COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

UNIVERSITY OF GHANA

FACTORS ASSOCIATED WITH THE USE OF EMERGENCY CONTRACEPTIVES AMONG FEMALES AGED 15-49 YEARS IN THE LA-BAWALESHIE COMMUNITY, EAST LEGON

BY

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FEBRUARY 2025

DECLARATION

I hereby declare that the work presented in this dissertation is a product of my original research work. This dissertation has not been presented either in part or whole for the award of another degree in any other university or institution. All sources of information and data from other researchers have been duly referenced. I confirm that this research work was carried out under supervision and complies with the ethical standards and guidelines of the School of Graduate Studies, University of Ghana.

27th February, 2025

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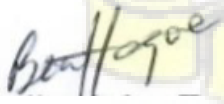
PAULINA NAA AFADUA QUANSAH **DATE**

(STUDENT)



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(SUPERVISOR)

ABSTRACT

Background: Emergency contraception (EC) is a method of contraception used to prevent unintended pregnancy that may occur after unprotected or under-protected sexual intercourse**.** The use of emergency contraception helps reduce the risk of unplanned and unwanted pregnancies, and the incidence of unsafe abortions which is on the rise among young female adults in developing countries, including Ghana. The prevalence of unplanned and unwanted pregnancies remains high, particularly among young women, despite the advancement in contraceptive technology over the years. This study aimed to identify the factors associated with the use of emergency contraceptives among residents of the La-Bawaleshie community in East Legon.

Method: A community-based cross-sectional study design was used for this study. Data was collected from 262 women in their reproductive age using self-administered questionnaires. The study examined the socio-demographic, economic, and knowledge-related factors associated with EC use. The data analyses were conducted using the STATA version 18 statistical software. Univariate and multivariate Poisson regression analyses were done to identify the statistically significant factors associated with EC use.

Results: The prevalence of EC use was found to be 72.27%, with the majority of the users being between the ages of 15-24 years (64.32%), never married (75.68%), and had at least secondary level education (52.43%). The level of awareness was high (93.89%) but knowledge regarding the specific types of EC and its appropriate use was limited. Friends or relatives were the main sources of information, with those receiving information from such sources being more likely to use EC (63.78%). Sexual activity was strongly associated with EC use (p= 0.001). Educational

level (p=0.01), age at first sexual activity (p= 0.01), awareness of EC (p= 0.001), and availability of EC (p= 0.001) were significantly associated with EC use.

Conclusion: The prevalence of EC use was 72.27%. Source of information on EC, sexual activeness, educational level, age at first sex, and availability of EC were significantly associated with EC use. There is the need for targeted EC awareness campaigns and outreaches, increased availability of EC, and the integration of EC education into sexual and reproductive health programs.

DEDICATION

I dedicate this work to my husband, parents, siblings, and all my friends and loved ones who have been of tremendous help in making this journey possible.

ACKNOWLEDGEMENT

My deepest appreciation goes to the Lord Almighty for the wisdom and strength He gave me throughout this journey and for making this possible.

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Special thanks go to the residents of the La-Bawaleshie community for their permission and consent to carry out this study.

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LIST OF ABBREVIATIONS

COCs: Combined Oral Contraceptives

Cu-IUD: Copper-bearing Intrauterine Device

DMPA: Depot-medroxyprogesterone Acetate

EC: Emergency Contraception

ECPs: Emergency Contraceptive Pills

IUD: Intra-uterine Device

LH: Luteinizing Hormone

LNG: Levonorgestrel

LNG-IUD: Levonorgestrel bearing Intrauterine Device

NET-EN: Norethisterone Enanthate

UPA: Ulipristal Acetate

WHO: World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background

Unplanned and unwanted pregnancies are a major issue of public health concern worldwide, but most significantly in developing countries. (Demissie et al., 2020)

It is reported that all types of emergency contraceptives can cause a reduction in the risk of unintended pregnancies and unsafe abortions by 75% to 85% when used appropriately within a time frame of 72 hours of unprotected sexual intercourse. The primary methods of emergency contraception include contraceptive pills and copper-bearing intrauterine devices (IUDs). The World Health Organization (WHO) recommends the use of Levonorgestrel taken as a single dose (1.5 mg) or taken in 2 doses (0.75mg 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)

Despite advancements in modern contraceptive methods, unintended pregnancies remain a significant health issue that can be mitigated through the proper use of emergency contraceptives. However, different findings in middle- and low-income countries revealed that the utilization of emergency contraception was 21.2% in South Africa, 13.3% in Nigeria, 39.9% in Ghana, and 2.7% in Ethiopia. (Wang et, 2015) (Amalba *et al*, 2014)

It has been shown in some studies that unmarried young women and female adolescents are often highly vulnerable to sexual violence and coercion leading to unwanted pregnancies and abortions. (Yeboah et al., 2022)

The Government of Ghana, along with its development partners and international NGOs, has been working for several decades to enhance the use of contraceptives. While some progress has been achieved, particularly in raising awareness, a significant number of Ghanaian female adolescents still infrequently use modern contraceptives. (Agyemang *et al*, 2019)

1.2 Problem Statement

Global estimates indicate that between 2015 and 2019, there were approximately 121 million unintended pregnancies. Of these, about 73 million (61%) resulted in some form of induced abortion among females aged 15 to 49 years worldwide. The highest incidence of unintended pregnancy (91/1000 women) and abortion rate (37%) was recorded in Sub-Saharan Africa. (Bearak *et al*, 2020)

According to findings by the World Health Organization (WHO), there are at least 10 million unintended pregnancies and an estimated 5.6 million abortions each year among adolescent girls aged 15 to 19 years in developing countries. (Edao *et al*, 2022)

Unplanned pregnancies are pregnancies that are unintended, mistimed, or unwanted at the time of conception and these pregnancies are critical issues of public health concern in both the developing and developed countries. These unwanted or unplanned pregnancies affect the women personally, their families, and the society in which they live at large. Effects of unwanted pregnancies on women include the risk of depression, maternal anxiety, poor nutrition during gestation, delayed antenatal care, and a higher chance of unsafe abortion which can be detrimental to her health and may even result in death. (WHO, 2022)

Families in which there are incidents of unplanned pregnancies tend to be faced with the challenge of economic hardship as they may not have been financially prepared for another child, and it can also hinder the formation and maintenance of strong family ties.

With these effects on society, unplanned pregnancies pose a higher economic burden on society as the cost of health care for unplanned or unwanted pregnancies is higher compared to that of planned pregnancies. (WHO, 2022)

Issues of unintended pregnancies, unplanned births, and unsafe abortions have been major concerns to the reproductive health of women globally. (Mutinta, 2022)

Despite the rapidly increasing rate of awareness and use of emergency contraceptive pills (ECPs) in Ghana among young women over the past decade, the rate of unplanned and unwanted pregnancy in this group remains high. (Rokicki & Merten, 2018). The 2022 Ghana Demographic and Health Survey showed that the use of modern contraceptive methods among women between the ages of 15-49 years rose from 5% in 1988 to about 28% in 2022. (DHS, 2022)

It has been shown that about 214 million women in developing countries have an unmet need for contraception, with women in Sub-Saharan Africa recording the highest proportion. (Grindlay et al, 2019**).** According to the 2022 Ghana Demographic and Health Survey (DHS), it was observed that about 31% of females between the ages of 15-19 years had an unmet need for family planning while that among females aged 25-29 years was about 23%. Among married women, the total demand for family planning is 60%, with 23% of these women having an unmet need for such services. (DHS, 2022)

Enhancing the availability and promotion of emergency contraception can reduce unintended pregnancies and unsafe abortions.

Findings from some studies conducted in Ghana by Agyemang *et al*, 2019 in the Ashanti Region and Rokicki *et al*, 2018 suggested that there were some misconceptions about ECs and infrequent and inappropriate use of ECs. Some studies have however suggested that despite the

increased awareness of EC, the proportion of individuals using EC does not match up to the proportion aware of EC.

1.3 Justification Of Study

This study will provide additional knowledge on the factors associated with using emergency contraceptives at the community level among community members in a suburb of the Greater Accra region (La-Bawaleshie). Findings from this study will help in policy development and policy implementation in the promotion of the proper and effective use of emergency contraceptives in the country and help reduce mortality associated with unintended or unwanted pregnancies.

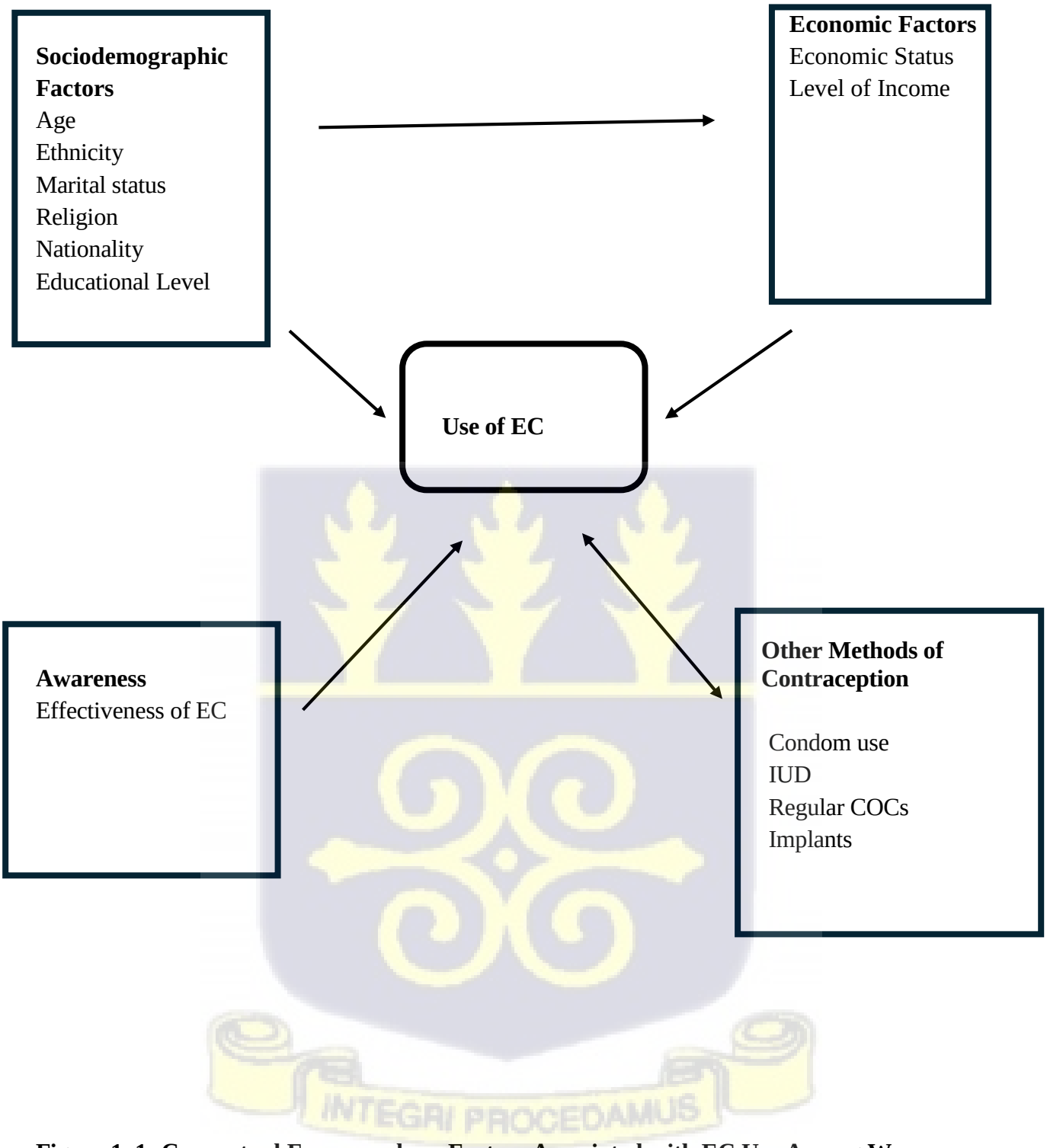

Figure 1. 1: Conceptual Framework on Factors Associated with EC Use Among Women Aged 15-49 Years

1.4 Narration of Conceptual Framework

From the conceptual framework above, various factors contribute to the use of emergency contraceptives. These factors include sociodemographic, economic and factors associated with the use of other contraceptive methods. Sociodemographic factors such as age, marital status, educational level, religion, and ethnicity may influence emergency contraceptive use. Economic factors such as employment status and level of income are key factors that can influence the use of emergency contraceptives as this determines the affordability of ECs by women. The awareness on the effectiveness of EC as well as the use of other methods of contraception can influence the use of EC and vice versa.

