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KNOWLEDGE AND UTILIZATION OF EMERGENCY CONTRACEPTION AMONG FEMALE STUDENTS ENROLLED IN PUBLIC UNIVERSITIES IN THE HO MUNICIPALITY

BY

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DECLARATION

I, Eunice Djangmamle Appiah, hereby declare that this submission is my own work towards the Master of Public Health Degree and that, to the best of my knowledge, it contains no material previously published by another person nor materials which have been accepted for the award of any other degree of the University, except where due acknowledgments have been made in the text.

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DEDICATION

This work is dedicated to God Almighty, who has overseen each and every stage of the process. This work is also dedicated to my family, who have provided unwavering support and guidance during this journey.

ACKNOWLEDGMENT

This work could not have seen the light of day without the unfailing grace, strength, wisdom and direction from the almighty God. I wish, therefore, to first and foremost thank the Almighty God for making this work a success. I wish to acknowledge the immense support given to me by my academic supervisor, Dr Kwabena Opoku Mensah, School of Public Health, College of Health Sciences, University of Ghana.

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OPERATIONAL DEFINITION OF TERMS

Contraceptives: These are devices used to prevent pregnancy from occurring.

Use of contraceptives: This is the consistent use of any method of contraceptive to prevent pregnancy.

Knowledge and awareness: This is what the respondents know about the type of contraceptives.

Availability: This is the respondents' knowledge of sources of availability of modern contraceptives and how accessible respondents say contraceptives are to them.

ABSTRACT

In an ever-growing world, knowledge and utilization of emergency contraceptives among female students are essential to ensuring their quality of reproductive growth. It is widely acknowledged that knowledge on contraceptives is widespread but this has not largely culminated in the usage of emergency contraception among females.

This study assessed the knowledge and utilization of emergency contraceptive methods among female students in the public universities in the Ho Municipality using quantitative research tools. A simple random sampling strategy was employed in recruiting 260 female students aged <20-40 years. Data from administered questionnaire was analysed using STATA version 13.

Findings reveal low patronage of emergency contraceptives which has remained persistently t Participants in the study revealed their fear of major side effects in relation to the usage of emergency contraceptives citing nausea and vomiting, weight gain, bleeding, irregular menstruation and infertility. Also, most respondents mentioned that it was ethically or morally wrong to use Emergency Contraception (EC) which might be partly influenced by socio-cultural patterns such as religion and misconceptions. However, majority of the respondents indicated their willingness to recommend emergency contraceptives (EC) to others.

The study recommends that policy making should address the barriers to emergency contraceptives in relation to access and availability and the promotion of health educational programs among the various public universities in the country.

Keywords: Knowledge, Attitude, Availability, Modern, Contraceptives, Religious, Beliefs.

CHAPTER ONE

INTRODUCTION

1.0 Background

Globally, contraceptive prevalence rate of modern methods is 57%, but remains as low as 30% in low-income countries (United Nations DoEaSA, 2012). For most women, unintended pregnancies can lead to reproductive health issues that result in abortions. WHO (2005) describes emergency contraception as a method that women use during the first few days after having sex without protecting oneself or sometimes as a result of the failure of the emergency contraceptive to curb unintended pregnancies. EC is also known as the post-coital or morning after pill and can be taken within 72 hours of unprotected sex (Faúndes, Távara, Brache, & Alvarez, 2007). Emergency contraceptive pills (ECPs) are essential in ensuring that women can reduce unwanted pregnancies. This hormonal contraceptive method acts by preventing ovulation (Faúndes et al., 2007). This essential as most pills provide relief for most women in ensuring that they feel safe after engaging in safe sex.

Furthermore, Weisberg and Fraser (2009) states that EC offers women a safe means of ensuring that pregnancy does not occur during sexual intercourse. There are three main types of EC's which are mainly combined oral contraceptives pills or Yuzpe method, emergency contraceptive pills (ECP's) and copper-bearing intrauterine devices (IUDs). The low usage of EC's might be attributable to the barriers associated with emergency contraceptive usage.

Young people continue to remain vulnerable to health risks, mainly those related to sexuality and reproduction such as early pregnancy and child bearing. Research shows that about 44% of pregnancies occurring worldwide between 2010 and 2014 were unintended (Bearak, Popinchalk, Alkema, & Sedgh, 2018). This statistic highlights the growing trends of unsafe abortions and pregnancies.

The United Nation Children Education Fund (UNICEF) reports that adolescents form one-fifth of the world's population, about 1.2 billion (UNICEF, 2012). This has led to over 16 million adolescents giving births every year with unsafe abortions numbering about 5 million. However, it has been found that the use of emergency contraception within 72 hours of having unprotected sex prevents pregnancy. There remains a lot to be done in the area of adolescent education and reproductive health so as to ensure that young women do not experience unsafe abortions which can lead to the loss of lives.

For instance, the use of oral lanosteroi 1·5 mg is known to prevent over 80% of pregnancies. Other studies have proved that the tablet has the potential to prevent up to 99% pregnancies if combined with the intra-uterine contraceptive device (IUCD), (Gbagbo & Kayi, 2018). According to the World Health Organisation (WHO), almost 350,000 women die yearly from unwanted pregnancies (WHO, 2014b). Reports from Ghana Health Service (GHS) indicate that in 2014, approximately 376,657 pregnancies occurred in 2013 were mainly young women ranging 10-24 years.

Empirical evidence reveals that effective contraceptive usage helps to reduce about 2.7 million infant deaths in a year (Apanga & Adam, 2015; Nsubuga et al., 2016). This affirms the essential role contraceptives plays in the reproductive life of young females. A study that took place in Nigeria reveals that approximately 50% of respondents had knowledge of emergency contraceptives, (Aziken, Okonta, & Ande, 2003).

This has been confirmed as similar to Ghana as a study carried out by Darteh and Doku (2016) among students at the University of Cape Coast indicated that only 57% of the participants had ever heard of the emergency contraceptive and 36% had used the emergency contraceptives. Adolescents constitute 22.4% of Ghana's population. Teenage pregnancy is also high in the country. (Yussif, Lassey, Ganyaglo, Kantelhardt, & Kielstein, 2017).

The same study indicates that teenagers have 45% risk of stillbirths and a 30% increased risk of losing their babies within the first 6 weeks after birth (Yussif et al., 2017). Recent survey shows high proportions of sexually active students in Ghana (Darteh & Doku, 2016; GHS, 2015). This has possible implications on the quality of reproductive health care of the population due to the low knowledge and use of emergency contraceptives.

Others have also emphasize the role of religion as a driving factor which influences the usage of contraceptives in different ways as a result of religious backgrounds (Srikanthan & Reid, 2008). The use of emergency contraceptives has been seen as effective in reducing unwanted pregnancies despite its low usage in developing countries. Apanga and Adam (2015) has highlighted the fact that several women experience barriers to the accessibility and usage of contraceptives in Africa.

This has resulted in low usage of contraceptives (Nyarko, 2015). Ghana is not excluded as there exists a low contraceptive prevalence as reports suggest a drop in contraceptive usage overtime based on national surveys (Hindin, McGough, & Adanu, 2014). In contrast, Adjei et al. (2015), highlights the fact that most stakeholders have not done enough to promote the usage of emergency contraceptives for more than thirty years. This is attributable to existing socio-cultural barriers that prevents females to making a choice.

1.1 Problem statement

Young people are at continuous risk in relation to unprotected sex since its exposes them to unplanned pregnancies, unsafe abortions due to unprotected sexual intercourse. It can also lead to them acquiring STDs which can result in reproductive health challenges (Eliason et al., 2014; Hagan & Buxton, 2012). In Sub-Saharan Africa, the usage of contraceptives is low which thereby contributes to unplanned pregnancies, usage abortions and maternal mortalities. University students are predisposed to unsafe sex mainly due to socio-cultural, religious,

peer pressure and demographic factors that tend to influence that choice of emergency contraceptives.

Despite, these young university students better positioned to make sexual and reproductive health decisions compared to a teenager, the literature reveals that most of them lack adequate public health education on emergency contraceptives. As such these young university students, tend to make decisions that expose them to unsafe sex leading to unplanned pregnancies. Female students, are at an increased risk of unintended pregnancies because of their indulgence in risky sexual practices, according to Trussell (2007). This is attributable to the low usage of contraceptives among young women, since they are less likely to adopt measures that would prevent unintended pregnancies.

This is revealing as it highlights the dangers that this vulnerable age group are exposed in relation to unsafe sex. It is therefore believed adequate knowledge of emergency contraceptive pills (ECPs) can help reduce the number of unintended pregnancies. This reveals that more needs to be done in educating students on the importance of emergency contraceptives so as to curb unplanned pregnancies. It is therefore very critical that policy making engages these vulnerable groups in the design and implementation of health reproductive policies that seeks to empower young women to embrace the usage of emergency contraceptives. These young one's if not given the right information would continue to engage in unprotected sexual activities that risks their lives.

1.2 Rationale for the study

Evidence shows that promoting contraceptive use thus helps to improve the lives of the people economically and provides adequate security for families, households, and communities (Eliason et al., 2014). This evidence is yet to be translated into the usage of contraceptives among female students that has accounted for the several unintended pregnancies. The nature of unplanned pregnancies leads to many young women face challenges of teen motherhood

which largely has become a major problem for most countries. This has led to widespread poverty and ill-health posing a major challenge to many governments (WHO, 2014).

Apart from the Ghana Demographic and Health Survey (GDHS) that provide data on the general use of contraceptives (Ghana Statistical Service et al., 2015), and the mention of pregnancies among students in Ho, little is known about the local context on the students' knowledge and use of emergency contraception in the area. This therefore situates this research within academia as it seeks to elicit the knowledge level with regards to emergency contraceptive use among females in public universities within the Ho Municipality.

The evidence or findings from this research would therefore be very useful for future reproductive health policy planning and design. This would inform policy making among the various implementing agencies in the health sector and contribute to the body of knowledge within the field of reproductive health. Governments would also be better positioned to introduce various initiatives, programmes and workshops targeted at this vulnerable groups of young females who are exposed to unsafe sex resulting in unplanned pregnancies.

1.3 Research Questions

a) What is the level of knowledge of contraceptive use, among tertiary female students in the Ho Municipality?

b) What are the factors that influence the uptake of emergency contraceptives among tertiary female students in the Ho Municipality?

c) What are the attitudes of tertiary female students within the Ho Municipality in relation to the usage of emergency contraceptives?

1.4 General Objective

The overall aim of the study is to assess the knowledge and utilization of emergency contraception among female tertiary students within the Ho Municipality.

1.5 Research Objectives

a) To assess the knowledge of emergency contraceptive use among female tertiary students in Ho Municipality.

b) To determine the prevalence and factors accounting for use of emergency contraception among female tertiary students in the Ho Municipality.

c) To explore the attitude of female tertiary students in relation to the usage of emergency contraceptives within the Ho Municipality.

1.6 Theoretical/Conceptual Framework

The theoretical framework adopted for this study is Fischbein's theory of reasoned action. This theory focusses on the relationship between attitude and behaviour. It theorises that a person's behaviour is influenced by their attitudes and motivation to perform the action. This theory is appropriate for the study as it seeks to understand the level of knowledge of students on EC intake, determine the prevalence of factors accounting for the use of EC and explore attitudes of female tertiary students in relation to emergence contraceptive usage. The figure below is the drawing of the conceptual framework of the study which shows the link between the various features that influence the knowledge and the use of emergency contraceptive by the students. The framework also shows the specific direction the research will follow. It is based on the theory of reasoned action which says that behavior is influenced by several factors (Fishbein, Jaccard, Davidson, Ajzen, & Loken, 1980). It shows the association between cultural beliefs, norms, attitudes, intentions and actions of an individual.

Socio-demographic data such as age and religion has impact on the use of emergency contraception as younger females tend to use EC more than elderly, this is because the older women are likely to be married and so may have planned their sexual life better. Some religious denominations are also not in support of EC due to the notion of promiscuity. Others also have

misconceptions about side effects of the "the morning pill" such as excessive bleeding and so people would not like to go through these discomforts (Free, Lee, & Ogden, 2012).

Family factors such as parent-daughter communication on Reproductive Health matters also has impact on students' knowledge and use of EC. Based on the attitudes of some service providers, such as nurses and pharmacists, young women feel demotivated to acquire the medication even though they may be in dying need of it (Free et al., 2012). Individual perception, access to information, the economic status of parent or guardian, marital status, and others have all been known to influence the uptake of EC. Socio economic status could empower their decision making on contraceptives hence, increase its use. Contraceptive usage among female adolescents was very high with those who had undergone secondary education or higher education (19.9%) while those without formal education experienced a low level of usage (Nyarko, 2015).

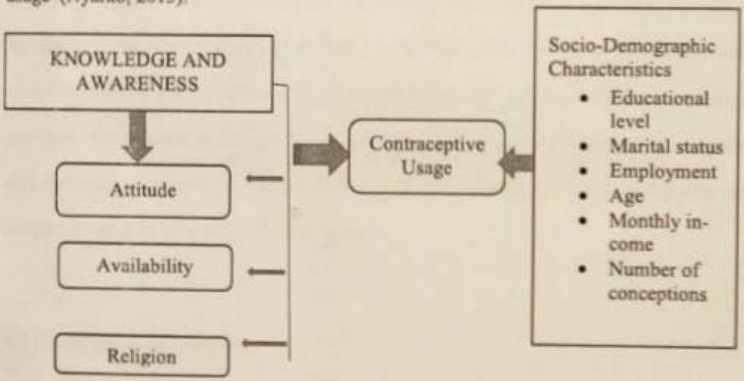

Figure 1: Conceptual framework of factors influencing contraceptive use among reproductive age females. Conceptual Framework Source: Adopted from Wondimu (2008) and modified by the Author.

The conceptual framework of factors influencing contraceptives use among reproductive age females seeks to explain how religion, attitude and availability influences contraceptive usage. It also explains how socio-demographics factors such as age, monthly income, number of conceptions, employment, marital status and educational level tends to influence one's usage of contraceptives. As religion defines the ideals for life, which in turn are reflected in the values and attitudes of societies and individuals. Such values and attitudes tend to shape the behaviour and practices of institutions and members of cultures.

Therefore, religion is seen as an influential tool that tends to influence the attitudes of young female students by virtue of its powerful role in society. This can have a positive or negative impact on the usage of emergency contraceptives thereby influencing attitudes of young female students. The availability of these emergency contraceptives might also be influenced by religion as the Ghanaian society is largely conservative and frowns on the use of emergency contraceptives due to socio-cultural underpinnings and religious doctrines. Health care providers demonstrate bias based on client's age, marital status and parity. As such health care providers are sometimes unwillingly to sell these emergency contraceptives to young people by virtue of their socio-cultural values.

1.7 Organisation of the study

This research consists of six chapters which outlines the research. The study gives a brief background on the study, problem statement and states the research objectives that the study is expected to achieve in Chapter 1. Chapter two highlights the literature review. Chapter three looks at the methods that would be employed in the study with chapter four giving a

highlight on the results obtained and chapter five deals with the discussion of the findings. Lastly, chapter six looks at the summary, conclusion and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction

This chapter focuses on the literature review component of the study. It highlights key studies undertaken by scholars and case studies in the area of emergency contraceptives. It also explores key concepts and how it is applied in the study. Studies undertaken by scholars in the field of reproductive health and contraceptives was also highlighted in the study.

2.1 Contraceptive Use: Global Overview

Globally, an estimated 214 million (155 million use no method and 59 million use traditional methods) women in the developing world do not use any form of modern method of contraception despite the desire to ensure that pregnancy does not occur (WHO, 2019). It is essential to note that for women the ability to make a choice as to whether to have a child or not is very essential to her reproductive health and economic wellbeing. This stage of her life is important to both family and the community (Ashford, 2003).

It is therefore critical that health policy takes into cognizance the promotion of contraceptives among young people so as to ensure that the reproductive needs of young people are met since effective contraceptive methods can help address unplanned pregnancies. Young people must be educated on the need to adopt effective modern methods when it comes sexual activity. This is critical as effective use of contraceptives has a positive correlation with adoption of modern methods (Fotso, Izugbara, Saliku, & Ochako, 2014).

Research reveals that 214 million women in developing nations would like to have their childbearing duties postponed despite the non-usage of contraceptives (WHO, 2019). Some of the reasons attributable are as a result of the choice of methods, limited access to contra-

ception, poverty, side-effects, cultural or religious opposition, poor quality of available services, users and providers bias (Akamike et al., 2020; Sable & Wilkinson, 2000). These barriers therefore contribute to creating barriers for many women within the region.

2.2 Contraceptive Use: Sub-Saharan Africa

Many scholars have suggested that the effective promotion of contraceptives usage plays a key role in empowering women and helping them live quality reproductive lives which therefore ensures that they make choices that are sustainable. This has a positive effect on universal primary school enrolment and quality of health of many young women (J. Cleland, A. Conde-Agudelo, H. Peterson, J. Ross, & A. Tsui, 2012). As these young women are empowered through health reproductive educational camps, they are capable of embracing some form of independency in making choices that guide their sexual reproductive lifestyle.

To ensure that this is successful, policy makers within the health sector must ensure that accessibility to emergency contraceptives are made available to all and sundry. This would go a long way to impacting positively to their reproductive health and provide sustainable incomes for most young women. (Singh, Bankole, & Darroch, 2017). As most young women, are largely denied access to emergency contraceptives due to barriers such as age, sex and beliefs. This is quite worrying due to the low patronage which poses a risk to population control and management. It also reveals that knowledge and usage of contraceptives are on the decline.

2.3 Overview of Barriers to Contraceptive Use

2.3.1 Key Barriers to Contraceptive Use

The literature reveals several barriers to the patronage of contraceptives. These barriers are largely cultural as most cultures in Africa are yet to fully embrace the use of emergency contraceptives. Various studies confirm that contraceptives usage is influenced by the nature of

social networks that women are engaged in. these factors contribute to the low usage of emergency contraceptives among young people. A study by Ochako et al. (2015), therefore reveals how young women through their various social networks are influenced thereby acting as a barrier to the usage of contraceptives. Some of these barriers include lack knowledge, lack of access, method related concerns and provider related barriers.

2.3.2 Lack of knowledge

There exists some form of barriers to knowledge acquisition on contraceptives among young people. These barriers are mainly centred on the knowledge about the mechanisms of action for specific methods of contraception. In a study among young women in Kenya, it was revealed that most of the women had knowledge of the various methods of contraception, but some largely lacked the knowledge on how it worked in relation to its application. Some made references to how the pill is inserted into the vagina to curb unplanned pregnancies. Some women also made mention of the use of the coil which was inserted in the body of the woman as a way of ensuring that unplanned pregnancies do not occur (Ankomah et al., 2013). Despite, the level of knowledge demonstrated, it appears that most lacked the application of the various methods which therefore affects their choices in relation to usage of contraceptives. It is understood that demonstration of the various methods of contraceptives need revisiting so as to equip women with adequate knowledge on how to effectively utilize these methods in relation to its application or how it works.

2.3.3 Lack of access

Access to contraceptives remains a challenge to many young women due to existing socio-cultural norms, cost and accessibility of the various methods in relation to how to acquire them from public or private health institutions. There exists lack of access which most women face as they largely cannot find a source due to the lack of its existence, distance and transportation costs. A study conducted in Africa reveals that 97% of the users are unable to

acquire these services because they cannot afford to pay for the full cost of contraceptives. Even in some cases when these are made free or subsidized (Gilda Sedgh & Hussain, 2014; Silumbwe et al., 2018). Some of these barriers include the distance, which acts as a major impediment to the many young women who might have to travel to acquire these services from various health posts (Ankomah et al., 2013; Muanda, Ndongo, Messina, & Bertrand, 2017)

2.3.4 Method related concerns

Some of the reasons given for unmet needs include side effects. Most women appear to be cautious of the side effects of the use of emergency contraceptives. Some of them fear for health reasons which they assume might affect their reproductive health. Some of the most commonly cited side effects include excessive bleeding, spotting, lack of sexual desire, weight gain, headaches, and blood pressure (Ochako et al., 2015).

