A STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE OF EMERGENCY CONTRACEPTIVES AMONG UNDERGRADUATE FEMALE STUDENTS OF POKHARA UNIVERSITY, NEPAL

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ABSTRACT

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Thesis Title: A Study on Knowledge, Attitude and Practice of Emergency Contraceptives among Undergraduate Female Students of Pokhara University, Nepal
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Abstract

A descriptive cross sectional study was carried out among 530 female undergraduate students of Pokhara University to assess knowledge, attitude and practice of emergency contraceptives using self administrated questionnaire. Data was entered and analyzed using SPSS Version 20. Majority of respondents 82.6% (439) had heard about Emergency Contraceptives. The main sources of information were; course of study 46.46 %, mass media 41.2%. Majority of the respondents 86 % had poor level of knowledge. Most of the respondents 68.5 % had positive attitude towards EC .Of the total respondents only 11.4% respondents were found to be sexually active. Among sexually active respondents, majority of them 60 % had ever used. It was observed that there was statistical significant association between age of the respondents and level of knowledge (p=0.000), field of study of the respondents and level of knowledge (p=0.016), living status of the

respondents and level of knowledge (p=0.002).It signified that age, field of study and living status directly affect to the level of knowledge.

Keywords: Emergency contraception, Knowledge, Attitude, Practice, University, Female, Undergraduates

(Signature)
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LIST OF ABBREVIATIONS

APA	American Psychological Association
COC	Combined Oral Contraceptive Pill
COFPTP	Comprehensive Family Planning Training Package
DDA	Department of Drug Authority
EC	Emergency Contraceptive
ECP	Emergency Contraception Pill
IUD	Intrauterine Device
KAP	Knowledge Attitude and Practice
NMS	National Medical Standard
POP	Progestin Only Pill
WHO	World Health Organization

CHAPTER I

INTRODUCTION

In the face of challenges to individual freedoms there is a need to rededicate ourselves to the goal that a woman does have the right to control her own fertility and that she needs access to information, services and psychological support for her decision. Today we are still faced with an environment in which action and decision are compromised by discriminatory practices and policies. Reproductive health reflects a deep commitment to parenthood and ensure that every pregnancy is intended and safe and also that children are born when their parents are best able to provide the love and support they needed to thrive (Hatcher and Nelson, 2007)

Each year about 210 million women around the world become pregnant (CDC 2004, PRCH and AGI 2003, WHO/SEARO 2001, AGI 1999 and UNFPA 1997). Among them, about 75 million pregnancies (36 %) are unplanned and/or unintended (WHO/SEARO 2004 and UNFPA 1997). Most of these unplanned/unintended pregnancies are not carried to full term, but aborted often in unhygienic conditions leading to serious consequences. It is estimated that worldwide about 46 million pregnancies (22 percent of the total pregnancies and 61 percent of the unplanned/unintended pregnancies) are aborted. It is also estimated that among the total pregnancies each year in South and South-East Asia, about one-third are unplanned or unintended. For instance, 30 percent in Bangladesh, 21 percent in India, 35 percent in Nepal and 35 percent in Pakistan are unplanned pregnancies. The reasons for such huge number of unplanned pregnancies in South and South-East Asia include low contraceptive use, method failure (both users' and technological faults), and high unmet need for contraceptives.(Hossain et al., 2005)

About 35% pregnancies in Nepal are unintended and more than half of those end in abortion. Many of Nepal's births are unwanted—women desire an average of 2.5 births, yet give birth to an average of 4.1 births (NDHS 2006). When safe abortions are not available, it can contribute significantly to maternal mortality and morbidity which is a serious public health problem in Nepal and 20-27 percent of maternal deaths in the hospital are due to complications resulting from abortions. The records collected at the Maternity Hospital in Kathmandu in 2002 showed that nearly 10 % of the 18,000 women admitted at the hospital were for abortion case.(Thapa, 2013)Almost all have been occurring due to non- use of family planning method or else contraception failure (Mool, 2002). The cost of providing the abortion services could probably be unavoidable for some women. Moreover, family planning programs could play a more effective role in preventing unintended pregnancies (Thapa et al., 2013).

Adolescents and youths between the ages of 10 and 24 comprise approximately 30 percent of Nepal's population (Thapa et al., 2001).In Nepal 10 to 20 percent of adolescents reported participating in pre-marital sex, yet only 9 percent of them reported using a method of contraception (CREHPA 2004). Female undergraduates obviously constitute a high risk group. Unsafe abortion no doubt is a major public health problem. EC could act as the necessary protection by preventing unwanted pregnancy, dangerous abortions and other detrimental consequences of having a mistimed or unwanted child (Shrestha et al., 2008). Experts estimate that timely use of EC could prevent up to 70 percent of abortions. In Nepal contraceptive prevalence rate is 48% in which there is no documentation of utilization of emergency contraception. Emergency contraception (EC) was incorporated in the NMS for Contraceptive Services and in Clinical Protocols for Health Providers in Nepal in 2003. The ECP was included in the COFPTP available to paramedics, and in 2004 was registered by the DDA and introduced to the people (Sakun et al., 2014).

The term "emergency contraception" refers to several contraceptive methods that can be used to prevent pregnancy after sex. The World Health Organization (WHO) defines 'Emergency contraception' (EC) as 'those back up methods for contraceptive emergencies which women can use within the first few days after unprotected sexual intercourse, or in the event of potential contraceptive failure to prevent an unwanted pregnancy'. EC is a type of modern contraception which is indicated after unprotected sexual intercourse, following sexual abuse, misuse of regular contraception or non use of contraception. EC plays a vital role in preventing unintended pregnancy, which in turn helps to reduce unintended child birth and unsafe abortion, which are major problems of maternal health (Neinstein, 2008). EC provides a last chance to prevent pregnancy after unprotected intercourse (Trussell and Guthrie, 2007).

These methods include several kinds of Emergency Contraceptive Pills (ECPs) as well as insertion of an intrauterine device (IUD). Research over the past 30 years has shown that these methods are safe and effective. EC is endorsed by the World Health Organization and many other international and national organizations. Depending on the method used, emergency contraception can reduce a woman's risk of becoming pregnant from a single act of intercourse by between 75 and 99 percent. There are four main types of EC pills: Levonorgestrel-only emergency contraceptive pills (LNG ECPs), pills containing ulipristal acetate (UPA ECPs) and combined pills containing both progestin and estrogen (the "Yuzpe" regimen made up of oral contraceptive pills). They work by preventing the release of an egg (ovulation) or by stopping the egg and sperm from meeting. The use of ECPs cannot terminate or interrupt an established pregnancy and will not stop a fertilized egg from implanting in the uterus, nor do they harm a developing embryo.

ECPs are safe for all women, including adolescents, for non-prescription use, with no contraindications and minimal side effects. ICEC has worked with manufacturers to ensure that product labeling is easy for consumers to understand. Studies show that women and teens can read and comprehend the label and understand when and how to take ECPs without advice from a health care provider. There are no clinical reasons suggesting that younger women and teens should not be able to use ECPs just as safely as adults. WHO, the American College of Emergency Physicians, the American College of Obstetricians and Gynecology, and other professional health groups support non-prescription access to ECPs.

Emergency contraception is an important option for young women. Young women often lack information about and access to ongoing family planning methods and services, face social mores that discourage them from "planning" to have sex, and experience difficulty negotiating contraceptive use. Thus EC should be facilitated and it is the right to have access to essential medicines and benefit from scientific progress. Emergency contraception should not be regarded as a substitute for other birth control methods used by women permanently exposed to the risk of pregnancy because it is less effective than on-going contraception. EC does not provide any protection against STIs (Westley et al., 2007).

There are two main methods available in Nepal that can be used for emergency contraception: oral contraceptive pills (both combined pills & progestin only pill) and use of intrauterine device (Thapa, 2013). The pills include COCs, and POP; IUDs can be effective if it is inserted within 5 days of unprotected sexual intercourse. The IUD is a small object that is placed in the uterus; it must be inserted by a trained medical practitioner. The copper IUD is more effective than emergency contraceptive pills (preventing over 99% of pregnancies) and can be left in place for as long as 10-12 years to provide on-going contraception. To function effectively as emergency contraception, IUDs can be inserted up to five days after unprotected intercourse EC is said to be safe with minor side effects like nausea and vomiting in case of pills and infection for IUDs if not used properly (WHO, 2004).

Despite the fact that different modern contraceptives exist worldwide, the problem of unintended pregnancy still exists, which could be due to gap in awareness, negative attitudes towards contraception, low accessibility or as a result of sexual assault. At times, the knowledge and practice might be there but no contraceptive is 100% effective, and it is always very vital to have EC as a backup method (Ahmed et al., 2012).

AIM OF THE STUDY

Knowledge, attitude and practice of emergency contraceptives among undergraduate female students

OBJECTIVES OF THE STUDY

(1) To assess the Knowledge on emergency contraceptives among students

(2) To assess the attitude of students towards emergency contraceptives

(3) To assess the utilization of emergency contraceptives among the students

(4) To determine association between socio-demographic factors and Knowledge level of the of the students on EC

EXPECTED NEW KNOWLEDGE

The study is expected to uncover the existing knowledge attitude and practice of emergency contraceptives among the female students in Pokhara University, Nepal. The results would help to enhance consciousness among students for Reproductive health promotion, adoption of emergency contraceptive as a safe and effective method for control of unwanted birth after having unprotected intercourse. The study is also expected to stimulate and arouse the interest of health professional to conduct further research in this area.

CHAPTER II

REVIEW OF LITERATURE

The study problem was selected after literature search and discussion with teachers and colleagues. The associated information for this study was taken from different sources such as different sites of WHO, APA and national and international journal articles from the internet search through the use of Pub Med, Google Scholar and Google. Literature search will be throughout the study period. Different facts and figures from national and international literature which were directly or indirectly relevant to study were reviewed to present in this study.

Despite the fact that different modern contraceptives exist worldwide, the problem of unintended pregnancy still exists, which could be due to gap in awareness, negative attitudes towards contraception, low accessibility or as a result of sexual assault. At times, the knowledge and practice might be there but no contraceptive is 100% effective, and it is always very vital to have EC as a backup method. Each year there are about 250 Million pregnancies globally and one third of these are unintended and 20% of these undergo induced abortion In Low income countries, more than one third of the 182 million pregnancies is unintended; the fate of 19% will be induced abortion and 11% of this is unsafe. In low income countries, the women who do not use any contraceptive contribute to two third of unintended pregnancies, where more than 100 million married women have unmet need for contraception. Unsafe abortion has much ill effects in women's health, each year about 68,000 women die because of unsafe abortion, and millions of women end up with many complications of unsafe abortion, which could have been immensely reduced by using EC (Hossain et al., 2005).

A cross sectional study **(Girma et al., 2015)** was conducted in Adama city of Oromia region on 280 female students of Hawas preparatory school. In this study it was found that, 182 (65%) out of the study participants had a knowledge about emergency contraception about 165 (59%) of them had positive attitude towards emergency contraceptives whereas 33 (11.78%) study participants had good practice of emergency contraception.

(Kagashe et al., 2014) in his descriptive cross sectional study assessed knowledge and attitude towards emergency contraceptive pills among 350 female university students in Dar Es Salaam. Where 57% were found to be aware of ECP and about half 49% of the participants had poor knowledge on ECP, On average 50% of respondent had a positive attitude toward the emergency contraceptive and only 14% had used them.

(Sakun et al., 2014)conducted descriptive cross sectional study in Tanahu district, Nepal to assess the knowledge of emergency contraceptives among 100 women of reproductive age

group where it was found that 46% of respondents had poor knowledge of Emergency contraceptives.

(Ojiyi et al., 2014) Conducted study on Emergency Contraception: Awareness, Perception and Practice among Female Undergraduates in Imo State University, Southeastern Nigeria. A questionnaire based cross-sectional survey using female undergraduates selected randomly from Imo State University. A total of 700 students participated in the study. Awareness of emergency contraception was very high. The awareness was significantly higher amongst students in health related faculties than in (Yapici et al., 2010)friends and lectures. 67% of the students were sexually active and only 39.9% of them used emergency contraception.

(Gebrehiwot et al., 2013) conducted a cross-sectional survey among 616 female college students to assess the knowledge, attitude and practice of emergency Contraceptives among female college students at Mekelle town, Ethiopia. Of the total respondents, 67.3% of them replied that they have heard about emergency contraceptives. Among those who have ever heard of emergency contraceptives, 45% of the respondents were knowledgeable towards ECs, and about 46.4% of the students had positive attitude towards emergency contraceptives. Of the sexually active respondents 24.2% only reported that they had used emergency contraceptive methods previously.

(Ahmed et al., 2012)A Cross-sectional quantitative study among 368 Ethiopian undergraduate female students was conducted where the majority (84.2%) of the participants had heard of EC; 32.3% had a positive attitude towards it and 75% had ever used EC.

(Hoque et al., 2012)performed a cross-sectional study among 582 female university students in KwaZulu-Natal, South Africa who were selected using multistage sampling techniques. Overall, 49.8% of the participants reported having heard about EC. The utilization of EC among the sexually active students was relatively low (21.2%) and most of the female students had a positive attitude towards the utilization of EC.

(Desta et al., 2011)conducted cross-sectional study on Emergency Contraception among female students of Haramaya University, Ethiopia: Surveying the level of knowledge and attitude. The study generated the required data from a representative sample of 572 female students drawn from the study population through multistage sampling. The findings of the study revealed that 47.6% of the respondents had ever heard about EC; 25.7 % had good knowledge of EC, and 76.5% had favorable attitude toward EC.

(Tilahun et al., 2010)studied knowledge, attitude and practices among undergraduate female students of Adama University using cross-sectional study design on 660 regular female students. Of the total, about 46.8% of the students had heard about emergency contraceptives and from those who heard emergency contraceptives, 27.2% had good knowledge. Majority,

62.9% of the students had positive attitude towards it. However, only 4.7% had used emergency contraceptive methods.

(Tajure, 2010) conducted a cross-sectional study on knowledge, attitude and practice of emergency contraception among graduating female students of Jimma University, Southwest Ethiopia. A total of 389 (96.5%) volunteered graduating female students participated in the study. 163 (41.9%) were ever heard of Emergency Contraceptive, only 11(6.8%) used the method. The common sources of information were friends 60 (36.5%), radio 37 (22.8%) and television 20 (12.3%). One hundred sixteen (71.2%) agreed to use Emergency Contraceptive when they practice unintended sexual intercourse.

(Yapici et al., 2010) conducted a cross-sectional study to determine the degree of knowledge, behavior and attitude of university students in Mersin towards emergency contraception (EC) in 510 females. Overall, 149 (14.3%) students were aware of EC, and among those, 125 (83.9%) students correctly identified 72 h as the time limit for the methods to be used. The main sources of knowledge about EC were schools (38.9%), friends (18.8%), healthcare providers (17.4%), media (16.1%) and other sources (8.7%). EC awareness was positively associated with female gender, age, studying Health Sciences, father's level of education and level of monthly income. A total of 37 respondents (3.6%) reported that they had unprotected intercourse. Only 20 students or their partners had previously used emergency contraceptive pills.

(Adhikari, 2009)conducted a cross-sectional study which was carried out in April-May 2006 to 1,137 college students (573 males and 564 females) in Kathmandu district where the awareness of EC among college female's students in Kathmandu reported to be 64% which is less than males (72%).

(Addo et al., 2009) conducted study on knowledge, practices, and attitudes regarding emergency contraception among students at a university in Ghana. The sample size was stratified and 2292 students were randomly selected out of 3200. Of the 71.6% of students who responded, 51.4% had heard of EC. Only 4.2% had ever used EC.

(Tamire et al., 2007)designed the cross-sectional survey among 774 female students at Addis Ababa University and Unity University College in Addis Ababa, Ethiopia from January to September 2005.the study reported that about 43.5% of the students said that they have heard about emergency contraceptives. About 53% of the students had positive attitude towards emergency contraceptives and only 4.9% respondents reported that they had used emergency contraceptive methods previously.

(Ebuehi et al., 2006) conducted cross-sectional descriptive study in 480 female undergraduate students in the University of Lagos, Nigeria to access knowledge and practice

of emergency contraception. The findings revealed that 67.8% of the respondents reported knowing about emergency contraception. More than half 56.1% were sexually active and of this group, 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 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 health care providers, while the larger majority obtained 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 previous history of induced abortion.

(Ikeme et al., 2005) studied Knowledge, attitude and use of emergency contraception among female undergraduates in Eastern Nigeria using a randomly selected sample of female undergraduate students at three tertiary institutions in Enugu, Nigeria. The majority of the respondents 95% were aware of contraception. However, 61% of the female undergraduates had heard of emergency contraception but only 31% had actually used it. The most common source of information about emergency contraceptive pills was from friends and teachers.

CHAPTER III

METHODOLOGY

3.1 Study Design

It was a cross- sectional descriptive study.

3.2 Study Method

The study method used was quantitative.

3.3 Study Area

The study area was Pokhara University,Lekhnath,Nepal.

3.4 Study Population

The study population was the undergraduate female students of Pokhara University.

3.5. SAMPLING

3.5.1 Sampling Unit

The undergraduate female students of Pokhara University

3.5.2 Sampling Technique

Total enumeration sampling technique was adopted.

3.5.3 Sample Size

The total number of undergraduates in PU was 1302 and female students were 680 of which, 530 samples could be undertaken in the study.

3.6 SELECTION CRITERIA

3.6.1 Inclusion Criteria

This study included: All the undergraduate Females students of Pokhara University.

3.6.2 Exclusion Criteria

This study excluded:

- The participant who refused to participate in this study.
- The students who were absent at the time of data collection.

3.7 DATA COLLECTION TOOLS AND TECHNIQUE

Data were collected by using self administered questionnaire

3.8 PILOT STUDY

A pilot trial test was conducted among 20 undergraduate female students of Tribhuwan University.

3.9 DATA PROCESSING AND ANALYSIS

The data was collected prior to any analysis, the data included information on demographics Data entry, and coding, decoding and cleaning were done. Data analysis software (Ms Excel and SPSS version 20) were used for further data processing and analysis. Descriptive statistics such as frequency distribution and mean were calculated to describe the demographic characteristics of the sample population. Cross tabulation of data and non-parametric chi-square tests were applied to test statistical significance between dependent and independent variables and inferential statistics were used for data entry and analysis.

3.10 VALIDITY AND RELIABILITY

Appropriate thorough literature review was done before the conduction of study. Questionnaire was constructed taking reference of various research papers. The questionnaire was finalized as per the expert's opinion and necessary suggestions were incorporated in every aspect of the study. Pilot study was also done to ascertain the feasibility of the tools. The researcher was directly involved in data collection and this report was prepared in accordance with thesis guidelines of Centre for Public Health and Healthcare Administration, Eternal University.

3.11 ETHICAL CONSIDERATION

- Permission was taken from the ethical committee of Eternal University.
- Informed consent was taken from the respondent before asking questionnaires.
- Anonymity and confidentiality of the subject were maintained.
- Withdrawal from the study at any time was accepted.

3.12 STUDY VARIABLES

Independent Variables: Age**,** Education**,** Religion**,** Marital status**,** Ethnicity**,** Exposed to media**,** Place of residence

Dependent Variables: Knowledge, Attitude and Practice on emergency contraception

3.13 OPERATIONAL DEFINITIONS

Knowledge

Knowledge is the understanding and awareness of respondent towards the existence of Emergency Contraceptives, its importance and effectiveness.

Knowledge level

The knowledge level was assessed by evaluating on the respondents' answers towards knowledge on emergency contraceptives. The questions related to knowledge were 12 and carried 22 scores comprising multi response questions .Each correct answer was given 1 score. According to the score gained by the respondent, their Knowledge level was assessed.

Bloom's cut off points were used where a score of 80 – 100% of correct responses meant a good knowledge, a score of 50 – 79% put a scorer in a level of satisfactory knowledge and a poor knowledge was for the respondents with a score less than 50% of the correct responses. Therefore the scores with their respective knowledge levels were:

Level	Composite Percentage	Scores
Good knowledge	80-100%	17-22
Satisfactory knowledge	50-79%	10-16
Poor knowledge	Less than 50%	<10

Attitude

Attitude is the belief about and intention of using or recommending EC when a need arises. Attitude was considered as a positive attitude or a negative attitude based on the respondents' answers towards emergency contraceptive. The questions related to attitude were 12 and carried 12 scores .Each correct answer was given 1 score. According to the score gained by the respondents, their attitude was assessed. The mean score was calculated and those scored above the mean and the mean score had positive attitude and scores below the mean meant negative attitude towards emergency contraceptives.

Attitude	Mean score	Composite Percentage	Scores
Positive attitude	8.84	≥73.66%	≥8.84
Negative attitude	8.84	<73.66%	<8.84

Practice

Practice is the action intended to do in order to prevent unwanted birth after having an unprotected sexual intercourse.

3.14 QUALITY CONTROL AND QUALITY ASSURANCE

- The study design was chosen appropriately.
- The data collection tools were chosen properly.
- Semi-structured questionnaires was developed and modified after pretesting.
- The whole research process was conducted under the direct guidance of supervisor.
- All the editing process was done as soon as possible after the day of the data collection.

3.15 COLLABORATION

Pokhara University

CHAPTER IV

RESULTS AND DISCUSSION

4.1 RESULTS

This chapter analyzes the data collected through the survey. The analysis was done with reference to the objectives. The study was conducted in undergraduate female students of Pokhara University on a total of 530 respondents. The chapter has been organized under major sections namely socio-demographic, knowledge, attitude and practices related characteristics.

Table 1: Demographics characteristics of the respondents

Variables	Frequency(N=530)	Percentage (%)
Age categorization of the respondents		
16-18 years	90	17.0
19-21 years	379	71.5
22-24 years	55	10.4
25-27 years	6	1.1
Minimum age= 16 years, Maximum age =27 ,Mean age =19.84,SD±1.5		
Study Courses		
Bachelor in Developmental Studies	17	3.2
Bachelor in Pharmacy	88	16.6
Bachelor in Public Health	65	12.2
Bachelor of Science in Medical Lab Technology	66	12.5
Bachelor in Business Administration	78	14.7
Bachelor in Business Administration – Banking and Insurance	74	14.0
Bachelor of science in Nursing	85	16.0
Bachelor in Engineering Science	57	10.8
Religion of respondents		
Hindu	484	91.3
Buddhism	35	6.6
Islam	4	.8
Christian	7	1.3
Caste of the respondents		
Brahmin	265	50.0
Chettri	117	22.1
Janajati	131	24.7
Dalit	17	3.2
Marital status of respondents		
Married	25	4.7

Unmarried	505	95.3
Type of family of respondents		
Nuclear	434	81.9
Joint	94	17.7
Extended	2	.4
Permanent address of respondents		
Village	186	35.1
Town	344	64.9
Currently living with		
Parents	353	66.6
Hostel	83	15.7
Renting with friends	32	6.0
Guardians	45	8.5
Alone	17	3.2
TOTAL	**530**	**100**

Table 1 depicts that majority of respondents (71.5 %) were of age group 19-21 years followed by 17% 16-18 years and least 1.1 % 25-27 years. Mean age was 19.84±1.5 Years. Most of the respondents (16 %) were studying Bachelor of Science in Nursing, 16.6 % Bachelor in Pharmacy and the least (3.2 %) were studying Bachelor in Developmental studies. 91.3% of respondents were Hindu, 6.6% Buddhist, 1.3% Christian and 0.8% Islam. The ethnicity of the respondents was 50% Brahmin, 24.7% Janajati, 22.1% Chettri and 3.2 % Dalit. Most of the respondent (95.3 %) were unmarried and 81.9 % were from Nuclear family. 64.9 % respondents were from urban area and most of them 66.6% lived with their parents followed by 15.7 % hostel, 8.5% with guardians, 6% rented room with friends and least 3.2% were staying alone.

Table 2 : Distribution of respondents according to their knowledge on Emergency Contraceptives:

Heard about Emergency contraceptives	**Frequency (N)**	**Percentage (%)**
No	91	17.2
Yes	439	82.8
Total	**530**	**100**
Source of information (*Multiple response)	**Frequency(n=439)**	**Percentage (%)**
Mass media	181	34.2
Friends	74	14
Course of study	204	38.5
Health personnel	32	6
Family	6	1.1
What is EC?		
Method used to prevent pregnancy after having unprotected sexual intercourse	384	87.5
Method used to prevent pregnancy during sexual intercourse	55	12.5
Which one these can be used as EC?		
Oral contraceptive pills	309	70.4
Intrauterine devices (IUDs)	13	2.9
Both	117	26.7
Do you know IUD can be used as EC?		
No	305	69.5
Yes	134	30.5
What is the timing for insertion of IUDs?		
Within 5 days of sexual activity	53	39.6
Within 7 days of sexual activity	24	17.9
Within 1 month	1	.7
At the time of sexual activity	5	3.7
Don't know	51	38.1
Have you heard of the following?(*Multiple response)		
Contragest	3	.6
E-72	25	4.7
e-Con	145	27.4
Feminor	22	4.2

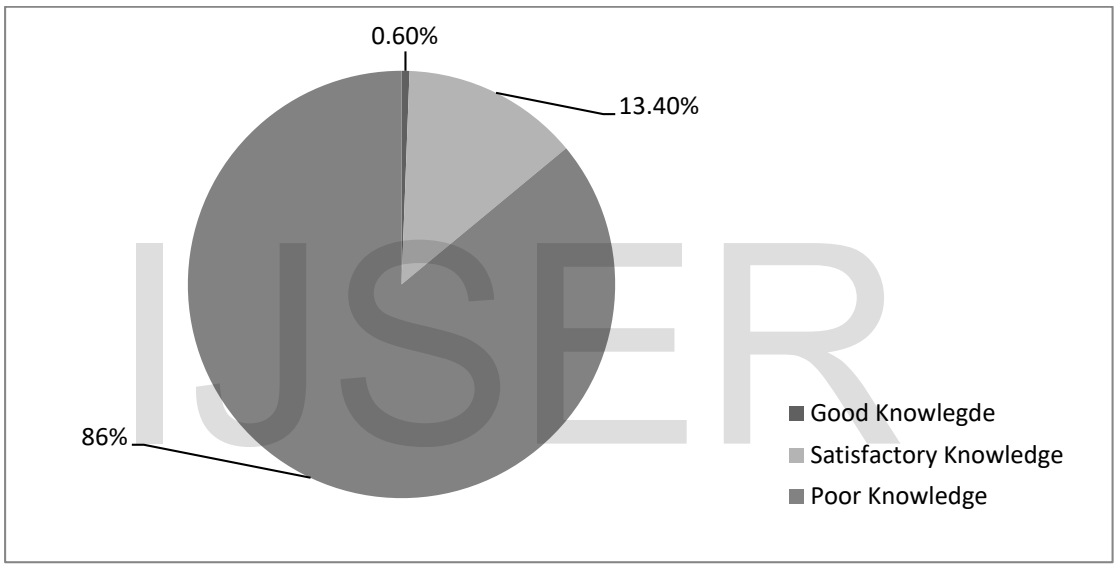
i-pill	272	51.3
Max-72	33	6.2
Pregnon	22	4.2
Unwanted 72	38	7.2
Where can you access EC? (*Multiple response)		
Hospital	117	22.1
Pharmacy	296	55.8
Government Health Facilities	102	19.2
Supermarkets	18	3.4
Don't know	42	7.9
Can you get EC without prescription?		
No	82	18.7
Yes	226	51.5
Do not know	131	29.8
When EC can be used effectively?		
Before sex	22	5.0
Within 24 -72 hours after unprotected intercourse	330	75.2
Don't know	87	19.8
Do you think use of EC is harmful?		
No	82	18.7
Yes	213	48.5
Don't know	144	32.8
If yes what could be the effects of EC use? (*Multiple responses)		
Infertility	94	17.7
Irregular menstruation	162	30.6
Nausea and vomiting	79	14.9
Weight gain and pain	65	12.3

Table 2 shows that majority of respondents (82.8%) had heard about Emergency Contraceptives, remaining 17.2% had not heard. The sources of information from course of study were 38.5 %, mass media 34.2%, friends 14%, health personnel 6% and family 1.1 %.

Majority of respondents (87.5%) had knowledge on EC .Most of the respondents (70.4%) answered oral contraceptive pills to be used as EC, followed by 2.9 % IUD and 26.7 % both.

Most of the respondents (69.5 %) had no knowledge on IUD can be used as EC. Among the 30.5 % who knew about IUDs, majority of them (39.6 %) answered the timing for the insertion of IUDs to be within 5 days of sexual activity. Most of the respondents (51.3 %) had heard of i-pill. 55.8 % respondents reported that EC are available in pharmacy and 51.5 % reported that EC can be got without prescription. About 75 % of the respondents answered EC can be used effectively within 24-72 hours after having unprotected sexual intercourse. Among the 48.5% of the respondents, who said it was harmful, 30.6% claimed irregular menstruation, 17.7% infertility, 14.9% nausea and vomiting and 12.3% weight gain and pain being harmful effects of using EC.

Figure: 1 Pie chart showing the distribution of respondents on level of knowledge on EC



The Pie chat depicts that Majority of the respondents (86%) had poor knowledge on EC followed by 13.40% had satisfactory and very less 0.6 % had good knowledge on EC.

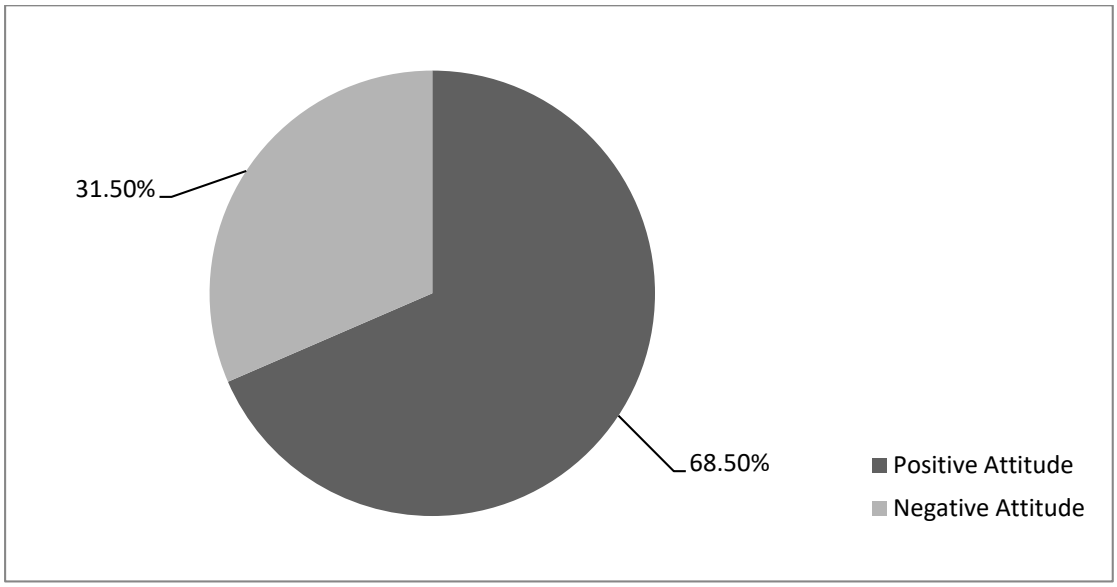
Table 3 : Distribution of respondents according to their attitude towards EC

How do you think of this method?	**Frequency (n=439)**	**Percentage**
Appropriate for women	333	75.9
Inappropriate for women	106	24.1
Would you like to have more information about EC?		
No	47	10.7
Yes	392	89.3
Whether contraception is only girl's responsibility?		
No	251	57.2
Yes	188	42.8
Do you think everybody should have the knowledge about EC?		
No	23	5.2
Yes	416	94.8
What are the ways to inform people about EC?		
At health care Centres	27	6.2
Group talks	12	2.7
Mass media	155	35.3
School/colleges	93	21.2
Conducting specific awareness programme at local level	152	34.6
Do you think EC should be easily available?		
No	86	19.6
Yes	353	80.4
Do you think promoting EC discourages use of contraceptive method?		
No	251	57.2
Yes	188	42.8
Do you think easy availability of EC increases sexual behavior?		
No	91	20.7
Yes	348	79.3
Do you think EC effective than regular contraceptive?		
No	279	63.6
Yes	160	36.4

Do you think use of EC is Cost saving than abortion and bearing unwanted child?		
No	40	9.1
Yes	399	90.9
Will you recommend the use of EC?		
No	113	25.7
Yes	326	74.3
Would you like to use EC in future if required?		
No	87	19.8
Yes	352	80.2
Total	**439**	**100**

Table 3 shows that majority of the respondents (75.9 %) viewed EC as appropriate for women. Most of them (89.3 %) liked to have more information about the method. 57.2% reported that contraception was not only girls responsibility. 94.8% of respondents answered that everybody should have knowledge on EC and 35.3% reported that mass media could be the effective medium to make people aware about the EC. Most of them (80.4 %) answered that EC should be easily available and 57.2 % perceived promoting EC discourages use of other contraceptive method. 79.3 % thought easy availability of EC increases sexual behavior and 63.6 % thought EC was not effective than regular contraceptive. 90.9 % respondents thought use of EC was cost effective than abortion and bearing unwanted child. Most of the respondents (74.3 %) recommended the use of EC and 80.2 % respondents liked to use EC in future if needed.

Figure 2: Pie Chart showing the distribution on attitude of respondents towards EC



The Pie Chart depicts that majority of the respondents (68.50%) had positive attitude towards EC and remaining 31.50 % had negative attitude towards EC.

Table 4: Distribution of respondents' answers towards practice related questions:

Experienced sexual intercourse	**Frequency(n)**	**Percentage (%)**
No	389	88.6
Yes	50	11.4
If yes, Age at first sexual intercourse		
17 years	5	10.0
18 years	12	24.0
19 years	16	32.0
20 years	12	24.0
21 years	1	2.0
24 years	2	4.0
25 years	2	4.0
Was it an act of :		
Act of will	41	82.0
Act of Force	5	10.0
Act of fear of losing a partner	4	8.0
With whom you had sex?		
Boy friend	32	64.0
Husband	16	32.0
Others	2	4.0
Used contraceptive method?		
No	19	38.0
Yes	31	62.0
Whether pregnancy occurred?		
No	41	82.0
Yes	9	18.0
Ever used EC?		
No	20	40.0
Yes	30	60.0
If yes, types of EC used? (n=30)		
Emergency contraceptive pill	26	86.7
IUD	4	13.3
Reason for the use?		
Time was miscalculated	4	13.3
Just in fear of being pregnant	21	70.0
Contraceptive failure	1	3.3
Withdrawal fails	4	13.3
Were EC recommended to you?		
No	10	33.3
Yes	20	66.7

If yes , who have recommended		
Partner	13	65.0
Friend	2	10.0
Relatives	1	5.0
Health personnel	4	20.0
Did you buy yourself?		
No	22	73.3
Yes	8	26.7
Have you faced any difficulty?		
No	1	12.5
Yes	7	87.5
If yes, what challenge you faced?		
Expensive	1	14.3
Unavailability	1	14.3
Provider's negative attitude towards you	5	71.4
If no, who brought it for you?		
Partner	18	81.8
Health personnel	4	18.2

Table 4 shows that 88.6 % respondents had not experienced sexual intercourse. Among the 11.4 % respondents who had experienced sexual intercourse, 32 % were of age 19 years and 10 % were 17 years of age. The minimum age for involving in sexual intercourse was found to be 17 and maximum age was found to be 25. Most of the respondents (82%) had sexual intercourse by their own will, 10% were forced .Most of them (64%) had sex with their boy friend. 62 % had used contraceptive method during sexual intercourse and 18% had reported to be pregnant. Most of the respondents (60 %) had used EC out of which, 86.7 % had used emergency contraceptive pills. 70 % used EC due to fear of being pregnant. EC was recommended to 66.7 % respondents. 65 % recommendation was done by partner to use EC. 73.3 % respondents did not bring EC themselves, whereas 26.7 % brought EC themselves. 87.5 % felt getting EC to be challenging. Most of the respondents (71.4 %) claimed provider's negative attitude on buying EC. 81.8 % respondent's partners had helped them to get EC.

Table 5: Association between socio-demographic characteristics and level of Knowledge:

Characteristics	Level of Knowledge		Test of significance	P value
	Satisfactory (%)	Poor (%)		
Age of the respondents				
Less than 20	10(4.2%)	228(95.8%)	χ_1^2=34.259	0.000
More than or equals to 20	64(21.9%)	228(78.1%)		
Field of study				
Non health related field	22(9.7%)	204(90.3%)	χ_1^2=5.863	0.016
Health related field	52(17.1%)	252(82.9)		
Religion				
Hindu	66(13.6%)	418(86.4%)	χ_1^2=0.493	0.503
Other than Hindu	8(17.4%)	38(82.6%)		
Caste				
Brahmin and chetteri	49(12.8%)	333(87.2%)	χ_1^2=1.467	0.263
Janajati and Dalit	25(16.9%)	123(83.1%)		
Family type				
Nuclear	64(14.7%)	370(85.3%)	χ_1^2=1.227	0.330
Joint	10(10.4%)	86(89.6%)		
Currently living with				
Parents	37(10.5%)	316(89.5%)	χ_1^2=10.660	0.002
Other than parents	37(20.9%)	140(79.1%)		

The above table shows the association between socio-demographic characteristics and level of knowledge of the respondents. Highly Statistical significant association was observed between level of knowledge and age (p=0.000, P <0.05), living status (p=0.002). It signified that age and living status directly affect to the level of knowledge.

Statistically significant association between field of study and level of knowledge (p=0.016) was found. It signified that field of study directly affect to the level of knowledge.

It was observed that there was no statistical significant association between level of knowledge and religion (p=0.503, P>0.05), caste (p=0.263), type of family (p=0.330). It signified that religion, caste and type of family did not affect to the level of knowledge.

4.2 DISCUSSION

A descriptive cross-sectional study was conducted to assess the knowledge, attitude and practice of emergency contraceptives among undergraduate female students of Pokhara University, Nepal. Data were collected from 530 respondents by using self administered questionnaire. In the study demographic profile of respondents, knowledge, attitude, practice and the association of socio-demographic characteristics with knowledge level was investigated. The findings of the study have been discussed in this chapter.

Majority of respondents, 71.5 %(379) were from age group 19-21 years. Mean age was 19.84 SD±15 Years. 57.4% (304) were studying health sciences. Most of the respondents, 91.3% (484) were belonging to Hindu. 50% (265) of the respondents were Brahmin. Most of the respondents, 95.3 %(505) were unmarried. Most of the respondents' family type was Nuclear 81.9% (434) and most of them, 66.6 %(353) live with their parents.

Majority of respondents, 82.8% (439) had about Emergency Contraceptives, this result is consistent with the result of similar study carried out in Ethiopian undergraduate female students where 84.2% of the participants had heard of EC(Ahmed et al., 2012) .However, the result differed in the study carried out in Kathmandu where the awareness of EC among college female's students reported to be 64% (Adhikari, 2009) as well as another study in Pakistan shows 48% (Naz et al., 2009) which is less than the present study.

As regard to the findings of the study on sources of information on EC, family featured as least (1.1%) which is contrary to the finding of another study conducted in Dar Es Salaam where family featured highest (31.7%) (Kagashe et al., 2014) .In the present study, mass media as a source of information was reported to be 41% which is high ,this can be because of raising publicity of EC.

Among the respondents who had heard about EC, 87.5% correctly knew its definition and 75% knew correct time of its effective use. These findings were in sharp contrast to the findings of the studies in Nepal and Nigeria ,where in 17% correctly knew its definition and 10% knew correct time of its effective use (subedi, 2012) and in another study 18% correctly knew its definition and correct time of its effective use (Aziken et al., 2003) respectively. In the study, among 30% of the respondents who knew about IUDs, majority of them 39.6% knew the correct timing of insertion of IUDs which showed almost similar rate in the similar study carried out in female college students, where 6.5% reported correct timing of insertion of IUDs (Nibabe et al., 2014).

Regarding the knowledge on type of EC, most of the respondents, 70.5 % answered oral contraceptive pills followed by 2.7 % intrauterine devices and 26.7 % both pills and IUD in the present study while this result differ from the finding of the similar study in Ethiopia

which revealed 53.7% pills, 11.4% IUD and 19.1% both pills and IUD (Nibabe et al., 2014).Most of the respondents, 51.3 % had heard of i-pill. This might be because of the increased advertisement of this product on a large scale. 55.8 % respondents reported that EC are available in pharmacy and 41 % government health facilities. The study findings get support from the similar study in Ethiopia which found 54% respondents get EC from pharmacy, 42.7% from government hospitals (Tajure, 2010) but contrasted with the findings in another similar study in Ethiopia where 87% reported pharmacy to be available source for EC (Kagashe et al., 2014).

In the present study 51.5 % respondents reported that EC can be got without prescription which differs from the result in the study carried out in South Africa where less than 30.4% knew that a prescription is not required to obtain EC (Hoque et al., 2012).

In the present study 32.8 % of the respondents were not aware of side effects of use of EC, this was higher as compared to the similar study conducted in South India, which reported 28.4% (Joseph et al., 2016).The various side effects associated to EC as stated by participants were 30.6% irregular menstruation, 17.7% infertility, 14.9 % nausea and vomiting, 12.3 % weight gain and pain wherein the similar study reported 10.9 % infertility ,12% nausea and vomiting, 9.1 % irregular menstruation, 8.1 % abdominal pain and weight gain (Joseph et al., 2016). Both study results in common revealed that infertility, nausea, vomiting, irregular menstruation, abdominal pain and weight gain are the major reported side effects of use of EC. Only 0.6% respondents had shown good knowledge ,this findings is similar to the study that reported 1% (Sakun et al., 2014).However, this finding sharply contrasted with the finding of similar studies in Ethiopia which found 27.2% (Tilahun et al., 2010), 33.9% (Nibabe et al., 2014) and 25.7 % (Desta et al., 2011) had good knowledge of EC. This could be due to low health promotion and low availability of EC in developing country like Nepal and also the possible reason for the lack of detailed knowledge on this subject may be linked to the source of information; friends /peers that may not have a good grasp of the subject.

In the current study, 68.5 % of the respondents had positive attitude towards EC which is comparable to the finding of similar study that found 62.9% had positive attitude (Tilahun et al., 2010). However, this finding is higher as compared to the result of similar studies in Ethiopia which shows 32.3% (Ahmed et al., 2012), 46.4% (Gebrehiwot et al., 2013), 50% (Kagashe et al., 2014), 53% (Tamire et al., 2007) and 59% (Girma et al., 2015) had positive attitude. But it is lower in the study where 76.5% had positive attitude toward EC (Desta et al., 2011).

In the present study, 11.4% respondents were found to be sexually active and 60% among these had ever used EC. However the findings is lower as compared to the result of similar

study in Ethiopia which showed, 23.4% were sexually active and 75 % among these had ever used EC(Ahmed et al., 2012). The reason behind this may be socio-cultural characteristics difference of the two different societies. Also there seem to be low usage of EC in the study population due to the high proportion of sexually inactive participants. However, when the sample was stratified, it was realized that usage of EC was actually high among the sexually active participants.

The present study showed that there was statistically significant association of variables (age of the respondents, field of study) and the level of knowledge. This result showed consistent result with the study where age, studying Health Sciences were associated factors to level of knowledge (Yapici et al., 2010).

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY

Many of births in Nepal are unwanted—women desire an average of 2.5 births, yet give birth to an average of 4.1 births (NDHS 2006). Nepal has a high incidence of unwanted pregnancies and incomplete and unsafe abortions, particularly among the youth who are also vulnerable to unprotected sexual habit.

A descriptive cross-sectional study was conducted to assess the knowledge, attitude and practice of emergency contraceptives among undergraduate female students of Pokhara University, