

**ENSIGN COLLEGE OF PUBLIC HEALTH, KPONG,
EASTERN REGION, GHANA**

**FACTORS ASSOCIATED WITH THE USE OF EMERGENCY
CONTRACEPTIVE PILLS AMONG STUDENTS OF THE TAKORADI
POLYTECHNIC IN GHANA**

by

WILHELMINA TIWAAH DUAH

**A Thesis submitted to the Department of Community Health in the Faculty of Public
Health in partial fulfilment of the requirements for the degree**

MASTER OF PUBLIC HEALTH

MAY 2016

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**Supervisor: Dr. Steve Manortey Head of Faculty, Department of Biostatistics and
Health Informatics Ensign College of Public Health**

MAY 2016

DECLARATION

I hereby declare that except for reference to other people’s work, which I have dully cited, this project submitted to the Ensign College of Public Health, Kpong is the result of my own investigations and has not been presented for any other degree elsewhere.

Wilhelmina Tiwaah Duah (147100018)
(Student) Signature Date

Certified by:

Dr. Steve Manortey
(Supervisor) Signature Date

Certified by:

Dr Christopher N. Tetteh
(Dean) Signature Date

DEDICATION

This study report is exclusively dedicated to my two lovely kids, Bill Sena Morttey and Riona Tiwaah Morttey; my beloved husband Ernest Selorm Morttey. Also to my dear parents, Mr William Duah and Mrs Monica Duah. To my sweet sisters Mrs Rosemond Owusu Duah and Adelaide Duah. Finally to Mrs Barbara Banson and family.

ACKNOWLEDGEMENT

Preparing such an onerous task would not have been achievable but for the abundant grace and mercy of God Almighty and some personalities worth mentioning.

My sincere thanks first go to the Almighty God for the opportunity, protection and insight through all the stages of the thesis.

With profound gratitude and deep appreciation, I would like to acknowledge my Supervisor Dr. Stephen Manortey, Head of Biostatistics and Health Informatics Department for the devoted support and diverse contribution in terms of corrections and suggestions through all the stages of the work. The guidance and support aided the successful completion of this thesis. I have been truly honoured to work with him.

I also recognize the immense support I have received from the lecturers and staff of Ensign College of Public Health.

I am indebted to the registrar, the ICT department, and the staff of Takoradi Polytechnic for their permission and assistance during the data collection. Moreover, my deepest thanks also go to students who were prepared to be part of the study. I am also grateful to the management and students of Holy Child Training College for allowing me to pre-test my questionnaire at their premises. I also appreciate the Western Regional Public Health Division for furnishing me with the supporting data.

Finally, I owe a debt of gratitude to my loving husband Mr. Ernest Morttey for his encouragement and support not forgetting my parent Mr and Mrs Duah for their prayers and encouragement. May the Almighty God abundantly bless all who supported in one way or the other in the completion of this thesis.

ABSTRACT

Emergency contraception, or post-coital contraception, denotes methods of contraception that can be used to prevent unwanted pregnancy in the first few days after unprotected sexual intercourse, which in turn helps in reducing the maternal mortality and morbidity. With the decreasing age of menarche and early onset of sexual activeness, young people are exposed early to inadvertent and unprotected sexual intercourse leading to undesirable pregnancy and invariably unsafe abortion.

The aim of this study was to evaluate the awareness, use and associated factors of emergency contraceptive pill among students of Takoradi Polytechnic, in the Western Region of Ghana. A cross-sectional study design among 375 matriculated female students of Takoradi polytechnic within the ages of 15 to 49 years was conducted. Anonymous self-administered questionnaires with semi open ended questions were used to gather the needed data, after requiring the contacted individuals to freely consent to their willingness to participate in the study.

The questionnaire assessed knowledge, attitudes and practices regarding contraception, with emphasis on emergency contraception and current sexual practices. Data was analysed using Stata statistical software version 14. Univariate and multivariate logistic regression analyses were done to respectively describe the data and identify factors associated with the use of emergency contraception pills among respondents.

Awareness of regular family planning methods were high, however usage was low; the pill and condoms being the popular choices. The electronic and print media were the most common sources of information on ECPs. Those who had basic awareness of EC however lacked detailed knowledge about the content, effectiveness and the timing schedule after unprotected sex. Of the 28.4% respondents who had used EC, 67.0% of them had used it more than ones. 62.5% were concomitantly using other family planning methods after EC use. Marital status and religion did not affect the use of EC. Previous use of any method of contraceptives and in-depth understandings of emergency contraceptive pill were factors associated with the use of ECPs.

There is the necessity to educate young adults on emergency contraception with emphasis on content, effectiveness and correct timing of use, through various communication channels, including the media, women groups, various students' associations and societies, counselling division in health facilities and the use of peer instructors.

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GLOSARY

ACRONYMS

ECPs - Emergency contraceptive pills

EC - Emergency contraception

FP – Family Planning

GDHS - Ghana Demographic and Health Survey

TPB - Theory of planned behaviour

WHO - World Health Organization

CHAPTER I

1.0 INTRODUCTION

1.1 Background

Worldwide access to reproductive and sexual health and right is an indispensable part of a healthy society (Dawson et al. 2014). Globally, approximately 222 million women who want to prevent pregnancy do not gain access to effective methods of modern contraceptives. In view of this, there is a yearly occurrence of 86 million unintended pregnancies (Singh S 2010). Pregnancy is considered unintended if the woman says that at the time she became pregnant she wanted no more children or did not want to become pregnant until later (CDC 2015). Every woman deserves every chance to prevent an unintended pregnancy (Parenthood 2013).

In an attempt to avoid an unplanned pregnancy, most women tend to use one or combinations of several preferred preventive methods either before or after the act of an intercourse. Emergency contraception (EC) is a type of contraception that is used to prevent unwanted or unintended pregnancy after an act of unprotected sexual intercourse, contraceptive failure or misuse (such as forgotten pills or torn condoms), rape or coerced sex (WHO 2016). It is known by several other names such as 'morning after' or "post-coital" method (Baiden et al. 2002). As the name signifies, it is meant only for contraceptive emergency situations and not for routine or repeated use. The risk of unwanted pregnancy increases if it is used several times within a year (Draca 2000). Emergency contraception is principally feminine driven so its use and success rest mainly on how women perceive and practice it (Akani et al. 2008).

As affirmed at the 1994 International Conference on Population and Development in Cairo, women have the liberty to specify the number and scheduling of their pregnancies (Ellertson 1996). To realize this right, women all over the world need access to an extensive range of contraceptives, as well as access to safe abortion services (Dawson et al. 2014). While most contraceptives are projected for use prior to or during intercourse, some methods can be used immediately after unprotected intercourse (Parenthood 2013).

The roots of modern emergency contraception date back to the 1920s, when researchers at first confirmed that estrogenic ovarian extracts inhibit pregnancy in mammals (Haspels et al. 2000). Veterinarians were the first to apply this finding, administering oestrogens to dogs and to horses that had mated when their owner had not wanted them to (Haspels et al. 2000). Despite scattered reports of clinical use of post coital oestrogens in humans as early as the 1940s, the first documented cases were not published until the mid-1960s (Baiden et al. 2002). That is when some physicians in the Netherlands applied the veterinary practice of post coital oestrogen was given to a girl who was raped at mid cycle at the age of thirteen years (Haspels et al. 2000).

Within that period researchers from the United State were studying the efficacy of high-dose oestrogens, and by the end of the decade, these preparations had become the standard (Bash 2015). In the 1970s, Haspels et al in the Netherlands in a study involving 2000 women found out that, large doses of oestrogen given during the first 5 days after unprotected intercourse effectively reduced the incidence of pregnancy to a very low level (Haspels et al 2000). This eventually gave way to a combined oestrogen-progestin regimen. Canadian physician Albert Yuzpe and his associates

began studies in 1972 on this combined regimen. The "Yuzpe method," as popularly called replaced the high strength oestrogen preparations, essentially because it offered a lower incidence of side effects, similarly the commonly used (Diethylstilbestrol) DES was linked to vaginal cancer in the daughters of women who had taken it to prevent miscarriages (Trussell et al. 2015).

Since the introduction of dedicated Emergency Contraceptive Pills (ECPs) in the mid-1990s, there has been comparatively little research into the success of their introduction and uptake in developing countries. This lack of evaluation of the use of the ECPs implies that little guidance is available about concrete strategies to expand access of the method (Amalba et al. 2014). The limited data available indicates that women who know more of or use emergency contraception are those with higher levels of education; those living in urban regions; and those who currently use or have ever used a modern contraceptive (Dawson et al. 2014).

Emergency contraception was introduced in Ghana in 1996 by the Ministry of Health, into its newly issued National Reproductive Health Policy and Standards (Steiner et al. 2000). A short survey conducted a year after its introduction to evaluate health providers' knowledge of EC indicated that only 34% had heard of EC amongst the 325 providers interviewed. None of them had sufficient knowledge to prescribe EC correctly, which meant provider knowledge was low at that time (Steiner et al. 2000). According to the 2014 Ghana Demographic Health Survey (GDHS), the prevalence of contraceptive use in Ghana is lowest among women who are currently married in the youngest (15-19) and oldest (45 – 49) age groups (i.e.19% and 18% respectively) (GSS 2014). General use of contraception method as well as modern method has

increased somewhat over the last six years from 24% and 17% in 2008 to 27% and 22% in 2014 (GSS 2014).

Use of contraceptive methods increases with increasing education in Ghana, according to the GDHS which indicated that 19% of married women with no education were using contraception compared with 34% of married women with secondary education or higher (GSS 2014).

Result from the multi country analysis on contraception use showed that, knowledge of emergency contraception was progressively associated with education (L'Engle et al. 2011): an odds ratio of 1.6 in Ghana was found for those with secondary or higher education, compared with those who could not complete primary education (Palermo et al. 2014). The likelihoods of having heard of emergency contraception also increased with affluence for most African countries (Palermo et al. 2014). Knowledge of emergency contraception was considerably high among women in urban areas with respect to those in rural areas (Myer 2007)(Palermo et al. 2014).

1.2 Statement of the Problem.

Unsafe abortion deaths disproportionately affect women in Africa. In the developed regions of the world, it is estimated that 30 women die for every 100,000 unsafe abortions (WHO 2015). However, that number rises to 220 deaths per 100,000 unsafe abortions in the developing regions around the globe and 520 deaths per 100,000 unsafe abortions more specifically in sub-Saharan Africa (WHO 2015). In a more disconsolate lens, while the continent contributes 29% of all unsafe abortions, globally 62% of unsafe abortion-related death are recorded (Dawson et al. 2014).

About 5 million women go on hospital admission as a result of unsafe abortion every year in developing countries. Meanwhile over 3 million women who develop complications do not receive care after abortion. Annually \$680 million is spent on treating major complications from unsafe abortion (WHO 2015).

According to the 2015 Western Regional annual review report, 3.8% of maternal deaths are due to unsafe abortion; out of which teenagers contribute 17.84% of abortion and 5.33% maternal death in the western region of Ghana (RPHD 2015). Sekondi/Takoradi Metropolis has the lowest family planning acceptor rate of 9.92% in the Western region as compared to the other district, even though the regional target is 30% (RPHD 2015).

Emergency contraceptive has been called “the greatest secret” in reproductive health because, despite its unique potential for helping women prevent unwanted pregnancies and fulfil their reproductive intentions, rates of use and of counselling are still low (Coeytaux & B 2001).

Since the introduction of devoted emergency contraceptive pills in the mid – 1990s there has been comparatively little research into the accomplishment of their introduction and acceptance in developing countries (Palermo et al. 2014). This lack of study on the use of emergency contraception has meant that little guidance is existing about tangible approaches to expand access to the method (Palermo et al. 2014).

Similarly, not much research has been done in Ghana to assess the knowledge and use of EC since it was introduced in 1996. Only a few studies have been documented on the knowledge and use of EC among young people in Ghana.

Among unmarried sexually active women, 42% have an unmet need for family planning and 45% are currently using a contraceptive method. The total demand for family planning among unmarried sexually active women is 87% (GSS 2014).

A study done by Baiden et al. to assess the perception on EC among university student in Ghana, indicated that awareness was very low (1.5%) and only 11.3% of respondents knew the recommended time for taking EC after unprotected sex. Almost all the respondent (97.4%) however, wanted to have more information on emergency contraception (Baiden et al. 2002). Results from another study on the knowledge and use undertaken in the University of Cape Coast revealed that, fifty-seven per cent of the respondents had ever heard of EC and 36 % had ever used EC (Kofuor et al. 2015a).

1.3 Rational of study

This study aims to explore the factors associated with the use of ECPs among female students of Takoradi Polytechnic.

1.3.1 Justification of study

Almost every abortion death and disability could be prevented through the use of effective contraception and sexuality education (WHO 2015). There is limited data on awareness and use of emergency contraceptive pill among young people in Ghana. Furthermore a study of this nature has not been done in and around the environs of Sekondi/Takoradi.

Significance of the study

Results from the study may be useful in the formulation of policies and in health promotion activities to promote the use of emergency contraceptive pills in Ghana. The Ministry of Health, Ghana Health Service and other reproductive health organizations could benefit from the result of this study. The study is expected to elicit factors that influence the use and prevailing attitude of Polytechnic students towards the use of ECP and will therefore contribute to scientific knowledge.

1.4 Hypothesis

The awareness and more accurate knowledge on ECP would be associated with positive attitude towards its use among students of the Takoradi Polytechnic.

1.5 Research questions

The study sought to answer the following questions:

- i. How does the awareness of emergency contraceptive influence its usage amongst tertiary students in Ghana?
- ii. What are Polytechnic students attitude on the use of emergency contraceptive pills?
- iii. Is there an association between the use of emergency contraceptives and other forms of contraceptive?
- iv. What are the factors that influence the use of emergency contraceptives

1.6 General objectives

- To assess the degree of awareness of emergency contraception among tertiary level students.
- To assess the use and factors associated with use of emergency contraceptive pills amongst tertiary level students.

1.7 Specific objectives

- To assess how the level of awareness of emergency contraception relates with awareness of other family planning methods
- To explore information on sexual activity and the frequency of use of ECP.
- To examine the factors that affects the use of emergency contraceptive among students.
- To assess how the use of emergency contraception influences the use of barrier methods of contraception.
- To explore partner influence and support for the procurement and use of emergency contraception

1.8 Profile of study area

The study was conducted at the Takoradi Polytechnic. This is a public tertiary institution located in Sekondi-Takoradi, the capital of the Western Region of Ghana. It was established as Government Technical Institute in 1954 and was upgraded to be part of the Tertiary Education System by Polytechnic Law (PNDCL 321 of 1992)

which has since 2007 been replaced by the Polytechnics Law (Act 745) (Takoradi Polytechnic Homepage).

The institution began to offer Higher National Diploma programmes in the 1992/93 academic year. Presently, the Takoradi Polytechnic has two campuses located at Effia (Takoradi) and Butumagyebu (Sekondi). The Takoradi campus is the main college grounds and houses the Central Administration, Engineering department, the Schools of Applied Science and Applied Arts while the School of Business Studies is situated at Sekondi campus (Takoradi Polytechnic Homepage).

1.9 Definitions of significant terms

The following terms were defined in the context of the study as:

Use of emergency contraception: refers to female students' likelihoods of ever having used emergency contraception in life.

Knowledge: refers to the information of having heard about emergency contraception,

Emergency contraception: represents contraceptive methods that women can use to avoid pregnancy after unprotected sexual intercourse, method failure, or incorrect use (Baiden et al. 2002).

Unsafe abortion: refers to the termination of a pregnancy by people lacking necessary skills or in a location lacking basic medical standards or both (WHO 2003).

1.10 Organization of report

The report is structured into six chapters. The first chapter, which is the Chapter One, is the introduction. It comprises of the background, statement of the problem, rationale of the study, hypothesis, and research questions, general and specific objectives. It also contains the profile of the study area, scope of study and the organization of the report. Chapter Two is the review of related literature. Chapter Three is the method section which comprises of the research methods and design, data collection techniques and tools, the study population, study variables and sampling. Also included in chapter three are the pre-testing, data handling and analysis, ethical consideration limitations of study and the assumptions made in the study. Data analysis and results are in Chapter Four. Interpretation and discussion of results are in Chapter Five while Chapter Six is the conclusion and recommendations.

Copies of the questionnaire and evidence of other administrative measures carried out to ensure the successful and ethical outcome of the research are in the appendices.

CHAPTER II

2.0 REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter evaluates the issues surrounding emergency contraception, studies done from around the world, Africa and in Ghana. This chapter includes the introduction, some facts on emergency contraception and unsafe abortion, relationship of the variables and research gap of literature reviewed.

2.2 Unintended (unwanted) pregnancy and unsafe abortion

About 123 million women succeed in getting pregnant yearly. However about 87 million women become pregnant unintentionally (WHO 2005). Of the estimated 211 million pregnancies that occur each year, about 46 million end in induced abortion (WHO 2005). Around 22 million unsafe abortions are estimated to take place worldwide each year, almost all in developing countries.

In 2008, there were an estimated 47 000 deaths due to unsafe abortion. Africa is disproportionately affected, with nearly two-thirds of all abortion-related deaths (WHO 2015). Unintended pregnancy is allied with an augmented risk of problems for the mother and baby. A woman may not be in optimal health for child bearing if a pregnancy is not planned before conception.

Females in their reproductive ages, including adolescents, with unwanted pregnancies often resort to unsafe abortion when they cannot access safe abortion

(Dawson et al. 2014). Globally it is estimated that 44 million pregnancy end in abortion. About 22 million unsafe abortions are estimated to take place worldwide each year, almost all occurring in developing countries (WHO 2015). In 2008, 40% of unintended pregnancy (excluding miscarriages) ended in abortion (WHO 2015). Complications during pregnancy and childbirth are the second cause of death for 15-19 year-old girls globally (WHO 2014).

2.3 Emergency Contraception

Emergency contraception offers women a last moment opportunity to prevent unwanted pregnancy after casual sex even though they do not protect against Sexually Transmitted Infections (STI) (Trussell et al. 2015). There are 3 methods of emergency contraception (WHO 2016).

- emergency contraception pills (ECPs)
- combined oral contraceptive pills or the Yuzpe method
- copper-bearing intrauterine devices (IUDs)

For the purpose of this research, the first method that is the ECPs will be studied.

2.4 Emergency Contraceptive Pill

The standard method for emergency contraception used to be the Yuzpe regimen, which consists of two doses of combined oral contraceptive pills at 12 h interval (Ho et al. 2003). It can prevent 74% of the estimated pregnancies but the occurrence of

side effects like nausea and vomiting is high (Ho et al. 2003). However the progestin only ECPs containing levonorgestrel have largely replaced the combined ECP due to its being more effective and with fewer side effects (Trussell et al. 2015). WHO recommends the use of Levonorgestrel taken as a single dose (1.5 mg) or taken in 2 doses (0.75 mg each, 12 hours apart), and Ulipristal acetate, taken as a single dose at 30 mg as emergency contraception, within 5 days (120 hours) of unprotected sexual intercourse (WHO 2016). Frequent use of ECP can result in side-effects such as nausea, vomiting, abdominal pain, breast tenderness, headaches dizziness and menstrual irregularities; which do not occur for more than a few days after treatment and generally resolves within 24 hours (Trussell et al. 2015). There are however no medical contraindications to the use of levonorgestrel emergency contraception pills and also repeated use poses no known health concerns (WHO 2016).

2.5 Effectiveness of emergency contraceptive pill

Emergency contraception is effective only in the first few days following sexual intercourse before the ovum is released from the ovary and before the sperm fertilizes the ovum and therefore cannot interfere with an established pregnancy or damage a developing embryo, therefore cannot cause abortion (WHO 2016).

Two factors influence the effectiveness of EC: the amount of time lapsed after unprotected intercourse, and the point in a woman's cycle at which she had sex (Planned Parenthood Association 2013). Based on reports from nine studies including 10,500 women, the WHO-recommended levonorgestrel regimen is 52–94% effective in preventing pregnancy (Von Hertzen et al. 2002). The regimen is more effective the sooner it is taken after intercourse (WHO 2016). The result from a

study conducted to determine the effectiveness of emergency contraceptive pill when it is administered between 72 and 120 hours after sexual intercourse indicated 72% to 87% effectiveness and 87% -90% when administered before 72 hours (Rodrigues et al. 2001). The closer a woman is to ovulation at the time of unprotected intercourse, the less probable the method will succeed (Stewart et al. 2004). EC is not as effective as correct and consistent use of on-going reversible contraceptive methods such as the pill, IUD, or contraceptive implants, injections, rings or patches (Planned Parenthood Association 2013). It also does not protect against sexually transmitted infections (STIs) (Planned Parenthood Association 2013). Results from twelve studies of levonorgestrel regimen involving over 13500 women reported estimate of effectiveness, that is a reduction in woman's chance of pregnancy between 52% and 100% (Trussell et al. 2015).

2.6 Knowledge and use of emergency contraception

In most countries, a single dose of levonorgestrel 1.5 mg is the first-line hormonal EC given within 72 hours of unprotected intercourse (Li et al. 2014). Some studies done among female university students indicates generally low level of knowledge and practice of emergency contraceptives among tertiary students (Tamire & Enqueselassie 2007)(Kofuor et al. 2015a) (Baiden et al. 2002) (Akani et al. 2008). A study in Egypt on women within their reproductive ages revealed an insufficient knowledge about emergency contraceptives, but had willingness to receive information to use EC methods when desired (Tamire & Enqueselassie 2007). Another empirical study shows sex differences exist in the awareness of ECP in association with contraceptive intentions among tertiary students (Kim 2015).

Education on EC taking into account the sex difference should therefore be part of any contraceptive counselling

2.7 Availability and access to emergency contraception

Improving access to EC by providing it over the counter or in advance would not encourage its abuse or stir up risky sexual behaviours, but may further facilitate the timely use so as to achieve the best efficacy (Li et al. 2014). A study to evaluate the effect of two approaches in provision of emergency contraceptive in Ghana revealed the study participants who had the pill in their possession were more likely to use than those who had to go to the clinic within three days after unprotected sex. The data did not however support the fact that availability increased the frequency of unprotected sex (Lovvorn et al. 2000).

2.8 Attitude towards emergency contraceptive use

The fact that women experience a high level of apprehension and anxiety of unwanted pregnancy soon after unprotected sex shows the extent to which they go to avoid it (Baiden et al. 2002) Results from a study in Kenya predicted a strong tendency of use of ECs in the future by the students (Njeri 2013). The findings further indicate that the students' attitude was influenced by access to ECs even among health professional, in that it contributed to immoral behaviour or promoted risky sexual behaviour. There were some others with the view that it was incorrect to use and perceived it as an abortifacient or illegal (Njeri 2013). Keesbury also pointed out that women were reluctant to use emergency contraception if they perceived it to be an abortifacient (Keesbury et al. 2011).

