KNOWLEDGE, ATTITUDE AND PRACTICE OF EMERGENCY CONTRACEPTION AMONG FEMALE STUDENTS OF AHMADU BELLO UNIVERSITY ZARIA, NIGERIA

BY

GARBA -ALKALI, ABDULRAZAQ ENEYE
MPH/MED/01534/2006-07

A THESIS SUBMITTED TO THE POSTGRADUATE SCHOOL IN PARTIAL FULFILLMENT FOR THE AWARD OF MASTER OF PUBLIC HEALTH

DEPARTMENT OF COMMUNITY MEDICINE,
FACULTY OF MEDICINE,
AHMADU BELLO UNIVERSITY,
ARIA, NIGERIA

JANUARY 2011

DECLARATION

I hereby declare that this thesis titled: Knowledge, attitude and practice of contraception among female students of Ahmadu Bello University, Zaria, Nigeria, was written by me, Dr. A.E. GARBA-ALKALI and it is an original work.

---------- ----------

Dr. Abdulrazaq Eneye Garba-Alkali **Date**

CERTIFICATION

This thesis titled Knowledge, attitude and practice of contraception among female students in Ahmadu Bello University Zaria by Dr. A.E. Garba Alkali meets the regulations governing the award of the degree of Master of Public Health of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

---------- ----------

Professor K. Sabitu **Date**
Supervisor

---------- ----------

Dr. S.H. Idris **Date**
Head of Department

---------- ----------

External Examiner **Date**

---------- ----------

Dean, Postgraduate School **Date**

DEDICATION

This thesis is dedicated to my late father Mall. Garba-Alkali Abdulsalam, my mother, Fatima Garba-Alkali and my senior brother, Engr. J.O. Garba-Alkali.

ACKNOWLEDGEMENTS

I am eternally grateful to the almighty Allah for giving me the wisdom and strength to carry out this study. My sincere and special thanks go to my supervisor, Professor K. Sabitu, who was able to guide me successfully to the end of the work. I am very grateful Sir. Special thanks to Dr. S. H .Idris (Head of Department of Community Medicine), Mall Saidu (MPH Coordinator) and Dr. Shehu for the special care and concern they gave me during this program and also for their leadership in the Department which has enabled me to complete the program within the stipulated time. I am grateful to all my other lecturers for the knowledge impacted and care.

I thank all my classmates for the company and assistance during the MPH program especially Dr. (Mrs.) Elizabeth Nwasor, Dr. (Mrs.) Aisha Sani, Dr. Idris Omede(class chairman), Dr. Alalade, Dr(Mrs.)Rabi Rufai, Dr Fache Asuva, Dr(Mrs.)Mary Onoja, Dr. Haruna Daniel and Dr. Odunola Kolawole. My appreciation goes to Rahmat Adams and others who space would not allow me to mention here, for all the assistance and advice given to make this work possible. Finally, I thank my mum, my elder brother (Engr. J. O. Garba-Alkali), my other siblings and my love for their support, encouragement and endurance.

SUMMARY

The persistently high incidence of premarital unprotected sexual activity, poor condom use, rape, and induced abortion among young women in Nigerian universities calls for exploration of emergency contraception for prevention of unwanted pregnancy. The descriptive study was conducted among female undergraduate student of Ahmadu Bello University, Zaria-Nigeria.A total of 194 female undergraduates of Ahmadu Bello University, Zaria, Kaduna State, Nigeria selected by simple random sampling were surveyed to evaluate the knowledge, attitude and practice of emergency contraception.

About 53% of the respondents were sexually active. A total of 138 (74.6%) of respondents were aware of emergency contraception and about 85% of the sexually active had used it previously. The level of awareness was better among those in higher level of study. Majority 96.4% of the respondents who knew about emergency contraceptive pills identified the correct timing of administration for maximal efficacy. Most of the respondents cited friends (64.1%) and health care providers (15.1%) as their main sources of knowledge, while 3.7%, 4.4% and 1.3% of the respondents got the information through parents/relations, TV and radio respectively. Concern of encouragement of promiscuity (56.6%), and side effects (22.8%) ranked high among reasons for disapproval of deregulation of sale and promotion of emergency contraception.

There is need for health education of young people in Nigerian universities about emergency contraception with emphases on available methods and correct use ,especially in cases of unprotected sexual intercourse and as back up for routine contraceptive failure.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES:

LIST OF ABREVIATIONS

W.H.O. World Health Organisation

VVF Vesicovaginal fistula

PID Pelvic inflammatory disease

IUD Intrauterine device

ECP Emergency contraceptive pills

EC Emergency contraception

HIV Human immunodeficiency virus

AIDS Acquired immunodeficiency syndrome

UHS University health centre

STD Sexually transmitted disease

STI Sexually transmitted infections

CHAPTER ONE

INTRODUCTION

Contraception remains one of the effective means of preventing unwanted pregnancy and unsafe abortion[1]. A large proportion of the millions of young women worldwide who are sexually active especially in developing countries are not using modern contraception. World Health organization (W.H.O) stresses that age alone does not constitute a medical reason for denying any available contraceptive method to adolescents and further recommends that it is important for health workers to be aware of the biomedical, psychological and social issues that affect young women in order to assist them in making well informed choices of contraceptive methods that suit their special needs, and in using the contraceptives they choose in an effective manner.[2] Emergency contraception is the contraceptive method that is used immediately after unprotected sexual intercourse and before establishment of pregnancy to prevent unwanted pregnancy.

Knowledge is one of the factors that shape attitude and influence behaviors. Lack of sexual health knowledge and information about emergency contraception result in risk of unwanted pregnancy and unsafe abortion especially in a situation of unprotected sexual intercourse and

rape[1,2]. Hence, there is need to study knowledge, attitude and practice of emergency contraception most especially in our environment where the routine family planning services are not targeted towards the young unmarried women. In Nigeria contraceptive use in general is less than 15% and the unmet need is high. There seems to be increasing sexual activities and rape among the youth. All these can result in unwanted pregnancy and unsafe abortion. Unsafe abortions constitute 11% of maternal mortality. Abortion law in Nigeria is restrictive. Therefore, in order to reduce these mortality and morbidity, there is need to explore alternative means using emergency contraception that is under the control of women, easily accessible and affordable. A large proportion of young women are sexually active, whereas childbearing under the age of 16 years carries high risk of morbidity and mortality for both mother and child. Also early parenthood tend to curtail opportunities for education, employment etc. in women.[3, 4]

One of the most effective methods of preventing unwanted pregnancies after unprotected sexual intercourse is the use of emergency contraception within 72 hours of unprotected sexual intercourse [3,4,5,6]. Studies have shown that about 75% of potential pregnancies were prevented by emergency contraception[5, 6]. It can be used safely in all but very few situations. No major medical complications apart from established

pregnancy contraindicate the use of the emergency contraceptive pills. The information from the study of level of the knowledge, attitude and practice of emergency contraception in the university, will among other things assist in the reproductive health policy making, national planning and family life education at home and in secondary / tertiary institutions.

STATEMENT OF THE PROBLEM

Globally 210 million became pregnant annually out of which 46 million perform abortion due to unwanted pregnancy, with 19 million being unsafe abortion resulting in 68,000 deaths. Unsafe abortion is highest in Africa. In Nigeria, 6.8 million pregnancies occur annually with 1.5 million unplanned pregnancies out of which 610,000 unwanted pregnancies are aborted. Maternal mortality from unsafe abortion is 11 percent[3]. The survivor may have complications like infertility, chronic pelvic inflammatory disease (PID), chronic pelvic pains, anemia, vesico-vaginal fistulae (VVF), ectopic pregnancies, socio-economic problems etc. Eighty percent of these deaths are among teenagers[2,3,7]. Less than 2% of these young women use a modern form of family planning in Nigeria partly because family planning services are not youth friendly and where they use contraceptive pills, they use them post-coitally[8, 9]. Such young women seeking termination of pregnancy also

often initially use unconventional harmful post-coital methods to prevent or terminate the pregnancy[10].

Emergency contraception may be an alternative method of prevention if correctly used. But there seems to be a gap between awareness and correct practice of modern emergency contraception among the young women in Nigeria. Correct use of emergency contraception has been found in studies to prevent potential pregnancies in 75% of cases for this intervention. Information is required particularly on sexuality, knowledge, attitude and practice of emergency contraception in order to review the practice. Factors that will influence these will be identified. These may be used for policy formulation or design of an interventional project.

JUSTIFICATION

Unwanted pregnancies and unsafe abortions are public health problems that have resulted in significant maternal morbidity, maternal mortality and socio-economic problems[7] The present family planning services are not targeted towards the young unmarried women who are at risk, whereas they are also the group that results to unconventional post-coital harmful methods to prevent or terminate unwanted pregnancies[11]. These facts and the popularity of emergency hormonal contraception among adolescents in other

countries suggest that such methods would be of great benefits in preventing unwanted pregnancies and thus the deaths from the unsafe abortions and its complications in our environment.

Furthermore, there seems to be increasing sexual activities among young people when away from home especially in the tertiary institutions. In the university system, there are more social interaction and sexual networking between opposite sex resulting from option of staying off-campus with more degree of freedom from parents and school authorities. The high level of poverty in the country has also created a conducive environment for prostitution to thrive in order to make ends meet by some students. The recommended contraceptive methods for these largely unmarried sexually active young women are no doubt abstinence and condom use. However, the risk of unprotected sexual intercourse and routine contraceptive failure is high. Hence, there is need for emergency contraception to be used as back up.

Emergency contraception can prevent consequences of unwanted pregnancies like complications of induced abortions such as maternal death, infections, anemia, visceral organ injuries, infertility, chronic pelvic pains etc. It can also prevent socio-economic problems including school dropout and loss of investment on female education, early marriage, loss of

employment opportunities, family disharmony, pregnancy from rape and incest, abandoned babies, psychological trauma etc.

Hence, the study of knowledge, attitude and practice of emergency contraception among young women in the Ahmadu Bello University, Zaria may assist in identifying the appropriate interventional strategy for prevention of unwanted pregnancies from unprotected sexual intercourse or failed routine contraception. This may help towards reducing the suffering and/or hurting and even death at several levels affecting the woman, her family, community and the nation at large[12]. The result of the study may also be useful in the reproductive health policy formulation, economic planning and teaching of family life education (sex education) in secondary and tertiary institutions.

SCOPE OF THE STUDY

The study is on knowledge, attitude and practice of emergency contraception among the female student of Ahmadu Bello University, Zaria-Nigeria.

OBJECTIVES

General objectives

To determine the levels of knowledge, attitude and practice of emergency contraception among the female students of Ahmadu Bello University, Zaria.

Specific objectives

1. To determine the prevalence of sexual activity among the female students of Ahmadu Bello University Zaria
2. To determine the level of knowledge of emergency contraception among the female students.
3. To asses the attitude to emergency contraception among the female students.
4. To determine the practice of emergency contraception among the female students.
5. To examine the socio-demographic factors that influences the knowledge, attitude and practice of emergence contraception.
6. To evaluate the influence of the knowledge and attitude of the students on the practice of emergency contraception.
7. In light of the findings from the above, to proffer some recommendation.

CHAPTER TWO

LITERATURE REVIEW

INTRODUCTION

Globally, unplanned pregnancy is a reproductive health problem of tremendous significance. Having an unplanned pregnancy can be psychologically distressing for the women and her family. In Nigeria, abortion is illegal. Some women may seek illegal abortion, which is carried out clandestinely with substandard care resulting in unsafe abortion. Unintended pregnancy poses a major challenge to reproductive health of young adults especially in developing countries[9]. With decreasing age of menarche and onset of sexual activity, young people are exposed early to unplanned and unprotected sexual intercourse leading to unwanted pregnancy which are the primary causes of unintended pregnancy and induced abortion[6]. With judicious use of emergency contraception, most of the unplanned pregnancies could be prevented.

The need for emergency contraception as a backup has been recognized for many years. The first reported use of emergency contraception was in the early 1960s, when high-dose diethylstilbestrol contraception was given. It was effective but was soon abandoned because of teratogenicity. The yuzpe regimen[12] was introduced in 1974 and is still

commonly used nowadays. In 1976, Lipples et al described the use of copper intrauterine contraception device (IUD) for emergency contraception[9,18]. Interest in a progestogen-only pill emerged in the 1990s since clinicians wanted to find a method that was more effective and caused fewer side effects than the yuzpe regimen. Four methods of emergency contraception are available in different parts of the world: copper IUD, Yuzpe regimen, Levonorgestrel only pills, and mifepristone.

Emergency contraception is the contraception administered to a woman after unprotected sexual intercourse. In the past, it has also been known as post-coital contraception or morning after pills[9]. The effective use is between immediately after coitus to 72 hrs in case of oral drugs and up to 5 days for intrauterine device (IUD). Emergency contraception is needed when intercourse is unexpected and without prior contraceptive coverage. Other indications include failure of barrier methods like the slipping or breakage of condoms, and after rape[9, 10]. Emergency contraception is essentially female-driven so its use and success rests mainly on how women perceived and practice it. Levonorgestrel–only pills (commonly marketed as postinor-2) and combined oral contraceptives are the most common available in Nigeria. These may be obtained over the counter from patent medicine/pharmacy shops and in family planning clinics. Unconventional techniques/unorthodox

methods of emergency contraception are also common among women in Nigeria[20]. These are often harmful and ineffective.

DEFINITION OF TERMS

Emergency contraception (EC), or emergency posticoital contraception, refers to contraceptive measures that if taken after sex, may prevent pregnancy before the establishment of pregnancy. Forms of emergency contraception include emergency contraceptive pills and intrauterine device (IUD).

Emergency contraceptive pills (ECPs) sometimes simply referred to as emergency contraceptives or the "morning after pill" or postcoital pills. They are drugs that act both to prevent ovulation or fertilization and possibly post fertilization implantation of a blastocyst (embryo). Emergency contraceptive pills are distinct from medical abortion methods that act after implantation. They are licensed for use up to 72 hours after sexual intercourse.

Intrauterine device (IUD) are usually used as a primary contraception but it can also be used as emergency contraception for up to 5 days after sexual intercourse especially in rape cases[5]. It has advantage of continue use afterwards for routine contraception.

TYPES OF EMERGENCY CONTRACEPTION

Emergency Contraceptive Pills.

The progestin only method uses the progestin Levonorgestrel in a dose of 1.5mg, either as two 750mg doses 12 hourly part, or more recently as a single dose. The progestin only emergency contraception is available as a dedicated contraceptive product under many names worldwide [(2)] .for example. It is known as plan B in US, Canada, UK, Ireland, Italy as Levonelle; in South Africa as Escapelle; in 44 nations including France, most of Western Europe, Latin America as novlevo. In Eastern Europe, Mexico Israel, China and Africa as postinor 2.

The combined or Yuzpe regimen uses large doses of both estrogen and progestin, taken as two doses at a 12 hourly interval. This method is now believed to be less effective and less well tolerated than the progestin only method[4,5] . Other names are ovral and preven pills. Ovral pills are the same as four preven pills

Intra uterine Devise (IUD) for Emergency Contraception

The type usually used is Copper T intrauterine device (IUD) which can be used for up to 5 days after unprotected intercourse to prevent pregnancy. Insertion of an IUD is more effective (>98%) than use of emergency contraceptive pills. Pregnancy rates when used as emergency contraception

are the same as with normal IUD use. The other advantage of IUD is one; it may be left in place following the subsequent menstruation to provide ongoing contraception for 3-10 years upon type [3,30]and two, it is more effective than the oral emergency contraception in pregnancy prevention. The disadvantages are, that it requires health care provider for insertion which makes it unpopular and also has no protection against sexually transmitted infections just like the oral drugs.

Mifepristone may be used either as an emergency contraceptive pill or as an abortificient, depending on whether it is used before or after implantation. In USA, it is commonly used in 200mg or 600mg doses as an abortificient[8], whereas in China it is commonly used as emergency contraception. Emergency contraception is not an abortificient because it has its effect prior to the earliest time before implantation. Hence they are considered medically and legally to be forms of contraception. One of the major disadvantages of the current emergency contraception method is that they do not protect against sexually transmitted infections including HIV/AIDS[9, 10].

SEXUAL BEHAVIOUR

Sexual behavior has a great impact on the practice of emergency contraception. Studies have shown that those who are sexually active are more likely to be more aware of emergency contraception. The age of first intercourse among young people is getting lower[11]. In a review of the initiation of adolescent sexual and contraceptive behavior in the United States, it was found that the long-term trend of younger age at first intercourse was halted for blacks and reversed for white fundamentalist Protestants, but continued for all other whites. However, overall patterns throughout the decade suggested that pressure from parents, religious groups and others either lead to a later age at first intercourse or use of contraception, but not both[12].

In another study on the major sources, quality and quantity of sex and contraceptive information African-American male teenagers received and the impact of the information on sexual and contraception behavior, it was found that mothers were the major sources of sex and birth control information for the adolescents, young adult and middle groups, while father and male friends were found to be second sources. The amount of sex education received was found to be a significant predictor of the age at first intercourse and the regularity of use of birth control after that. The amount

of birth control information received was also a significant predictor of the regularity of use of birth control after the first coitus. Because parents influence their children's behavior through a socialization process, their support of their teenage sons in matters of sexuality and contraception may be of potential value in mitigating the effects of early, unprotected sex[13].

A related study showed approximately 1 in 5 sexually active girls become pregnant by age 20 years and one-third end in abortion. Sexually active girls who received sex education were more likely to use contraception. It was also noted that pre-marital sex was decreased by strict parents, high level of education and being older. However, early puberty, feeling lonely, and adoption of western education/culture encourage premarital sex. It was suggested that premarital sex could be reduced if there was improvement in sex education or family life education and development of resistance to peer pressure[14.]

KNOWLEDGE OF EMERGENCY CONTRACEPTION

Studies of knowledge of young people on emergency contraception in many parts of the world showed relatively high awareness but inaccurate information and practices. A study conducted in Enugu (eastern Nigeria) by Obionu et al on knowledge and practice of emergency contraception among

adolescent students, showed that more than 2/3 (77.5%) of the respondents were aware of the existence of emergency contraceptive oral drugs. Awareness was greater among women in the younger age group (15-20 years) than their older counterparts but no significant differences between it and marital status. However, there was a high significant association between awareness and educational status. Knowledge of the existence of intrauterine device (IUD) as emergency contraception was claimed by only 29.4% of the respondents. The sources of knowledge of emergency contraception was identified as friends and relations in 52.4% of the women, radio and television by 20.4%, lectures in school by 18.8% and mass media (newspapers and magazines) by 12.6%. Family planning clinics were sited by 11.3% of the respondents as sources of knowledge about emergency contraception[8].

A related study in Lagos among female undergraduate students conducted by Ebuelu, and Ekanem, indicates that 67.8% of the respondents reported knowing about emergency contraception. More than half (56.1%) were sexually active. About 37.8% and 36.3% of respondents who reported knowing about emergency contraception knew the correct time frame for effective use, and correctly identified emergency contraceptives respectively. Among those who were aware of, and had used emergency

contraception, 34.1% obtained their information from healthcare providers, while the remaining larger majority obtained theirs from friends. Knowledge and practice of emergency contraception was found to be directly related to age, level of study, medical education, marital status, sexual activity, previous history of use of contraceptives and induced abortion[20].

The findings in a similar study by Akani, Eyindah and Babatunde in Port Harcourt, Niger-Delta of Nigeria, showed 50.7% of respondents were aware of emergency contraception among which reported friends/peers as the source of knowledge ranked highest (33.53%) followed by sexual partners/spouse 32.80% and health facility/personnel (18.42%). On the correct timing, most (88.2%) of them said it should be taken after sexual intercourse, however, the remaining 11.8% said before sexual intercourse and after a missed period[19].

In a related study in Ogun state university in southwestern Nigeria, more than ¾ of the respondents were aware of the existence of emergency contraception. Awareness appeared to also increase with age and highest among the 31 to 35 year age group. Young respondents were significantly less aware compared to the older age group (59.9% vs. 89.2%). All the respondents knew of the progesterone-only pills (postinor®) as an emergency contraception while 12.1% of them knew that the combined pills

could also be used as an emergency contraception. Knowledge of the existence of intrauterine device (IUD) for emergency contraception was found in only 5.3% while 6.5% claimed knowledge of "other methods" of emergency contraception of no proven efficacy such as post-coital douching and use of "APC", a mild oral analgesic. The source of knowledge of emergency contraception was identified as friends and/or relation by 54.5% of the respondents, mass media (newspapers and magazines by 23%, and television by 10.5% and workshops/seminars by 9.2% of the respondents. Family planning clinics and University health centers were cited by 3.8% and 5.4% respectively. On the knowledge of correct use, 6.1% of them identified correct timing of use for almost effectiveness (up to 72 hours after unprotected intercourse), while 35.5% of those who knew about the post-coital use of intrauterine device identified the correct timing of the effectiveness of up to 5 days after unprotected intercourse[20,22].

The finding in another study conducted in Benin, mid-western Nigeria among female undergraduates, showed that 58% of respondents had heard of the drugs that could be used to prevent pregnancy after unprotected intercourse. Sexually active respondents and those who had practiced contraception or had studied at university for 3-6 years were significantly more likely than other respondents to have heard of emergency

contraceptives. There was no significant difference in awareness according to history of induced abortion. Out of those who were aware of the emergency contraception, only 18% correctly identified 72 hours as the time limit for the method's use. An additional 49% thought that emergency contraception were effective only when used within 24 hours of unprotected sex. Although this answer was within the 72-hour limit, such misinformation might inhibit someone who could still prevent a pregnancy from taking emergency contraceptives because they thought they had missed their "windows" of effectiveness. The pattern of knowledge of correct timing for emergency contraceptives followed the same trend as that for general knowledge. The respondents who were sexually active and those who had ever practiced contraception were significantly more likely to know about the correct timing of use. About 38% of respondents who had heard of emergency contraceptives correctly identified combined oral contraceptives and 42% identified levonorgestrel-only pills as emergency contraceptive methods. Menstrogen, a medication use to treat women with low levels or an absolute lack of estrogen or progesterone was the drug most frequently cited as an emergency contraceptive (50%). Other methods mentioned include antibiotics, alcohol, lime, lime-mixed with potash and salty water, etc. Out of the women who were aware of emergency contraception, fewer than half

had received their information on the method from trained health providers; 31% from doctors, 13% from pharmacists and 5% from nurses. However, 33% had received their information about emergency contraceptives from female friends, 5% from their boyfriends and 14% from patent medicine dealers[16].

In a survey of knowledge, attitude and practice of emergency contraception among university students in Cameroon, Central Africa, conducted in University of Buea (Cameroon), the awareness of emergency contraceptive pills was 63.0%. However, knowledge of the general features of emergency contraceptive pills was low and misinformation was high among the students. Knowledge differs according to the source of information. Informal sources were associated with misinformation, while medical and informational sources were associated with better knowledge[23].

A study done in Gonda, Ethiopia among university students of Northwest Ethiopia, about 24.0% thought that there are methods that can be used to prevent pregnancy when a woman had unprotected sex. Overall, 18.8% knew that the correct methods of emergency contraception (pill or IUD). Of those who mentioned pills as the only method of emergency contraception, 73.3% said the pill should be used within 72 hours after unprotected sex. Only one student (less than 1%) used pill as emergency

contraceptive. Students in the health field have 6.8 times higher knowledge on emergency contraception. Generally, there was an increasing trend in the knowledge of students when their age and years of study increases. Married or divorced students had 3.36 times higher knowledge when compared with never married[21].

In a study in Shanghai, China, on the awareness and usage of emergency contraception among teenagers seeking abortion, almost half (49.1%) of participants had experienced contraception failure and almost all (99.3%) had already had sex without contraception in the past. Backup "methods" previously used include emergency contraception in 36.1%, urine in 32.1%, showering in 15.4%, vaginal douching in 10.5% and jumping up and down in 5.9%. Almost half (47.7%) had heard of emergency contraception. Girls who were aware of emergency contraception were more likely to use a contraceptive method, and were less likely to have sex without any contraception but were not more likely to use unreliable contraception[24].

In a related study on knowledge and attitudes towards emergency contraception in Hong Kong by Lee et al among women who requested termination of unplanned pregnancy, about 67% had heard of emergency contraception, out of which 41.8% did not use it because they were willing

to take the risk of starting a pregnancy. About 22.4% thought that their current contraceptive method would work while 14.9% thought that they might not get pregnant that easily. Only 8.2% knew about it after getting pregnant that time, and 3.0% knew little about emergency contraception. About 3.0% thought it was not readily available, 3.0% could not explain the reason for not using it while 2.2% were worried about the side effect of taking emergency contraception. Only 2% out of 33% that claimed to know the correct time-frame of using the emergency contraceptive were actually correct[29, 30].

In a survey in University of North Carolina, USA, on the knowledge and perceptions in a university population, many respondents considered unintended pregnancy to be a major problem and considered emergency contraception a worthy option in the event of method failure or unprotected intercourse. While most participants were aware that there was a post-coital method of contraception, confusion exists between emergency contraception and RU-486 (the abortion pill). Almost half (49.5%) believed that they were the same[26].

In another related study in the West North Carolina among rural women, of the 70.5% who responded, almost all (97%) were sexually active and most (92%) perceived an unintended pregnancy to be a problem. A

majority of the participants (72%) were aware of emergency contraception only 7.5% of women reported usage in the last year. More than 80% of the surveyed women were uncertain if it was the same as the abortion pill, RU-486. While only 16% of respondents indicated they had discussed the emergency contraception with a doctor or another health professional, most women (89%) reported that doctors or other health professionals would be first choice for accurate information on it[26, 29,30].

PRACTICE OF EMERGENCY CONTRACEPTION

In Nigeria and elsewhere in Africa, childbearing outside marriage is culturally unacceptable. However, premarital sex occurs and is increasing as young women delay marriage as a modern desire to acquire formal education, develop skills and take time to choose their husbands. But routine family planning services are not youth-friendly, hence in order to prevent unwanted pregnancy they use emergency contraception. In a study done on knowledge and perception of emergency contraception among female Nigerian undergraduates in Benin City, Nigeria, 39% of respondents reported that they had practiced contraception. Of these, 7% had used the pills, 4% used injectable, 2% emergency contraceptive pills, 26% condom, 5% IUD and 1% used spermicides, while the remainder had used other

methods such as rhythm (11%) or withdrawal method (45%). Sexually active respondents and those who had ever practiced contraception or had studied at the university for 3-6 years were significantly more likely than other respondents to have heard and practiced emergency contraception[16].

In a related study in Shagamu, Ogun State, Nigeria, 18% of the sexually experienced students had used emergency contraception before. This figure translates to 11.6% of the total number of respondents. Fewer younger students (16-25 years) had practiced emergency contraception compared to their older counterparts (11.7% v 29.2%). Junior respondents were less likely to have previously used any form of emergency contraception compared to the senior ones (10.6% v 24.1%). Out of those who had knowledge of post-coital pills, only 6.1% of the students identified the correct timing of use of utmost effectiveness (up to 72 hours after unprotected intercourse). About 35.5% of those who knew about the post-coital use of IUCD identified the correct timing of effectiveness (up to 5 days after unprotected intercourse).

On the sources of procurement of emergency contraception, 59.2% of the respondents knew where to obtain emergency contraception, while 40.8% reported they did not. The university health centre and the family planning clinic were identified as the sources of supply by 2.7% and 4.7% of

the respondents respectively. Patent medicine stores, pharmacy shops and market were cited by 39.8%, 10.6% and 1.5% of respondents respectively. A total of 77.6% of those who were aware of emergency contraception knew where to obtain it[22].

Similar study in Port Harcourt, Nigeria, by Akani et al showed that 200 of 512 sexually active respondents reported using none, while quinine and post-coital pills ranked highest (112 out of 512) among the items. The other 312 had "ever" used. Nearly half (47.7%) of those that used a form of "after intercourse" method claimed that pregnancy never occurred. The rest 52.6% admitted the measures were not always successful[19].

The findings in a study by Ebuelu, Ekanem and Ebule in the University of Lagos, Nigeria, showed that out of 67.8% of the respondents who reported knowing about emergency contraception, 56.1% were sexually active among which 96.8% had ever practiced contraception with only 33.9% having ever practiced emergency contraception. However, only 37.8% and 36.3% of respondents who had reported knowing about emergency contraception, knew the correct time-frame for the effective use, and correctly identified emergency contraceptives respectively. The knowledge and practice of emergency contraception was found to be directly related to age, level of study, medical education, marital status, sexual

activity, previous history of use of contraceptives and previous history of induced abortion[20].

In the study in Enugu, Nigeria, 31% respondents had ever used or practiced emergency contraception as against 69% who had never used or practiced it. There was statistical significance association between the practice of emergency contraception and age ($p<0.1$) in favour of increased advertising. About 5.6% stated that they knew where to obtain emergency contraception while 43.4% said they did not. The sources of emergency contraception was identified as the chemist (pharmacy) shop by 75%, family planning clinic by 22.6%, patent medicine shops by 10.7% and the market by five percent[15].

In the study in Cameroon, only 7.4% had used emergency contraceptive pills themselves or their friends, whereas in Ethiopia where the awareness was about 44%, the practice was less than 5%. Almost 1/5 of the respondents, reported being sexually active. Among unmarried students who are sexually active, about 27% gave history of pregnancy at least once, of which 73.5% were unwanted. The prevalence of induced abortion in this study was 4.9%, unwanted pregnancy was the main reason for undergoing abortion[23].

In a related study in France, among the 706 women at risk of unintended pregnancy, only 11.1% used emergency contraceptive pills. Women in stable relationships or using the same contraceptive methods during the year were less likely to use emergency contraceptive pills than other women. The study also demonstrates that detailed knowledge of emergency contraceptive pills increases the probability of its subsequent use[29].

In Western North Carolina, USA only 7.5% out of 70.5% of respondents reported use of emergency contraception in the previous year among the women in the rural community, More than 80% were uncertain if its was same as abortion pills. In a similar study among university population in the same state in USA, there was an association between advanced prescription for emergency contraception and its likelihood of use. Most women would be significantly more likely to use emergency contraception if they had a prescription on hand. Of the women who were less likely to choose emergency contraception, 100% indicated they feel embarrassed or judged when asking for it. Only 34% of those women who have had a gynecological examination in the previous 12 months had discussed emergency contraception with their provider[26].

In Honduras, Mexico the study among urban family planning clients showed awareness and willingness to use emergency contraception were strongly associated with age, educational status and city of residence[25].

Another study on misconception of emergency contraception among tertiary school students in Akwa Ibom State, South-South Nigeria, and 5.7% of the respondents had practiced some form of emergency contraception, which was most commonly practiced by those between 16 and 25 years (71.4%). Menstrogen (30.6%), gynaecosid (24.5%), and quinine (14.3%) were the most common medications used for emergency contraception. Patent medicine dealers (40.9%) and friends/course-mate (29.7%) were the most common sources of knowledge of emergency contraception[19].

A qualitative duty on "why Nigerian adolescents seek abortion rather than contraception done in Benin City, Nigeria, showed that those who had not initiated sexual activity often had little information on specific means of contraception. In contrast, the other participants were more knowledgeable. They mentioned a large variety of traditional methods for emergency contraception/termination of pregnancy viz caustic substances such as alum, potash or snuff (ground up tobacco); home-made mixtures such as salt and water, salt and sugar solutions, omo detergent solution, lime water, menstrogen (methyloeteradone) and methyloestradiol), gynaecosid

(ethylestradiol and ethisterone), while quinine (anti-malaria drug), andrew liver salt (magnesium sulphate); waist band, padlock or ring; apiol and steel pills (parsley oil marketed for correction of menstrual irregularity), krest (non-alcoholic mineral drink), conquer mixture (marketed as laxative) [18].

ATTITUDE TOWARDS EMERGENCY CONTRACEPTION

In the study done in Enugu, Nigeria, about 38.5% of the respondents favored availability of emergency contraception over the counter while 58.4% declined and 3.1% were neutral. Those who were in favor of deregulation were women of older age bracket, unmarried women and women with higher education[15].

In a related study in Port Harcourt, while up to half (50%) of those having knowledge of emergency contraception offered that they agree/strongly agree to its efficiency, 25.8% disagree and 26.5% were undecided. Also in another study in Akwa Ibom State, South-South, Nigeria, out of 68.5% of the respondents who had heard of the emergency contraception, only 5.7% of the respondents had practiced at least one form of emergency contraception which was mainly practiced by those between 16 and 25 years (71.4%). There is wrong perception of some drugs used for emergency contraception. Menstrogen (30.6%), gynaecoside (24.5%), and

quinine (14.3%) were the most common medications used for emergency contraception[19].

In the survey in Cameroon, although the students generally had positive attitudes regarding emergency contraceptive pills, up to 65.0% believed that emergency contraceptive pills were unsafe. Those with adequate knowledge generally showed favourable attitudes with regards to emergency contraceptive pills. Another study in Ethiopia showed favourable attitude of 53% towards it with level of knowledge of 44% while <5% practice emergency contraception[23]. In Hong Kong study, the emergency contraception is a prescription drug and medical consultation is required. Women felt that telling the nurse that one needs an urgent consultation for emergency contraception can be embarrassing, hence some women may find it difficult to talk about this and finally decide not to make the request[29].

In Mexico, generally there was a positive attitude and low rates of concern about emergency contraception. Awareness and willingness to use it is strongly associated with age, educational status and city of residence, while in North Carolina, more than 80% of the women surveyed were uncertain if emergency contraception was the same as the abortion pill, RU-486. This finding is similar to that among the university population in the

same state of USA where about 100% indicated they feel embarrassed or judged when asking for emergency contraction[25, 29].

In a focus group discussion on "why Nigerian adolescents seek abortion rather than contraception conducted in Benin, Nigeria, low level of contraceptive utilization among sexually active women arise from their perceived risk of side effect e.g. interference with, menstral cycle, fertility and weight gain. Youth generally felt that the services offered by patent medicine dealers were sufficient to meet their contraceptive need[28].

CHAPTER THREE

METHODOLOGY

BACKGROUND INFORMATION ON THE STUDY AREA

Ahmadu Bello University was founded in 1962 and has its origin in the defunct Nigerian College of Arts, Science and Technology, Zaria, establised in 1955; the clerical Training Centre, Kongo, founded in 1957, the Samaru Agricultural Research Station established in 1924; and the Shika Livestock Farm started in 1928. Ahmadu Bello University, Zaria is the largest and most extensive of all the universities in sub-Saharan Africa. It covers a land area of about 7,000 hectares and embraces twelve faculties, a post graduate school and seventy five departments. There are also five institutes, six specialized centers, a Division of four Agricultural Colleges, a Demonstration Secondary School, primary schools, and Extensions / consultancy services which provide a variety of complementary roles to the academic faculties. It has two campuses; the main campus located in Samaru village, 13 km north of Zaria along Sokoto road on latitude $11^{o}2'$ north and longitude $07^{o}37'$ east. The Kongo campus is situated in the north eastern part of Zaria urban settlement.

The total student population pursuing degree and sub-degree programmes number about 25,348 drawn from all over the federation and abroad with about 9,788 students accommodated in the halls of the main campus – 5968 in the male halls and 3,820 in the female halls.

The university maintains a virile programme of sporting, athletics and recreational activities. On the main campus, there are several sporting and recreational facilities like gymnasium, basketball, handball, volleyball and lawn tennis courts. There are also athletics, soccer, hockey and cricket fields, swimming pool with adjoining recreational garden. There is also a social center where table tennis and chess are played with several video viewing centers, restaurant and snack shops. The student halls also have common rooms with modest recreational facilities. The university has weekend postgraduate programme that attract people from far and near places across the country. All these create several opportunities for interaction and socialization among the students across sex lines within and outside the campus.

There is the University Health Services (UHS) center which serves as a primary care facility that offers preventive and curative health services to members of the university community of which the students constitute significant part. It offers free medical care, medical examinations, antenatal

care to pregnant staff and students, child welfare services, family planning services, eye and dental care, immunization, laboratory services and free dispensing of drugs from the pharmacy. Referral of cases requiring specialist attention is made to Ahmadu Bello University Teaching Hospital, Zaria near the samara campus. There are many government and private hospitals/clinics as well as pharmacy/chemists outside the university campuses. Zaria has a radio station, good road network telecommunications system and internet cyber cafés. National daily and weekly newspapers and magazines circulate within the university campuses and libraries which serve as good information dissemination system to the university campus.

METHODOLOGY

Study population

The study population consists of all the female students of Ahmadu Bello University, Zaria who were within the reproductive age group of 15-49 years

Study design

The study design was a cross- sectional descriptive study.

Eligibility Criteria

Inclusion criteria: Samples of female undergraduate students of Ahmadu Bello University, Zaria within reproductive age group (e.g. 15 – 49 years) were included in the study.

Exclusion criteria:

- Female students of Ahmadu Bello University, Zaria who were outside the reproductive age group and non-students of the university
- Any student who refused consent to be included in the study.

SAMPLE SIZE DETERMINATION

A minimum sample size was calculated using Kish formula[30]

$$n = \frac{z^2 pq}{d^2}$$

A similar study done in Lagos, Nigeria revealed that 67.8% of respondents were aware of emergency contraception with a non-respondent rate of 10%. Hence, prevalence for awareness of emergency contraception was used.

p = 67.8/100 = 0.678

q = 1 – p = 1 – 0.678 = 0.322

d=0.05

$$\therefore = \frac{1.96^2 \times 0.678 \times 0.322}{0.05^2}$$

$$= \frac{0.838682}{0.05^2} = 171.1$$

Since the university population of the female undergraduate student was 9,654 which was less than 10,000, the final sample estimate was calculated using the formula: nf = (n)/1+ (n)/(N)

Therefore, nf = 171.1/1+171.1/9654 = 171.1 / 1.0177 = **168.12**

The attrition rate used was 10%. Hence, 10% of 168 =16.8

Adding 16.8 to 168.12=185, the minimum sample size becomes 185

This was rounded up to **200**.

SAMPLING TECHNIQUE

Two female hostels were selected using simple random sampling by balloting. Questionnaires were distributed to the students by the researcher by simple random sampling.

DATA COLLECTION

The data were collected using self-administered structured questionnaires, with mostly close ended questions. Each questionnaire had the following sections; bio-data, knowledge of the emergency contraception,

attitude towards emergency contraception, sexual behavior and practice of emergency contraception.

The questionnaires were pre-tested among twenty female students of Nuhu Bamalli Polytechnic Zaria. Necessary amendments were made to correct the questionnaire.

DATA ANALYSIS

The data collected were entered into computer and SPSS software was used for analysis. Each relevant question answered correctly was scored 1 while each relevant wrong answer was scored 0.These were summed up and percentages computed for each section and analyzed as poor, fair or good accordingly for each section on knowledge, attitude and practice. There was cross-tabulation of the data collected on bio-data against the knowledge, attitude and practice for statistical relationship between the variables. The data were also shown as frequency tables, pie chart, bar chart etc. Bivariate analysis was done for the variables on knowledge, attitude and practice against the socio-demographic variables.

The statistical relationship and differences were tested using chi-square test (χ^2). Statistical significance was put at $P<0.05$.

ETHICAL CONSIDERATION

Permission was obtained from the hall administrators of the two selected hostels. An informed consent was obtained from each respondent. This includes explaining the purpose of the research, general content and assuring them of the confidentiality of the identity of the respondents. Only those who consented were served the questionnaires to fill.

LIMITATIONS OF THE STUDY

1. The study may not be a true representation of all the female students in Ahmadu Bello University, Zaria on knowledge, attitude and practice because as at the time of administering the questionnaires, not all levels of student were in session as the academic calendars were not the same for all levels.
2. The information collected may not give a true picture of the knowledge, attitude and practice of emergency contraception considering the sensitivity of the topic and socio-cultural/religious beliefs of the respondents which may influence the response.

CHAPTER FOUR

(RESULTS)

Two hundred questionnaires were distributed, out of which 194 subjects responded to the questionnaires while six were not returned. The response rate was 97%. The respondents were aged between 15 to 35 years. The mean age was 21 years.

Table 1: Socio-demographic characteristics of respondents (n=194)

Variables	Freq	%
Age		
21-25	116	59.8
15-20	41	21.1
26-30	35	18.1
31-35	2	1.0
Marital status		
Single	171	88.2
Married	22	11.3
Divorced	1	0.5
Religion		
Christianity	145	74.8
Islam	47	24.2
Others	2	1.0
Ethnic group		
Yoruba	44	22.6
Igbo	43	22.2
Hausa	43	22.2
Non-Nigerians	6	3.1
Others	58	29.9
Level of study		
400	80	41.2
300	45	23.2
200	34	17.5
100	18	9.3
500	13	6.7
600	4	2.1

A total of 194 subjects responded to the questionnaires while six were not returned. The respondents were aged between 15 to 35 years. The mean age was 21 years. Majority of the respondents were single, 171(88.2%) and age group 21-25years formed the the highest group of respondents, 116(59.8%). Most of the respondents were Christians 145 (74.5%). The major ethnic group in Nigeria; Hausa, Yoruba and Igbo had almost equal proportion of respondents (22.2%; 22.6% and 22.2% respectively). Four hundred level (400L) students constituted the majority 80 (41.2%) while 600 level were in minority, 4(2.10%).

PATTERN OF SEXUAL ACTIVITY

Table 2: Have you ever had sex?

Response	Freq	%
Yes	103	53.0
No	91	47.0
Total	**194**	**100**

More than half, 103 (53.0%) admitted having ever had sexual intercourse in their life. About 91(47%) had never had sexual intercourse.

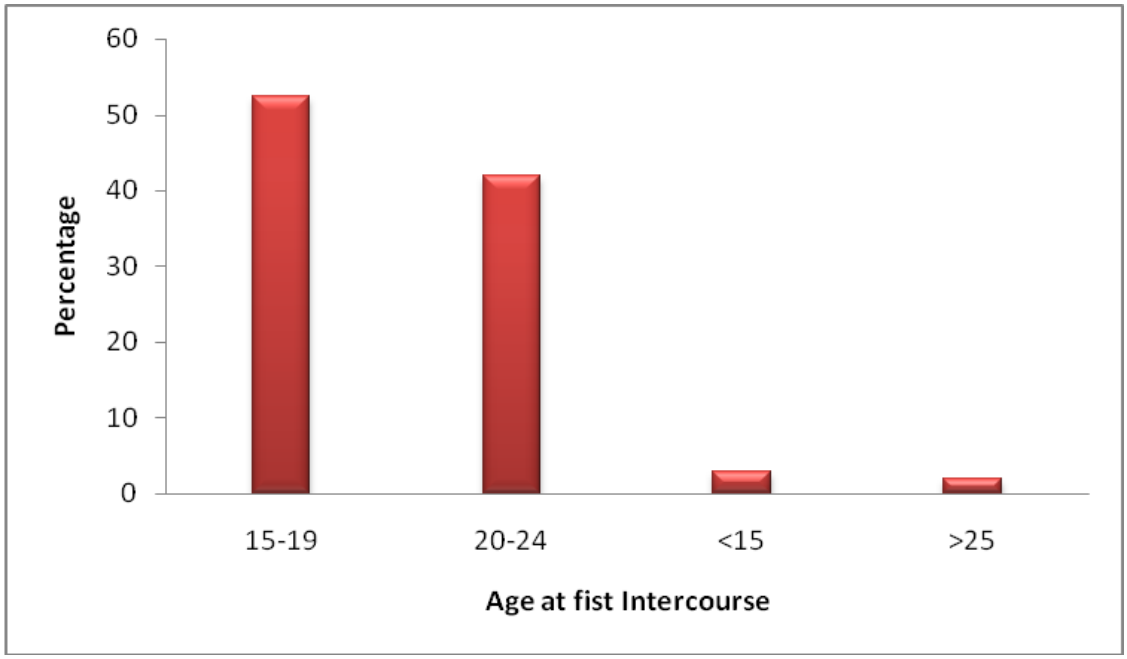

Fig. 1 Age at first intercourse

Most of the respondent, 54 (52.4%) had their first sexual intercourse within the age group 15-19years of age. This was followed by age group 20-24years with 44(42%) . Few had first intercourse <15years and>25years of age (2.9% and 2.0% respectively).

Table 3; Sexual intercourse had in the last 6 months among the sexually exposed.

Response	Freq	%
Yes	45.4	85
No	7.73	15
Total	**53.1**	**100**

Out of the 103 that had ever had sexual intercourse, 88 (85%) has had sexual intercourse in the last 6 months and only 15(15%) did not.

Table 4 Number of sexual partners kept in the last 6 months among the sexually exposed.

No. of sexual partners	Freq	%
One	65	63.1
None	15	14.6
Two	15	14.6
Three	4	3.09
Four	2	1.9
Five and above	2	1.9
Total	**103**	**100**

Table 14 shows out of the 103 that had sexual intercourse, most 65 (63.1%) of the respondents had one sexual partners in the last 6 months, while about 23 (22.3%) had multiple (>1) sexual partners and 15(14.6%) had none.

KNOWLEDGE ON EMERGENCY CONTRACEPTION

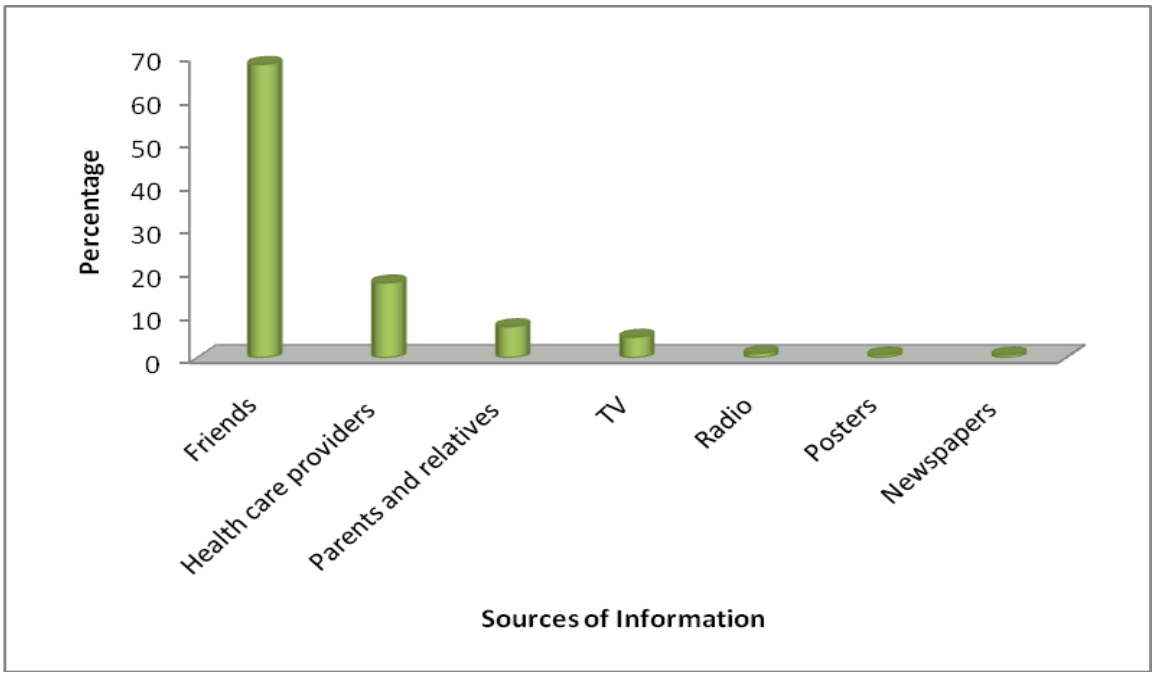

Fig. 2: Sources of information on emergency contraception.

The figure shows that in a total 138 respondents that had ever heard of emergency contraception, the commonest sources were from friends, 94 (68.1%) followed distantly by 24 (17.4%) from health care providers, while sources from newspapers and posters were 1(0.7%) each

Table 6: Understanding of the meaning of emergency contraception among those that knew about it.

Response	Freq	%
An act of preventing pregnancy after unprotected sexual intercourse.	106	76.8
A means of preventing pregnancy.	23	16.6
I don't know.	6	4.4
It is a form of abortion	3	2.2
Total	**138**	**100**

About 106 (76.8%) of respondents knew the correct definition of emergency contraception while 3(2.2%) said it was a form of abortion. And only 6 (4.4%) were unsure of the meaning.

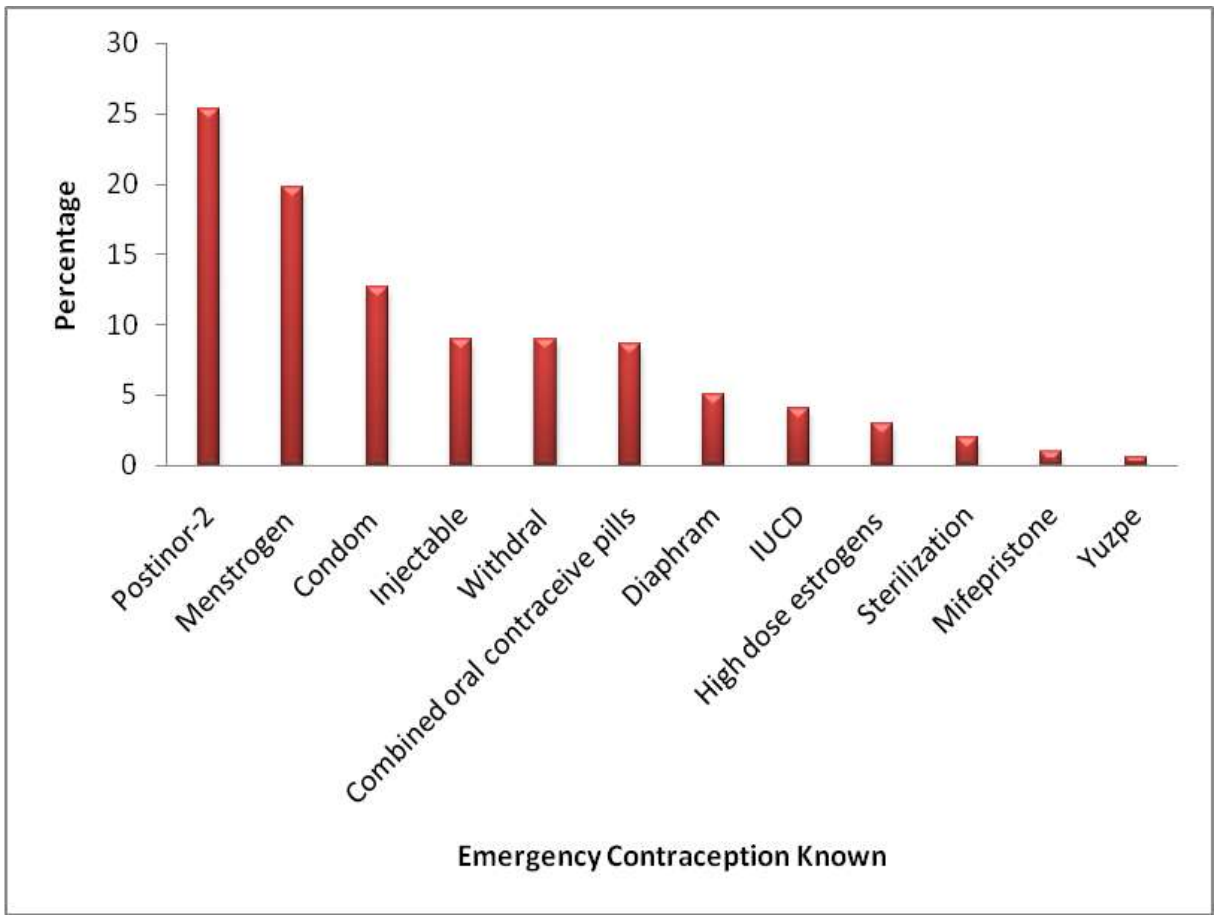

Fig. 3: Commonly used emergency contraception

Figure 3 shows Postinor-2 was the most commonly known emergency contraception by 124 (25.3%) followed by condom, 62 (12.7%) then menstrogen 97 (19.8%), injectable and withdrawal methods were 44 (9%) each and combined oral contraception was 42(8.6%)

Table 7: Knowledge on legalization of abortion in Nigeria by all the respondents

Response	Freq	%
I don't know	96	49.5
No	91	46.9
Yes	7	3.6
Total	**194**	**100**

Few of the respondents 7 (3.6%) said abortion was legalized, almost half 96 (49.5%) were unsure, while 91(46.9%) knew abortion was not legalized.

Table 8: Cross-tabulation of socio-demographic characteristics against the knowledge of the respondents

Characteristics of socio-demographic variables	Poor	Fair	Good	Total
Age	(%)	(%)	(%)	(%)
15-20	21(24.4)	14(17.4)	6 (21.4)	41 (21.1)
21-25	49(57.0)	51(63.8)	16(57.2)	116 (59.8)
26+	16(18.6)	15(18.8)	6(21.4)	37 (19.1)
Total	**86** (100)	**80** (100)	**28** (100	**194** (100)
Marital status				
Married	9 (11.7)	13(15.9)	0 (0.0)	22 (11.3)
Single/divorced	77(88.3)	69(84.1)	26 (100)	172 (88.7)
Total	**86** (100)	**82** (100)	**26** (100)	**194** (100)
Religion				
Christianity	62(72.9)	61(75.3)	22(78.6)	145 (74.7)
Islam	23(27.1)	20(24.7)	6 (21.4)	49 (25.3)
Total	**85** (100)	**81** (100)	**28** (100)	**194** (100)
Ethnic group				
Hausa	23(28.0)	14(16.9)	6 (20.7)	43(22.2)
Yoruba	16(19.5)	19(22.9)	9 (31.0)	44(22.6)
Igbo	19(23.2)	18(21.7)	6(20.7)	43(22.2)
Others	22(26.8)	30(36.1)	6(20.7)	58(29.9)
Non-Nigerians	2 (2.5)	2 (2.4)	2(6.9)	6(3.1)
Total	**82** (100)	**83** (100)	**29** (100)	**194** (100)
Level of study				
100	9(10.3)	7(8.5)	2 (8.0)	18(9.3)
200	19(21.8)	11(13.4)	4 (16.0)	34(17.5)
300	23(26.4)	18(22.0)	4(16.0	45(23.2)
400	30(34.4)	39(47.6)	11(44.0)	80(41.2)
500	6(6.9)	6(7.3)	1(4.0)	13(6.7)
600	0 (0)	1(1.2)	3(12.0)	4(2.1)
Total	**87**(100)	**82** (100)	**25**(100)	**194** (100)

Age-x^2=1.392,df=4,p=0.846 ; marital status-x^2=5.053,df=2,p=0.080; religion x^2=0.377, df=2 p= 0.082; ethnic group –x^2=5.071,df=6,p=0.535; level of study x^2=19.133,df=10, p=0.061

Table 8 is a cross-tabulation of the socio-demographic characteristics variables against knowledge score. There was no statistical difference between knowledge and age, marital status, religion, ethnic groups and the level of study at P<0.05 but the study level has the strongest influence.

ATTITUDE ON EMERGENCY CONTRACEPTION

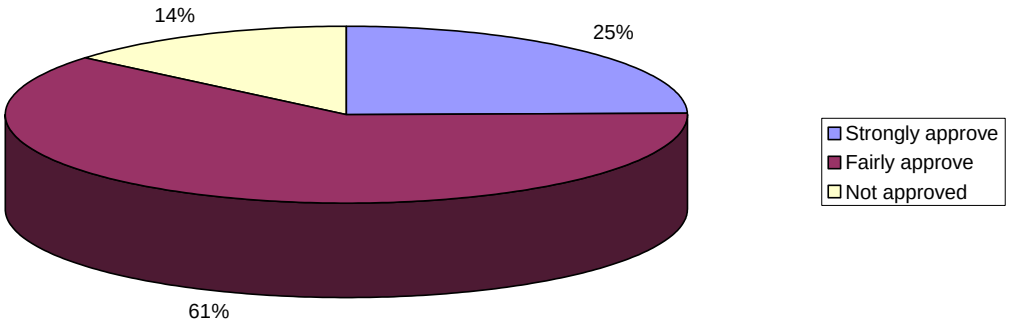

Figure 4; Approval for use of emergency contraception

The figure shows a total approval (both strongly and fairly) for use of emergency contraception in 119(86.2%) of the respondents and only 19(13.8%) disapproved.

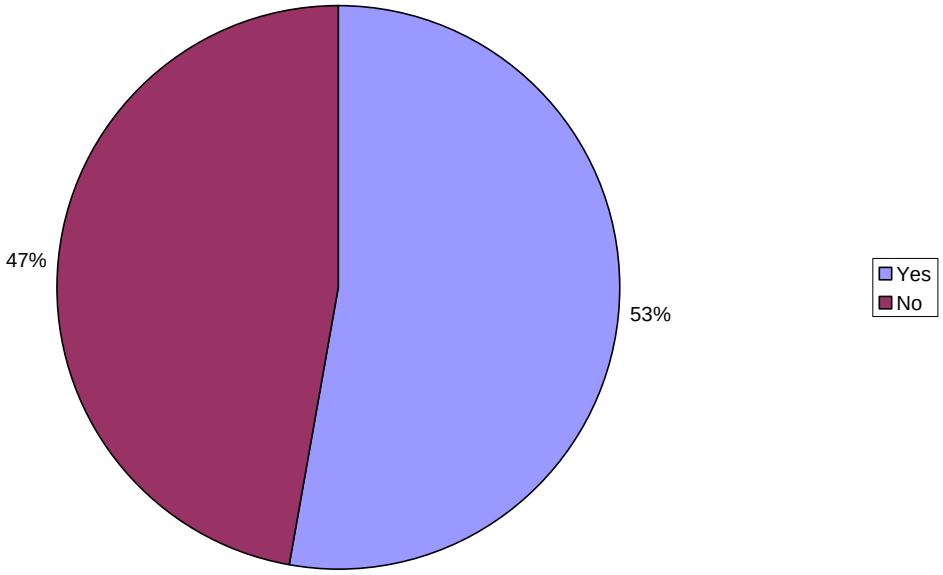

Fig. 5: Approval for sale of emergency contraception without regulation

The figure shows approval for sale of emergency contraception without regulation in 73(52.9%) of respondents, while 65(47.1%) disapproved.

Table 10: Reason for not supporting the sale of emergency contraception over the counter without prescription/regulation among the respondents

Reasons	Freq	%
No response	73	52.9
Encourages promiscuity	36	26.0
It has side effects	15	10.0
It is a form of abortion	5	3.6
Other reasons	5	3.6
It is against my religion	4	2.8
Total	**138**	**100.0**

The table shows reasons for not supporting the sale of emergency contraception without prescription. Reasons of encouragement of promiscuity ranked highest, 36(26%) followed by side effect (10%), religious reason were the least, 4(2.8%).Majority, 52% did not respond.

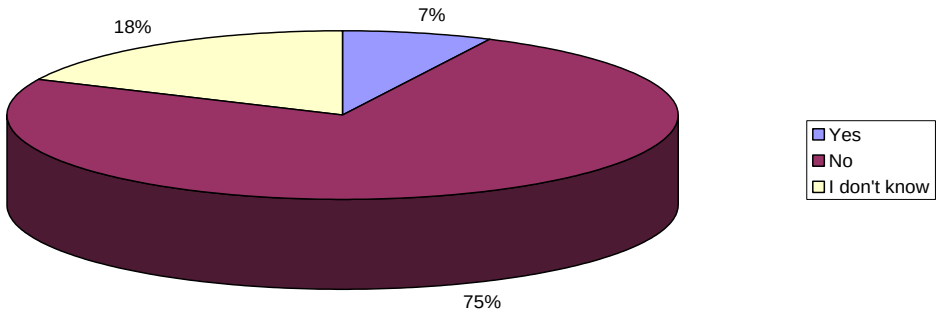

Fig. 6: Protection against STD/HIV by emergency contraception

The Figure shows majority of the respondents, 103(74.6%) thought emergency contraception could not prevent against STD/HIV while 10 (7.3%) said they could. About 25(18.1%) were uncertain.

Table 11: Willingness to recommend emergency contraception to friends among those with awareness.

Response	Freq	%
Yes	103	74.6
No	34	24.7
I don't know	1	0.7
Total	138	100

The table shows that most of the respondents 103 (74.6%) were willing to recommend emergency contraception to their friends and about a quarter were unwilling.

Table 12: Willingness to have more information on emergency contraception among the entire respondents.

Response	Freq	%
Yes	161	83
Undecided	19	9.8
No	14	7.2
Total	**194**	**100**

The table shows majority 83% were willing to have more information on emergency contraception, while small percentage, 7.2% were unwilling.

Table 13: Cross-tabulation of socio-demographic variables and attitude score

Socio-demographic variables	Attitude: Poor	Good	Total
Age	%	%	%
15-20	22 (27.2)	19 (16.8	41 (21.1)
21-25	43(53.1)	73(64.6)	116(59.8)
26-30	16(19.8)	19(16.8)	35(18.1)
31-35	0 (0)	2(1.8)	2(1.0)
Total	**81**(100)	**113**(100)	**194**(100)
Marital status			
Married	5(6.0)	17(15.5)	22 (11.4)
Single	78(92.8)	93(84.5)	171(88.1)
Divorced	1(1.2)	0 (0)	1(0.5)
Total	**84** (100)	**110**(100)	**194**(100)
Religion			
Christianity	68 (81.0)	77(70.0)	145 (74.7)
Islam	16 (19.0)	31(28.2)	47(24.2)
Others	0 (0)	2(1.8)	2 (1.4)
Total	**84** (100)	**110**(100)	**194** (100)
Ethnic group			
Hausa	18(21.0)	25(23.1)	43(22.2)
Yoruba	19(22.1)	25(23.1)	44(22.7)
Igbo	14(16.3)	29(27.0)	43(22.2)
Others	33(38.3)	25(23.1)	58(29.9)
Non-Nigerians	2 (2.3)	4(3.7)	6(3.0)
Total	**86**(100)	**108**(100)	**194** (100)
Level of study			
100	11(13.1)	7(6.4)	18 (9.3)
200	24(28.5)	10(9.1)	34 (17.5)
300	10 (11.9)	35(31.8	45 (23.2)
400	32(38.1)	48(43.6)	80 (41.2)
500	4 (4.8)	9 (8.2)	13 (6.7)
600	3(3.6)	1 (0.9)	4 (2.1)
Total	**84**(100)	**110**(100)	**194**(100)

Age-x^2=3.470,df=2,p=0.176; marital status-x^2=4.277,df=1,p=0.039; religion-x^2=3.879,df=1, p=0.049; ethnic group-x^2=6.237,df=3,p-0.101; level of study-x^2=6.55,df=4,p=0.016.

