%) were Christians and 36% of this number were Catholic's and use of contraceptive is considered a sin against God. This is consistent with the findings by a study done by Darroch and Sully, (2019), which reported that the following factors to influence the choose of contraceptives; limited access to contraception, Limited choice of methods, Fear or experience of side-effects, Cultural or religious opposition, Poor quality of available services and gender-based barriers. Most religions including Islam, Christianity and Hinduism prohibit sex before marriage, therefore some of the participants practice abstinence which has helped them avoid unintended pregnancies and STIs and HIV.

5.2 Conclusion

Based on the results, it was clear that, the students are well acquainted with different types of contraceptives method known to mankind. However, the rate of contraceptive use among participants in the present study was low. From the analysis of the findings it was clear that male condoms are favorable as the overall suitable one and other suitable types of contraceptives identified by students among them include oral contraceptives, intrauterine, withdraw method, cycle method, Norplant and vaginal ring in respect of suitability. The majority of the participants were sexually active and were in the age-range of 21 to 30 years. The factors that influenced the choice of contraceptive method included; contraceptive effectiveness, safety of the contraceptive method, convenience of buying or using the contraceptive tools and religion.

5.2 Limitation

The present study has some restrictions that need not to be overlooked when interpreting the study results. The study population was made of students from one university only that is Lusaka Apex medical university. Hence, the findings from this study cannot be generalized to all the female undergraduate students in Zambia. Students' practices and attitudes were self-reported; as a result, there might be an information bias because some information perceived to be sensitive by the students might not be reported. Participants were randomly selected from the same year of study and assessment of the participants cannot be generalized to the entire university students. There was also a low rate respondent as only 107 out of 384 distributed questioners participated. Therefore, we cannot draw a predictive conclusion based on these results.

5.3 Recommendations

Encourage parents and high school teachers to educate both their female and male children and pupils respectively about contraception, as everyone has sexual feeling and only a portion of the population manage to abstain from sexual intercourse until the appropriate time (marriage). This will help reduce the stigma around contraception, increased utilization and increased awareness of contraceptives , its benefits (avoid unintended pregnancy and reduce rapid spread of STIs and HIV) and its side effects in the young population.

To reduce inconsistent use of contraceptives, health care professionals should provide adequate, accurate and complete information about their potential negatives. They could also request LAMU students using health services about their concerns or challenges in obtaining their contraception and work with them to find solutions. They should also emphasize the significance of consistent contraceptive use, especially condoms, to avoid both unintended pregnancy and STDS, considering the low percentage of students using condoms found in this study.

The study population was restricted to medical students, therefore, the researcher recommends that the study population should be extended to other undergraduate students from various institutions.

CHAPTER 6

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7.0 APPENDICES

7.1 Information sheet

RESEARCH TITLE: TO INVESTIGATE THE FACTORS ASSOCIATED WITH THE CHOICE OF CONTRACEPTIVES AMONG STUDENTS FROM THE FACULTY OF MEDICINE (3RD YEAR MBCHB) AT LUSAKA APEX MEDICAL UNIVERSITY

My names are **Zainab Tembo**, a 6th year medical student, pursuing a Bachelor's of Science in medicine and surgery at Lusaka apex medical university. As part of my studies, I need to conduct a research in Public Health in partial fulfillment of the requirements for the Community Medicine course. You are being invited to take part in this research but before you do so, it is important that you understand the purpose of this study and what it will involve. Please read the information below and decide whether you wish to take part or not.

ABOUT THE RESEARCH

The rate of premarital sexual activity, unwanted pregnancies and illegal abortions remain high among university students. In addition to this, medical students lose out on school time nursing various acquired sexually transmitted infections and pregnancies. This calls for understanding the knowledge and factors influencing choice of contraceptives and sexual behaviors among this high risk group if the incidence of unwanted pregnancies, sexually transmitted infections and HIV/AIDS and loss of school time during training. This study aims to assess sexual behavior and factors influencing choice of contraceptives among Undergraduate Medical students at Lusaka apex medical university.

CONFIDENTIALITY

Should you agree to take part in this study, be assure that no personal information such as names, address or contact details will be obtained. Further, this information will be handled with utmost dignity and will not be distributed to anyone. It is solely for this research purpose.

BENEFITS OF THE STUDY

This study will help address problems to do with loss of school time and psychological stress endured during training due to unintended pregnancies, time lost nursing acquired nursing sexually transmitted infections and help in the fight against HIV/AIDS new infections and reinfections.

VOLUNTARINESS

There are no monetary payments associated with participating in this study, it is completely voluntary. The data will not be used for commercial purposes and the research is not anticipated to cause you any disadvantages or discomfort.

7.2 Consent form

The purpose of the study has been explained to me and I understand the purpose, the benefits, the risks and confidentiality of the study. I further understand that if I agree to take part in this study, I can withdraw at any time without having to give an explanation and taking part is purely voluntary.

I _____ (names) agree to take part in this study.

Signed _____ Date _____ (participant)

Participant's signature or thumb print.

Signed _____ Date _____ (Researcher)

7.3 Questionnaire

LUSAKA APEX MEDICAL UNIVERSITY

FACULTY OF MEDICINE

TITLE: TO INVESTIGATE FACTORS ASSOCIATED WITH THE CHOICE OF CONTRACEPTIVES AMONG STUDENTS FROM THE FACULTY OF MEDICINE (3RD YEAR MBCHB) AT LUSAKA APEX MEDICAL UNIVERSITY

INSTRUCTIONS

1. Please answer all questions by circling the appropriate response.
2. No name should appear on the questionnaire
3. Participants should be free to ask questions during the course of interview.
4. Participants may or may not answer questions sensitive to them.
5. Only females to participate in this study.
6. Indicate answers clearly
7. All information obtained will be confidential.

Section 1. Demographics Characteristics

1. Gender

a) male b) female

2. Age group (years)

A) 18-24 B) 25-29 C) 30+

3. Marital status

A) Single B) Married C) Dating

4. Religion

A) Catholic B) Protestant C) Muslim D) Hindu E) Other, Specify.....

Section 2 ;Sexual behavior and contraceptives usage among students

6. Overall contraceptive usage of any sort

A). ever used B). Current user C). Never used

7. Ever had sex

A). Yes B). No

Sexually active participants

8. Age group at first sex (years)

A). 13-18 B). 19-24 B). 25-30

9. Ever used contraception

A). Yes B). No

10. Current use of contraception

A). Yes B). No

11. Type of contraception used (ever used)

A). Condom B). Periodic abstinence C). Withdrawal C). Pills

D). others, specify.....

12. Type (current users)

A). Condom B). Withdrawal B). Periodic abstinence C). Pills D). Implant

E). Injectable F). Diaphragm G). IUCD

Section 3; Contraceptives Knowledge among participants

13. Ever heard about contraceptive

A). Yes B). No

14. Source of information about contraceptives

A). Friends B). TV/Radio C). Family D). School E). Magazine F). Internet

15. Modern contraceptive ever heard

A). Pills B). Injectable C). Condom D). IUD E). Diaphragm

F). Spermicidal G). Norplant/Implants

16. Traditional methods ever heard

- A). Periodic abstinence B). Withdrawal C). Lactation amenorrhea D) Other,
specify.....

Section 4; Accessibility

17. Where do you get your contraceptives services from?

- A). within campus (convenience rooms) B). Local clinic/hospital C). Campus pressure groups
E). Counselling center F). NGO's

18. Why do you choose the location in previous question?

- A). easily accessible B). Friendly staff C). Religious/cultural belief D). Avoid stigma

19. How effective is your contraceptive method of choice?

Rate out of 10; 1 being least effective and 10 being most effective

- A). not effective (1-2) B). Somewhat effective (3-4) C). Fairly effective (5-6) D). Very
effective (7-8) E). Outstandingly effective (9-10)

7.4 PLAN

march/April 2022	April 2022	April 2022	April 2022	April 2022
Project proposal writing				
	Project submission to LAMUREC for approval			
		Data collection and analysis		
			Data collection, analysis and Report writing	
				submission of report

7.6 BUDGET

Photocopying and printing of proposal	K170
Printing and photocopying of final report	K200
Ethics fee	K300
Contingency	K250
Online form Software labor	K200
Total	K1120

LUSAKA APEX
MEDICAL UNIVERSITY



Faculty of Medicine and Surgery
Mutandwa Campus
P O Box 31909
LUSAKA
2nd September, 2022

To Whom it may Concern

Dear Sir /Madam

RE: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT YOUR FACILITY – ZAINAB TEMBO – MBCHB/14/02/002447

The above subject matter refers

The bearer of this letter **Ms ZAINAB TEMBO – MBCHB/14/02/002447** is a 6th year bonafide student of the Lusaka Apex Medical University in the Faculty of Medicine and Surgery. Currently she is undergoing a rotation in Pubic health and the component requires that students carry out studies in any area of interest in Public Health.

The student wishes to conduct a Research Study on the Topic: **To investigate the factors associated with the choice of contraceptives among third year students at Lusaka Apex Medical University.**

The purpose of this letter is to request for permission to allow the student to conduct this study at your Faculty. The study has been granted ethical approval by the Lusaka Apex Medical University Biomedical Research Ethics Committee (LAMUBREC.) The Approval Letter is attached.

The assistance rendered will be highly appreciated.