1.5 Research Questions

This study seeks to answer the following questions:

i. What is the prevalence of EC use among residents of the La-Bawaleshie community
ii. What are the factors that influence the use of emergency contraceptives among the residents of the La-Bawaleshie community?

1.6 Aim

This study aims to determine the factors associated with the use of emergency contraceptives among residents of the La-Bawaleshie community.

1.7 Objectives

- To determine the prevalence of emergency contraceptive use among residents of the La-Bawaleshie community.
- To determine the socio-demographic and economic factors associated with the use of emergency contraceptives among residents of the La-Bawaleshie community.
- To assess the awareness of residents in the community on the effectiveness, and proper usage of emergency contraceptives.
- To assess how the use of emergency contraceptives influences the use of other routine methods of contraception and vice versa.

CHAPTER TWO

LITERATURE REVIEW

2.1 Emergency Contraception

Emergency contraception (EC) is a method of contraception used to prevent unintended pregnancy that may occur after unprotected or under-protected sexual intercourse. It also refers to any method that women can use after intercourse to prevent pregnancy. (Amalba *et al*, 2014)

Emergency contraception is sometimes referred to as "post-coital contraception" or "second chance". It can be used in instances such as following sexual abuse, improper use of regular contraception, or the absence of a regular method of contraception.(Demissie et al., 2020)

Emergency contraception is most effective only during the first few days following a sexual activity either before the release of the ovum from the ovary or before the fertilization of the ovum by the sperm and thus cannot disrupt an established pregnancy or destroy a developing embryo, therefore cannot cause abortion. (WHO, 2021)

2.2 Methods of Emergency Contraception

The differing methods of EC include the use of copper-bearing intrauterine devices (IUDs) and hormone pills (referred to as emergency contraceptive pills (ECPs). In Ghana and other developing countries, the ECPs are the most widely used form of EC. (Amalba *et al*, 2014)

2.2.1 Copper-bearing Intrauterine Devices

Copper-bearing intrauterine devices (Cu-IUD) have proven to be the most effective method of emergency contraception currently. They are capable of preventing approximately more than 99% of unintended or unwanted pregnancies when used within 120 hours of unprotected sexual

intercourse. (Rudzinski et al., 2023) It acts as an emergency contraceptive by avoiding fertilization. The copper ions released are toxic to the sperm and affect the viability and function of the sperm. (Al-Hasani, 2018) .

This method of contraception is recommended for women who are interested in using a reversible contraceptive method which is highly effective and long-acting. Once the Cu-IUD is inserted, it can either be used as an ongoing contraceptive method or changed to other methods of contraception. (WHO, 2021). When used as a method for regular contraception, its main mechanism of action is to prevent fertilization. On the other hand, when it is applied for EC, it affects the uterine fluid and endometrium which contributes to its more potent contraceptive action. (Al-Hasani, 2018)

2.2.2 Emergency Contraceptive Pills

The World Health Organization (WHO) recommended emergency contraceptive pills (ECPs) include levonorgestrel, ulipristal acetate (UPA), and combined oral contraceptives (COCs) containing ethinyl estradiol and levonorgestrel (LNG). (WHO, 2021) The earliest available ECPs were the ethinyl estradiol and levonorgestrel-based COCs, then known as the Yuzpe regimen. It was later shown that LNG, administered at a dose of 1.5mg was better tolerated and more effective than the Yuzpe regimen.(Rosato et al., 2016) LNG can also be taken as an initial dose of 0.75mg and a second 0.75mg dose taken after 12 hours.

The WHO recommends the use of levonorgestrel, commonly known as the morning-after pill, as the first-line emergency contraceptive pill. It is most efficacious when used within 72 hours of unprotected sex or in cases of assumed contraceptive failure. It is capable of reducing the risk of pregnancy by 87% when used within 72 hours after unprotected sex. It acts by reducing the surge

of luteinizing hormone(LH) which usually takes place during the pre-ovulation stage. LNG further inhibits ovulation by preventing follicular rupture and the release of a viable egg from the ovaries thus preventing fertilization. LNG is also able to cause the cervical mucus to thicken and this interferes with sperm passage and motility. (Vrettakos et al., 2023)

UPA is taken as a single dose of 30mg and works mainly by preventing ovulation and disrupting the transportation of the oocyte or zygote through the fallopian tube. It also affects the endometrium by altering its receptivity and embryo implantation.(Rosato et al., 2016). Ulipristal acetate is capable of preventing pregnancy when used within 120 hours of unprotected sex or presumed contraceptive failure. When used before ovulation, it causes a delay in follicular development and release. Administering during the peak of LH, the rupture of the follicle and release of the ovum may be delayed. Using UPA in the latter part of the menstrual cycle may result in a reduction in endometrial thickness. (Kim et al., 2011)

The COCs containing ethinyl estradiol and levonorgestrel (Yuzpe regimen) work by inhibiting the fertilized egg's implantation into the uterus's walls by causing fluctuations in the endometrium. Other presumed mechanisms include its ability to suspend ovulation and interfere with the function of the corpus luteum. (Mittal, 2014) The Yuzpe regimen has proven to be the least effective method of EC and is associated with a higher risk of side effects when compared with ECPs containing LNG. It is administered in 2 doses, taken at a dosing interval of 12 hours. A dose contains 100µg of ethinyl estradiol and 0.5 to 1.0mg of LNG. The Yuzpe regimen however remains useful in restricted settings where accessing more effective methods of EC is problematic. (Al-Hasani, 2018)

2.3 Instances in which EC can be used.

There are several instances in which EC can be used following sexual intercourse according to WHO (2021). These instances include:

- Sexual assault where the woman was not protected by any active method of contraception.
- When there was no prior use of contraceptives.
- In cases of likely contraceptive failure resulting from incorrect or improper use such as:
  - Incorrect condom use, breakage, or spillage
  - Expulsion of a hormonal contraceptive implant or an IUD
  - Missing consecutively 3 or more COC pills or being 3 days late during the first week of the cycle
  - Wrongly calculating the abstinence period or failing to use the barrier method or abstaining during the fertile days of the cycle
  - Being more than 3 hours late from the routine time of taking the progesterone-only pill or more than 27 hours after the previous pill
  - Failure of a spermicide film or tablet to melt before sexual intercourse
  - Being more than 12 hours late from the routine time of taking the desogestrel-containing pill (0.75mg) or more than 36 hours from the intake of the previous pill
  - Failure to withdraw during sexual intercourse (e.g. ejaculating into the vagina or on external genitalia)
  - Missing the norethisterone enanthate (NET-EN) progestogen-only injection for more than 2 weeks
  - Breakage, early removal, dislodgment, or tearing of cervical cap

- Missing the depot-medroxyprogesterone acetate (DMPA) progestogen-only injection for more than 4 weeks
- Being more than 7 days late for the combined injectable contraceptive (WHO, 2021)

2.4 Side Effects of EC

The side effects observed with the use of ECPs are like those observed with the use of other oral contraceptives. These side effects include nausea and vomiting, fatigue, and slight irregular vaginal bleeding(Meena et al., 2023). ECPs containing UPA or LHG are preferred to COCs as they cause minimal nausea and vomiting. It is however not recommended that anti-emetics be routinely used before taking ECPs. (WHO, 2021). Other side effects reported with the use of ECPs include breast tenderness, abdominal pain, headaches, and dizziness. These symptoms, however, usually resolve within 24 hours and do not occur for more than a few days after treatment. (Trussell et al. 2014). There are no medical conditions in which EC is contraindicated. The contraindications that prevent the use of other hormonal contraceptives do not apply to EC due to the short duration of exposure associated with the use of oral EC. (Al-Hasani, 2018)

2.5 Shifting to Regular Contraception

WHO recommends that women initiate or resume using a regular method of contraception to prevent unwanted pregnancies following the use of EC. No additional method of contraception is needed in a situation where a Cu-IUD was inserted for emergency contraception. Women may initiate or resume the use of their regular methods of contraception immediately following the

use of ECPs containing LNG or COCs as EC. In situations where UPA was used in EC however, women may initiate or resume the use of any progestogen-based methods, either in the form of combined hormonal contraception or progestogen-only contraceptives on the 6th day following the use of UPA for EC. The LNG-IUD may however be inserted immediately following the use of UPA as a method of EC in women who are determined not to be pregnant. A Cu-IUD may also be inserted immediately following the use of UPA in EC. (WHO, 2021)

2.6 Knowledge of EC

Lima et al revealed that just few women (29.0%) of reproductive age were aware of the appropriate timing of EC although most of them had ever heard of EC. A greater proportion of the women were confident that EC was effective in preventing pregnancies. (Lima et al., 2023)

A study conducted by Agyemang et al (2019) in the Atwima Kwanwoma District of the Ashanti region of Ghana showed that, out of 95% of respondents who had some knowledge about contraceptives, the high knowledge did not reflect its use as the prevalence of use was found to be 18%. (Agyemang et al., 2019a)

In another study conducted by Yeboah et al (2022) among reproductive-aged women in the Kwadaso municipality of Ghana, 96.15% had some level of knowledge of EC. Among this percentage, ECPs (progesterone-only pills e.g. Postinor 2, Lydia) were the most known method of EC (92%), followed by COC pills (58.67%) and IUDs (54.67%). A few of these respondents (2.33%) had, however, heard of EC but did not know exactly what it was. For 81% of these respondents, health professionals were their source of information. A greater percentage (61.33%) were aware that EC was not recommended as a routine method of contraception.

However, 22.67% of these respondents did not know whether EC was recommended for regular contraception or not. The vast majority (94.67%) of participants were aware that emergency contraception can prevent unwanted pregnancies. Sixty-eight percent of participants knew the recommended duration for EC use, which is within 72 hours after unprotected sex. However, 6.33% of them did not know there was a recommended time limit for taking emergency contraceptives. Fifty-two percent of the respondents agreed that the provision of EC could result in discouragement with compliance to other methods of contraception.

2.7 EC use and its associated factors

A cross-sectional study conducted in Bangladesh revealed that high socio-economic status, a visit by a family planning field worker, and access to media had a positive influence on EC use. (Mahfuzur et al., 2022)

Societal norms, personal attitudes toward reproductive health, cultural factors, stigma, and economic factors play a role in the variability of EC uptake among various populations. The geographical location, socio-economic status, and educational levels have an influence of the accessibility and utilization of EC. (Adaki et al., 2023)

In a study by Agyemang et al (2019), a small percentage (18%) of adolescent respondents in the Atwima Kwanwoma District had ever used EC. 67% of the participants stated that their cultural beliefs and practices did not approve of the use of EC. About 54% of the respondents indicated that they did not use EC due to the fear of being considered promiscuous by their peers. The side effects of EC were also identified as a factor contributing to the low prevalence of EC use among 53.66% of the participants.

Yeboah et al (2022) however showed that 79.67% of the women had ever used EC. Among the proportion of respondents who had ever used EC, 59.83% used EC after the event of unprotected sex while 24.69% of respondents used EC after a failed coitus interruptus. About sixty-four percent of the participants used EC within 72 hours after the incident of unprotected sexual intercourse to prevent unwanted pregnancies while the remainder of the participants used EC within 24 hours following unprotected sexual intercourse.

Findings from focused group discussions carried out in a study conducted by Hindin et al (2014) indicated that the concern about menstrual irregularities deterred women from using methods of contraception that had some effect on the menstrual cycle.

2.8 Use of EC among regular contraception users

Studies consistently indicate that most users of regular contraception view emergency contraception as a "back-up" method, which can be used following condom breakage, missed pills, and other contraceptive failures, rather than as a replacement for their regular method of contraception. (Rokicki et al., 2018; Kwame et al., 2022)

Increased access to EC has not been shown to systematically replace the use of regular methods of contraception at the population level, but instead it is used episodically or as an addition to routine methods. Systematic reviews of EC access and use in sub-Saharan Africa support this interpretation. (Kwame et al., 2022)

Ghanaian qualitative work shows young women describing EC as a pragmatic safety net used after specific risk events, not as the main prevention strategy. (Rokicki et al., 2018)

2.9 Determinants of EC use among regular contraception users

Some determinants have been identified that make regular contraception method users more likely to use EC. The type of regular method has been identified as a factor. Users of short-acting methods, such as condoms and daily pills, are more likely to use EC due to failure or missed doses, compared to users of long-acting methods. (Kwame et al., 2022)

Age and marital status were identified as other factors influencing the use of EC among users of regular methods of contraception. A study by Rokicki et al. (2018) found that younger, unmarried women (including students) reported a higher episodic use of EC.

The knowledge, beliefs, and perceived risk have also been found to influence the use of EC among users of regular methods of contraception. Accurate knowledge about EC (window of effectiveness, mechanism, safety) increases its appropriate episodic use. Misconceptions about EC, however, discourage the use of EC or lead to its inappropriate use. (Creanga A.A. et al, 2011)

The above listed studies have immensely contributed to the body of knowledge with regards to the knowledge and practices associated with EC use. Few studies have however, been conducted in Ghana at the community level on the factors associated with the use of EC among community members. This study seeks to provide additional knowledge on the factors associated with using emergency contraceptives at the community level.

CHAPTER THREE

METHOD

3.1 Study Design

A community-based cross-sectional study design was adopted in the data collection among female residents of the La-Bawaleshie community in their reproductive ages. The quantitative method was employed in gathering information for the study.

3.2 Study Site

La Bawaleshie is a Ga community situated in the Ayawaso West Constituency within the Greater Accra Region of Ghana. The name "Bawaleshie" is coined from two Ga words, "Bawale" which is the name of a deity or a tree, and "shie" which means under. The name Bawaleshie therefore means, "under the Bawale". This community is located about 1.7 kilometers away from the University of Ghana. The La Bawaleshie community is surrounded by other communities like American House, Okponglo, and Madina. Like some other Ga communities, the La Bawaleshie community was formed after some Ga people migrated from their main settlement in La (now referred to as Labadi), in search of farmlands for their farming activities.

According to the Population and Housing Census conducted in 2021, the Ayawaso West District, in which the La Bawaleshie community is located, has a total population of 75,303 with 36,689 being females, contributing to 48.7% of the population. (PHC, 2021)

This community however has no government health facility, except a private health center. Residents of the community, however, visit healthcare facilities in surrounding communities for their healthcare needs. Due to the lack of health facilities, residents visit community pharmacies

to purchase emergency contraceptive pills and daily combined oral contraceptive pills as a means of family planning. They have to visit healthcare facilities such as hospitals and clinics in neighboring communities for other family planning services such as insertion of IUDs, injectables, etc.

However, a few schools are located in the community, including a government basic school, La-Bawaleshie Presby School, which contributes to meeting the educational needs of the community. Community members are mainly engaged in petty trading and the sale of both local and continental dishes. Some community members are, however, formally employed.

3.3 Study Participants

Participants for the study were women of reproductive age, between the ages of 15 and 49 years who are residents of the La-Bawaleshie community.

3.4 Sample Size

Sample size(n) = $\frac{Z^2\, p(1-p)}{d^2}$

z= selected critical value of 1.96 at 95% confidence level

p= 79.76% (prevalence of emergency contraceptive use obtained from a previous study done in the Kwadaso Municipality (Yeboah et al., 2022)

d= 5% level of precision

The total sample for the study was 249 based on the formula above. Accounting for a 5% non-response rate, the sample size was 262.

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusion Criteria

- Females aged 15 to 49 years.
- Residents of the La-Bawaleshie community who have been residing in the community for at least a year.

3.5.2 Exclusion Criteria

- Community members who have lived in the community for less than a year.
- Visitors of residents who are in the community for short stays.

3.6 Sampling Technique

Participants for the study were selected by cluster sampling. The households in the community were put into 2 clusters, using the Chief's Palace as the landmark. The first cluster was households from the Bawaleshie Traffic Light to the Chief's Palace and the second cluster was households from the Chief's Palace to the Melcom junction. A cluster from the Chief's Palace to the Melcom junction was selected by balloting and the households in the selected cluster were used for the study. In a household with more than one member falling within the inclusion criteria, one member was selected from the household by balloting.

3.7 Data Collection Tool

Self-administered questionnaires containing both open and closed-ended questions were employed in the data collection. The questionnaires were based on the specific objectives of the study. The questionnaire was divided into five sections. The first section collected information on the sociodemographic characteristics of the participants while the second section provided

information on the economic status of the participants. The third section focused on the sexual history of participants, with the fourth section collecting information on participant's knowledge of emergency contraception. The fifth section focused on the participant's use of emergency contraceptives. The questionnaires were hand-delivered to the respondents and either returned on the same day or on an agreed date.

3.8 Data Quality Assurance

The supervisor assessed and validated the questionnaire to ensure that the questions asked were relevant and aligned with the study's objectives. The questionnaires were checked to ensure accuracy, completeness, and consistency. The questionnaires were numbered to ensure the correct entry of data.

3.9 Variables

Dependent Variable.

- Use of Emergency Contraceptives

Independent Variables.

- Sociodemographic Factors
- Economic Factors
- Use of other methods of contraceptives

3.9.1 Operational Definitions of Variables

Table 3. 1: Operational Definitions of Variables

Variable	Operational Definition
Dependent Variable	
Use of EC	The use of oral pill or IUD emergency contraceptives to prevent unwanted pregnancies
Independent Variables	
Sociodemographic Characteristics	Age, marital status, ethnicity, religion, nationality, educational level
Economic Factors	Employment status, occupation, average monthly income
Use of other methods of contraception	Whether the participant is on any method of regular contraceptives such as daily pills, injectables, condoms, IUD, vasectomy by the male partner, tubal ligation, or any other method

3.10 Data Management

Completed questionnaires were kept safe in a locked cabinet, to which only the researcher had access. Data collected with the questionnaires were entered into a laptop using Microsoft Excel which was kept secured with a password. The variables were coded using numbers. The entered data were double-checked to ensure all required data elements had been captured and no important information was missing. Backup storage was created in the researcher's OneDrive

account to ensure the data was not lost and was made available for future reference. The cleaned data was exported into the STATA statistical software for analysis.

3.11 Data Analysis

All analyses were conducted using the STATA statistical software version 18. Univariate analysis of selected variables was conducted to generate descriptive statistics on the socio-demographic characteristics of the participants. Multivariate analysis was used in investigating the association between community members' socio-demographic characteristics and EC knowledge and use.

3.12 Ethical Considerations

- **Ethical clearance**

Ethical clearance was sought from the Noguchi Memorial Institute for Medical Research Institutional Review Board before data collection started.

- **Informed consent**

Participants were provided with a piece of detailed information about the study and were made aware that the findings from the study were for academic purposes. Participants were allowed to decide to participate in the study. Participants were informed of their right to withdraw from the study anytime they got uncomfortable with the questions asked or felt harmed during the data collection process. Participants were assured of confidentiality.

- **Confidentiality**

Confidentiality was completely assured in this study. Filled questionnaires were locked up in a cabinet. Data collected from the study was only accessible to the researcher and supervisor for

this study. The laptop on which the data was entered was secured with a password only the researcher could access.

- **Anonymity**

The section for participants to include their names was excluded from the questionnaire to ensure anonymity throughout the study.

CHAPTER FOUR

RESULTS

4.1 Socio-demographic Characteristics of Study Participants

This study involved two hundred and sixty-two females of reproductive age in the La-Bawaleshie community. Table 2 shows the socio-demographic characteristics of the study participants. The mean age of the females in their reproductive ages was 24.21 ± 6.6 years with the majority of the study participants being in the age range of 15-24 years (n=166, 63.4%). Most of the study participants had never married (n=195, 74.43%), with just about 1.15% (n=3) of the study participants cohabiting. The dominant ethnic group among the study participants was the Ga-Adangbe (n=81, 30.92%). Most participants were Christians (n=227, 86.64%) with 4.58% (n=12) being traditionalists. Two hundred and fifty-eight (98.47%) of the participants were Ghanaians. About 52.67% (n=138) of the participants had at least Secondary school education while about 5.73% (n=15) had no educational experience.

Table 4. 1: Socio-demographic Characteristics of Participants

Characteristics	Frequency (N)	Percentage (%)
Mean age of Respondents	24.21 ± 6.6	
Age Group		
15-24 years	166	63.36
25-34 years	72	27.48
35-44 years	21	8.02
>44 years	3	1.15
Marital Status		

Never Married	195	74.43
Divorced	26	9.92
Married	25	9.54
Cohabiting	3	1.15
Separated	13	4.96
Ethnicity		
Ga-Adangbe	81	30.92
Akan	46	17.56
Ewe	45	17.18
Fante	32	12.21
Asante	31	11.83
Hausa	23	8.78
Other	4	1.53
Religion of Respondent		
Christianity	227	86.64
Islam	23	8.78
Traditional	12	4.58
Nationality of Respondent		
Ghanaian	258	98.47
Other	3	1.15
Educational Level		
None	15	5.73
Primary	50	19.08
Secondary	138	52.67
Tertiary	59	22.52

4.2 Socio-economic Characteristics of Participants

Table 3 shows the socio-economic status of the study participants. The majority of the participants were unemployed (n=165, 62.98), while 49 (18.70%) were self-employed and 48 (18.32%) were salaried workers. A greater percentage (n=140, 59.32%) of the participants were students. Most of the study participants (n=56, 56.00%) had an average monthly income of <1000gh with about 6.00%(n=6) having an average monthly income of >3000gh.

Table 4. 2: Socio-economic Characteristics of Participants

Variable	Frequency (N)	Percentage (%)
Employment Status		
Unemployed	165	62.98
Self-employed	49	18.70
Salaried Worker	48	18.32
Occupation of Participant		
Trader	22	9.32
Teacher	12	5.08
Hairdresser	21	8.90
Student	140	59.32
Dressmaker	18	7.63
Other	23	9.75
Average Monthly Income		
<1000gh	56	56.00
1000-3000gh	38	38.00
>3000gh	6	6.00

4.3 Sexual and Reproductive History of Participants

Table 4 represents the sexual and reproductive history of the study participants. A greater proportion of the participants were sexually active (n=236, 90.08%) with the mean age at first sexual activity being 20.23 (±3.271). Thirty-eight participants (14.50%) had their first sexual activity when they were less than 18 years while 224 (85.50%) of the participants had their first sexual activity when they were 18 years and older. About 29.96% (n=74) of the participants had been pregnant, while 173 (70.04%) of the sexually active participants had never been pregnant. About 36.10% (n=26) of the sexually active females indicated that the pregnancies were unplanned, with 20 (25.32%) of the participants having had pregnancies aborted. The majority (n=59, 74.68%) of the participants who had been pregnant had, however never had any pregnancy aborted.

Table 4. 3: Sexual and Reproductive History of Participants

Variable	Frequency (N)	Percentage (%)
Sexual Activeness		
No	26	9.92
Yes	236	90.08
Age at first sexual activity		
< 18 years	38	14.50
>= 18 years	224	85.5
Ever Been Pregnant		
No	173	70.04
Yes	74	29.96
How Pregnancy Happened		

Planned	46	63.90
Unplanned	26	36.10
Any Pregnancies Aborted		
No	59	74.68
Yes	20	25.32

4.4 Knowledge of EC Among Participants

As shown in Table 4 below, a greater portion of the participants (n=246, 93.89%) indicated that they had heard of ECs, with a few (n=16, 6.10%) stating that they had never heard of ECs. The majority of participants (n=242, 97.19%) who were familiar with emergency contraception identified the emergency contraceptive pill, commonly referred to as the morning-after pill, as the primary method. In contrast, only 2 participants (0.80%) were aware that a copper-bearing IUD could also be used for emergency contraception. Additionally, 5 participants (2.01%) mentioned that other methods of emergency contraception exist. About 9.64% (n=24) of the participants could not remember when they heard of ECs. Most of the participants (n=103, 41.37%) indicated they had heard of ECs in the past 1-5 years, and 33 individuals (13.25%) indicated they had heard about ECs within the last six months. Forty-five participants (18.07%) had heard of ECs in the past 6 to 11 months, while 44 participants (17.67%) reported hearing about EC more than five years ago. Of the participants surveyed, 37 (14.12%) reported hearing about ECs from a hospital or health center. A total of 96 participants (36.64%) indicated the internet as their source of information, while 45 participants (17.18%) heard about EC through radio or television. Additionally, 136 participants (51.91%) indicated that social media was their

source of information, and the highest proportion of participants, 153 individuals (58.40%), reported learning about EC from relatives or friends. Most participants (n=133, 52.36%) indicated that emergency contraceptives (ECs) should be taken immediately after unprotected sex. Approximately 39.37% (n=100) of the participants who were aware of ECs stated that these contraceptives could be taken within 72 hours following unprotected sex. A small minority (n=2, 0.79%) believed that ECs could be taken up to one week after unprotected sex. About 7.48% (n=19) of the participants who had heard of ECs however did not know the time duration within which ECs should be taken after unprotected sex. Regarding participants' knowledge of the side effects of ECs, the majority (n=169, 67.87%) believed that ECs did not have side effects, while 80 participants (32.13%) thought that ECs did have side effects. In terms of the effectiveness of ECs, 58 participants (23.20%) indicated that they find ECs to be almost always effective (99%). Meanwhile, 92 participants (36.80%) rated them as 50% effective, and 47 (18.80%) reported that ECs are less than 50% effective. Additionally, approximately 21.20% of the participants (n=53) stated that they were unsure about the effectiveness of ECs. In response to whether emergency contraception (EC) can be used as a regular contraceptive method, the majority of participants (n=149, 60.57%) indicated that ECs should not be used regularly for contraception. In contrast, a smaller group of participants, accounting for 39.43% (n=97), believed that ECs could be used as a regular method of contraception.

Table 4. 4: Knowledge of EC Among Participants

Variable	Frequency (N)	Percentage (%)
Ever heard of EC		
No	16	6.10
Yes	246	93.89
Types of EC aware of		
Emergency Contraceptive Pill/ Morning-after Pill	242	97.19
Copper-bearing IUD	2	0.80
Other	5	2.01
When EC was heard of		
Less than 6 months ago	33	13.25
6-11 months ago	45	18.07
1-5 years ago	103	41.37
>5 years ago	44	17.67
Do not remember	24	9.64
Source of Information$^{\infty}$		
Hospital/ health center	37	14.12
Internet	96	36.64
Radio/ TV	45	17.18
Relative/ Friend	153	58.40
Social media	136	51.91
When can ECs be taken		
Immediately after sex	133	52.36
Within 72 hours after sex	100	39.37
Within 1 week after sex	2	0.79
Do not know	19	7.48

Do ECs have Side Effects		
No	169	67.87
Yes	80	32.13
Effectiveness of EC		
Almost always (99%)	58	23.20
50%	92	36.80
<50%	47	18.80
Do not Know	53	21.20
How often can EC be taken		
As often as needed	124	49.21
Once a month	27	10.71
Do not know	101	40.08
Can EC be used as a regular method		
No	149	60.57
Yes	97	39.43

∞ Responses do not add up to 100% because it is a multiple-choice question

4.5: Contraceptive Use History of Participants

Of the 262 participants in the study, 185 (72.27%) had used ECs at some point. Most participants (n=125, 58.14%) could not recall the number of times they had used ECs in the last year. Among those who could remember how often they had used ECs in the previous year, 42 (19.53%) participants indicated that they had used ECs once in the year, 39 (18.14%) participants had used ECs between 2-4 times, and 9 (4.19%) participants had used ECs >5 times in the last year. Concerning who recommended ECs to the participants, most (n=154,75.86%) of the recommendations were from friends/relatives, with 41 (20.20%) being from their partners. About

3.94% (n=8) of the participants had recommendations from other sources. Forty-one participants (17.37%) believed that ECs were not readily available while the majority (n=195, 82.63%) indicated that ECs were readily available. Concerning how affordable ECs are, 111 (48.26%) participants believed that ECs were not affordable while 119 (51.74%) believed ECs were affordable. The majority of the participants (n=127, 60.48%) were not on any method of regular contraception, with 83 (39.52%) indicating that they were currently on a method of contraception. Among the participants who had ever used ECs, the majority (n=116, 61.70%) used a regular method of contraception after using the EC while 72 (38.30%) of them did not use a regular method after EC use. The regular method used by most of the participants after EC use was the daily pills (n=69, 46.31%), followed by condoms (n=48, 32.21%). Twenty-five (16.78%) participants used the injectables as a regular method after EC use and 6 (4.03%) participants indicated that they used other regular methods after EC use. One participant (0.67%) however indicated that her partner had a vasectomy after her EC use. When asked whether the use of regular methods of contraception influenced EC use, most of the participants (n=174, 95.08%) indicated that there was no influence. Nine participants (4.92%) however indicated that there was some form of influence. About 96.77% (n=180) of the participants stated that the use of ECs did not influence the use of regular methods of contraception while 6 (3.23%) participants indicated that there was some form of influence. Fifty participants (22.42%) experienced some side effects while using ECs while the majority of the participants (n=173, 77.58%) indicated they had not experienced any side effects while using ECs. When asked if they would recommend ECs to others, 53 (20.23%) participants indicated they would not recommend them while the majority (n=209, 79.77%) stated that they would recommend ECs to others.

Table 4. 5: Contraceptive Use History of Participants

Variable	Frequency (N)	Percentage (%)
Ever used EC		
No	71	27.73
Yes	185	72.27
Number of Times Used in Last Year		
Once	42	19.53
2-4 times	39	18.14
>5 times	9	4.19
Do not remember	125	58.14
Who Recommended Use of EC		
Partner	41	20.20
Friends/Relative	154	75.86
Other	8	3.94
Availability of EC		
No	41	17.37
Yes	195	82.63
Affordability of EC		
No	111	48.26
Yes	119	51.74
Currently on Regular Method of Contraception		
No	127	60.48
Yes	83	39.52
Use of Regular Method after EC Use		
No	72	38.30

Yes	116	61.70
Type of Regular Method Used After EC		
Daily Pills	69	46.31
Injectables	25	16.78
Condoms	48	32.21
Vasectomy (By Partner)	1	0.67
Other	6	4.03
Use of Regular Method Influencing EC Use		
No	174	95.08
Yes	9	4.92
Use of EC Influencing Regular Method Use		
No	180	96.77
Yes	8	3.23
Ever Experienced Side Effects while Using EC		
No	173	77.58
Yes	50	22.42
Will You Recommend EC Use		
No	53	20.23
Yes	209	79.77

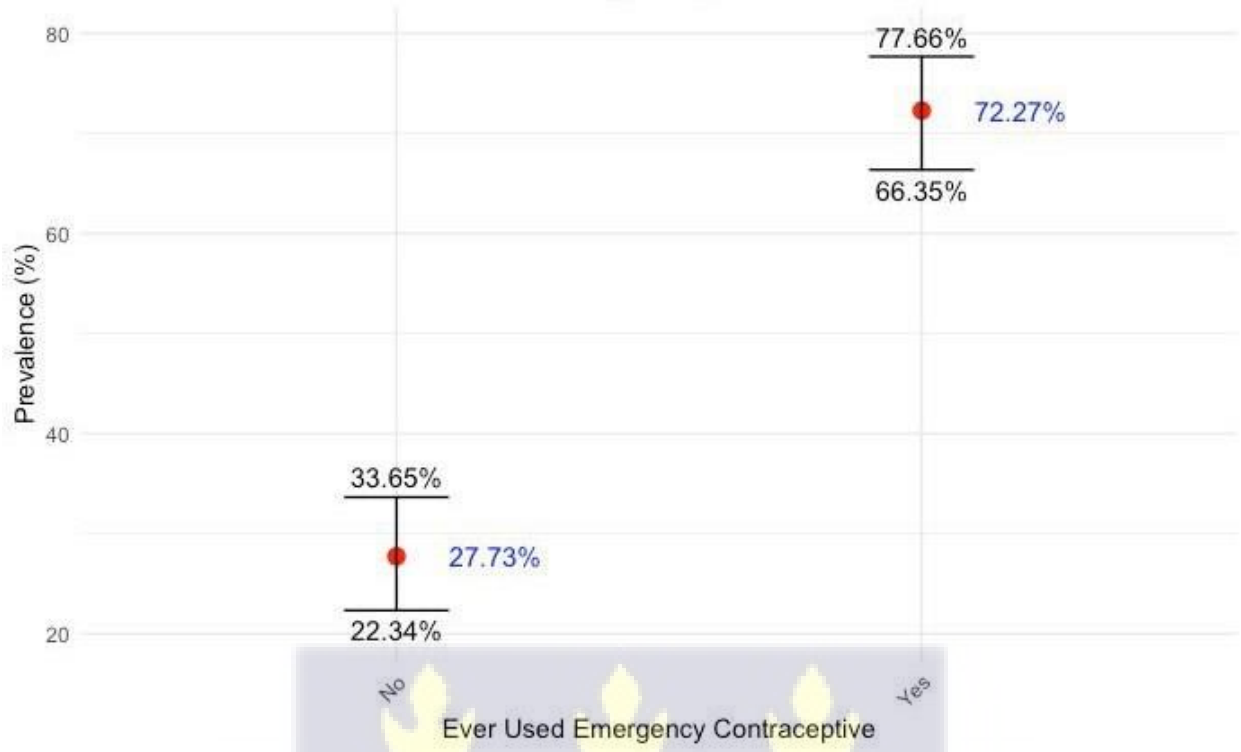

Figure 4. 1: Prevalence of EC use among Reproductive Age Women in the La-Bawaleshie Community