2.9 Knowledge gaps on EC from reviewed literature

Incomplete awareness of emergency contraception especially on the mechanism of action; timing of use after unprotected sexual intercourse; efficacy and content have led to misconceptions, which has impacted on their use. Issues have been raised about their use, effectiveness, safety and morality. In some other peoples' opinion emergency contraception method is a form of abortion, this further leads to other health concerns and the impact the pills would have on the a developing foetus should the method fail.

Moreover some people associate the access of emergency contraceptive to promote irresponsible sexual behaviour and the spread of Sexually Transmitted Infections, raising issues on morality which impact on use. Studies done have not been conclusive enough on this matter.

Studies all over the continent explored how awareness of emergency contraception impacts their use and the consequential attitudes that arise from different levels of knowledge of the emergency pills. As far as we know, in Ghana, only a few studies have explored knowledge, attitudes and use of emergency contraceptives as well as factors associated with use; and none of that nature has been cited for the Western Region of Ghana especially among tertiary students.

CHAPTER III

3.0 RESEARCH METHODOLOGY

3.1 Research methods and design

A cross-sectional study among a sampled of residential and non-residential female students at the Polytechnic were deployed. The research design involved in-depth enquiry into people's personal experience and attitudes. Anonymous self-administered questionnaires, which contained a mixture of open and closed ended questions, were then administered to the respondents.

3.2 Data collection techniques and tools

Questionnaire with both closed and open ended questions was used for data collection. Questionnaires were appropriate for this study because it is permitted for data collection from wide population, less time consuming and less expensive. The questionnaires were hand delivered to the respondents and collected on the same day or on an agreed date.

3.3 Study Population

The total population of student of Takoradi Polytechnic at the time of the survey was 7,700. The female students have a total population of 2,287 students. The categories per department are shown in table 3.1.

Table 3.1 Female students' population as at February 2016

Departments	Number of female students
School of Business Studies	1,566
School of Applied Arts,	299
Applied Science,	348
Engineering	74

The population for this study was the matriculated female HND students (Source: Chief ICT office)

3.4 Study variables

Questions asked were centred mostly on the demographic characteristics, knowledge and use and attitude towards use of contraceptive methods with much focus on ECP, the frequency of use, information on sexual activity, access to information on reproductive health and perceived factors that influence the use of ECP. Religious acceptability as well as availability and affordability were assessed using “yes/no” questions that were contained within in the questionnaire.

Questions asked from respondents were: whether they had pre-knowledge of emergency contraception. The remaining questions were asked among those who answered yes to the above question. These included: “source of the information; the time period within which one can take ECPs; active ingredient or composition of ECP, the effectiveness of ECP, where they think ECPs could be obtained”. Respondents were asked if they had any concerns about emergency contraceptives.

The researcher wanted to find out if the respondent had used ECP before. Among those who responded yes, further follow up questions were asked. These included: the frequency of use; the person who recommended the use; whether ECPs were available and accessible and finally if they used a regular method of contraception after the use of ECP. When they were further asked about who recommended use.

One of the objectives of the study was to assess students' attitude towards the use of emergency contraceptive. Questions asked to achieve this objective were: "EC pills are necessary for use in case of rape, condom breakage and unwanted sex?"; "EC pills could promote promiscuity"; "EC pills could promote the spread of sexually transmitted infections"; "Does your religion accept the use of EC pills"; "Will you ever use it or recommend it to a friend or relative in case of need?"; "Should EC pills be sold to men"; "Do you believe your partner will accept you use this method"; "Would you prefer your male partner to use condoms instead of you taking EC pills"; "Would your male partner still use condoms if he knows about EC pills?".

3.5 Sampling

The sample size necessary for this study at a 95% confidence level and with 5% margin of error was calculated to be 377. However with an estimated 6% attrition rate, the total working sample size was adjusted to about 400 respondents.

Individual students were selected from their classrooms. Classes to be used for the survey were chosen purposively from the different departments (School of Applied Arts, Applied Science, Engineering and School of Business Studies) in the institution, to include the classes with more female students. Individual respondents were then chosen randomly from the selected classes until the required number was

attained. For the inclusive criteria, only matriculated female students were admitted into the study without regards to ethnic background, age, religion and marital status.

3.6 Pre-testing

Pre-testing of questionnaire was done with 20 female students from Holy Child Training College, a tertiary institution in Takoradi with general demographic characteristics as the target population.

3.7 Data Handling

Data was double entered into computer using a platform created in Microsoft excel. The two datasets were reconciled and corrections were effected using the information contained on the completed questionnaire as source document. The cleaned data was exported into STATA statistical software for analyses.

3.8 Data Analysis

All analyses were conducted using STATA statistical software package (Stata Corp. 2007. *Stata Statistical Software: Release 14*. StataCorp LP, College Station, TX, USA). Univariate analysis of selected variables were conducted to generate descriptive statistics on the socio-demographic characteristics of participants. Bivariate analyses were used to investigate the association between students' socio-demographic characteristics and EC knowledge and use at 95% Confidence level with a statistical significant level set at a p-value <0.05 . Finally, a multivariate

logistic regression model was built to evaluate factors that affect the respondents' knowledge and use of the ECPs.

3.9 Ethical Consideration

Ethical approval was obtained from Ensign College Ethical Review Board. Institutional approval was also obtained from the Review Board of Takoradi Polytechnic. Signed individual informed consent was obtained from each participant before the questionnaires were handed over to them. Respondents were assured of confidentiality. Study participants were informed of their right to opt out of the study any time they felt uncomfortable with the posed questions or felt physical and mentally harmed in the course of the data collection. The information provided was kept strictly confidential and only made available to persons related to the study and the research team. Responses from the questionnaires were not shown to other participants or any other individual within the school's community.

3.10 Limitations of Study

The study focused on only female students of Takoradi Polytechnic offering HND. The campus is situated close to the central business town of Sekondi/Takoradi with a number of pharmacies located close to the premises. The students may have substantial knowledge and access to emergency contraceptive pills.

3.11 Assumptions

The study assumed that participants may willingly and honestly respond to question so as not to bias the results.

CHAPTER FOUR

4.0 ANALYSIS AND RESULTS

4.1 Introduction

In this chapter, data collected from respondents are presented, analysed and interpreted. The data is presented based on the responses derived from the questionnaires and also on the objectives of the research.

4.2 Response rate

Three hundred and ninety five students out of 400 returned completed questionnaires yielding response rate of 98.75%. Five of the questionnaires could not be retrieved because the students involved left campus without returning them.

4.3 Background Characteristics of Study Subject

Of the 395 who returned the questionnaire, the average age was 21.97 (± 2.27) years; with the youngest being 18 years and the oldest being 34 years. The median age was 22 years.

4.3.1 Programme of study

Most of the respondents (52.4%) were from the Business class. Students from the Applied Art and Applied Science Department contributed 88 (22.28%) and 87

(22.03%) respectively. The Engineering Department with only few female students had 13 respondents (3.29%) as illustrated in Table 4.1

Table 4.1: Background Characteristics of Study Subject

Variables n= 395	Categories	N (%)
Programme of study	Business	207 (52.4)
	Applied Art	88 (22.28)
	Applied Science	87 (22.03)
	Engineering	13 (3.29)
Marital status	Single	372 (94.18)
	Married	14 (3.54)
	Co-habiting	9 (2.28)
Religion	Christian	359 (90.89)
	Islam	32 (8.10)
	Traditional	4 (1.01)
Knowledge of contraception	Yes	371 (93.92)
	No	24 (6.08)
Use of contraception	Yes	143 (36.20)
	No	252 (63.8)
Sex relation	Yes	249 (63.04)
	No	146 (36.96)
Ever pregnant (n= 249)	Yes	41 (16.47)
	No	208 (83.53)
Age	Mean age = 21.97	SD = 2.27

4.3.2 Marital status

The overwhelming majority (94.2%) of the students were single. Only 14 (3.5%) were married and only 9 (2.3%) cohabiting as illustrated in Table 4.1.

4.3.3 Religion

Christianity contributing 359 (90.9%) was the dominant religion among the respondents; 32 (8.1%) were Islam while only 4 professed faith in the Traditional Religion representing 1.0%. (Table 4.1)

4.3.4 Awareness and use of contraceptives

Almost all the respondents 371 (93.9%) had awareness of contraceptive in general; only 24 of them representing 6.1% indicated they were not aware. Of the total, 143 (36.2%) had used contraceptives 28% of modern contraceptives and 8% of the traditional methods of contraceptive) and a greater percentage had never used any method of contraceptive as shown in Table 4.1.

On the choice of methods, as shown in Table 4.2, contraceptive pill was dominant with 56(39.2%) followed by condom 48 (33.6%), followed by Calendar method representing (17.5%) of respondents. The other three; Withdrawal 7 (4.9%), Injectable 6 (4.2%) and Implant 1(0.7%) were the least choice.

Table 4.2 Contraceptive methods used

Variable	Frequency	Percentage (%)
Modern contraceptive method		
Pill	56	39.16
Condom	48	33.57
Injectable	6	4.2
Implant	1	0.7
Traditional method of contraception		
Calendar	25	17.48
Withdrawal	7	4.9
Total	143	100

4.3.6 Sexual activity

One hundred and forty six representing (36.96%) were not sexually active. The other 249 representing (63.04%) who were sexually active were further asked if they had ever been pregnant. The minority 49 (16.47%) were those who had ever been pregnant.

4.4 Awareness of ECPs

Information below shows response obtained from respondents to assess the awareness and extent of knowledge on ECPs. Majority of the students 295 (74.6%) sampled had prior knowledge of ECP. About half 155 (52.5%) of those who had prior knowledge had acquired the information via different media. Just a few had the

information through a formal lecture. 175 (59.3%) of those who had prior knowledge knew the correct time period for taking ECPs, however quite a substantial number 120 (40.7%) did not know the time that it should be taken.

Furthermore more the majority which is (79.9%) of the respondent did not have any idea about the content of ECPs. Although, 43 (14.6%) choice the option that said ECPs was 99% effective, more than half of those who claimed to have prior knowledge were not sure of its effectiveness. Two hundred and twenty representing 74.6% of the respondents indicated that they knew EC could be obtained from the pharmacy. Only 6 of them representing 2.0% mentioned the supermarket as a source of EC. The findings are elaborated in Table 4.3.

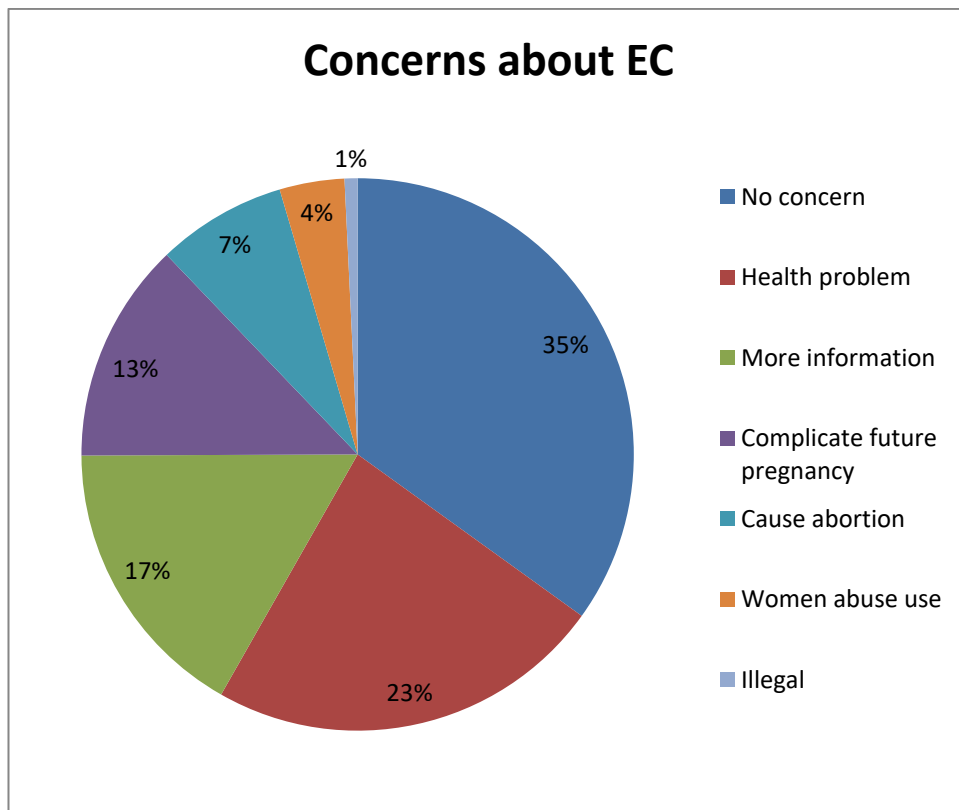
Table 4.3: Students' awareness and knowledge of ECPs

Variables (N= 395)	Number (%)	
	Yes	No
Awareness of ECPs	295 (74.68)	100 (25.32)
Asked among those reporting only awareness (n = 295)		
Source of information	Electronic/print media	155 (52.54)
	Family/friends	81 (27.46)
	Hospital	37 (12.54)
	Formal lecture	22 (7.46)
Time frame for use	Immediately after sex	84 (28.47)
	Within 24 hours	82 (27.80)
	Within 5 days	9 (3.05)
	Do not know	120 (40.68)
Content of ECP	Same as other contraceptive	25 (8.50)
	Same but stronger	33 (11.22)
	Different drug	1 (0.34)
	Do not know	235 (79.93)
Effectiveness of EC	99% effective	43(14.58)
	75% effective	48 (16.24)
	≤ 50% effective	32 (10.85)
	Not sure	172 (58.31)
Where EC could be obtained	Pharmacy	220 (74.58)
	Hospital/Clinic	69 (23.39)
	Supermarket	6 (2.03)

4.4.1 Concern about ECPs

Majority of them representing 35% had no concern about ECPs. Ninety two of them representing 23% were concerned about it effects on health; 17% needed more information on ECPs; whiles 13% were worried about future complications. Only 30 out of the 395 respondents perceived EC to cause abortion; four per cent were concern about it being abused by women, the remaining 1% perceived it to be illegal as illustrated in fig 4.1

Fig 4.1 Concerns of EC



4.5 Use of ECPs

Table 4.4 represent the findings from the questions asked on the use of ECPs. From the table 4.4, about a third of the respondents, 112 (28.4%) had used ECPs before. 37 out of the 112 representing (33.0%) were one time users. The remaining (67%) had used it more than just once, but interestingly 26 (23.3%) had used ECPs more than twelve times already. About two thirds 70 (62.5%) claimed that their male partners recommended use followed by family and friends 25 (22.3%).

A vast majority the respondents 103(92%) said that ECPs were available and 95 (84.8%) of respondents indicated ECPS were affordable. Seventy (62.5%) reverted to the use of a regular contraceptive after ECP use.

4.6 Bivariate analysis

Marital status and religious belief were the only variables which were statistically significantly associated with the use of ECPs. All the other variables in Table 4.5 were statistically insignificant.

Table 4.4: Students' use of ECPs

Variable (N =395)	Categories	n (%)
Use of ECPs	Yes	112 (28.35)
	No	283 (71.65)
Asked only among those reporting use (n = 112)		
Frequency of use	Once	37 (33.04)
	2 – 4 times	33 (29.46)
	5- 8 times	12 (10.71)
	9- 12 times	4 (3.57)
	≥ 12 times	26 (23.21)
Who recommended use	Partner	70 (62.50)
	Friends/Relatives	25 (22.32)
	Media	17 (15.18)
Availability	Yes	103(91.96)
	No	9 (8.04)
Affordability	Yes	95 (84.84)
	No	17 (15.18)
FP after EC use	Yes	70 (62.50)
	No	42 (37.50)

Table 4.5 Bivariate analysis of some demographic data on EC use

EC use (N = 395)			
Variable	Yes n= 112(%)	No n= 283 (%)	P value
Age group			
18 – 22	64 (57.14)	189 (66.78)	0.154
23 – 27	45 (40.18)	85 (30.04)	
≥ 28	3 (3.18)	9 (3.18)	
Programme of study			
Business	58 (51.79)	149 (52.65)	0.586
Applied Art	29 (25.89)	59 (20.85)	
Applied Science	23(20.54)	64 (22.61)	
Engineering	2 (1.79)	11 (3.89)	
Marital status			
Single	100 (89.29)	272 (96.11)	0.032*
Married	7(6.25)	7 (2.47)	
Cohabiting	5 (4.46)	4 (1.41)	
Level			
Level 100	67 (59.82)	137 (48.41)	0.154
Level 200	20 (17.86)	89 (31.45)	
Level 300	25 (22.32)	57 (20.14)	
Religious belief			
Christianity	97 (86.61)	262 (92.58)	0.046*
Islam	12 (10.71)	20 (7.07)	
Traditional	3 (2.68)	1 (0.35)	

Note: * indicates the measured association is statistically significant at $\alpha < 0.05$

Table 4.6: Output of logistics regression between EC use and respondents attitude towards ECPs

Variable	categories	N (%) n=395	P value	OR (95%CI)
ECP use is necessary	No	15 (3.80)	Reference	1
	Yes	254 (64.30)	0.078	3.9 (0.85, 17.68)
	Don't know	126 (31.90)	0.872	0.9 (0.18, 4.28)
ECP use promotes promiscuity	No	60 (15.19)	Reference	1
	Yes	168 (42.53)	0.006	0.4 (0.23, 0.78)
	Don't know	167 (42.28)	<0.001	0.3 (0.15, 0.53)
ECP use promotes the spread of STIs	No	107 (27.09)	Reference	1
	Yes	173 (43.80)	0.606	0.9 (0.53, 1.44)
	Don't know	115 (29.11)	<0.001	0.2 (0.07, 0.32)
Religious acceptance	No	119 (30.13)	Reference	1
	Yes	121 (30.63)	0.33	1.3 (0.76, 2.19)
	Don't know	155 (39.24)	<0.001	0.3 (0.17,0.57)
Will recommend ECP to a friend	No	102 (25.82)	Reference	1
	Yes	192 (48.61)	<0.001	2.9 (1.68, 5.13)
	Don't know	101 (25.57)	0.013	0.3 (0.14, 0.79)
EC should be sold to men	No	83 (21.01)	Reference	1
	Yes	168 (42.53)	0.63	1.1 (0.66, 1.96)
	Don't know	144 (36.46)	<0.001	0.2 (0.08, 0.34)
Partners acceptance	No	58 (14.68)	Reference	1
	Yes	155 (39.24)	0.01	2.1 (1.17, 3.69)
	Don't know	182 (46.08)	<0.001	0.1 (0.04, 0.17)
Will prefer condoms to ECP	No	90 (22.78)	Reference	1
	Yes	147 (37.22)	0.122	1.5 (0.89, 2.62)
	Don't know	158 (40.0)	<0.001	0.1 (0.05, 0.25)
Partner use condom after ECP awareness	No	94 (23.80)	Reference	1
	Yes	99 (25.06)	0.013	2.1 (1.17, 3.69)
	Don't know	202 (51.14)	<0.001	0.1 (.04, 0.17)

4.7 Students attitude towards use of emergency contraception

Table 4.6 above presents the results of from the logistic analysis. Respondents partner use of condoms after ECP use, partner acceptance of ECPs, recommendation of ECP to a friend, thought that ECP could promote promiscuity were statistically significantly associated with the use of ECP. The other variables were not statistically significant.

4.8 Factors affecting use of ECPS

Table 4.7 illustrates the variables that could predict use of emergency contraception. Marital status, religious acceptance and partner acceptance of ECP were not statistically significantly associated with use of ECP when the other variable were held constant, even though the unadjusted odds ratio had significant p-values of (<0.05). Use of other family planning methods, Partner preference for condoms, knowledge of time to take ECP after unprotected sex, and respondents' sexual activity were statistically significant predictors of ECP use.

Table 4.7 Output of multiple logistic regression analysis of factors affecting ECPS use

Variables	Categories	N (%) n=395	P value	OR (95%CI)	P value	AOR (95%CI)
Marital status	Single	372 (94.2)	Reference	1		1
	Married	14 (3.5)	0.07	2.7 (0.93,7.95)	0.78	1.3 (0.21, 7.5.78)
	Co habiting	9 (2.3)	0.07	3.4 (0.90, 12.91)	0.40	3.8 (0.16, 89.39)
Use FP	No	252 (63.8)	Reference	1		1
	Yes	143 (36.2)	<0.001	22.8 (12.76,40.75)	<0.001*	6.3 (2.64, 14.93)
Partner prefer condom	No	94 (23.8)	Reference	1		1
	Yes	99 (25.1)	0.013	2.1 (1.17, 3.69)	0.16	2.0 (.07, 0.70)
	Do not know	202 (51.1)	<0.001	0.1 (.04, 0.17)	0.009*	0.2 (0.76, 5.08)
ECP timing after sex	No	120 (40.7)	Reference	1		1
	Yes	175 (59.3)	<0.001	36.2 (14.06,93.16)	<0.001*	12.9 (4.21, 39.31)
Partner accept ECP	No	58 (14.7)	Reference	1		1
	Yes	155 (39.2)	0.01	2.1 (1.17, 3.69)	0.19	2.0 (0.70, 5.77)
	Do not know	182 (46.1)	<0.001	0.1 (0.04, 0.17)	0.15	0.4 (0.10, 1.42)
Religious acceptance	No	119 (30.1)	Reference	1		1
	Yes	121 (30.6)	0.33	1.3 (0.76, 2.19)	0.19	0.1(0.18, 1.41)
	Do not know	155 (39.2)	<0.001	0.3 (0.17,0.57)	0.51	0.7 (0.25, 2.01)
Sexual activity	No	146 (37.0)	Reference	1		1
	Yes	249 (63.0)	<0.001	37.1 (11.51, 119.63)	0.028*	5.5 (1.19, 24.89)

Note: * indicates the measured association is statistically significant at $\alpha < 0.05$

CHAPTER V

5.0 DISCUSSIONS

5.1 Introduction

This study assessed the awareness, knowledge and use of emergency contraception as well as the factors associated with use of emergency contraception among Polytechnic students in Ghana.

5.2 Awareness of contraceptives methods

Ninety four per cent were aware of contraceptive generally. One hundred and forty three (36.2%) had used any method of contraceptives (28% for modern contraceptives and 8% of the traditional methods of contraceptive). Popular choice was the contraceptive pill use (39.2%) followed by condom (33.6%). The use of contraceptives is lower than those obtained in the 2014 GDHS on the general population. According to the report, 45% sexually active unmarried women were using any method of contraceptive (32% modern method, 13% for traditional method). It also stated that, the male condom, pill and rhythm or calendar methods were the most commonly used method among sexually active unmarried women. This disparity may be accounted for by the fact that most of the respondents were young adult and the age range (18- 34) did not cover the whole reproductive age group of (15 -49).

5.3 Awareness and knowledge of EC

Awareness level of ECP among the students was 74.7% which was higher than those obtained in similar studies of university student done in Ghana {(Baiden et al. 2002)(Kofuor et al. 2015b) (Amalba et al. 2014)} and that done in Taibah (24.5%). Findings were however lower than those reported among students of Korea (88.2%) (El-sabaa et al. 2013) and in Kenya(88.0%) (Bash 2015).

Awareness of ECPs seems to have increased markedly over the years. Their common source of information were popularly electronic and print media 155 (52.5%), family/friends 81 (27.5%) hospital 37 (12.5%) and formal lecture 22 (7.5%) similar to studies done in Ghana (Baiden et al. 2002). Of those who had prior knowledge, 59.3% knew the correct time period for taking ECPs. However quite a substantial number 120 (40.7%) did not know the time that it should be taken. This is lower compared to studies done in Tamale which indicated that 85% of the women knew the correct timing for use of ECP (Amalba et al. 2014). Other studies in Nigeria and California reported lower values {(Aziken et al. 2003) (Foster et al. 2004)}. Eighty per cent did not know the content of ECP and 58.31% were not sure of its effectiveness. These results are similar to studies done in Ghana and California indicating that women who are aware of ECP do not have adequate knowledge on timing of use {(Dawson et al. 2014)(EB et al. 2006)}. The media which appears to be the major source of information may be giving inadequate information about ECPs which may account for this. Sixty three per cent of the students interviewed were sexually active, of which 16.5% had ever been pregnant, which is quite understandable because the mean age of respondent is within the early adult transition stage (17-22) (Levinson 1986). Twenty three per cent of the student were

concerned about the health implications of ECPs, however 17% wanted to have more information about ECPs

Still a major problem is the lack of knowledge about how ECPs are to be used. This may be the problem with providers not giving adequate information about ECP when dispensing. Also students were aware of the existence of emergency contraceptive pills from different information sources. The awareness created by the media may not be comprehensive enough to include knowledge on appropriate use, content and effectiveness of method. This is in line with a conclusion from a study that website could not provide adequate information on ECPs (Latthe et al. 2000).

5.4 Access to ECPs

A vast majority of the respondents said that ECPs were available and affordable representing 103(92.0%) and 95(84.8%) of respondents respectively. Seventy of the respondents representing 62.50% reverted to the use of a regular contraceptive after ECP use. ECP has been in Ghana for over 20 years. The institution is located close to the central business area of Sekondi/Takoradi and surrounded by a number of pharmacies where they could easily get products from. It is therefore not surprising that high proportion indicated availability is high.

5.5 Use of ECP

Among the 28.4% respondents who reported ever using ECPs, 33% were one time users, but interestingly 26 (23.3%) had used ECPs more than twelve times already. Use of ECP is similar to a study done in Egypt which reported 24.5% use among

women aged 18 – 49 years. Use was however lower compared to studies done in Ghana{(Kofuor et al. 2015b)(Amalba et al. 2014)}. Even though access and availability was high, use was low similar to a studies that (Ellertson 1996)low usage despite convenient access and use . The fact that ECPs were being used frequency may be attributed to the fact that the students did not have in depth knowledge on correct usage of ECP. This is of public health concern because studies done indicates that the risk of unwanted pregnancy increases if ECP is used several times (Draca 2000). Seventy (62.5%) claimed that their male partners recommended use followed by family and friends 25 (22.3%). Education on ECP and how it is used should not be limited to female partners alone but should include male partner education. Male participation ECP education should be part of the family planning agenda.

5.6 Factors affecting use of ECPs

Marital status, religious acceptance, partner acceptance of ECP and partner preference for condoms was were not statistically significantly associated with use of ECP when the other variable were held constant, even though the unadjusted odds ratio had significant p-values of (<0.05). This is in line with another study done in Ghana, where high use of EC was reported in Tamale despite religious unacceptability (Amalba et al. 2014). Use of other family planning methods, knowledge of time to take ECP after unprotected sex, and respondents' sexual activity were statistically significant predictors of ECP use. Student who were using modern contraceptive were six times more likely to use ECPs with reference to those who were not holding the other predictor variables constant.

Those who knew the correct time for taking ECP after unprotected sex had 13 times likelihood of using ECP after adjusting for the other predicting variables. It could be explained that those who had enough information on ECP were sure of the method and did not hesitate its use. Also students who were sexually active were 37 times more likely to use ECP. After adjusting for the other predicting variables, sexually active students were 6 times more likely to use ECPs which is to be expected.

CHAPTER VI

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

Emergency contraception is a useful method of contraception that prevents unwanted pregnancy after unprotected sexual intercourse. It is however not recommended as a regular family planning method.

Awareness of regular family planning methods were high, however use was lower than that of the general population, the pill being the popular choice followed by condoms.

The electronic and print media were the most common sources of information on ECPs, followed by family and friends, which is in line with a study done in Ghana among university student. Those who had basic awareness of EC however lacked detailed knowledge about the content, effectiveness and the timing schedule after unprotected sex. Some of the students expressed interest about getting more information on ECPs. The reason may be linked to the source of information; the media may not be in the capacity to give detailed information.

The research findings showed that out of the 28.4% students who had used EC, about two thirds of them had used ECPs more than ones; even though 62.5% were concomitantly using other family planning methods after EC use. Again 62.5% of use was recommended by partners.

The students who perceived EC to be necessary in terms of rape, condom breakage or unprotected sexual intercourse had more positive attitude towards ECP. Those

who thought that EC could promote promiscuity were 0.43 times less likely to use EC; the fear for EC promoting the spread of STIs and sale of EC to men however did not change the attitude towards use. Students who believed they will recommend method to friends and those whose partners accepted EC were more likely to use EC. Use of condoms positively affected the use of ECP. Marital status and religious acceptors did not affect the use of EC according to the data. Previous use of any method of contraceptives and in-depth knowledge of emergency contraceptive were factors associated with the use of ECPs.

6.2 Recommendations

Recommendations based on the findings and conclusions of the study are presented as follows:

1. There is the need to educate students on emergency contraception with emphasis on content, effectiveness and correct timing of use.
2. Reproductive health education should be promoted among young adults through various communication channels, including the media, women groups, various university clubs and societies, the counselling department, health facilities and peer educators.
3. Further information on conception, human sexuality, and access to confidential counselling should be made available to female students once they attain the reproductive age.
4. Dispensing of ECPs from pharmacies and chemical shops should be accompanied by the necessary information and counselling.

5. There should be policy and regulation on the sale and advertising of emergency contraceptive pills such that in-depth education about content, effectiveness and use goes along with it.

6.3 Recommendations for further research

The study sought to explore the awareness and use as well as the factors influencing the use of emergency contraceptive pills among female tertiary students in Ghana. I will recommend a similar study to be undertaken to include male students to gain their perspectives as well.

Also a large target group of tertiary students in Ghana can be studied to enable generalization of the findings.

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APPENDICES

APPENDIX 1

QUESTIONNAIRE TO ASSESS THE FACTORS ASSOCIATED WITH THE KNOWLEDGE AND USE OF EMERGENCY CONTRACEPTIVE PILL

Questionnaire number
...../...../2016.

Date:

1. Age:

2. Sex : F M

3. Programme of study

- Engineering
- Applied Art
- Applied Science
- Business
- Other: (Specify)

4. Programme Type

- HND DBS
- Other: (Specify)

5. Level

6. Residence On campus (Hall)
 Off Campus

7. Nationality: Ghanaian Non Ghanaian

8. Ethnicity Akan Ga Adangme
 Ewe Mole-Dagbane
 Others:.....

9. Religion Christianity (.....)
Denomination
 Islam
 Traditional
 Others:.....

10. Marital status :

- Married Single Co-habiting

11. Have you heard about family planning methods or contraceptives? Yes No

12. Do you use contraceptive?

- Yes No (skip to question

16)Which contraceptive methods are you using?
(Tick as many as are applicable)

- Pills Injectables Condoms
- IUD Tubal ligation Vasectomy
- Withdrawal Calendar (rhythm)
- Other: (Specify)

13. Have you ever had sexual relationship?

- Yes No (skip to question 16)

14. Have you ever been pregnant?

- Yes No Currently pregnant

Knowledge of EC

15. Have you ever heard of emergency contraceptive pill or morning after pill?

(e.g. POSTINEX, POSTINOR 2, LYDIA POST PILL)

- Yes No (Skip to question 25)

16. When was the first time you heard of emergency contraceptive pill?
- Less than 6 months ago
- 6 – 11 month ago 1-5 years
- >5years ago Do not remember

17. Where did you hear about it? (You can tick more than one)
- Hospital/health centre
- Friends or relative
- News/Magazines
- Radio/Television
- Internet
- Course /formal lecture
- Social media
- Others (specify)

18. Do you know where a woman can obtain emergency contraceptive pills?
- Pharmacy
- Hospital/clinic
- Supermarket
- Other (specify).....

19. Would emergency contraceptive work if there is menstrual delay?
- Yes No Do not know

20. How long after unprotected sex should EC pill be taken?
- Immediately after sex Within 24 hours
- Within 5 days Within 1 week
- Before the first day of the next menses
- Do not know
- Other (specify).....

21. Which drug do you believe is contained in EC pill?
- Same as in normal contraceptive pills
- Same but stronger
- A completely different drug
- Do not know

22. How effective do you think EC pill is?
- Almost always (99%)
- 75%
- 50%
- 30%
- Not sure

23. Did the person or media from which you obtained information about EC pill explain to you;
(Please circle your answers)

	YES	NO	DON'T KNOW
A. How often you can use them?	1	2	3
B. Where they can be obtained?	1	2	3
C. That it will be advisable to discuss with your partner	1	2	3
D. That you will not have any problem to become pregnancy in the future	1	2	3
E. That after using EC it will be advisable to start using a different contraceptive method	1	2	3

Use of EC pill

24. Have you ever used EC pill?

- Yes No

If **NO**, why ?

.....

(Skip to 33)

Why did you use EC pill?

- To prevent unsafe abortion
 To prevent unwanted pregnancy
 For birth spacing
 Other (specify).....

25. How many times have you used this method during the last year?

- Once 2-4 times 5- 8 times
 9- 12 times More than 12 times
 Don't remember

26. Who recommended it?

- Partner Friends or relative
 News/Magazines Radio
 Television/other Do not remember

27. Is EC pill readily available?

- Yes No

28. Is EC pill affordable?

- Yes No

29. After you used EC pill did you start to use a regular method of birth control or one different from the method you were using?

- Yes No (skip to 33)

30. Which method did you start using?

- Pills Injectables Condoms
 IUD Tubal ligation
 Vasectomy Withdrawal
 Calendar (rhythm)
 Do not remember
 Other (specify).....

Attitude towards EC pills

31. EC pills or morning after pill are contraceptive pills that can be taken by a woman after unprotected sexual intercourse to prevent unwanted pregnancy. What do you think about think about this method?

- Adequate for women Inadequate for women Adequate for some women
 Would like to have more information Do not know

32. In your view what do you think about EC pill? Please tick	Yes	No	Do not Know
A. EC pills are necessary for use in case of rape, condom breakage and unwanted sex?			
B. EC pills could promote promiscuity			
C. EC pills could promote the spread of sexually transmitted infections			
D. Does your religion accept the use of EC pills			
E. Will you ever use it or recommend it to a friend or relative in case of need?			
F. Should EC pills be sold to men			
G. Do you believe your partner will accept you use this method			
H. Would you prefer your male partner to use condoms instead of you taking			

EC pills			
l. Would your male partner still use condoms if he knows about EC pills?			

33. What concerns do you have about this method?

- No concern
- It may cause health problem
- It may hurt the baby if it fails.
- Its use may be illegal
- It may result in complications to get pregnant in the future
- Some women may use it frequently instead of using regular contraceptive
- It can cause abortion
- I do not have enough information
- Other

- Radio/Television
- News/Magazines
- Do not know
- Other (specify).....
- Internet
- Social Media

37. Will you likely recommend the use of EC to a friend? Yes No

34. Where do you think contraceptive methods should be provided?

- Hospital/clinic
- Pharmacy/drug store
- Supermarket
- Tertiary institutions
- Maternity homes
- Other (specify).....

35. Who should provide it?

- Doctors
- Sex counsellors
- Pharmacist
- Other (specify).....
- Nurses
- Psychologist
- Midwives
- Social workers

36. According to you, which will be the best way to inform people about emergency contraception?

- Hospital/clinic
- Brochure
- Group talks
- Schools

Thanks again for your time and willingness to participate in the project

APPENDIX 2

INFORM CONSENT FORM

Introduction

My name is I am a student from the Ensign College of Public Health Kpong, conducting a study to assess the awareness and factors associated with the use of emergency contraceptive among tertiary students in Takoradi. This participant information leaflet explains the research study you are being asked to join. Please take all the time you need to read it carefully. You may ask the research team questions about anything you do not understand at any time. You are a volunteer. You can choose not to take part and if you join, you may quit at any time. There will be no penalty if you decide to quit the study.

Why you are being asked to participate

You are being asked to take part in this study because you are a matriculated female student of Takoradi Polytechnic. This survey is specifically about female student of reproductive age.

Procedures

If you agree to be part of the study, you will fill a self-administered questionnaire which will take about 5-15 minutes of your time. Your responses will later be entered into a computer database by study staff. The questionnaire will only be administered after you have agreed to be in the study and have signed the consent form. As a participant, if you agree to participate in this study, data from your responses may be to assess the knowledge and use of emergency contraceptive pill.

Risk and Benefits

We anticipate minimal or no risk to you. There is no direct benefit to you for being in the study; however, study outcomes may lead to better understanding of factors affecting emergency contraceptive use.

Confidentiality

Your name will not be record on any of the study documents. The information you provide in this survey will be known only by you and the research team. Your responses will not be shown to other participants or community members.

Voluntariness and Withdrawal

Your participation in the study is completely voluntary and you reserve the right not to participate, even after you have taken part, to withdraw. Decision you take will not be

disclosed to anyone. You can choose not to take part and you can quit at any time. There will be no negative consequences if you choose not to participate in the study. Please note however, that some of the information that may have been obtained from you without identifiers, before you chose to withdraw, may be used in analysis reports and publications.

Cost/Compensation

Your participation in this study will not lead to you incurring any monetary cost during or after the study.

Who to contact

This study has been approved by the Ensign College of Public Health Ethics Committee. If you have any concern about the conduct of this study, your welfare or your rights as a research participant or if you wish to ask questions, or need further explanations later, you may contact Wilhelmina Tiwaah Duah (0209129643) of Ensign College of Public Health Kpong. You may also contact the chairman of the Ensign College of Public Health Ethics committee.

Do you have any queries?

Part 2. CONSENT DECLARATION

“I have read the information given above, or the information above has been read to me. I have been given a chance to ask questions concerning this study; questions have been answered to my satisfaction. I now voluntarily agree to participate in this study knowing that I have the right to withdraw at any time without affecting future health care services”

	Signature of Participants	Date

.....

.....

Signature of witness / Date