The table 13 shows cross-tabulation of socio-demographic characteristics and the attitude of respondents on emergency contraception. There was no

statistical significance between the age and ethnic groups of the respondents However, there was statistical significance between the marital status, religion and level of study and attitude of the respondents.

PRACTICE OF EMERGENCY CONTRACEPTION

Table 14: Use of Emergency Contraception.

Response	Freq	%
Yes	88	85
No	15	15
Total	**103**	**100**

The table shows about 88 (85%) had ever used emergency contraception while 15 (15%) had never used.

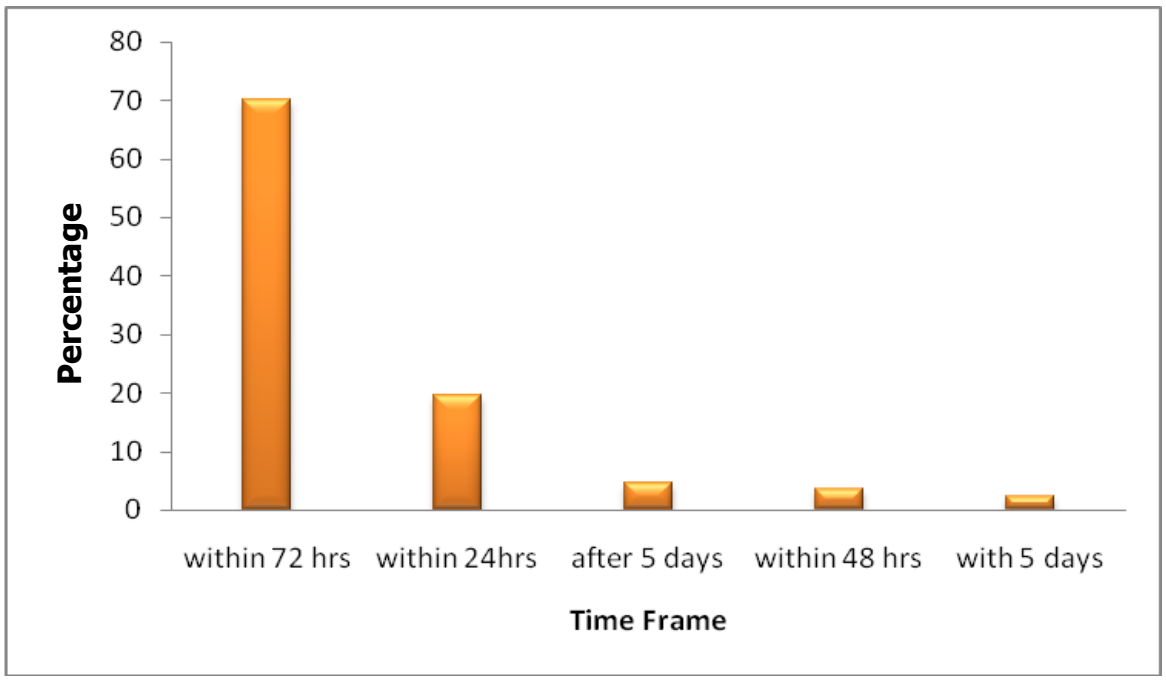

Fig. 7: Time frame for use of emergency contraception

The figure shows that majority 61(70.1%) used the emergency contraception within 72 hours, while use within 24hour and 48hours were 19.5% and3.5% respectively. About 4 (4.6%) used them after 5 days.

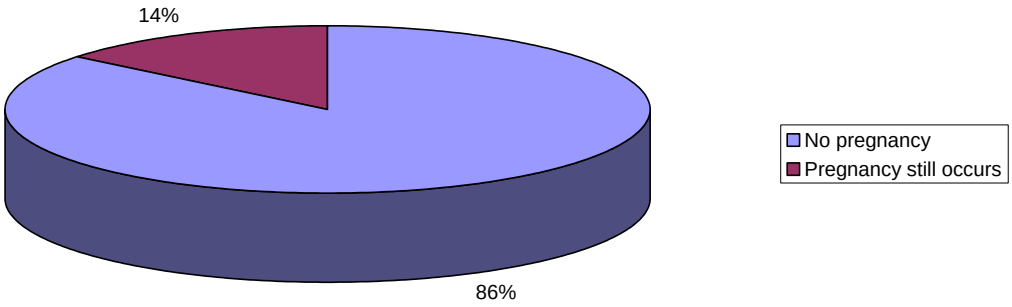

Fig 8 Outcome on the use of emergency contraception

The figure shows among the users ,75 (86.2%) of the respondents did not get pregnant after use of emergency contraception while 12 (13.8%) got pregnant despite use.

Table 15: Unwanted pregnancy outcome among those who were pregnant despite use of emergency contraception.

Response	Freq	%
Pregnancy was carried to term and delivered.	6	50
Pregnancy was aborted.	6	50
Total	**12**	**100**

The table shows 6 (50%) of the unwanted pregnancy were aborted while 6 (50%) carried the pregnancy to term and delivered.

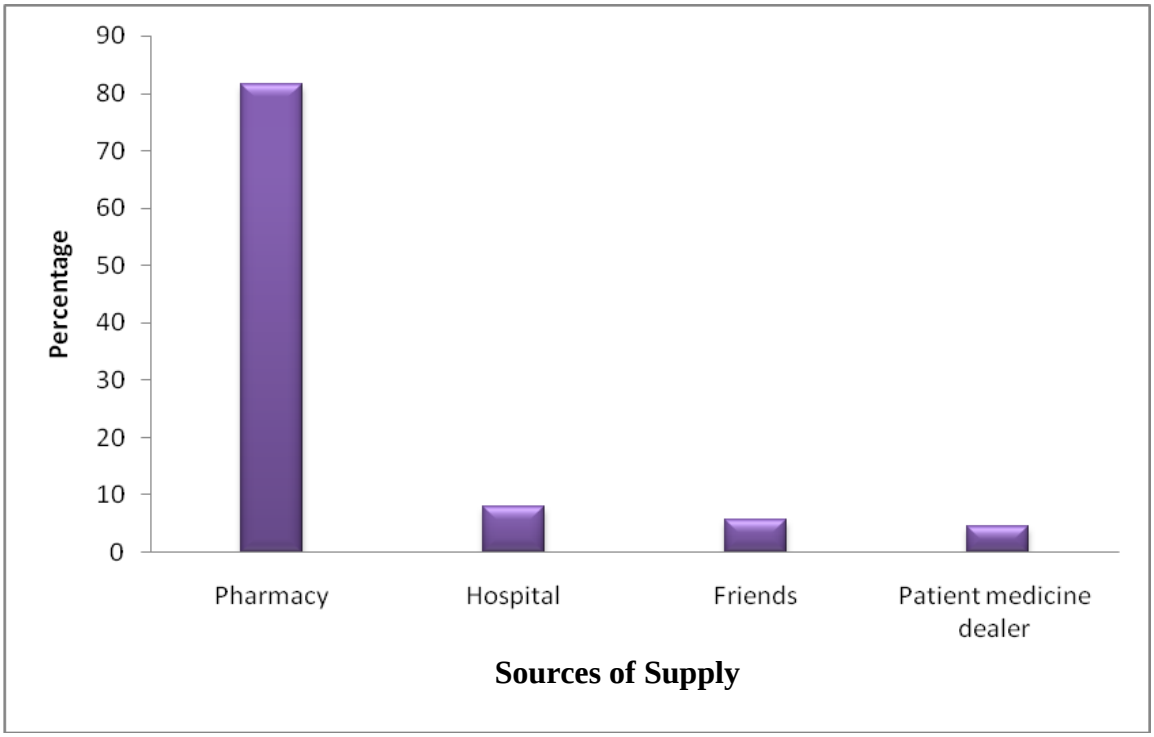

Fig. 9: **Source of supply of emergency contraception**

Figure 9 shows sources of supply of emergency contraception – pharmacy shop was mostly cited by 71 (81.6%) followed distantly by hospital 7 (8.2 %) and friends 5 (5.8%).

Table 16: Problems encountered in purchasing emergency contraception among the users.

Response	Freq	%
Not readily available.	30	42.9
Too shy to ask for it.	30	42.9
Expensive.	8	11.4
Refusal of some-pharmacy shop to sell.	2	2.8
Total	**70**	**100**

Table 16 shows the common problems encountered in purchasing the drugs. The most common were “not readily available” and “too shy to ask for it” with 30 (42.9%) respondents each. Few respondents cited “too expensive” 8 (11.4%) and “refusal to sell” 2 (2.8%).

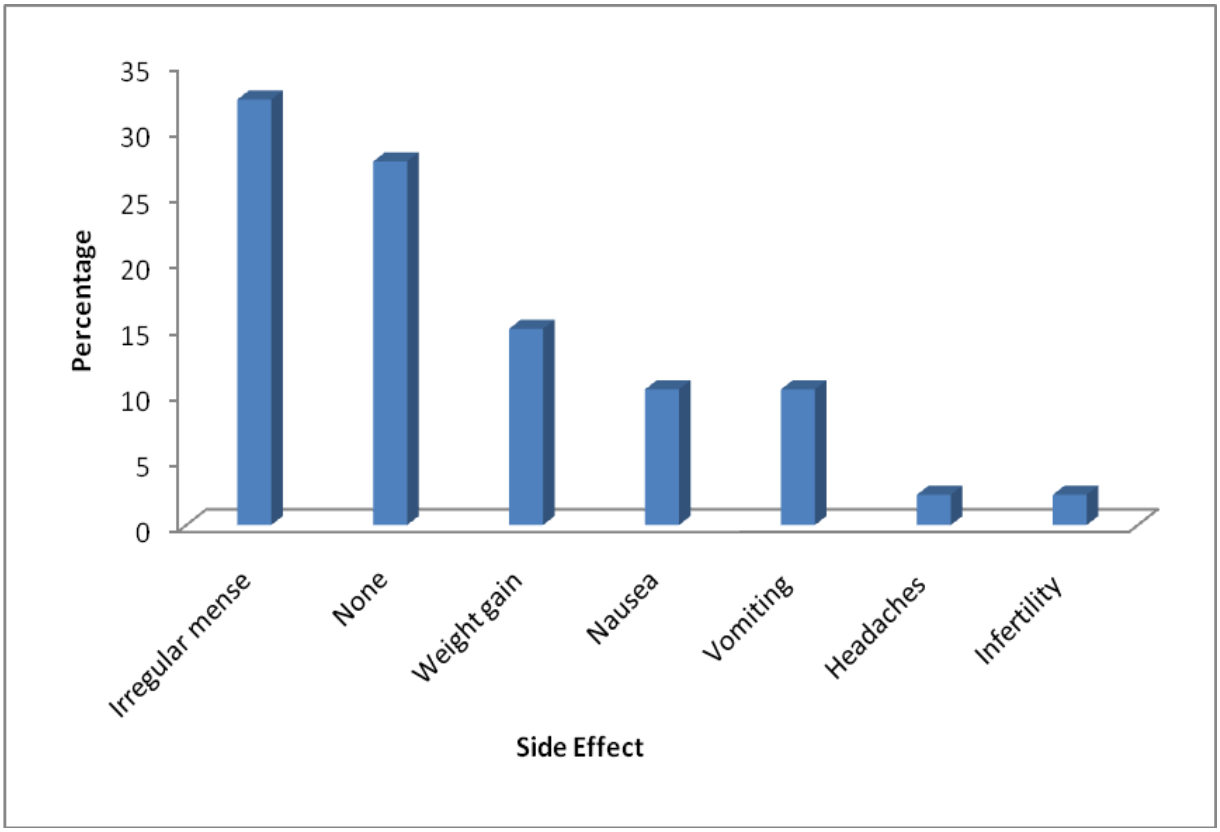

Fig. 10: Side effects of emergency contraception.

The figure identified irregular menstruation 28 (32.3%) and weight gain 13 (14.9%) as the most common side-effect, while the fewer side effects were headaches and infertility were 2 (2.3%) each. There was no problem reported in 24 (27.6%) of the respondents.

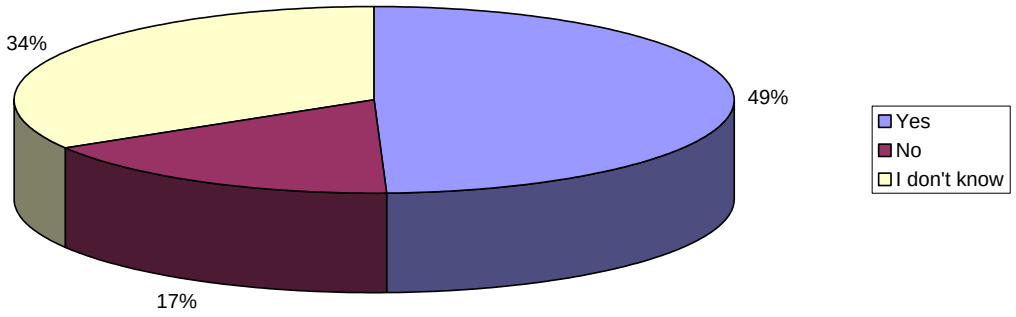

Fig. 11: Using emergency contraction in the future

The figure depicts respondents' willingness to use the emergency contraception. About half or 96 (49.5%) of the respondents were willing to use it in the future, while 65 (33.5%) were undecided, about 33 (17.0%) categorically said they will not.

Table 17: Cross-tabulation of ever use (practice) of any form of emergency contraception and knowledge score

		Knowledge score			Total
		Poor	**Fair**	**Good**	
		(%)	**(%)**	**(%)**	**(%)**
Ever use of any form	Yes	39(47.6)	44(64.7)	13 (65.0)	87(54.0)
of emergency	No	43(52.4)	24(35.3)	7 (35.0)	74(46.0)
contraction	**Total**	**82**(100)	**68** (100)	**20**(100)	**161**(100)

$x^2 = 4.421$, df = 1, p = 0.035

The table shows a cross-tabulation of ever used (practice) of any form of emergency contraception and knowledge score. There was a statistical significance between in the knowledge of respondents and ever use of emergency contraception (p = 0.011). Those who ever used (practiced) emergency contraception had better knowledge.

Table 18: Cross-tabulation of practice of emergency contraception and attitude of the respondents

		Attitude		
		Poor (%)	**Good (%)**	**Total (%)**
Ever used of any form of emergency contraction	Yes	12(19.7)	75(75.0)	87(54.0)
	No	49(80.3)	25(25.0)	74(46.0)
	Total	**61**(100)	**100**(100)	**161(100)**

$x^2 = 46.697$, df = 1; p = 0.000

The table shows the cross-tabulation of practice and the attitude of emergency contraception. There was statistical significance between the attitude and the practice of emergency contraception. The better the attitude of respondents, the more practice of emergency contraception.

CHAPTER FIVE

DISCUSSION

The study focused on female undergraduate students who were predominantly unmarried and young adults perceived to be at risk of unwanted pregnancy. There were a total of 194 students that filled the questionnaires. The response rate was 97 % (see table 1). The study found that there was high sexual activity among the students. More than half 103 (53%) of the students admitted ever had sexual intercourse (see table 2). The average age at first intercourse was 19years (see figure 1). About 88(45%) had sex within the last six months while twenty three (22%) had multiple sexual partners (see table 3 and 4). Condom use was low (24%), in this study which is comparable with a study in Lagos, Nigeria[8].This shows high sexual activity with risk of unwanted pregnancy, HIV/AIDS and other STIs. These are challenges to health educators.

Like other studies done in Nigerian universities in Benin, Enugu and Port Harcourt [8,16,19,27], the level of awareness of emergency contraception pills was high(71%) in this study population. However, information on emergency contraception was obtained mainly through friends (64.1%), while other sources were, healthcare providers (15.1%) and parents (5.7%) (See figure 2). This is despite the fact that health care provider are more

likely to give more accurate and reliable information. It can be explained by the fact that the issue of sexuality is confidential, and such information are commonly communicated through peer group as health care providers and parents perceived contraceptive issues are only supposed to be discussed with married women. The implication is that there will be likelihood of misinformation among the unmarried women. The finding is similar to the study in Ibadan by Arowojolu et al[17]. In addition, radio and TV were sited only in 1.3% and 4.4% respectively as the respondents' sources of information on emergency contraception. This is also because of the sensitive nature as it is hardly discussed publicly in the mass media. Furthermore, it is a reflection of youth-unfriendly nature of family planning/reproductive health services in our health centres.

In this study population, postinor-2 (levernorgestrel) was the most commonly known method used. Some erroneously perceived male condom as emergency contraception. There were also mention of some unconventional harmful substances used in about a third of the respondents.These substances include injectables, mentrogen, quinine, alcohol and traditional concoctions(see figure 3). These substances may be harmful to the body. This is similar to findings in Benin, Nigeria [15, 18].

The study revealed that majority (95%) of the respondents were aware of the accurate timing of its administration to achieve maximum effectiveness of within 72hours which is in contrast to findings in eastern and western part of Nigeria[1,8,15-20] where awareness of the correct timing was low. Correct timing is very important in emergency contraception otherwise it would not be effective (see figure 7).

About half (49.5%) of the respondents were not sure of whether emergency contraception was legalized for use or not in Nigeria (see table 7). This can negatively affect patronage with fear of being caught by law enforcement agents. Similarly, 49.5% of the respondents were also not certain of whether abortion was legalized or not while 46.9% said it was illegal. This could be due to inadequate knowledge of status of abortion laws in Nigeria among the students. Some of the students may probably be procuring abortion thinking it was legalized. This may further contribute to risk of complication from unsafe abortions.

There was no statistically significant association between the knowledge and sociodemographic variables such as age, marital status, religion, ethnic group and level of study of the respondents at $p<0.05$ (see table 8).

The study showed over half 73(52%) of the student were in favour of sale of emergency contraception without prescription in contrast to the findings

in a similar study in Enugu[8] .This should be an important consideration for policy makers and health care providers. Most of the students who had taken emergency contraception in this study were older and in higher level of study. This is not surprising as the emergency contraceptive awareness and attitude increased with level of study and sexual activity, and more students would want to use them to prevent pregnancy. This was also the observation in other parts of Nigeria[1, 4, 8, 16-20] (see figure 5).

There was also relatively high approval for use of emergency contraception in case of rape (46%) than other unprotected sexual intercourse like incest (37%).This can be explained by the fact that emergency contraception has a good place for recommendation in rape and incest where pregnancy would not be allowed to be established talk less of being carried to term. Among the reasons given for not supporting deregulation of sale of emergency contraception were fear of encouraging promiscuity (55%), side effect (23%) while religious reason was 6.2% (see table 10).Overall, it shows religion was not a major hindrance to its use.Therefore,for decision making, all these should be noted by health care providers and policymakers.

It was evident in the study that majority (74.6%) of the respondents felt emergency contraception could not protect against STD/HIV. It was only

few, 6.8% who erroneously believed it could protect against STD/HIV (see figure 6).This was a reflection of good knowledge of HIV/AIDS transmission by the students. It shows health education on HIV/AIDS on campuses has an impact. However, there is still more to be done to correct the dangerous misinformation among this small group that may engage in high risk behaviours. These would be challenges to all the stakeholders involved in the HIV/AIDS health education in campuses.

It was also observed that majority, 83% were willing to have more information on emergency contraception which should be noted by public health care providers and the family life educators (see table 12). There was no statistically significant association between ages and ethnic group of the respondents, whereas there was between marital status, level of study and the attitude of the respondents. Married women and those at higher level of study had better attitude compare to singles and junior level students.

It was not surprising that most of the respondents were not familiar with the use of intrauterine device (IUD) as a method of emergency contraception as it is similar in several other studies.[16-20] (see figure 3). The reason is that it needs insertion by a trained health care provider. Hence, it is unpopular because of lack of privacy. Furthermore, it is usually not recommended as routine contraception for young women who have not yet

had children and those at risk of sexually transmitted infections like undergraduates. However, it is important to note that it is more effective (>95%) than oral drugs (75%) in pregnancy prevention. It also has an advantage of subsequent use as regular contraception.

Despite the fact that most of the respondents were aware of emergency contraception pills, about 63% had ever used them previously (see table 14). This finding was similar to the study by Obionu and Okonkwo in Enugu[8]. In agreement with the study done by Glasier [25] but in contrast to Enugu study [(8)], there was high level of awareness of emergency contraception among those in higher classes of study, and higher age group. The practice of unprotected sexual intercourse also appears to be higher among this group. This can be explained by the fact that they (this group) had more exposure to social interaction, sexual experience and contraception with time spent in school. And the younger students tend to learn more about emergency contraception as they progress from one level of study to another.

The common source (84.5%) of purchase was pharmacy shop which was similar to many other studies in Nigeria[16-20] (see figure 9). Among those who used emergency contraception, 86.2% of respondents reported no pregnancy (see figure 8). This further shows the efficacy of the methods. Abortion was done in half 6(50%) of those that got pregnant (see table 15).

Most of the induced abortions are often done clandestinely by quacks as it is not legalized. This has implications for resulting in complications like maternal mortality, infection, infertility, anemia, abdomino-pelvic injuries etc. It also brings the controversial issue of legalizing abortion or not for unwanted pregnancy.

Among the problems faced in purchasing the drugs were unavailability in 34.5% and ‘ too shy to ask for it’ (34.5%) which was in agreement with the findings in West Carolina, USA[26] (see table 16).Side effects were generally not an inhibition to using the drugs which was also the findings in most of the other studies[2,6,17,28, 29,].More than half of the respondents were willing to use the emergency contraception in the future especially those who had ever used them, an indication of satisfaction with the method. From the study findings, good knowledge and good attitude were noticed to positively influence the practice of emergency contraception. The finding was confirmed with statistical significance at p=0.05 which is similar to many other related Nigerian studies[1, 6, 17, 28, 29,30].

CONCLUSIONS

The study showed a high prevalence of unprotected sexual intercourse and high level of awareness of emergency contraception among the students especially as they progressed higher in their levels of study. Among the sexually active students, there was low prevalence of condom use and emergency contraception was used by majority of these students. Abortions were procured by half of those with unwanted pregnancy. Unavailability and too shy to ask for emergency contraception were common problems encountered in purchasing the drugs. Harmful substances were used as forms of emergency contraception. Friends were major source of information and students were willing to have more information on emergency contraception. All these findings should be noted in any decision making regarding the young women and emergency contraception. The role of family life education at home and institutional levels in prevention of unprotected sexual intercourse, unwanted pregnancy and prevention of STD/HIV infection can never be overemphasized. While emergency contraception should not be a substitute for regular contraception and abstinence, young women should be counseled on emergency contraception in cases of unprotected sexual intercourse and regular contraceptive failure.

On the re-assessment of the specific objectives, the prevalence of sexual activity among the female undergraduate students was determined and was high, the level of knowledge of emergency contraception was also high, the attitude of the students towards emergency contraception was assessed to be good and the practice of emergency contraception was high among the sexually active students. Some socio-demographic factors influenced the knowledge, attitude and practice of emergency contraception, while knowledge and attitude of emergency contraception were also found to influence the practice of emergency contraception.

RECOMMENDATIONS

1. There should be proper dissemination of information on emergency contraception by the health care providers through the mass media especially radio, television, newspapers, students' magazines, seminars, debates and public lectures.

2. Family planning services in university health center should be made youth-friendly by the providers through warm reception, empathy and attention.

3. Emergency contraception counseling should be incorporated into the health services offered in the university health centre by the providers.

4. Emergency contraception drugs should be made available in the university health center pharmacy by the university authority.

REFERENCES

1. Adewale I.F., Oye Adeniran B.A, Oladokin A. Contraceptive usage among abortion seekers in Nigeria West Afri. J Med 2002, 21 (2) 17-14.
2. Yuzpe A.A . A multicentre clinical investigation employing enthinyl estradiol combine with norgestrel, as a post coital contraceptive agent. Fertilizer and sterility1992; 37(4): 508-513.
3. World Health Organisation (WHO). Improving access to quality care in family planning. Medical eligibility criteria for initiating and continuing use of contraception methods. Geneva WHO 1995 p. 160.
4. Odujinrin, OM. Sexual activity, contraceptive practice and abortion among adolescents in Lagos, Nigeria. International Journal of Gynecology and Obstetrics.1991; 34 (4): 361-6.
5. Bagshar S.N. Ethinyl oestradiol and ethinorgestrel is an effective emergency postcoital contraceptive. A report of its use in 1,200 patients in a family planning clinic in Australian and new Zealand Journal of Obstetrics and Gynaecology1998; 28(2): 137-140.
6. Truessel J, Sefewort F. The effectiveness of postcoital hormonal contraception. Family Planning Perfective.1992; 24(6):262-264.

7. Emureyan E.E. Unsafe abortion in sub-Saharan Africa. Nigeria J. Clinical Practice. 1998; (2); 53-61.
8. Obionu CN, Okonkwo CN, Okonkwo EN: Knowledge and practice of emergency contraception by Nigerian adolescent females. Tropical J. Obstet Gynacol. 1999; 16(1):27-32.
9. Treffers PE, Olikoya AA, Fegusen BJ. Care for adolescent pregnancy and child birth. International Journal of Obstetrics and Gynaecology 2001; 75:111-121.
10. Rive R.. Contraception for adolescent: Social, clinical and service delivery consideration. International journal of Obstetrics and Gynaecology 2001; 75: 149-163.
11. Chiing, T.C, Yen, C.T, Wu, H.M. A survey on sex knowledge and medical demand of the cases in Kaoshiung City adolescent health clinic. Kaohsiung Journal of Medical Science.1996;12(3): 174-182.
12. Cooksey, E.C; Rindfuss, R.R; Guilkey, D.K. The limitation of adolescent sexual and contraceptive behaviour during changing times. Journal of Health Social Behaviour.1996; 37(1): 59-74.
13. Iucker, S.K. The sexual and contraceptive socialization of Black adolescent males (Black adolescent sexuality) Public Health Nursing .1991(2):105-12.

14. Marot F. Teenagers and sex.Professional Care of Mother and Child.2001; 2:46-49.
15. Obionu CN, Okonkwo J.E.N Knowledge and practice of emergency contraception by Nigerian adolescent females. Trop. J. Obstet. Gynaecol. 1999: 16(1):27-32.
16. Aziken, ME, Okonta PI, Ande AB. Knowledge and perception of emergency contraception among female Nigerian undergraduates. Int. Fam. Plann. Persp. 2003; 29(2):84-87.
17. Arowojolu OA, Adekunle AO. Knowledge and practice of emergency contraception among Nigerian youths. Int. J. Gynecol Obstet. 1999; 66:31-32.
18. Otoide VO, Oronsaye, F, Okonofua FE. Why Nigerian adolescents seek abortion rather than contraception: evidence from focus group discussions. Nig. Clin. Review. 2001: 13-20.
19. Akami CI, Enyindah CE and Babatunde S. Emergency contraception: knowledge and perception of female undergraduates in the Niger-Delta of Nigeria. Ghana Medical Journal. 2008; 42(2):68-70.

20. Ebueli QM, Ekanem EE, Ebuchi OA. Knowledge and practice of emergency contraception among female undergraduates in the University of Lagos. Nig. East African Medical Journal, 2006, 8 3(3):20-25.

21. Kebede Y. Emergency contraception: knowledge and practice of Gondar University Students, Northwest Ethiopia. Ethiop Med. J. 2006 Jul, 44(3):221-30.

22. Olufemi T. Emergency contraception among female undergraduates in Ogun State, Nigeria. Sexual health Matters J.2005;6:1

23. Konginyuy E.J. A survey of knowledge, attitudes and practice of emergency contraception among students in Cameroon. BMC Emerg. Med. 2007. 17; 7(1):7.

24. Yu, J. Cheng L. Awareness and usage of emergency contraception among teenagers seeking abortion: a Shanghai survey. Eur. J. Obstet. Gynaecol. Reprod. Biol. 2008 Sep. 30.

25. Gracia, SG, Lara D, Landis SH. Emergency contraception in Honduras: knowledge, attitudes and practice among urban family planning clients. Stud. Fam. Plann. 2006; 37(3): 187-96.

26. Fagan EB, Boussios HE, Moore R. Knowledge, attitude and use of emergency contraception among rural Western Carolina women. South Med J. 2006; 99(8):806-10.

27. Okonofua FE. Factors associated with adolescent pregnancy in rural Nigeria. J youth and adolesc. 1995;24(4): 419-438.

28. Emergency conception in Nigeria. Report of an exploratory research project Lagos. Society for Family health 1998:1-2.

29. Bartfan GY. Emergency contraception in clinical practice: global perspective. International Journal of Obstetrics and Gynaecology 2000: 70; 49-58.

30. Haspels A. A. Emergency contraception: a review. Contraception. 1994; 50: 1001-108.

APPENDIX 1 (QUESTIONNAIRE)

FACULTY OF MEDICINE

DEPARTMENT OF COMMUNITY MEDICINE, ABU ZARIA

QUESTIONNAIRE

This questionnaire is designed to assess the knowledge, attitude and practice of emergency contraception amongst female students of Ahmadu Bello University, Zaria. The questionnaire is purely for academic exercise. Please your honesty and sincerity are highly needed. The information provided will be treated with absolute confidentiality and please do not write your name.

INSTRUCTION: Please tick/circle as appropriate in the space provided.

1.0 PERSONAL DATA

1.1 What is your age as at last birthday?

(a) 15 – 20 [ ]

(b) 21 – 25 [ ]

(c) 26 – 30 [ ]

(d) 31 – 35 [ ]

(e) 35 and above [ ]

1.2 What is your marital status?

(a) Married [ ]

(b) Single [ ]

(c) Divorced [ ]

(d) Widowed [ ]

1.3 What is your religion?

(a) Christianity [ ]

(b) Islam [ ]

(c) Others [ ]

1.4 What is your ethnic group?

(a) Hausa [ ]

` (b) Yoruba [ ]

(c) Igbo [ ]

(d) Non-Nigerian [ ]

e) Others [ ]

1.5 Which department are you?_____

1.6 What is your level of study:_____

2.0 KNOWLEDGE ON EMERGENCY CONTRACEPTION

2.1 Have you ever heard of contraception?

(a) Yes [ ], (b) No [ ],

2.2. Which types do you know? (Tick as many as you know)

(a)	Pills	[ ]	(b)	Condoms	[ ]
(c)	Injectables	[ ]	(d)	Spermicide	[ ]
(d)	IUCD	[ ]	(e)	Diaphragm	[ ]
(f)	Withdrawal	[ ]	(g)	Sterilization	[ ]

2.3 Have you ever heard of emergency contraception?

(a) Yes [ ], (b) No [ ],

If No to item 2..3 skip to item 3.0

2.4 What is your source of information on emergency contraception?

(a) Friends [ ], (b) Parents & Relations [ ], (c) Health care Providers [ ]

(d) Radio [ ], (e) television [ ], (f) posters.

(g) Others (Specify) _____

2.5 What do you understand by emergency contraception?

(a) A means of preventing pregnancy [ ]

(b) Act of preventing pregnancy after unprotected sexual intercourse [ ]

(c) A form of abortion [ ]

(d) A tool by western countries to limit the population of other countries [ ]

(e) Others (Specify) _____

2.6 Which of the following are used as emergency contraception?

		Yes	**No**	**I don't know**
a.	Condom			
b.	Injectables			
c.	Yuzpe			
d.	High dose estrogens			
e.	Postinor 2 (Levonogestrel only pills			
f.	Combined oral contraceptives			
g.	Mifepristone			
h.	IUCD			
i.	Withdrawal			
j.	Diaphragm			
k.	Sterilization			
l.	Menstrogen			
m.	Others (specify)			

2.7 When can emergency contraception be used effectively to prevent pregnancy?

(a) Before having sex [ ]

(b) Within 72 hours of having sex [ ]

(c) 5 days after having sexual intercourse [ ]

(d) More than 5 days of having sexual intercourse [ ]

(e) Everyday [ ]

2.8 Is emergency contraception legalized for use in Nigeria?

(a) Yes [ ], (b) No [ ], c) I don't know [ ]

2.9 Is abortion legalized in Nigeria? (a) Yes [ ],(b) No [ ],

c) I don't know [ ]

3.0 PATTERN OF SEXUAL ACTIVITY

3.1 Have you ever had sex? (a) Yes [ ], (b) No [ ],

If no, skip to item 4.1.

3.2 How old were you when you had your 1st sexual intercourse?

_____

3.3 Have you had sex within the last 6 months? (a) Yes [ ],

(b) No [ ],

3.4 How many sexual partners have you had in the last six months

_____

3.5 Do you use any form of contraceptive method/device to prevent pregnancy? (a) Yes [ ], (b) No [ ]

3.6 Which one do you use?

(a) Condom [ ]

(b) Injectables [ ]

(c) Contraceptive pills [ ]

(d) IUCD [ ]

(e) Withdrawal [ ]

(f) Diaphragm [ ]

(g) Sterilization [ ]

(h) Others (Specify) _____

3.7 Have you ever had sex that you were afraid may result in unwanted pregnancy?

(a) Yes [ ], (b) No [ ].

3.8 If yes, what did you do?

(a) Took oral contraceptive pills [ ]

(b) Took injectables [ ]

(c) Took Quinine [ ]

(d) Took Ampicillin [ ]

(e) Took Alcohol [ ]

(f) Took traditional concoctions [ ]

(g) Others (Specify) _____

3.9 What was the outcome?

(a) Pregnancy occurred [ ]

(b) There was no pregnancy [ ]

4.0 ATTITUDE ON EMERGENCY CONTRACEPTION

If no to item 2.3, skip to item 4.8

4.1 Do you think emergency contraception is necessary to prevent unwanted pregnancy from:

(a) Rape [ ]

(b) Unprotected sexual intercourses [ ]

(c) I don't know [ ]

4.2 Do you approve of the use of emergency contraception? (a) Strongly approve [ ] (b) Fairly approve [ ] (c) Not approve [ ]

4.3 Do you support the sale of emergency contraception over the counter in the pharmacist/chemist shops without prescription/regulation? (a) Yes [ ] (b) No [ ]

4.4 If no, why?

(a) Because it will encourage promiscuity/immorality [ ]

(b) Because it is against my religion [ ]

(c) Because I feel it is a form of abortion [ ]

(d) Because of its side effects [ ]

(e) Others (specify): ----------

4.5 Do you think emergency contraception is effective in preventing pregnancy after unprotected sexual intercourse?

(a) Yes [ ]

(b) No [ ]

(c) I don't know [ ]

4.6 Do you think emergency contraception has protection against sexually transmitted diseases (STDs) and HIV/AIDS?

(a) Yes [ ]

(b) No [ ]

(c) I don't know [ ]

47. Will you recommend emergency contraception to your friend in need?

(a) Yes [ ],

(b) No [ ]

4.8 Are you willing to have more information on emergency contraception?

(a) Yes [ ]

(b) No [ ]

If no to item 2.3 skip to item 5.9

5.0 PRACTICE OF EMERGENCY CONTRACEPTION

5.1 Have you ever used any form of emergency contraception?

(a) Yes [ ],

(b) No [ ],

If no to item 5.1 above, skip to item 5.9

5.2 If yes, which type?

(a) Pills [ ]

(b) IUCD [ ]

(c) Others, (specify) ----------

5.3 Within what time frame did you use it?

(a) Within 24 hours of having sex [ ]

(b) Within 48 hours of having sex [ ]

(c) Within 72 hours of having sex [ ]

(d) Within 5 days of having sex [ ]

(e) After 5 days of having sex [ ]

5.4 What was the outcome?

(a) No pregnancy [ ]

(b) Pregnancy still occurred [ ]

5.5 If you got pregnant, what was the outcome?

(a) I carried the pregnancy to term and delivered [ ]

(b) I aborted the pregnancy [ ]

5.6 Where do you get your supply of emergency contraception?

(a) Pharmacy [ ]

(b) Hospital [ ]

(c) Patent Medicine dealer [ ]

(d) Friends [ ]

(e) Other (Specify)_____

5.7 What problems do you have purchasing it?

(a) Its not readily available [ ]

(b) Its expensive [ ]

(c) I am too shy to ask for it [ ]

(d) Some pharmacy shops refuse to sell it [ ]

(e) Others (Specify)_____

5.8 What were the side effects when you used emergency contraception?

(a) None [ ]

(b) Headaches [ ]

(c) Nausea `` [ ]

(d) Vomiting [ ]

(e) Weight gain [ ]

(f) Irregular menstruation [ ]

(g) Infertility [ ]

(h) Others (specify) ----------

5.9 Would you like to use emergency contraception in the future?

(a) Yes [ ]

(b) No [ ]

(c) Don't know [ ]

Thank You