4.6: Distribution of EC Usage Based on Socio-demographic Characteristics

The Age of participants was not significantly associated with EC use (p= 0.10). The majority of EC users were between the ages of 15-24 years (64.32%), followed by those between the ages of 25-34 years (28.11%). A smaller proportion of EC users were above 44 years (1.62%). The association between marital status and EC use was not statistically significant (p= 0.32). Among those who had never married, 75.68% had used EC while 10.27% of those who divorced had used EC. About 7.03% of those who were married had used EC. Ethnicity was not significantly associated with EC use (p= 0.56). About 28.65% of Ga-Adangbes had used EC while 21.08% of

the Akans had used EC. Use of EC among Ewes was 16.76% while that among the Asantes was 12.43%. Participant's religion was not significantly associated with EC use (p= 0.30) though a larger proportion of EC use was among Christians (85.41%). Participant's educational level was significantly associated with EC use (p= 0.01). Those with secondary education represented the largest proportion of EC users followed by those who had received tertiary education (25.95%). 14.59% of those with primary education had used EC while 7.03% of those who had received no formal education used EC.

Table 4. 6: Distribution of EC Usage Based on Socio-demographic Characteristics

Characteristic	Total (N)	Ever Used EC	95% CI	P-value
Age of Participant				
15-24 Years	165	119 (64.32%)	57.12%, 70.94%	0.10
25-34 Years	67	52 (28.11%)	22.07%, 35.06%	
35-44 Years	21	11 (5.95%)	3.31%, 10.45%	
>44 Years	3	3 (1.62%)	0.52%, 4.94%	
Marital Status				
Never Married	193	140 (75.68%)	68.93%, 81.35%	0.32
Divorced	24	19 (10.27%)	6.63%, 15.58%	
Married	23	13 (7.03%)	4.11%, 11.76%	
Cohabiting	3	3 (1.62%)	0.52%, 4.94%	
Separated	13	10 (5.41%)	2.92%, 9.79%	
Ethnicity				
Ga-Adangbe	78	53 (28.65%)	22.56%, 35.62%	0.56
Akan	46	39 (21.08%)	15.77%, 27.60%	
Ewe	45	31 (16.76%)	12.01%, 22.89%	

Fante	32	22 (11.89%)	7.94%, 17.44%	
Asante	31	23 (12.43%)	8.38%, 18.06%	
Hausa	20	14 (7.57%)	4.52%, 12.41%	
Other	4	3 (1.62%)	0.52%, 4.94%	
Religion of Respondent				
Christianity	222	158 (85.41%)	79.51%, 89.82%	0.30
Islam	22	16 (8.56%)	5.35%, 13.69%	
Traditional	12	11 (5.95%)	3.31%, 10.45%	
Educational Level				
None	15	13 (7.03%)	4.11%, 11.76%	0.01
Primary	50	27 (14.59%)	10.18%, 20.49%	
Secondary	132	97 (52.43%)	45.19%, 59.58%	
Tertiary	59	48 (25.95%)	20.11%, 32.79%	

4.7: Distribution of EC Usage Based on Socio-economic Characteristics

The participant's employment status did not show a statistical significance with EC use (p= 0.07). About 67.03% of those who were unemployed had used EC while 15.14% of salaried workers had used EC. Among those who were self-employed, 17.84% of them had used EC. The occupation of participants was found to be significantly associated with EC use (p= 0.001). The largest proportion of EC users were students (65.88%), followed by traders (10.00%) and dressmakers (7.06%). Teachers and hairdressers had a similar proportion of EC use (5.88%). Participant's income level was not significantly associated with EC use (p= 0.37). Those who had an average monthly income of less than 1000gh recorded a higher proportion of EC use

(58.06%) compared to those earning between 1000gh- 3000gh (33.87%) and those earning more than 3000gh (8.06%).

Table 4. 7: Distribution of EC Usage Based on Socio-economic Characteristics

Characteristic	Total (N)	Ever Used EC	95% CI	P-value
Employment Status				
Unemployed	162	124 (67.03%)	59.89%, 73.46%	0.07
Self-employed	47	33 (17.84%)	12.94%, 24.08%	
Salaried worker	47	28 (15.14%)	10.63%, 21.09%	
Occupation				
Trader	22	17 (10.00%)	6.29%, 15.54%	0.001
Teacher	12	10 (5.88%)	3.18%, 10.63%	
Hairdresser	19	10 (5.88%)	3.18%, 10.63%	
Student	137	112 (65.88%)	58.39%, 72.66%	
Dressmaker	18	12 (7.06%)	4.04%, 12.06%)	
Other	22	9 (5.29%)	2.76%, 9.90%	
Average Monthly Income				
<1000gh	54	36 (58.06%)	45.28%, 69.85%	0.37
1000gh-3000gh	37	21 (33.87%)	23.05%, 46.69%	
>3000gh	6	5 (8.06%)	3.34%, 18.23%	

4.8: Distribution of EC Usage Based on Sexual and Reproductive History

Sexual activeness was found to be strongly associated with EC usage (p= 0.001). About 98.92% of the sexually active participants had used EC. Age at first sexual activity was also significantly associated with EC usage (p= 0.01). About 81.62% of those who had their first sexual activity at 18 years and older had used EC compared to those who were less than 18 years old (18.38%). A history of pregnancy was not found to be significantly associated with EC use (p= 0.40). Those who had never been pregnant recorded 72.43% usage while among those who had a history of pregnancy, 27.57% had used EC. Concerning whether pregnancies were planned or unplanned, 69.39% of participants with planned pregnancies had used EC, compared to those who had unplanned pregnancies (30.61%). This association was, however, statistically insignificant (p= 0.19). There was no significant association between a history of abortion and EC use (p= 0.53). About 74.07% of participants without a history of abortion had used EC with 25.93% of those with a history of abortion had used EC.

Table 4. 8: Distribution of EC Usage Based on Sexual and Reproductive History

Characteristic	Total (N)	Ever Used EC	95% CI	P-value
Sexual Activeness				
No	25	2 (1.08%)	0.27%, 4.25%	0.001
Yes	231	183 (98.92%)	95.75%, 99.73%	
Age at First Sexual Activity				
<18 Years	38	34 (18.38%)	13.41%, 24.67%	0.01
>= 18 Years	218	151 (81.62%)	75.33%, 86.59%	
Ever Pregnant				
No	172	134 (72.43%)	65.51%, 78.43%	0.40

Yes	70	51 (27.57%)	21.57%, 34.49%	
How Pregnancy Happened				
Planned	44	34 (69.39%)	54.86%, 80.87%	0.19
Unplanned	24	15 (30.61%)	19.13%, 45.14%	
Any Aborted				
No	57	40 (74.07%)	60.52%, 84.19%	0.53
Yes	18	14 (25.93%)	15.81%, 39.48%	

4.9: Distribution of EC Usage Based on Knowledge of EC

There was a significant association between the awareness of EC and its usage (p= 0.001) as almost all the participants (n= 184, 99.46%) who had ever used ECs had some prior knowledge of it, with only about 0.54% (n=1) indicating they had no previous knowledge of EC. The emergency contraceptive pill/ morning-after pill was known to the majority of the participants who had ever used EC (n= 180, 97.83%, p= 0.04), with the knowledge of the copper-bearing IUD being absent (n=0, 0.00%). The time participants heard of ECs was shown to be statistically significant in influencing EC usage (p= 0.001). Participants who heard of ECs between 1-5 years ago recorded the highest rate of EC usage (43.78%) compared to those who had heard of them 6-11 months ago (22.16%). Those who had heard of EC less than 6 months ago and more than 5 years ago had a lower rate of EC usage (14.05%). Among the various sources of information on EC, receiving information from a friend or relative was significantly associated with EC usage (p= 0.02). About 63.78% of the participants who heard about EC from friends or relatives had ever used EC. The other sources of information were, however, not statistically significant.

Knowledge of the timing of EC after sexual intercourse was found to be significant in influencing EC usage (p= 0.001). The highest usage of EC was observed among those who identified that EC can be taken immediately after sex (60.00%) followed by those who indicated that EC can be taken within 72 hours after sex (33.51%). Participants who did not know the proper timing of taking EC (5.41%) and those who believed EC can be taken within 1 week after sex (1.08%) recorded lower rates of usage. Perceived side effects of EC was found to be significantly associated with EC usage (p=0.01). Those who believed EC has no side effects had a higher rate of EC usage (72.43%) compared to those who believed EC has side effects (27.57%). Knowledge of the frequency of EC usage was significantly associated with EC usage. (p= 0.001). Those who believed EC could be taken as often as needed recorded the highest usage of EC (60.87%) while those who believed EC could be taken once a month had the lowest rate of use (9.24%). The perceived effectiveness of EC significantly influenced EC usage (p= 0.04). Participants who perceived EC to be 50% effective had the highest rate of EC use (38.46%) followed by those who perceived EC to be almost always effective (25.27%). Those unaware of the effectiveness and those who perceived EC to be < 50% effective had usage rates of 16.48% and 19.78% respectively.

Table 4. 9: Distribution of EC Usage Based on Knowledge of EC

Characteristic	Total (N)	Ever Used EC	95% CI	P-value
Ever heard of EC				
No	16	1 (0.54%)	0.08%, 3.78%	0.001
Yes	240	184 (99.46%)	96.22%, 99.92%	
Types of EC Aware of				
Emergency Contraceptive pill/ Morning-after pill	237	180 (97.83%)	94.32%, 99.19%	0.04
Copper-bearing IUD	2	0 (0.00%)		
Other	5	4 (2.17%)	0.81%, 5.68%	
When EC was heard of				
Less than 6 months ago	33	26 (14.05%)	9.72%, 19.89%	0.001
6-11 months ago	44	41 (22.16%)	16.72%, 28.76%	
1-5 years ago	100	81 (43.78%)	36.76%, 51.06%	
>5 years ago	42	26 (14.05%)	9.72%, 19.89%	
Do not remember	24	11 (5.95%)	3.31%, 10.45%	
Source of Information				
Hospital/ Health Centre				
No	221	162 (87.57%)	81.94%, 91.62%	0..35
Yes	35	23 (12.43%)	8.38%, 18.06%	
Internet				
No	161	111 (60.00%)	52.73%, 66.85%	0.12
Yes	95	74 (40.00%)	33.15%, 47.27%	
Radio/ TV				
No	214	153 (82.70%)	76.52%, 87.53%	0.53
Yes	42	32 (17.30%)	12.47%, 23.48%	
Relative/ Friend				

No	104	67 (36.22%)	29.57%, 43.43%	0.02
Yes	152	118 (63.78%)	56.57%, 70.43%	
Social media				
No	120	81 (43.78%)	36.76%, 51.06%	0.11
Yes	136	104 (56.22%)	48.94%, 63.24%	
When can EC be taken				
Immediately after sex	132	111 (60.00%)	52.73%, 66.85%	0.001
Within 72 hours after sex	97	62 (33.51%)	27.04%, 40.67%	
Within 1 week after sex	2	2 (1.08%)	0.27%, 4.25%	
Do not know	17	10 (5.41%)	2.92%, 9.79%	
Does EC have side effects				
No	166	134 (72.43%)	65.51%, 78.43%	0.01
Yes	79	51 (27.57%)	21.57%, 34.49%	
How often can EC be taken				
As often as needed	123	112 (60.87%)	53.59%, 67.70%	0.001
Once a month	25	17 (9.24%)	5.80%, 14.40%	
Do not know	99	55 (29.89%)	23.68%, 36.94%	
Effectiveness of EC				
Almost Always (99%)	58	46 (25.27%)	19.46%, 32.14%	0.04
50%	89	70 (38.46%)	31.63%, 45.78%	
< 50%	47	36 (19.78%)	14.59%, 26.25%	
Do not know	51	30 (16.48%)	11.74%, 22.64%	

4.10: Distribution of EC Usage Based on Contraceptive History

Of the participants who reported using EC in the past year, the majority of participants (n= 97, 53.89%) could not remember the number of times they had used EC while about 20.56% (n= 37) of the participants had used ECs once and between 2-4 times in the past year. Nine of the participants (5.00%) of the participants had, however, used ECs more than 5 times in the past year. Concerning who participants had recommendations from, the larger proportion of the participants (n=133, 77.78%) who use EC had recommendations from their friends and relatives with about 19.88% (n=34) of them stating that they had recommendations from their partners. A few of them (n= 4, 2.34%) had recommendations from other sources. The availability of EC was found to significantly influence the use of EC (p= 0.001). One hundred and fifty-nine participants (86.41%) who used ECs indicated ECs were readily available. The affordability of ECs did not however show any significant influence (p= 0.999) as the use of EC was almost the same among those who indicated that ECs were affordable (n= 92, 51.11%) and those who stated that ECs were not affordable (n= 88, 48.89%). The current use of regular contraception did not have a significant influence on EC use (p= 0.29). The use of a regular method of contraception following EC use was statistically significant (p= 0.001). About 68.42% (n= 104) of the participants used a regular method after EC use, with the daily pills being the most common regular method used (n= 64, 52.03%), followed by condoms (n=34, 27.64%) and injectables (n= 20 (16.26%). There was no significant influence of regular contraceptive method use on EC usage (p= 0.90). The use of EC also had no significant influence on regular contraceptive method use (p= 0.28). Experiencing side effects did not have a statistically significant influence on EC usage (p= 0.59). About 22.28% (n= 41) of the participants who used ECs however reported that they had experienced some side effects at a point. A statistically significant association (p=

0.001) was observed between willingness to recommend EC and EC usage as the majority of the participants who were willing to recommend EC had ever used them (n= 159, 85.95%).

Table 4. 10: Distribution of EC Usage Based on Contraceptive History

Characteristic	Total (N)	Ever Used EC	95% CI	P-value
Number of Times used last year				
Once	40	37 (20.56%)	15.24%, 27.13%	0.01
2-4 times	39	37 (20.56%)	15.24%, 27.13%	
>5 times	9	9 (5.00%)	2.61%, 9.37%	
Do not remember	124	97 (53.89%)	46.53%, 61.09%	
Who Recommended EC				
Partner	39	34 (19.88%)	14.53%, 26.59%	0.01
Friends/ Relative	153	133 (77.78%)	70.88%, 83.42%	
Other	8	4 (2.34%)	0.87%, 6.11%	
Availability of EC				
No	41	25 (13.59%)	9.33%, 19.38%	0.001
Yes	190	159 (86.41%)	80.62%, 90.67%	
Affordability of EC				
No	110	88 (48.89%)	41.61%, 56.21%	0.999
Yes	115	92 (51.11%)	43.79%, 58.39%	
Currently on Regular Method				
No	125	91 (58.33%)	50.39%, 65.86%	0.29
Yes	82	65 (41.67%)	34.14%, 49.61%	
Use of Regular Method after EC				

No	69	48 (31.58%)	24.64%, 39.45%	0.001
Yes	116	104 (68.42%)	60.55%, 75.36%	
Type of Regular Method used after EC				
Daily Pills	69	64 (52.03%)	43.14%, 60.79%	0.06
Injectables	24	20 (16.26%)	10.69%, 23.95%	
Condoms	46	34 (27.64%)	20.40%, 36.28%	
Vasectomy (by partner)	1	1 (0.81%)	0.11%, 5.64%	
Other	6	4 (3.25%)	1.21%, 8.42%	
Use of Regular Method Influencing EC Use				
No	171	136 (95.10%)	90.03%, 97.66%	0.90
Yes	9	7 (4.90%)	2.34%, 9.97%	
Use of EC Influencing Regular Method				
No	177	148 (96.10%)	91.55%, 98.25%	0.28
Yes	6	6 (3.90%)	1.75%, 8.45%	
Ever Experienced Side Effects				
No	168	143 (77.72%)	71.09%, 83.19%	0.59
Yes	50	41 (22.28%)	16.81%, 28.91%	
Will You Recommend EC				
No	50	26 (14.05%)	9.72%, 19.89%	0.001
Yes	206	159 (85.95%)	80.11%, 90.28%	

4.11: Bivariate Poisson Regression Analysis of Significant Variables

Table 12 shows the results of the bivariate Poisson regression analysis carried out to determine the association between the various factors and the incidence rate ratio (IRR) of emergency contraceptive use which is the outcome of interest. Sexual activeness was found to be statistically significantly associated with EC use as participants who were sexually active had a nearly ten-fold increase in the incidence rate (IRR=9.90, p=0.001). Individuals who had their first sexual activity at the age of 18 and older had a lower incidence rate (IRR= 0.77, p= 0.001) when compared to participants who had their first sexual encounter below the age of 18. Coitarche (age at first sexual activity) was found to be statistically significant. Participants who were engaged in other occupations had a lower incident rate compared to the traders (IRR= 0.58, p= 0.024). Awareness of ECs was also found to be statistically significant. There was a higher incidence rate among those who had heard of EC (IRR= 12.27, p= 0.010). Individuals who could not recall when they heard of EC had a lower incidence rate (IRR= 0.58, p=0.0124). Concerning the source of information on EC, participants who received information on EC from their relatives and friends had a higher incidence rate (IRR= 1.20, p=0.028). Regarding the knowledge of the appropriate timing for EC use, participants who believed that EC could be taken within a week after sexual intercourse had a statistically significant higher incidence rate (IRR= 1.19, p= 0.001) compared to individuals who thought that EC should be taken within 72 hours after sexual intercourse (IRR= 0.76, p= 0.001). Participants who indicated that ECs should be taken once a month (IRR= 0.75, p= 0.038) and those who were not sure of how often ECs should be taken (IRR= 0.61, p= 0.001) had a statistically significant lower incidence rate of EC use. Availability of EC (IRR= 1.37, p= 0.014) and use of a regular method of contraception after EC use (IRR= 1.30, p= 0.003) were found to be significantly associated with an increased incidence rate of EC

use. Participants who indicated that they would recommend ECs to others had a higher incidence rate of EC use (IRR= 1.48, p= 0.005)

Table 4. 11: Bivariate Poisson Regression Analysis of Significant Variables

Variable	IRR	P-value	95% CI
Sexual Activeness			
No	-		
Yes	9.90	0.001	2.60, 37.57
Coitarche			
< 18 years	-		
>= 18 years	0.77	0.001	0.67, 0.89
Educational Level			
None	-		
Primary	0.62	0.161	0.32, 1.21
Secondary	0.85	0.576	0.48, 1.51
Tertiary	0.94	0.840	0.51, 1.73
Occupation			
Trader	-		
Teacher	1.08	0.664	0.77, 1.52
Hairdresser	0.68	0.120	0.42, 1.10
Student	1.06	0.646	0.83, 1.35
Dressmaker	0.86	0.468	0.58, 1.29
Other	0.53	0.024	0.30, 0.92
Ever heard of EC			
No	-		
Yes	12.27	0.010	1.83, 82.24
When did you hear of EC			
Less than 6 months ago	-		

6-11 months ago	1.18	0.091	0.97, 1.44
1-5 years ago	1.03	0.787	0.84, 1.26
>5 years ago	0.79	0.111	0.58, 1.06
Do not remember	0.58	0.024	0.36, 0.94
Source of Information (Relative/ Friend)			
No	-		
Yes	1.20	0.028	1.02, 1.42
When can ECs be taken			
Immediately after sex	-		
Within 72 hours after sex	0.76	0.001	0.64, 0.90
Within 1 week after sex	1.19	0.001	1.10, 1.28
Do not know	0.70	0.084	0.47, 1.05
How often can ECs be taken			
As often as needed	-		
Once a month	0.75	0.038	0.57, 0.98
Do not know	0.61	0.001	0.51, 0.73
Do ECs have Side effects			
No	-		
Yes	0.80	0.015	0.67, 0.96
Effectiveness of EC			
Almost Always (99%)	-		
50%	0.99	0.924	0.84, 1.18
< 50%	0.97	0.740	0.79, 1.19
Do not know	0.74	0.027	0.57, 0.97
Number of times used in last year			
Once	-		
2-4 times	1.03	0.665	0.91, 1.15
> 5 times	1.08	0.084	0.99, 1.18
Do not remember	0.85	0.011	0.74, 0.96

Who Recommended its use			
Partner	-		
Friends/ Relative	0.99	0.967	0.87, 1.14
Other	0.57	0.122	0.28, 1.16
Availability of EC			
No	-		
Yes	1.37	0.014	1.07, 1.77
Use of Regular Method after EC use			
No	-		
Yes	1.30	0.003	1.09, 1.54
Will you Recommend its use			
No	-		
Yes	1.48	0.005	1.23, 1.96

4.12: Multivariate Poisson Regression Analysis of Significant Variables

After controlling for potential confounding variables, some variables no longer showed statistical significance. Sexual activeness, age at first sexual activity, timing of EC use, perceived side effects of EC, and willingness to recommend EC were no longer significantly associated with EC use.

However, receiving information about EC from relatives and friends remained statistically significant. Participants who received information from relatives or friends were 16% more likely to use EC compared to those who did not. (AIRR= 1.16, p= 0.018). Concerning the frequency of EC use, those who did not know how often EC was to be taken were 23% less

likely to use EC (AIRR= 0.77, p= 0.01). The availability of EC remained statistically significant. Individuals who had access to EC were 33% more likely to use EC (AIRR= 1.33, p= 0.024). The use of a regular method of contraception after EC use also remained significantly associated with EC use. Individuals who adopted a regular method of contraception after EC use were 28% more likely to use EC compared to those who did not (AIRR= 1.28, p= 0.001)

Table 4. 12: Multivariate Poisson Regression Analysis of Significant Variables

	Crude IRR			Adjusted IRR		
Characteristics	**IRR**	**95% CI**	**p-value**	**IRR**	**95%CI**	**p-value**
Sexual Activeness						
No	-			-		
Yes	9.9	2.60, 37.57	0.001	1.64	0.521, 5.20	0.396
Age at First Sexual activity						
< 18 Years	-			-		
>= 18 Years	0.77	0.67, 0.89	0.001	1.06	0.90, 1.25	0.455
Source of Information (Relative/Friend)						
No	-			-		
Yes	1.20	1.02, 1.42	0.028	1.16	1.02, 1.31	0.018
When can EC be taken						
Immediately after sex	-					
Within 72 hours after sex	0.76	0.64, 0.90	0.001	0.88	0.76, 1.01	0.081
Do not know	0.70	0.47, 1.05	0.084	1.05	0.82, 1.33	0.701
Do ECs have Side effects						
No	-			-		

Yes	0.80	0.67, 0.96	0.015	1.12	0.94, 1.35	0.192
How Often can EC be Taken						
As often as needed	-					
Once a month	0.75	0.57, 0.98	0.038	1.00	0.86, 1.67	0.984
Do not know	0.61	0.51, 0.73	0.001	0.77	0.63, 0.94	0.010
Availability of EC						
No	-			-		
Yes	1.37	1.07, 1.77	0.014	1.33	1.04, 1.70	0.024
Use of Regular Method after EC use						
No	-			-		
Yes	1.30	1.09, 1.54	0.003	1.28	1.11, 1.48	0.001
Will you Recommend EC Use						
No	-					
Yes	1.48	1.23, 1.96	0.005	1.14	0.88, 1.47	0.324

CHAPTER FIVE

DISCUSSION

This chapter discusses the study's findings within the context of existing literature. The study explored factors that influence the use of emergency contraceptives (EC) among females in their reproductive ages in the La-Bawaleshie community.

5.1: Knowledge of EC Among Women of Reproductive Age

It is evident from the study's findings that most participants had heard of EC (93.89%). This finding is consistent with studies that were conducted in Ghana where 95.0% of participants (Agyemang et al., 2019) and 96.15% of participants (Yeboah et al., 2022) reported to have heard of EC.

Another study conducted in Ethiopia also showed a high EC knowledge rate (82.3%) among the participants (Jima et al., 2017). This implies that much work was being done to increase the awareness of EC. The emergency contraceptive or morning-after pill was more commonly known to most of the participants in this study with just a few participants indicating that they were aware of the copper-bearing IUD as a method of EC. This finding is consistent with other studies that also revealed the emergency contraceptive pill as the main method of EC reported by the participants. (Jima et al., 2017; Chaudhary, 2022). This implies that not enough awareness has been created about the other available options for EC.

The major sources of information on EC were from their friends or relatives and social media. Few of the participants indicated their source of information was from the hospital or health center. This finding is consistent with a study done in Ghana indicating friends as the major

source of information on EC. (Asiedu et al., 2022). Partners, friends, and relatives also were found to be a major (73%) source of information in Delhi (Sahu et al., 2019)

This highlights the major role social media, friends, and relatives play in the spread of information. Other studies carried out in Ghana revealed otherwise, where the healthcare provider was the major source of information.(Mohammed et al., 2019; Yeboah et al., 2022). The audio-visual media was also found to be a major (97.05%) source of information (Chaudhary, 2022).

About 39.37% of the women were aware of the appropriate timing for EC use. This finding was lower than a study done by Yeboah et al (2022) where about 68% were aware of the appropriate timing for EC. The higher proportion observed in the study by Yeboah et al could be due to most of the participants receiving their information from healthcare providers, implying that they were receiving accurate information compared to that of this study where most of the participants received their information from friends or relatives. A study in Ethiopia revealed that about 81% of women knew the appropriate timing of EC use(Jima et al., 2017). Most of the participants (60.57%) were aware that EC could not be used as a method of regular contraception. This finding is similar to another study done in Ghana.(Yeboah et al., 2022)

5.2: Prevalence of EC Use

There was a high prevalence of EC use (72.27%) which was higher than other studies done in Ghana (48.5%) (Nketia & Atta-Nyarko, 2022), Nigeria (34.3%) (Adaki et al., 2023), Nepal (63%) (Chaudhary, 2022), Korea (45.6%) (Lee et al., 2023), and Spain (25.7%) (Leon-Larios et al., 2022).

Most of the users of EC in this study were students (65.88%), between the ages of 15-24 years (64.32%), never married (75.68%), and had at least secondary level education (52.43%). Other studies also found that young, unmarried women with higher education levels are more likely to use EC (Yeboah et al., 2022). There was a significant association between educational level and EC use highlighting the important role education plays in promoting EC use.

5.3: Factors Associated with EC Use

This study revealed a strong association between sexual activity and EC use, with approximately 98.92% of sexually active participants reporting having used EC at some point. This finding is consistent with a study done in Ghana where most of the participants indicated sexual activity as their reason for EC use (Yeboah et al., 2022).

The age at first sexual activity was also found to be significantly associated with EC use. Participants who had their first sexual activity at 18 years and older, were 23% less likely to use EC compared to those who had their first sexual activity younger than 18 years.

There was a significant association between the source of information on EC and EC use. Those who received information on EC from friends or relatives were 20% more likely to use EC compared to those who received information from other sources. Availability of EC was significantly associated with EC use. Those with access to EC were 37% more likely to use EC compared to those who did not. This observation is consistent with other studies carried out in

other settings(Adaki et al., 2023; Mahfuzur et al., 2022). Transitioning to a regular contraceptive method after EC use was significantly associated with the use of EC.

5.4: Limitations of the study

This study employed a cross-sectional approach, which limits the establishment of causal relationships between the variables. Therefore, the findings of this study could be limited in informing evidence-based interventions and policies since policymakers depend on evidence of causal relationships to allocate resources and justify their decisions.

The use of self-reported data in this study increases the likelihood of response and recall biases, and inconsistent responses from participants, potentially altering the accuracy of responses. This could limit the drawing of accurate conclusions.

The study was conducted within a single community, which may introduce bias in the results and community-specific conclusions that do not reflect broader patterns or trends. This limitation potentially restricts the generalizability of the findings to other populations and settings.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1: Summary and Conclusion

This study sought to determine the factors associated with the use of emergency contraceptives among women of reproductive age (15-49 years) in the La-Bawaleshie community. A community-based cross-sectional design was used in this study. The study was conducted among 262 women using self-administered questionnaires in the data collection process. The analysis was done using STATA version 18. P-value ≤ 0.05 was considered statistically significant.

The findings from the study revealed that the majority of the participants had heard of EC with the major sources of information being from friends or relatives and social media. The emergency contraceptive pill was known to most of the participants as the method of EC. The prevalence of EC use was 72.27%. The majority of those who used EC were between the ages of 15-24 years, never married, and had at least secondary education. There was a significant association between educational level and EC use. Higher educational levels correlated with increased EC use. There was no significant association between employment status and EC use although the majority of EC users were students. Income level was not statistically associated with EC use. There was a high level of awareness of EC (93.89%) but participants had limited knowledge of the specific types of EC and its appropriate use. There was a strong association between sexual activeness and EC use. Accessibility to EC was significantly associated with EC use. Transitioning to a regular method after EC use had a significant association with EC use.

6.2: Recommendations

Despite the high level of awareness of EC, the major sources of information were friends, relatives and social media. It is recommended that the Health Promotion Division of the Ghana Health Service organize community-based interventions and campaigns involving healthcare providers, community leaders, and social networks to ensure that accurate information regarding EC is disseminated to communities to avoid misconceptions and misinformation regarding EC use and improve knowledge on the appropriate use. Peer-level education models could also be adopted because they serve as a primary source of information.

Since accessibility to EC was significantly associated with its use, it is recommended that the availability to EC be improved in the communities. This can be achieved through community health outreach campaigns and programs organized by the Ghana Health Service in collaboration with the community leaders, as well as increasing its availability in pharmacies and health centers. Additional research can be conducted to examine potential barriers to access to emergency contraception, particularly among older and married women

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APPENDICES

Appendix 1: Participant's Consent Form

UNIVERSITY OF GHANA NOGUCHI	NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH	
	INSTITUTIONAL QUALITY OFFICE	
	DOCUMENT CHANGE AND REQUEST FORM	
	Reference Number: Mgt-F-005-1.0	Effective Date: 1st May 2023

CONSENT FORM

Title: Factors Associated with The Use of Emergency Contraceptives Among Females Aged 15-49 Years in The La Bawaleshie Community, East Legon

Principal Investigator: Paulina Naa Afadua Quansah

Address: School of Public Health, University of Ghana, Legon. P.O.Box LG 13.

General Information about Research

There have been global concerns about unwanted and unplanned pregnancies despite the introduction of emergency contraceptives and some misconceptions surrounding their use which some studies have identified. This study involves research that seeks to determine the various factors associated with the use of emergency contraceptives among females in the La-Bawaleshie community aged between 15-49 years. The study is a one-time study and findings obtained from the study would be helpful in policy development and policy implementation in promoting the proper and effective use of emergency contraceptives in the country. Participation in this study is expected to take about five minutes.

Possible Risks and Discomforts

Participating in this study involves minimal risk which may be due to some form of discomfort experienced because of the time spent filling out the questionnaire.

Possible Benefits

There is no direct benefit to you the individual, but the study's findings will help in policy development to increase awareness and ensure proper usage of emergency contraceptives in the country.

NMIMR INSTITUTIONAL REVIEW BOARD VALID UNTIL 04 JUN 2025 APPROVED

Confidentiality

Responses will be kept confidential, and your identity will be kept anonymous as the names of respondents will not be included in the questionnaire. Information gathered from the study will be used solely for academic purposes and will only be made available to the researcher and the supervisor of this study.

Compensation

There would be no form of compensation for you the participant either in cash or kind.

Voluntary Participation and Right to Leave the Research

Participation in this study is completely voluntary and you have the right to disagree to participate without any negative consequences. You may also withdraw from the study at any time without any penalty.

Contacts for Additional Information

If you have pertinent questions about this research and seek further clarification, you may contact Paulina Naa Afadua Quansah (0551235995), the Principal Investigator of this study. You may also contact the Department of Population, Family and Reproductive Health of the School of Public Health, Legon on 0289109021/22.

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.ug.edu.gh

VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title "Factors Associated with The Use of Emergency Contraceptives Among Females Aged 15-49 Years in The La-Bawaleshie Community, East Legon" has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

_____ _____

Date Name and signature or mark of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

_____ _____

Date Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

....

Date Name Signature of Person Who Obtained Consent

Appendix 2: Child Assent Form

UNIVERSITY OF GHANA NOGUCHI	NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH	
	INSTITUTIONAL QUALITY OFFICE	
	DOCUMENT CHANGE AND REQUEST FORM	
	Reference Number: Mgt-F-005-1.0	Effective Date: 1st May 2023

CHILD ASSENT FORM

Introduction

My name is Paulina Naa Afadua Quansah, and I am from the Department of Population, Family, and Reproductive Health at the School of Public Health, University of Ghana. I am conducting a research study entitled "Factors Associated with the Use of Emergency Contraceptives Among Females Aged 15-49 Years in the La-Bawaleshie Community, East Legon". I am asking you to take part in this research study because I am trying to learn more about the use of emergency contraceptives. This will take about 5 minutes of your time.

General Information

If you agree to participate in this study, you will be asked to complete a questionnaire which will seek to identify your knowledge of the use of emergency contraceptives and several factors associated with its use.

Possible Benefits

Your participation in this study will not result in any form of personal compensation but the findings from this study would be helpful in policy development for the proper usage of emergency contraceptives.

Possible Risks and Discomforts

However, the risk associated may be due to some form of discomfort experienced because of the time spent filling out the questionnaire.

Voluntary Participation and Right to Leave the Research

You can stop participating at any time if you feel uncomfortable. No one will be angry with you if you do not want to participate.

Confidentiality

Your information will be kept confidential. No one will be able to know how you responded to the questions and your information will be anonymous.

Contacts for Additional Information

You may ask me any questions about this study. You can call me at any time 0551235995 or talk to me the next time you see me.

Please talk about this study with your parents before you decide whether to participate. I will also ask permission from your parents before you are enrolled into the study. Even if your parents say "yes" you can still decide not to participate.

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.ug.edu.gh

VOLUNTARY AGREEMENT

UNIVERSITY OF GHANA NOGUCHI	NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH	
	INSTITUTIONAL QUALITY OFFICE	
	DOCUMENT CHANGE AND REQUEST FORM	
	Reference Number: Mgt-F-005-1.0	Effective Date: 1st May 2023

By making a mark or thumb printing below, it means that you understand and know the issues concerning this research title **Factors Associated With the Use of Emergency Contraceptives Among Females Aged 15-49 Years in the La-Bawaleshie Community, East Legon**. If you do not want to participate in this study, please do not sign this assent form. You and your parents will be given a copy of this form after you have signed it.

This assent form which describes the benefits, risks and procedures for the research titled 'Factors Associated With the Use of Emergency Contraceptives Among Females Aged 15-49 Years in the La-Bawaleshie Community, East Legon", has been read and or explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate.

Child's Name..... **Researcher's Name**.....

Child's Mark/Thumbprint..... **Researcher's Signature**.....

Date: ..... Date: .....

Appendix 3: Parental Consent Form

	NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH	
UNIVERSITY OF GHANA NOGUCHI	INSTITUTIONAL QUALITY OFFICE	
	DOCUMENT CHANGE AND REQUEST FORM	
	Reference Number: Mgt-F-005-1.0	Effective Date: 1st May 2023

PARENTAL CONSENT FORM

Title: Factors Associated with The Use of Emergency Contraceptives Among Females Aged 15-49 Years in The La-Bawaleshie Community, East Legon

Principal Investigator: Paulina Naa Afadua Quansah

Address: School of Public Health, University of Ghana, Legon. P.O.Box LG 13.

General Information about Research

There have been global concerns about unwanted and unplanned pregnancies despite the introduction of emergency contraceptive: and some misconceptions surrounding their use which some studies have identified.

This study involves research that seeks to determine the various factors associated with the use of emergency contraceptive: among females in the La-Bawaleshie community aged between 15-49 years.

Your child is being requested to participate in this study because she falls with the 15-17 years reproductive age bracket and sh will be required to fill a questionnaire which should take about 5 minutes of her time.

The study is a one-time study and findings obtained from the study would be helpful in policy development and policy implementation in promoting the proper and effective use of emergency contraceptives in the country.

Possible Risks and Discomforts

Participation of your child in this study involves minimal risk which may be due to some form of discomfort experienced because of the time spent filling out the questionnaire.

Possible Benefits

There is no direct benefit to your child as an individual, but the study's findings will help in policy development to increase awareness and ensure proper usage of emergency contraceptives in the country.

Confidentiality

Information about your child will be protected to the best of our ability. Your child will not be named in any of the reports. The information gathered from this research is solely for academic purposes. The supervisor of this research may however sometimes look at your child's research records.

Compensation

There will be no form of compensation for your child either in cash or kind.

Voluntary Participation and Right to Leave the Research

Participation of your child in this study is completely voluntary and your child has the right to disagree to participate without any negative consequences. Your child may also withdraw from the study at any time without any penalty.

Contacts for Additional Information

If you have pertinent questions about this research and seek further clarification, you may contact Paulina Naa Afadua Quansah (0551235995), the Principal Investigator of this study. You may also contact the Department of Population, Family and Reproductive Health of the School of Public Health, Legon on 0289109021/22.

Your Child's Rights as a Participant

This research has been reviewed and approved by the Noguchi Memorial Institute for Medical Research Institutional Review Board (NMIMR-IRB). If you have any questions about your child's rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.ug.edu.gh

VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title **Factors Associated With the Use of Emergency Contraceptives Among Females Aged 15-49 Years in the La-Bawaleshie Community, East Legon**. has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree that my child should participate as a volunteer.

_____ _____

Date Name and signature or mark of parent or guardian

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the child's parent or guardian. All questions were answered and the child's parent has agreed that his or her child should take part in the research.

_____ _____

Date Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____ _____

Date Name Signature of Person Who Obtained Consent

Appendix 4: Data Collection Instrument

UNIVERSITY OF GHANA NOGUCHI	NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH	
	INSTITUTIONAL QUALITY OFFICE	
	DOCUMENT CHANGE AND REQUEST FORM	
	Reference Number: Mgt-F-005-1.0	Effective Date: 1st May 2023

DATA COLLECTION INSTRUMENT

SOCIODEMOGRAPHIC CHARACTERISTICS **Please tick the correct option in the box provided and provide an answer in the open space where needed**		
NO	**QUESTION**	**RESPONSE**
1	Age in years	
2	Marital Status	☐ Never Married ☐ Married ☐ Cohabiting ☐ Divorced ☐ Separated ☐ Widowed
3	Ethnicity	☐ Ga-Dangbe ☐Akan ☐Ewe ☐Fante ☐Asante ☐Hausa ☐ Other, Specify ……..
4	Religion	☐ Christianity ☐ Islam ☐ Traditional ☐ Other

		If other, specify ……
5	Nationality	☐ Ghanaian ☐Other, Specify ……..
6	Educational Level	☐ None ☐ Primary ☐ Secondary ☐ Tertiary
ECONOMIC STATUS		
7	Employment Status	☐ Unemployed ☐ Self-employed ☐ Salaried worker
8	Occupation	☐ Trader ☐ Teacher ☐ Hairdresser ☐ Student ☐ Dressmaker ☐ Other If other, specify ……

9	Average Monthly Income	☐ < 1000gh ☐ 1000gh – 3000gh ☐ > 3000gh
SEXUAL HISTORY		
10	Are you sexually active?	☐ Yes ☐ No
11	Age at first sexual engagement	
12	Have you ever been pregnant?	☐ Yes ☐ No If yes, how many pregnancies? ……
13	How did the pregnancy happen?	☐ Planned ☐ Unplanned
14	Were any of the pregnancies aborted?	☐ Yes ☐ No If yes, how many? ……
15	Reason for abortion (If the answer to question 14 is Yes)	
KNOWLEDGE OF EMERGENCY CONTRACEPTION (EC)		
16	Have you ever heard of emergency contraception?	☐ Yes ☐ No

17	What types of emergency contraception are you aware of?	☐ Emergency contraceptive pill/Morning-after pill ☐ Copper bearing IUD ☐ Other, Specify .....
18	When first did you hear of emergency contraception?	☐ Less than 6 months ago ☐ 6-11 months ago ☐ 1-5 years ago ☐ > 5 years ago ☐ Do not remember
19	What was your source of information? (Tick as many as applicable)	☐ Hospital/health center ☐ Internet ☐ Radio/Television ☐ Relative/Friends ☐ Social media ☐ Other, Specify .....
20	How long after unprotected sexual intercourse should emergency contraceptives be taken?	☐ Immediately after sex ☐ Within 72 hours after sex ☐ Within 1 week after sex ☐ Do not know ☐ Other, Specify .....

21	Do emergency contraceptives have any side effects?	☐ Yes ☐ No If yes, specify…… ……
22	How often should emergency contraceptives be used?	☐ As often as needed ☐ Once a month ☐ Do not know
23	Can emergency contraceptives be used as a method of regular contraception?	☐ Yes ☐ No
24	How effective do you know emergency contraception to be?	☐ Almost always (99%) ☐ 50% ☐ < 50% ☐ Do not know
USE OF EMERGENCY CONTRACEPTIVES		
25	Have you ever used emergency contraceptives?	☐ Yes, why …… ☐ No, why ……

26	How many times have you used emergency contraceptives during the last year?	☐ Once ☐ 2-4 times ☐ > 5 times ☐ Do not remember
27	Who recommended its use?	☐ Partner ☐ Friends/Relative ☐ Other, Specify ……..
28	Is emergency contraception readily available?	☐ Yes ☐ No
29	Is emergency contraception affordable?	☐ Yes ☐ No
30	Are you on any regular method of contraception?	☐ Yes, Specify …… ☐ No
31	What was the reason for using emergency contraception while on regular contraception?	
32	Did you start to use a regular method of contraception after using emergency contraception?	☐ Yes ☐ No

33	Which regular method did you use after emergency contraception?	☐ Daily Pills ☐ Injectables ☐ Condoms ☐ IUD ☐ Vasectomy (by partner) ☐ Tubal Ligation ☐ Other, Specify .....
34	Does your use of regular contraceptive methods influence your use of emergency contraceptives?	☐ Yes ☐ No If yes, how? ....
35	Does your use of emergency contraceptives influence your use of regular contraceptive methods?	☐ Yes ☐ No If yes, how? ....
36	Did you experience any side effects when using emergency contraception?	☐ Yes, Specify ..... ☐ No
37	Will you recommend the use of emergency contraception?	☐ Yes ☐ No

Appendix 5: Ethical Clearance

UNIVERSITY OF GHANA

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH (NMIMR)
COLLEGE OF HEALTH SCIENCES
INSTITUTIONAL REVIEW BOARD

5th June 2024

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824 **IRB 00001276**

NMIMR-IRB CPN 120/23-24 **IORG 0000908**

On 5th June 2024, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting reviewed and approved your protocol titled:

TITLE OF PROTOCOL : **Factors associated with the use of emergency Contraceptives among females aged 15-49 years in the La-Bawaleshie Community, East Legon**

PRINCIPAL INVESTIGATOR : **Quansah Paulina Naa Afadua**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 4th June 2025. You are to submit annual reports for continuing review.

Signature of Chair: .....
Dr. Abraham Hodgson
(NMIMR – IRB CHAIR)

P. O. Box LG 581, Legon, Accra, Ghana | Tel: +233 (0) 302-2916438
Email: nirb@noguchi.ug.edu.gh | www.noguchimedres.org | www.ug.edu.gh

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