Yours Faithfully,



LUSAKA APEX
MEDICAL UNIVERSITY



**LUSAKA APEX MEDICAL UNIVERSITY BIO-MEDICAL
RESEARCH ETHICS COMMITTEE
(LAMUBREC)**

Telephone: +260 976051832/0977480460

Foxdale Campus
Plot N^o 3073
P O Box 31909
LUSAKA, ZAMBIA

Email: lamubrec@lamu.edu.zm
FWA 00029892
IRB 00001131

Ref: 00200-22

13th May 2022

The Principal Investigator
M/s Zainab Tembo
C/O Lusaka Apex Medical University
Faculty of Health Sciences
LUSAKA

13 MAY 2022

Dear M/s Zainab Tembo,

**RE: TO INVESTIGATE THE FACTORS ASSOCIATED WITH THE CHOICE OF
CONTRACEPTIVES AMONG THIRD YEAR MEDICAL STUDENTS AT LUSAKA
APEX MEDICAL UNIVERSITY**

The above mentioned research proposal was submitted to Lusaka Apex Medical University Bio-Medical Ethics Committee (LAMUBREC) on 4th May 2022. The review was based on the following documents that were submitted.

- a. Study Proposal
- b. Questionnaires
- c. Participant's Consent Form

We are pleased to inform you that your research proposal has been approved with minor corrections as shown on the feedback report. Kindly make the corrections to the satisfaction of your Supervisor.

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APPROVAL NUMBER

Ref: 00200-22

The number should be used on all correspondence, consent forms and documents as appropriate.

- **APPROVAL DATE:**
- **TYPE OF APPROVAL:**
- **EXPIRATION DATE OF APPROVAL**

12th May 2022
Expedited
11th May 2023

After this date, this project may only continue upon renewal. For purposes of renewal a submitted report on a standard form obtained from the LAMUBREC offices should be submitted one month before the expiration date for continuing review.

- **SERIOUS ADVERSE EVENT REPORTING (SAE):** All SAEs and any other serious challenges/problems having to do with participant welfare and participant safety and study must be reported to LAMUBREC offices.
- **MODIFICATIONS:** Prior to LAMUBREC approval using standard forms obtainable from LAMUREC offices is required before implementing any changes in the Protocol (including changes in the consent documents).
- **TERMINATION OF STUDY:** On termination of study, a report has to be submitted to LAMUBREC using standard forms obtained from the LAMUBREC Offices.
- **QUESTIONS:** Please contact the LAMUBREC Secretariat on Telephone Numbers: +260976051832/0977480460/0966480460 or by email on lamubrec@lamu.edu.zm.
- **OTHER**
Please be reminded to send copies of your research for our records. You are also required to submit electronic copies of your publications in peer-review journals that may emanate from this study.

Yours sincerely,



Dr Oswell Khondowe *PhD, MSc PT, MSc APA, BSc PT, Dip PT*
Chairperson

Scanned by TapScanner

5.4 AUTHORITY LETTER

Zainab Tembo, MBCHB/14/02/002447

Lusaka Apex Medical University,

Faculty of Medicine,

Department of public health,

P.O Box 31909.

Chalala along Kasama road,

Lusaka.



*No objection
Done
29/8/22*

The Director,

Lusaka Apex Medical University,

69 Mutandwe Road, Roma.

Lusaka, Zambia.

29th April, 2022.

Dear sir/madam,

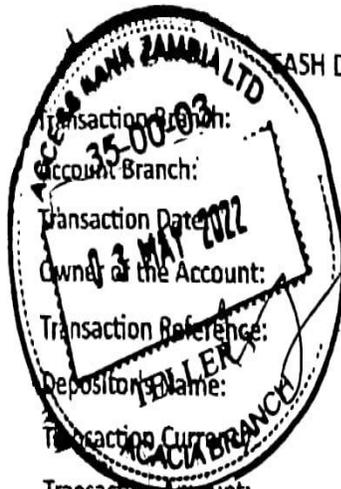
RE: PERMISSION TO UNDERTAKE RESEARCH STUDY

With regards to the reference above, I am here by requesting for permission to undertake a study at Lusaka Apex Medical University (Mutandwe Campus). I am a student pursuing Bachelor of Medicine and Surgery. I'm expected to carry out a research study as part of the requirements for the fulfillment of the degree and as part of my continuous assessment in community medicine (CBE 310).

The essence of the study is to investigate the factors influencing the choice of contraceptives among 3rd year medical students at Lusaka Apex Medical University.. This research will require to the 3rd year students during the time of study.

Please find attached my research approval letters from the research ethics committee.

28



CASH DEPOSIT

Transaction Branch: ACCESS BANK - ACACIA PARK
Account Branch: ACCESS BANK - ACACIA PARK
Transaction Date: 2022-05-03 10:47:02 AM
Owner of the Account: LUSAKA APEX MEDICAL UNIVERSITY LTD
Transaction Reference: FJB2212330379293
Depositor's Name: STUDENT #MBCHP/14/02/002447 ZAINAB TEMBOI
Transaction Currency: ZMW
Transaction Amount: 300.00
Transaction Account: 0030011356451
Amount in words: THREE HUNDRED ONLY

Dy.
CUSTOMER'S SIGNATURE