2.3.5 Provider related barriers

In our part of the world, especially in Africa provider related barriers has contributed to the low usage of emergency contraceptives as most young women are turned back from health facilities. Some health care providers due to their personal prejudices sometimes do not give access to these contraceptives which thereby denies most young women their reproductive health rights in making a choice. A study conducted in Kisumu, Kenya reveals that some health providers refused to accord clients some form of respect when they approached them for advice on emergency contraceptives. They rather showed disrespectful attitudes to these clients who visited their health posts (Tumlinson, Speizer, Archer, & Behets, 2013).

2.4.0 Contraceptives

There has generally been some form of global recognition given to contraceptive usage and reproductive health issues. This is evident in the various global platforms mounted by the WHO and other world-wide reproductive health agencies who seek to empower women in

the area of their reproductive health in developing nations (Appiah-Agyekum & Kayi, 2013). It is therefore essential that policy makers in the health sectors promote the usage of emergency contraceptives so as to help alleviate population explosion, unplanned pregnancies and induced abortions (Apanga & Adam, 2015) which would have an positive impact on the socio-economic development of many less developed countries.

2.4.1 Types and methods of contraception

There exist various types of contraceptives for young people. They are mainly two types namely the modern and traditional methods. These pertain to the norms and cultural ways of the people. Some young women who live in the rural areas are largely shaped by norms and traditions governing their societies and communities. In the urban communities, where there exist a cosmopolitan population, there is a tendency most working women to adopt the use of modern contraceptive methods in their sexual lifestyle.

2.4.2 Empirical Literature Review

There has been some form of efforts by various health facilities and practitioners to promote reproductive health issues with a clear focus on population growth which has since become a major issue of global concern (Appiah-Agyekum & Kayi, 2013). Evidence reveals that growth and population relies not on only education but the need to address reproductive health needs of many young adolescents in the country (Ghana Health Service, 2016). There has been a decline in the usage of contraceptives even though most stakeholders acknowledge the essential role it plays in the reproductive health of young people.

There has been an increase in awareness of the essential role but this is yet to translate into the usage of emergency contraceptives which largely reveals a decline (Yidana, Ziblim, Azongo, & Abass, 2015). Various reviews undertaken in the area of reproductive health reveals that the cohort of young people between the ages of 15-19-year-old are indeed sexually active and are unlikely to use contraceptives though they aware of the risk of unplanned

pregnancies (Darko, 2016). The vulnerable group are the female adolescents who are largely culpable for not practicing safe sex despite the risk posed by unplanned pregnancies. There is therefore an association between unwanted pregnancies and health complications mainly miscarriages, unsafe abortions and stillbirths which may result in infant or maternal deaths (Nyarko, 2015). This poses a threat to the reproductive health of many young women of the age group of 15-19 years.

2.5. Knowledge and awareness of contraceptives

The existence of knowledge and awareness of contraceptives helps shapes and inform the decisions young females within the reproductive age undertake. This level of knowledge and exposure to contraceptives helps to clear several misconceptions that inhibits the usage of contraceptives. A study in Sikkim in India, concluded that high knowledge level of contraceptives does not always translate into usage of contraceptives. Therefore, knowledge and awareness creation programmes would be useful in equipping young people with the needed skills in making choices.

2.5.1 Availability of contraceptives

The availability of contraceptives has been seen as integral to promoting the usage of emergence contraceptives. This is essential as it requires the display of the various methods and types so as to demonstrate to the target group its functions with respect to how it can be used. Egede et al. (2015), revealed that availability and use of appropriate contraceptive methods were essential in controlling population growth and other complications of pregnancy.

Ghana's pluralistic health sector include both public and private health care providers who are playing a pivotal role in ensuring that clients mainly young adolescents are given much reliable information so as to equip them with choices that addresses their reproductive health challenges. The private health care providers are seen as much reliable in ensuring that the client's reproductive needs are met and as such youngest females patronize their services.

This provides them some of anonymity as the public health providers mainly would like to seek further clarifications on client's choice of emergence contraceptives before providing that service to them.

2.5.2 Attitudes toward emergency contraceptives

At the centre of every program put in place is the goal to ensuring that knowledge and awareness is targeted at key groups that leads to long term social change in relation to attitude towards contraceptives usage. There is therefore the assumption that when this critical group of young adolescents in their reproductive age groups are given adequate knowledge and awareness is created, it would lead to them making positive choices and ensuring access to the various methods of contraceptives usage (Amalba et al., 2014). There is therefore the need to intensify public education due to the number pregnant adolescents dropping out of school due to the social and economist cost of raising these children (Whitaker & Gilliam, 2008).

2.5.3 Religious beliefs and contraceptives

The role of religion in the lives of a community cannot be underestimated as it is the social engine on which people's lives evolves around it. One cannot underestimate the power of religion, as a vehicle for pulling humanity together and therefore religion as a social organization has a major influence on the decisions that shape the choices of young people within the reproductive age groups.

Religion therefore has some form of major influence as it regulates the behaviour of individual's including sexual and reproductive health behaviour (Wusu, 2015). Hence the need to understand the factors that account for the usage and non-usage of emergency contraceptives among young adolescent.

2.5.4 Students Knowledge of Emergency Contraception (EC)

Most sstudents appear to have a high level of knowledge when it comes to the use of contraceptives but however research reveals that most of them do not utilize contraceptives during

sex. This has therefore severe consequences on their sexual reproductive health and lifestyle. Various studies confirm the low usage of contraceptives among young people.

2.6 Conclusion

The literature supports the view that young women, are handicapped by several factors hindering their uptake of EC. It is important to note that this study seeks to assess the validity of some of these facts raised order to develop recommendations that will protect the sexual health of young women.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter highlights the various methods applied in the data gathering and collection pro

cess. It gives a brief of study area, variables, study population and data collection techniques. It also highlights data processing and analysis undertaken and ethical considerations within the study.

3.1 Scope of the study

The study focuses on contraceptive knowledge, use and factors affecting contraceptive use by female tertiary students within the Ho Municipality. The two public universities involved in the study are the Ho Technical University and the University of Health and Allied Sciences.

3.2 Study population

The study population consists of female students in the two public universities in the Ho Municipality in the Volta Region of Ghana.

3.3 Study design

This study employed a descriptive cross-sectional design using quantitative tools to describe the factors influencing contraceptive use among female tertiary students within the Ho Municipality. The use of cross-sectional survey is fast and less expensive way to measure a phenomenon in a population. It allows the measures of exposures and outcome simultaneously (Grimes & Schulz, 2002).

3.4 Sampling method

A simple random sampling method was employed for this study. A simple random sample is a subset of a population chosen at random. Each member of the population has an exact equal probability of being chosen in this sampling approach.

A simple random sample was undertaken by way of obtaining a list of the larger population and then selecting at random, a certain number of individuals to comprise the sample. Simple random sampling only takes a single random selection and little prior knowledge about the population, this method is the simplest of all the probability sampling methods. Any research conducted on this sample should have excellent internal and external validity due to the randomization. This enabled everyone who qualified for the study to have an equal opportunity to participate.

3.5 Study Area

The study was conducted within the municipality among the various public universities namely the Ho Technical University and the University of Health and Allied Sciences.

3.6 Ho Technical University

The study is undertaken at the Ho Technical University which was established to train middle level manpower labour for the technical and vocational industry. Ho Technical University, previously known as Ho Polytechnic, is a public tertiary institution in Ghana's Volta Region. In 1968, the Polytechnic Institute was established as a Technical Institute with the primary purpose of offering pre-technical education. The Technical Institute in 1986 was renamed a Polytechnic. The passage of the Technical Universities Act 2016 (Act 922) mandated it to award degrees, diplomas, certificates and other qualifications in science, engineering and technology based disciplines. With a total population of about 3,500 students, the Technical

University continues to impart knowledge on various areas of specialties. The Technical University is made up of various schools or faculties namely the School of Graduate Studies (SGS), Business School, Faculty of Applied Sciences and Technology (FAST), Faculty of Art and Design (FAD), Faculty of Engineering (FOE), Faculty of Applied Social Sciences (FASS), and the Faculty of Built and Natural Environment.

3.7 The University of Health and Allied Sciences

The University of Health and Allied Sciences, Ho (UHAS) was established by an Act of Parliament (Act 828 in December, 2011) and envisioned to become a pre-eminent research and practically oriented health educational institution dedicated to community service. The University started operations in September, 2012 with 154 students. Student's population currently stands at 3, 752 (3, 727 undergraduates and 25 postgraduates) while the staff strength is 611. Staff to student ratio in UHAS is 17:1, which is currently the best among all state universities in Ghana.

The University currently runs eighteen (18) undergraduate programmes in six (6) schools and one (1) institute, namely; School of Allied Health Sciences, School of Basic and Biomedical Sciences, School of Medicine, School of Nursing and Midwifery, School of Public Health, School of Pharmacy and Institute of Health Research. The University of Allied Health Science (UHAS) was established to provide training to students in the area of allied health. The vision is to be able to equip young people in the health sector with modern skills in the health sector that seeks to support the country's ever growing demands in the health sector.

Figure 2: Map of Study Site

3.8 Sample size

The sample size for this study was determined using the following factors such as the:

- sample size which was determined by using the estimated population based on contraceptive prevalence rate of 19% in Ghana as reported by the Ghana Statistical Service et al., (2014).
- 95% confidence level
- Acceptable margin of error of 5%

Based on the Cochrane Formula, that is

$$Z^2 * p(1-p)n = /d^2$$

Where:

n - Minimum sample size required d - Is margin of error 5% = 0.05

z - Confidence level 95% = 1.96

p - Estimated proportion of adolescents = 0.19

Therefore,

$$n = \frac{1.96^2 * 0.19(1 - 0.19)}{0.05^2} \approx 236.4 = 236$$

To cater for non-respondents and incomplete questionnaires, 10% of the sample size will be added to complement the calculated size thus (10/100*236≈23.6=24). So therefore, the n will be obtained as 236 + 24 = 260. A final sample size (n) of 260 unmarried female students will be recruited for the study. In order for the sample to be representative of the 2 schools, the final sample size will be divided into 2 i.e. 260/2 = 130 per University. The sample size of 50/50 for both schools is justified since it gives the most significant sample size due to the level of uncertainty of responses from the various respondents or participants.

3.8.1 Inclusion criteria

All unmarried female students, within reproductive age (18-36 years) enrolled in the two universities who agrees to sign the consent form.

3.8.2 Exclusion criteria

Female students who are married and those who do not fall within the reproductive age and are not willing to sign the consent form.

3.9 Study Variables

3.9.1 Dependent variable

The dependent variable for this study is the use of EC.

3.10 Independent variables

The independent or exposure variables of measure are socio-demographics (age, religion, exposure to sex education, etc.), family background factors for example, parents-daughter's

communication about RH, Other factors access to information, service provider attitude, access to the medication, misconceptions about side effects and peer communication on EC.

3.11 Data collection instrument

The data collection instrument used in this study was the questionnaire. The questionnaire as the main instrument for data collection consisted of a set of standardized questions often called items, which followed a fixed scheme in order to collect individual data about or more specific topics. The questionnaire consisted of Section A focused on demographic information, Section B focused on the knowledge of emergency contraception and lastly Section C which consisted of questions on attitudes and use of emergency contraception. The data collection instrument was therefore divided into sections where the first section required students to produce answers for their personal characteristics. The second part contained questions bothering on participants' knowledge and use of EC. Next, the remaining section inquired about participants' attitude and use of EC.

3.11.1 Data collection

Questionnaires were administered to the WhatsApp platforms or groups chats of students in the University of Health and Allied Sciences and the Ho Technical University. This was done through a software link called REDCAP. The simple random sampling of study participants was implemented using WhatsApp by ensuring that when students choose the appropriate gender that is female, the next option is to select whether married or unmarried, which would depend on the option chosen that would make one be able to proceed with the research. If a participant chooses unmarried, she would then be able to continue with the questionnaire, as it would enable her to proceed with answering the remaining questionnaire.

The simple random sampling method, therefore enabled each unmarried female student to be given the equal chance of being chosen by virtue of their level of study. The link in the

REDCAP was specifically stated that this questionnaire was to be answered by only unmarried females within the reproductive ages of 18-36 years in the WhatsApp groups. The justification for the adoption of the electronic method of data collection was due to the closure of school's by the government due to the spread of the coronavirus that led to virtual classes been held for student's. Student's at that time could not be reached for a face to face interview as most of them were at home using the virtual platforms to access teaching and learning materials. The delivery of teaching and learning was conducted via Zoom, WhatsApp, Telegram and other virtual electronic spaces.

As such, research participants had to be reached via their corresponding levels of study within the official WhatsApp groups created by the departments or faculties. Access to student's platforms was obtained via introductory letters sent to the school, thereby granting access to the various groups via course representatives. Students were then sent reminders every three (3) days to ensure that they were prompted in relation to the study via messages to the chat platforms.

3.12 Pre-Testing

Pre- test was carried out before the actual field work in the 2 universities. A total number of 10 unmarried females were recruited from the Evangelical Presbyterian University, a private institution within the municipality at all levels of study for the pilot study. The pre-test was conducted to provide guidance regarding the desirable size of pre-tests questionnaire. This helped to aid in detecting misunderstandings, ambiguities, or difficulties participants may encounter with instrument items. The questionnaire was therefore pre-tested among 10 unmarried female students who meet the inclusion criteria in order to help understand the clarity of the questionnaire. After pre-testing, amendments were made to the questionnaire depending on the nature of feedback received and a final version of it obtained for the study. The pilot

study helped to ensure validity and reliability of the instrument for data collection. The questionnaire was checked for completeness and internal consistency.

3.13 Statistical Analysis

The data was then being captured into Microsoft Office spreadsheet for further cleaning and coding. The cleaned data was exported to STATA for analysis. This would enable data to be analyzed in accordance with STATA to generate useful data analysis with respect to respondent's inputs. First, the dependent and independent variables were explored to explore measures of central tendency, variation, proportion, frequency and normality distributions. Throughout the process of univariate analysis, missing data was assessed. In event the missing values exceed 5%, the multiple imputation was used. Using stepwise selection, associations with p- value$\leq$0.05 was eligible for the multivariate model. A p-value$\leq$0.05 reveals a statistically significant relationship between the variables. The logistic and multiple linear regression was selected depending on the outcome variable.

3.14 Ethical Considerations

Moher, Dulberg, and Wells (1994) defines ethics as the appropriateness of the researcher's behavior in terms of the rights of respondents of a research. Ethical approval was sought from the Ghana Health Service Ethical Review Committee, with approval ID GHS-ERC 020/06/20. Following this, permission was sought from the university authorities to interview students.

Questionnaires were sent to the WhatsApp platforms of students in the two universities. This was done through a software link called REDCAP. The link in the REDCAP specifically stated that this questionnaire was to be answered by only unmarried females within the reproductive ages of 18-36 years in the class or departmental WhatsApp pages. Access to student's

platforms was obtained via introductory letters sent to the school, thereby granting access to the various groups via course representatives. Students were then sent reminders every three (3) days to ensure that they were prompted in relation to the study via messages to the chat platforms.

It was made known to students that participation in the study was voluntary and that, they have the right to withdraw at any point in the study, without any penalty. All data was secured, was handled anonymously and confidentially and was used for the purpose for which it was collected for. There is no conflicting interest of the principal investigator of this study.

3.15 Chapter Summary

This chapter highlighted the various methods employed within the study. It provided answers to how the data gathering process was undertaken and how the variables were deployed within the study.

CHAPTER FOUR

RESULTS

4.0. Introduction

This chapter presents the findings of the empirical study. The number of participants totalled 260 who were all female students from the Ho Technical University and the University of Health and Allied sciences. Even though the researcher acknowledged the important role males could play in achieving the objectives of the study, particular attention was given to females because the topic of the study is directly related to females. This chapter therefore presents the results or findings of the research based on data collected from participants in relation to the knowledge and utilization of emergency contraception among female tertiary students within public universities of the Ho Municipality. Thus, the researcher assumed that given that the study had a very short life cycle, the focus on females will generate the best needed data for the purposes of the study. The results of the study are presented in figures, tables and graphs and for the purposes of clarity, the results have been organized based on the objectives of the study. It should be noted that a 100% response rate was recorded.

4.1. Demographic Characteristics of Respondents

There were 260 questionnaires distributed in total. All questionnaires were correctly completed, and the response rate was 100% (260/260). The demographic parameters give a detailed picture of the study participants. From the total study participants, majority of them (n=193, 74.2%) were between the ages of 21-30 years, 18.8% (n=49) were <20 years and the rest were between 31-40 years (n=18, 6.9%). Half of the participants are urban residents (n=131, 50.4%) and the rest resided in the rural area. More than half of the participants are Christians (n=171, 65.8%) and the rest are Muslims (n=89, 34.2%). According to the level of study of participants, 71 (27.3%) of them are in level 100, 60 (23.1%) are in level 400, 55 (21.2%) are

in level 200, 48 (18.5%) are in level 300 and the rest are offering diploma programs (n=26, 10.0%).

Out of the 260 reproductive age women, 42 (16.2%) reported that they were married. Additionally, most 213 (83.9%) are single women that is they are not are not married and none being a divorcee as shown in Table 1 below. Majority, 193 (74.2%) of the respondents were within the age group of 21-30 years.

Table 1: Demographic characteristics of female students

Variable (Characteristic)	Frequency	Percent (%)
Age Category		
<20 years	49	18.8
21-30 years	193	74.2
31-40 years	18	6.9
Place of Residence		
Urban	131	50.4
Rural	129	49.6
Religion		
Christian	171	65.8
Muslim	89	34.2
Marital status		
Married	42	16.2
Single	213	83.9
Divorced	0	0.0
Level of study		
Diploma	26	10
Level 100	71	27.3
Level 200	55	21.2
Level 300	48	18.5
Level 400	60	23.1

Source: Field Data

Responses to educational level attained revealed that over 27.3% making up 71 students were in Level 100. This was followed up by Level 400 students making up 23.1% with a population of 60 students, Level 200 constituting 21.2% and Level 300 making 18.5% of 48 students. Christians constituted the majority, 171 (87%) and those who were of the Islamic faith were only 89 (34.2). In relation to the place of residence, majority of the students constituting 131 (50.4) resided in the urban whiles 129 constituting 49.6% resided in the rural.

Table 2: Descriptive statistics of Age

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
Age (years)	260	18	36	25.00	3.9

Table 2 shows the descriptive statistics of the ages of the participants. The mean age of the participants was 25 years with a standard deviation of 3.9 years. The minimum age was 18 years and the maximum age was 36 years.

4.2 Knowledge on Emergency Contraception (EC)

Knowledge of contraceptives was found to be almost universal among respondents. Of the 260 respondents, more than half 205 (78.8%) of the study participants regarding EC indicates that more than half 205 (78.8%) of the study participants had good knowledge about EC and 55 (21.2%) did not have knowledge on it.

This means that more of the student had heard of contraceptives with only 55 students who had no knowledge of contraceptives. Table 3 depicts the knowledge of participants on Emergency contraception. Regarding if participants thought that unintended pregnancy is a major problem facing our country, majority of them think it is a major problem (n=143, 55%) and 117 (45%) did not think it was a major problem.

More of the participants mentioned that there is something a woman can do in the following days to prevent pregnancy should they have unprotected sex (n=160, 61.5%), 76 (29.2%) mentioned that there is nothing to do, 15 (5.8%) were not sure and 9 (3.5%) did not know. Majority of the participants stated that emergency contraceptive is another term for morning pill (n=202, 77.7%), 22 (8.5%) mentioned that it is not another term for morning pill and 36 (13.8%) do not know. Regarding when participants heard about EC, 112 (43.1%) heard about it more than 3 years, 98 (37.7%) was between 1-3 years, 26 (10.0%) was between 6 months to 1 year and 24 (9.2%) was less than 6 months ago.

Majority of the participants 105 (40.4%) mentioned that it takes up to 12 hours for EC pills to work after you have had unprotected sex, 103 (39.6%) up to 24 hours, 33 (12.7%) up to 1 week and 19 (7.3%) do not know. Most respondents choose friends which constituted about (31.1%) making up a total of 81 female students, with television being ranked second constituting 28.5% of 74 students and followed by radio of 25.4% of 66 female students. Social media constituted about 11.1% of 29 students. This was followed by the newspaper 7 (2.6%) and the least was doctors, nurses, health care workers 3 (1.2%). In terms of hearing of emergency contraception, majority of respondents 205 (78.8%) indicated 'Yes' whiles 55 (21.2%) responded 'No'. Table 4.2 shows results of respondents' sources of emergency contraceptive information, methods of contraceptives constituting knowledge and usage of contraceptives.

Table 3: Knowledge on Emergency Contraceptives (EC)

Variables	Frequency (n=260)	Percent
Have you heard of Emergency contraception		
Yes	205	78.8
No	55	21.2
If yes, when did you first hear of it?		
Less than 6 months	24	9.2
6 months to 1 year	26	10
1-3 years	98	37.7
More than 3 years	112	43.1
Where did you first hear about it?		
Television	74	28.5
Radio	66	25.4
Friends	81	31.1
Social media	29	11.1
Newspaper	7	2.6
Doctors/ Nurses/Health care workers	3	1.2
From where can you access the medicine buy?		
Private Health facilities	22	8.5
Public health facilities	6	2.3
Pharmacies	216	83.0
Do not know	16	6.10
Can you get the medicine without prescription?		
Yes	214	82.3
No	42	16.2

Do not know	4	
Do you think that unintended pregnancy is a major problem facing our country		
Yes	143	55
No	117	45
Do not know	0	0
Is there anything a woman can do after unprotected sex to prevent pregnancy		
Yes	160	61.5
No	76	29.2
Not sure	15	5.8
Don't know	9	3.5
Have you ever discussed EC with a health care professional?		
Yes	10	26.2
No	250	96.2
How long after unprotected sexual intercourse do you have to start taking EC in order for it to work		
up to 1week	33	12.7
up to 24 hours	103	39.6
up to 12 hours	105	40.4
Don't know	19	7.3
Emergency contraceptive pills are primarily used to prevent pregnancy		
Strongly agree	69	26.5
Agree	67	25.8
Neutral	65	25.0
Disagree	59	22.7
Strongly disagree	0	0

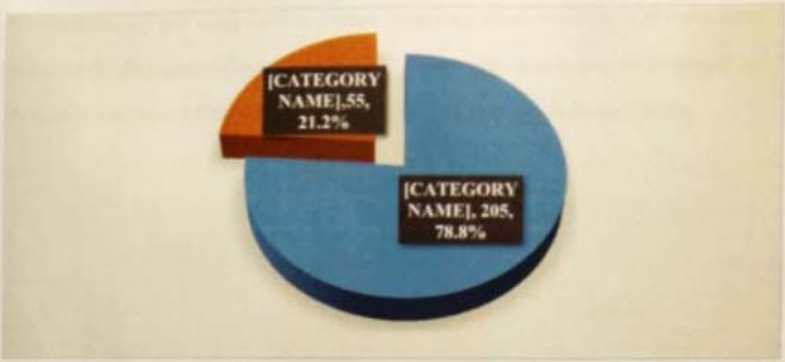

Figure 4. 1: Have you ever heard of emergency contraceptive pill

Figure 4.1 shows whether if the participants have ever heard about EC pills. More than half of the participants (n=205, 78.8%) have heard about EC whereas the rest haven't heard about it (n=55, 21.2%)

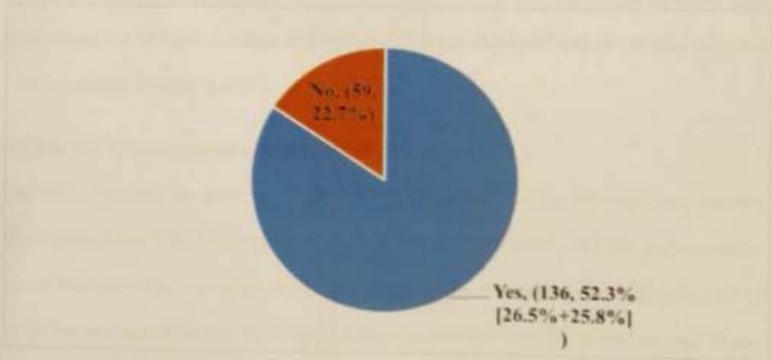

Figure 4. 2: Emergency contraceptive pills are used primarily to prevent pregnancy

In relation to EC pill being used to prevent pregnancy about 69 (26.5%) strongly agree, whiles 67 (25.8%) agree indicating that EC pills are primarily used to prevent pregnancy and the neutral were 65 (25.0%) with 59 (22.7%) disagreeing as shown in figure 2 above.

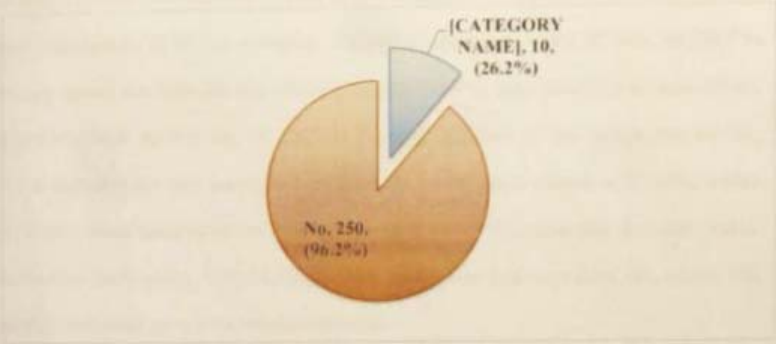

Figure 4. 3: Have you ever discussed EC with a doctor or other health care professional?

Out of the total participants, more than half of them 250 (96.2%) mentioned that they have never discussed EC with a doctor or other health care professional and 10 (26.2%) indicated 'Yes' as shown in figure 4 above.

4.3 The use of Emergency Contraception (EC)

Table 4.3 shows the use of EC by the participants of the study. Of the 260 responses, majority of the participants 176 (67.7%) did not object to the use of EC and 84 (32.3%) objected to the use of EC. More than half of the participants admitted that they had not used EC 178 (68.5%) in the last one year whiles 82 (31.5%) did admit that they had used EC in the last year. Therefore, contraceptive us was found to be highest among (state the age group) .... single or married? Majority of the participant 117 (45.0%) stated that unintended pregnancy is an average

problem in Ghana, 113 (43.5%) said it's a major problem. Some also indicated that it's a minor problem 9 (3.50%) and 21 (8.1%) stated they do not know 21 (8.1%).

More than half of the participants 225 (86.5%) mentioned that EC is not medically appropriate after a woman has missed her period or just confirmed a pregnancy, 14 (5.4%) said it is appropriate and 21 (8.1%) do not know. Regarding side effects of the EC pills, 69 (26.5%) strongly agreed that there are side effects of EC, 67 (25.8%) agree that there are side effects, 65 (25.0%) were neutral and 59 (22.7%) disagree. Majority of the participants (n=123, 47.3%) indicated that they have concerns about the health risk in relation to EC pills, whiles 91 (35.0%) stated that they do not have concerns and 46 (17.7%) stated that they don't know. Of the total participants, 108 (41.5%) of them stated that they have used EC, whiles 105 (40.4%) mentioned no and the rest did not know.

Table 4: The use of Emergency Contraceptives (EC)

	Frequency (n=160)	Percent
Do you have objections to Emergency contraception		
Yes	84	32.3
No	176	67.7
Have you used EC in the last one year?		
Yes	82	31.5
No	178	68.5
Have you ever experienced unintended pregnancy?		
Yes	106	40.8
No	154	59.2
How big of a problem do you think unintended pregnancy is in Ghana		
Major	113	43.5
Average	117	45
Minor	9	3.50
Don't Know	21	8.1
EC is medically appropriate after a woman has missed her period?		
Yes	14	5.4
No	225	86.5

Don't Know	21	8.1
Is EC effective at reducing the chance of pregnancy if taken correctly?		
Yes	225	86.5
No	35	13.5
EC pills has extreme/harsh side effects		
Strongly agree	69	26.5
Agree	67	25.8
Neutral	65	25.0
Disagree	59	22.7
Do you have concerns about health risks in relation to EC pills		
Yes	123	47.3
No	91	35.0
Don't Know	46	17.7
Do you think it is ethically or morally wrong to use EC?		
Yes	142	54.6
No	106	40.8
Do not know	12	4.6
Have you ever taken EC		
Yes	108	41.5
No	105	40.4
Don't Know	47	18.1
What are the major side effects of the morning pill?		
Nausea and vomiting	17	6.5
Weight gain	28	10.8
Bleeding	65	25.0
Irregular Menstruation	98	37.7
Infertility	62	23.9
Death		
Do you worry sometimes that the pill may not work?		
Yes	108	41
No	68	26.1
Not sure	84	32.3
Would you have taken emergency contraception if needed?		
Yes	142	54.0
No	106	40.0
Not sure	16	6.0
If no why?		
Health reasons	56	21.5
Fear of side effects	75	28.8
Religious reasons	41	15.8
Fear of stigma	45	17.3
Scio-cultural reasons	13	5.0
How likely are you to recommend it to someone?		

Very likely	216	83.1
Somewhat likely	11	4.2
Neutral	21	8.1
Somewhat unlikely	8	3.1
Very unlikely	1	0.4
Under what circumstance would you recommend EC		
Rape	14	5.40
Failed regular method	25	9.0
Unprotected sexual intercourse	95	36.5
All the above	126	48.5

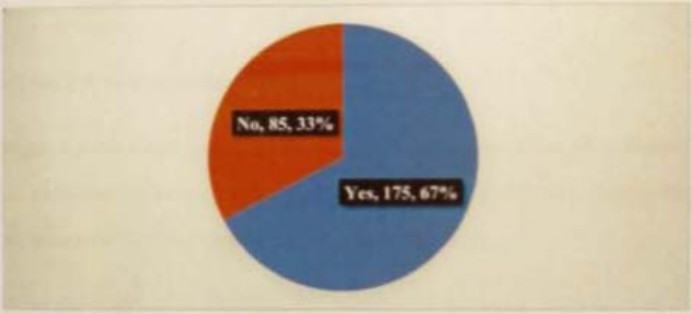

Figure 4. 4: Would you feel embarrassed or judged when obtaining Emergency Contraception

The above figure shows whether participants would feel embarrassed or judged when obtaining EC. Majority of the participants (n=175, 67%) mentioned that they would feel embarrassed or judged when obtaining EC and the rest said no (n=85, 33%).

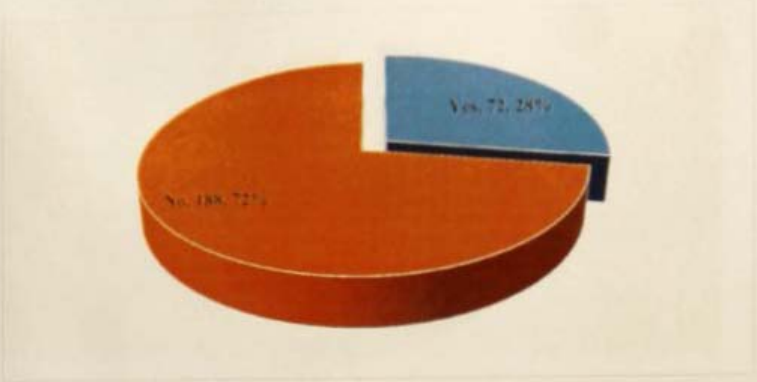

Figure 4. 5: Ever experienced unintended pregnancy

Figure 4.5 above depicts whether the participants have ever experienced unintended pregnancy. More than half of them said no (n=154, 59.2%) and the rest stated making up 106 (40.8%) mentioned that they had experienced unintended pregnancy.

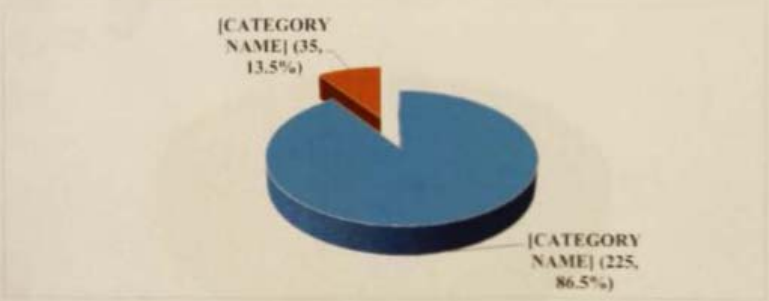

Figure 4. 6: Emergency Contraception is effective at reducing the chance of pregnancy if taken correctly.

Majority of the participants stated that EC is effective at reducing the chance of pregnancy if taken correctly (n=225, 86.5%) and the rest said otherwise (n= 35, 13.5%) as shown in the figure above.

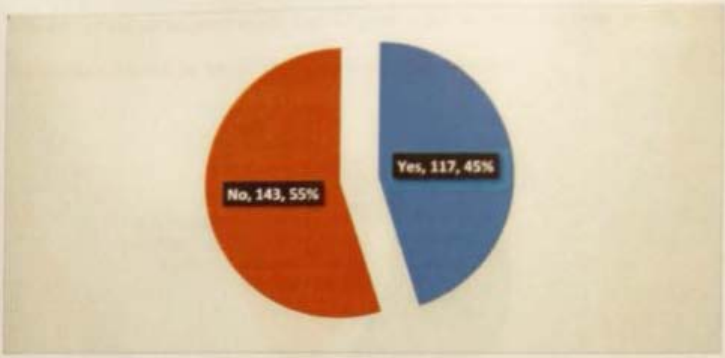

Figure 4. 7: Is it ethically or morally wrong to use EC

Figure 4.7 shows whether it is ethically or morally wrong to use EC. More than half (n=142, 54.6%) of the participants stated that it is ethically or morally wrong to use EC whereas the rest said it is not ethically or morally wrong to use it (n=106, 40.8%). The rest of the female respondents mentioned that they don't know representing 12 (4.6%).

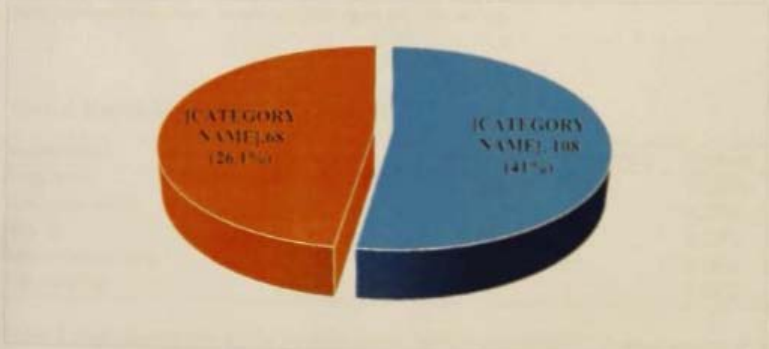

Figure 4. 8: Do you worry that EC pills might not work

Majority of the participants worry that EC pills might not work for them (n=108, 41%) and the rest do not worry (n=68, 26.1%) as shown in figure 8 above.

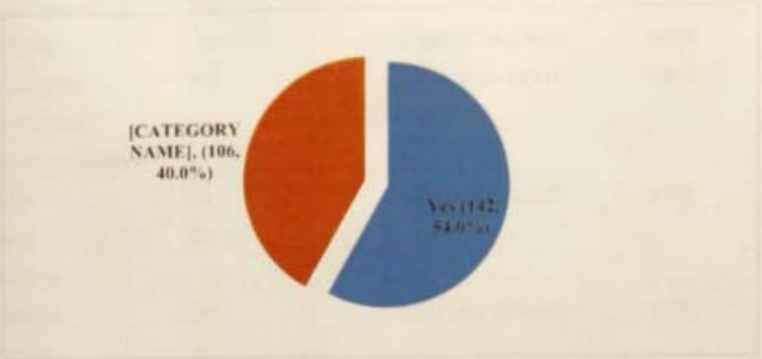

Figure 4. 9: Would you have taken EC pills if needed?

The figure above shows whether a participant will take EC pills if needed. Majority of them 142 (54.0%) mentioned that they would take EC pills if needed whereas the remaining participant mentioned that they would not take them (n=106, 40%).

Table 5: How likely would you recommend EC

Recommend	Frequency	Percent
Very likely	216	83.07%
Somewhat likely	11	4.23%
Neutral	21	8.07%
Somewhat unlikely	8	3.08%
Very unlikely	4	1.54%

Table 5 above depicts how likely the participants would recommend EC to other people. 216 (83.07%) mentioned that they are very likely to recommend to others, 11 (4.23%) are somewhat likely to recommend, 21 (8.07%) are neutral, 8 (3.08%) are somewhat unlikely and 4 (1.54%) are very unlikely.

Table 6: Factors associated with the use of EC

Variable	Use of EC		OR (95% C.I)	p-value
Age Category	Yes	No		
<20 years	36	13	0.765 (0.234-2.501)	0.658
21-30 years	128	65	1.014 (0.36-2.857)	0.979
31-40 years	12	6	1	
Place of Residence				
Urban	83	48	1.428 (0.836-2.441)	0.192
Rural	93	36	1	
Religion				
Christian	119	52	0.737 (0.421-1.292)	0.287
Muslim	57	32	1	
Level of study				
Diploma	18	8	0.638 (0.237-1.719)	0.375
Level 100	45	26	0.868 (0.423-1.782)	0.700
Level 200	41	14	0.527 (0.235-1.181)	0.120
Level 300	36	12	0.493 (0.212-1.146)	0.100
Level 400	36	24	1	

Table 6 above shows the factors which are associated with the use of EC. None of the factors: age category, place of residence, religion and level of study are statistically significant association with the use of EC. (all $p>0.05$).

4.7. Chapter summary

This chapter focussed on the findings generated from the data gathering process. It highlighted key results based on participant's response to questions posed on emergency contraceptives. The findings reveal higher knowledge on contraceptive but largely the usage level of contraceptives was found to be low due to several barriers identified within the study.

CHAPTER FIVE

DISCUSSIONS OF FINDINGS

5.0 Introduction

This chapter focused on the discussion of findings per the research study undertaken among students in two public universities. Therefore, this chapter discusses the findings along the various themes.

5.1 Socio-demographic characteristics

The study participants comprised mainly of young females between the ages of 18 and 40 who are enrolled at the University of Health and Allied Sciences and the Ho Technical University. It can be seen clearly that majority of the research participants were between the ages of 21 – 30, which was followed by those with ages below 20 and the rest fell between the ages of 31 – 40. It is observed that all the participants were within the youthful age bracket. Most people within this age bracket often have their sexual desires at their peak. They thus constitute a group of people whose life styles will often be characterized with sexual exploration and activities. Thus, the risk and prevalence of unwanted pregnancies are often very high within this age bracket.

It is therefore not surprising that one quarter of the estimated twenty million unsafe abortions and 70,000 related deaths each year occur among women during the ages of 15–19 (Nsubuga et al., 2016) and that over 16 million adolescents give birth every year worldwide with an additional 5 million having an abortion (WHO, 2014a). What makes the situation even worse is the fact that almost half of these females reside in rural areas as discovered by the current study.

The assumption is that women in rural areas are very more unlikely to patronize emergency contraception when compared with women in urban areas. It was also discovered that more

than half of the respondents were Christians and few were Muslims. This could also increase the risk of unwanted pregnancies as some young people may refuse to patronize family planning measures on religious grounds, especially that most of them are often not married. Indeed, it was discovered that a vast majority of the respondents were not married at the time of the study.

As per the level of study, nearly equal number of participants from all levels of study including the Diploma participated in the study. This indicates that participants were fairly distributed across all the levels of tertiary education. Thus, the responses that were given serve as a representative sample of the population. The study also found that almost half of the respondents live within rural areas which shows that both the urban and rural areas should be given equal importance in efforts improve the use of emergency contraception.

5.2 Knowledge of Emergency Contraceptives (EC)

Overall the study assessed the knowledge and utilization of emergency contraception among female students enrolled in the two public universities in the Ho Municipality. The findings on knowledge of reproductive female students regarding emergency contraceptives suggest that there was widespread knowledge among students. This is consistent with several other studies conducted across Africa and beyond. For example, in Nigeria, 67.8 has heard of EC and 95% in Mexico (Frarey, Gurney, Sober, Whittaker, & Schreiber, 2019; Harper & Ellertson, 1995; Hoque & Ghuman, 2012; Whittaker, Berger, Armstrong, Felice, & Adams, 2007). This is affirmed by studies in India (Hayat, Khan, Imtiyaz, Hayat, & Hayat, 2013).

A study conducted by Nsubuga et al. (2016) shows a contrary view as their study reported that the level of knowledge about contraceptive is low in a similar African university setting. Their study reported that the level of knowledge about contraceptive use is low in a similar research setting. The difference in reporting could be due to difference in the use of technolo-

gy as most of ihe participants in the current study learned about emergency contraception through the media.

Again, majority have heard of the pills between and three years followed by 98 respondents who have also heard of it between one and three years with 26 respondents 24 who first head of the morning pill within a year ago. When their sources of information were sought, it came out that friends were their greatest influencers were the television, radio, through the social media, the newspaper with doctors and health care workers accounting for lowest percntage. This could explain why there still seem to be a lot of inaccurate information about the emergency contraceptive pill as only three people have first-hand information from health care workers, rather, majority of the respondents first heard from friends.

This agrees with findings from Nigeria, that friends were a major source of contraceptive knowledge or information among market women of reproductive age. (Egede et al., 2015). Other studies have also revealed similar findings. For example, in a study conducted by DiCenso et al. (2001) respondents said they had little exposure to formal sex education and they believe that has led to unhealthy sexual decisions they take. This study found that reproductive age female students in the study area had knowledge of on how to access emergency contraceptives as the study revealed that respondents seem to know the sources from where they can get access to the medication such as the private health facilities, public health facilities, pharmacies and only 6.1%do not know at all where to get the medicine from. At least a good number also know that they do not need a prescription before they can buy the medication. Only 42 respondents are not sure whether or not they need a prescription to buy, whilst 16 indicated that they do not know. EC use in public health facilities is very low, even though most South African women rely on the public health facility for their contraceptive supplies (Maharaj & Rogan, 2011). This confirms the findings in this study as public health facilities

recorded 2.3% as compared to 8.2% private health facilities with pharmacies recording a high figure constituting the majority in relation to access to emergency contraceptives.

This is however in contrary to a study in a South Africa by Hoque and Ghuman (2012), which reports that female university students (69.9%) did not know that a prescription was not required to acquire the drug. This further enhances the literature on policy regarding emergency contraceptives within the Africa region as it policy makers would have to reconsider lifting restrictions on contraceptives. It is quite surprising, that public health facilities are less accessible with only 6 students indicating it as a source of modern contraceptives.

This is partly attributable to the attitude of some health professionals in these public health facilities who insist that EC is meant for married couples and so it deters young females from visiting the facilities. Knowledge on how to access the availability of contraceptives was positive among the female respondents with each stating at least a source from where to access or acquire a modern contraceptive similar to the 99% reported in other studies with only 6.10% indicating that they do not know (Ghana Statistical Service & ICF International, 2014). Furthermore, findings during the study reveals that unintended pregnancy is a major challenge facing students in both universities even though awareness of modern contraceptives, especially emergency contraceptives (EC). This is also in line with some earlier studies on some university students by Whittaker et al. (2007) the respondents have also not discussed the EC with any health professional for better understanding. However, knowledge level of female students on EC with regards to prevention of pregnancy tended to be divided as more respondents strongly agreed than those who remained neutral or disagreed.

5.3 Awareness of Emergency Contraception

The level of awareness of emergency contraception is very high among the respondents while only few said they did not know anything about emergency contraception. Additionally, a good number said they know where to get emergency contraception during times of need and

again, majority confirmed that emergency contraception could be accessed even without prescription. Regardless, this should be an issue of worry to few number of females who could attend school to the level of tertiary and still do not know anything about emergency contraception when same could not be said about sexual activity.

Thus, despite the fact that the study recorded a high awareness rate on emergency contraception that cannot be considered a positive sign. Given that almost a quarter of tertiary students do not know anything about emergency contraception. Interestingly, it is quite shocking to observe the trends of awareness/knowledge of this emergency contraception among the participants. Almost half of the participants who are young females heard something about emergency contraception more than three years ago and the other portion of the respondents only heard something about it at least one year ago. This means that most young females who are at the peak of sexual desires heard of emergency contraception at least one year ago. Therefore, these young females are saying that they have not heard anything about emergency contraception for the past one year or even more than that. Also, as it is reported that of the respondents had heard about emergency contraception for about more than 3 years, at least friends or peers serve as a good avenue for females to confide in with respect to information regarding emergency contraception.

The pie chart below gives a representation of respondents who have ever heard of emergency contraception before. When one considers that 10% of the respondents said that the last time they heard about emergency contraception was 6 months to 1 year ago and that 9.2% reported hearing about it less than six months ago, it becomes seemingly clear that the rate of awareness/knowledge of emergency contraception decreases with time.

Another interesting dimension of the data concerns where participants are getting their information about emergency contraception from. It is discovered that more than a quarter of them get information about emergency contraception from peers. This is confirmed by Nworah et

al. (2010), who indicates that 34.7% of students in four tertiary institutions where the study was conducted revealed that their source of information about EC are friends while 20.6% indicated the media as a source of information.

5. 3 Use of Emergency Contraceptives (EC)

There is low EC usage by the youth or discontinuation by those who are using due to false beliefs and misconceptions about it. In Nigeria, a study done by Otoide et al., in 2001 revealed that the youth depended on induced abortion (mostly unsafe) to control their fertility instead of use of modern contraception. Studies have found that "early adolescents have significantly lower levels of knowledge of at least one contraceptive method, as compared to the late adolescents" (Ezebialu & Eke, 2013).

5.8. Chapter Summary

This chapter discussed the results of the study in relation to existing literature. This chapter discuses findings of the study and how it relates to other studies on the same subject. It is aimed at identifying similarities or disparities in the literature.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter focussed on the summary of findings and conclusions. The recommendations were based on the findings generated after the analysis. "

6.1. Summary of the study

The study explored the knowledge of emergency contraception among reproductive age female students in the study area. The overall objective was to assess the knowledge level of emergency contraceptives and usage among female students in the two public universities.

6.2. Conclusions

The following conclusions are made in relation to the objectives of the study.

6.2.1. Knowledge and awareness of modern contraceptives

The study found widespread knowledge and awareness (78.8%) among respondents regarding modern contraceptives despite low use (41.5%). It therefore confirms that most students had much knowledge on contraceptive use and thus knowledge was high.

6.2.2. Awareness towards Emergency Contraceptives (EC)

The general awareness of respondents towards emergency contraceptives was positive and there was a significant association between awareness and use of emergency contraceptives. Female students with an appreciable level of awareness towards emergency contraceptives were more likely to use them.

6.2.3 Use of Emergency Contraceptives (EC)

The study found out that use of emergency contraceptives was evenly dispersed among female students as 41.5% recorded having taken emergency contraceptives whilst 40.5% men-

tioned that they have not taken some before. This finding reveals moderate usage of emergency contraceptives by female students.

6.2.4 Availability of modern contraceptives

Respondents' knowledge of sources of availability of emergency contraceptives was found to be encouraging, but this was not associated with use. Thus, knowledge of sources of availability of emergency contraceptives may not drive use among female students in the two public universities."

6.3. Recommendations

The study proposes the following recommendations based on the results generated from the data analysis in the study.

1. In the light of the findings of the study to the effect that more female students seem to rely on friends for advice on emergency contraceptives, it will be crucial for health care agencies to embark on media education in order to promote the usage of emergency contraceptives among young adolescents and women within the reproductive age groups.
2. The fact that there was high knowledge and awareness (78.8%) of emergency contraceptive but yet low usage (41.5%) may suggest that there may be lack of understanding on the usage of contraceptives despite the knowledge. This is critical going forward in relation to policy making that seeks to ensure that access is made available for female's students with an efficient delivery system put in place to attend to their needs.
3. Literature shows that there are still barriers when accessing emergency contraceptives (EC) in health care facilities especially for young people. So therefore, policy making must take into cognizant these barriers during policy formulation so as to address these barriers to emergency contraceptive usage among female students. Hence there is a

need for educational programmes and health programs geared towards female students in the tertiary educational sector.

Health professionals and stakeholders must as a matter of urgency work with the various media houses and platforms to intensify education and spread of information regarding emergency contraception. Through this, the populace will continue to receive accurate and needed information about emergency contraception as their patronage of the media is very high. The Ministry of Health and relevant civil societies are thus entreated to take upon themselves to ensure that this is done. Additionally, a good number of the respondents still rely on friends to receive information on emergency contraception (31.1%). This could explain why there seem to be some misconceptions and inaccurate information among the population. It is partly due to the fact that some people are obstructed from the use of emergency contraception because of wrong perceptions and moral reasons. This calls for a wider stakeholder engagement in efforts to improve emergency contraceptive use.

This depict that health professionals should work hand in hand with religious and cultural leaders to improve acceptability of emergency contraception among the populace. Notwithstanding all that has been discussed, 83.1% are very likely to recommend emergency contraception to someone under the circumstances of unprotected sex, rape and failure of regular period. This again suggests that respondents actually have the will to use emergency contraception but feel reluctant due to perception surrounding the use of emergency contraception. This could also be due to some of the side effects identified by the respondents to include nausea, weight gain, bleeding, irregular menstruation and infertility where the health professionals should intensify efforts in educating the public.

In all, the findings of the study indicate that the level of emergency contraceptive use is low (31%) even though awareness is high (78.8%). Meanwhile, respondents believe that emergency contraception is effective in preventing unintended pregnancies when used correctly

(86.5%). Giving that there are a number of misconceptions regarding emergency contraceptive use, the conclusion that is drawn is that either people are wrongly using these emergency contraceptives due to the wrong perceptions recorded or they are prevented from using them. Now, also given that respondents were willing to use emergency contraception during times of need (83.1% will recommend it to friends), we further conclude that they are obstructed from using them because they feel morally ashamed to use them as has also been already reported. Thus, the low use of the emergency contraceptive pills is linked with inadequate knowledge on the correct use, side effects, concerns associated with socio-cultural beliefs, stigma, perceptions and misconceptions among others. The study recommends that future studies should make attempts to explore this area in details.

6.4. Contribution to knowledge

The study makes contribution to policy and practice in relation to the subject under discussion. Against the backdrop of the findings in the study, recommendations were made which could be relied upon by policy makers to aid the formulation of new health educational programs and interventions tailored towards the needs of the female cohort of students. Health care practitioners could rely upon the recommendations to ensure that adequate information is made available to female clients and the provision of emergency contraceptives made available using various mediums to reach out to the female students under this study.

6.5. Limitations to the study

A limitation to the study was that it was conducted among unmarried female students in public universities within the municipality. Therefore, this may limit the generalization of the findings to the wider municipality and the educational sector.

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APPENDICES

Appendix A: Participant's Informed Consent Form

School of Public Health

College of Health Sciences

University of Ghana

Project Title: Knowledge and Utilization of Emergency Contraceptives among female tertiary students in public universities of the Ho Municipality.

Introduction

My name is Eunice Djangmamle Appiah. I am a student pursuing master's in public health at the School of Public Health, College of Health Sciences, University of Ghana. I am the principal investigator and together with my research assistants we are conducting a study on factors influencing contraceptive use among female tertiary students reproductive age women in the Ho Municipality. You are warmly invited to take part in the study. But before you make a decision to take part in the study or not, we would like you to read this consent or will read it to you to guide you in making your decision.

Procedures

You will be answering questions from a two (2) page questionnaire. There will not be coercion to obtain response from you. This is purely an academic research, which forms part of the requirements for the award of a Master's Degree in Public Health. It will be appreciated if you could participate in this study.

Risk and Benefits

There will be no harm and costs for participating and there will be no payments awarded for participating in this research. However, your response will help in coming out with the true picture in relation to the knowledge and utilization of emergency contraceptives among female tertiary students in public universities within the Ho municipality.

This will aide in policy decisions to improve reproductive care in the municipality. The only cost you will incur will be the time taken to answer the questionnaire.

Confidentiality and Anonymity

Every piece of information you provide will be held in absolute confidence. Data collected in this study are strictly for research purposes and will be stored with passwords on electronic media and in safely locked boxes. Access to the data will be limited strictly to the researcher and supervisor. Anonymity will be ensured in dissemination of findings from this study since participants will not be identified by their names.

Right to Refuse

Participation in this study is entirely voluntary and you can choose not to answer any individual question or all the questions. You are at liberty to withdraw from the study at any point in time of the study. However, I will encourage you to fully participate in the study since your opinions are important to help assess the factors influencing modern contraceptives use in the study area.

Ethical Approval

The study has been reviewed and approved by the Ghana Health Service Ethical Review Committee (GH-ERC). This committee is there to ensure that participants in research are protected from harm and their rights are respected.

Participant's Consent I have read the foregoing information / the foregoing information has been read to me or translated to me in a language that I understand and I have fully understood it. I consent voluntarily to participate in this study.

(Name and signature of a witness should be provided in a case where the participant cannot speak or read English).

Signature/thumbprint: _____

Name of witness: _____

Signature/thumbprint of witness: _____

Interviewer's Statement

I, the undersigned (your name), have explained this consent form to the participant in simple language that she/he understands, clarified the purpose of the study, procedures to be followed as well as the risks and benefits involved. The participant has freely agreed to participate in the study.

Signature of interviewer .....

Date ...../...../.....

Address

PMB

Telephone number:

Email address:

In case of any concern you can contact the Ethics Administrator, Miss Hannah Frimpong, GHS/ERC on: 0243235225 / 0507041223.

APPENDIX B: QUESTIONNAIRE

STUDY TITLE: KNOWLEDGE AND UTILIZATION OF EMERGENCY CONTRACEPTION AMONG FEMALES IN PUBLIC UNIVERSITIES IN THE HO MUNICIPALITIES

SECTION A: DEMOGRAPHIC INFORMATION

Please tick or circle to choose your answer and specify where necessary.

1. Completed Age in years: _____

2. Place of residence: a) Urban ☐ b) Rural ☐

3. Religion:

a) Christian ☐

b) Islam ☐

c) Traditional ☐

d) Others (Specify) _____

4. Level of study:

a) Diploma ☐

b) Level 100 ☐

c) Level 200 ☐

d) Level 300 ☐

e) Level 400 ☐

5. Marital status a) Single ☐ b) Married ☐ c) Divorced ☐

SECTION B: KNOWLEDGE OF EMERGENCY CONTRACEPTION

Please tick or circle to choose your answer and specify where necessary.

6. Have you ever heard of emergency contraceptive pills?

a) Yes ☐ b) No ☐ c) Not sure ☐

If yes, when did you first hear of it?

a) < 6 months ☐

b) 6 months- 1year ☐

c) 1-3 years ago ☐

d) > 3 years ago ☐

7. Where did you first hear about it?

a) Television ☐ b) Radio ☐

c) Friends ☐ d) Social Media ☐

e) Newspaper ☐ f) Doctors\Nurses\ Health care workers ☐

8. From where can you access the medicine to buy?

a) Public Health facilities ☐ b) Private hospitals ☐

c) Pharmacies ☐ d) Do not know ☐

9. Can you get the medicine without a prescription?

Yes ☐ b) No ☐ c) Do not know ☐

10. Emergency contraceptive pill is another term for morning pill?

a) True ☐ b) False ☐ c) Do not know ☐

11. Do you think that unintended pregnancy is a major problem facing our country?

a) Yes ☐ b) No ☐ c) Do not know ☐

12. Emergency contraception pills are used primarily to prevent pregnancy?

a) Strongly Agree ☐

b) Agree ☐

c) Neutral ☐

d) Disagree ☐

e) Strongly Disagree ☐

13. Have you ever discussed emergency contraception with a doctor or other health care professional?

a) Yes ☐ b) No ☐

14. How long after unprotected sexual intercourse do you have to start taking emergency contraceptive pills in order for it to work?

a) Up to 1-week ☐ b) Up to 24 hours ☐

c) Up to 12 hours ☐ d) Up to 72 hours ☐ e) Do not know ☐

SECTION C: ATTITUDE AND USE OF EMERGENCY CONTRACEPTION

Please tick or circle to choose your answer and specify where necessary.

15. Do you have objections to emergency conception?

a) Yes ☐ b) No ☐ c) Don't know ☐

16. If you had a pack of emergency contraceptive pills at home, would you be more likely or less likely to use them after unprotected sex?

a) more likely ☐ b) less likely ☐ c) don't know ☐

17. Would you feel embarrassed or judged when obtaining emergency contraception?

a) Yes ☐ b) No ☐ c) don't know ☐

20. If a woman has just had unprotected sexual intercourse or thinks that her birth control method may have failed, is there anything that she can do in the following days to prevent pregnancy?

a) Yes ☐ b) No ☐ c) don't know ☐

22. Have you ever experienced an unintended pregnancy?

a) Yes ☐ b) No ☐ c) don't know ☐

23. Do you think that emergency contraceptive pill is medically appropriate after a woman has missed her period or just confirmed a pregnancy?

a) Yes ☐ b) No ☐ c) don't know ☐

24. Is the emergency contraceptive pills effective at reducing the chance of pregnancy if taken correctly?

a) Yes ☐ b) No ☐

26. Emergency contraceptive pill has extreme/harsh side effects.

a) Strongly Agree ☐
b) Agree ☐
c) Neutral ☐
d) Disagree ☐
e) Strongly Disagree ☐

28. Do you have concerns about possible health risks in relation to emergency contraceptive pills?

a) Yes ☐ b) No ☐ c) Don't know ☐

29. Do you think it is ethically or morally wrong to use emergency contraceptive pills?

a) Yes ☐ b) No ☐ c) Don't know ☐

30. What are the major side effects of the morning pill?

Nauzea and vomiting ☐

Weight gain ☐

Bleeding ☐

Irregular menstruation

Infertility ☐

Death ☐

30. Do you worry sometimes that emergency contraceptive pills might not work?

a) Yes ☐ b) No ☐ c) Not sure ☐

Have you ever taken emergency contraception?

a) Yes ☐ b) No ☐ c) Don't know ☐

31. Would you have taken emergency contraceptive pills if needed?

a) Yes ☐ b) No ☐ c) Don't know ☐

If yes, why?

.....

If no, why?

Health concerns ☐

Fear of side effects ☐

Religious reasons ☐

Fear of stigmatization ☐

Socio-economic reasons ☐

33. How likely are you to recommend it to someone?

a) very likely ☐

b) somewhat likely ☐

c) neutral ☐

d) somewhat unlikely ☐

e) very unlikely ☐

34. Under which circumstance would you recommend EC?

Rape ☐

Failed regular method ☐

Unprotected sexual intercourse ☐

All the above ☐

APPENDIX C: ETHICAL APPROVAL CLEARANCE FROM GHS

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Digital Address: GA-050-3303
Mob: +233-50-3539896
Tel: +233-302-681109
Fax + 233-302-685424
Email: ethics.research@ghsmail.org
27th January, 2021

My Ref. GHS/RDD/ERC/Admin/App |20| 508
Your Ref. No.

Eunice Djangmamie Appiah
University of Ghana
School of Public Health

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	**GHS-ERC 020/06/20**
Study Title	Knowledge and Utilisation of Emergency Contraception among Public Universities in the two Municipality
Approval Date	27th January, 2021
Expiry Date	26th January, 2022
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of a yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months.
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID -19

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED...
Dr. James Akazili
(Head, Ethics & Research Management Department)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra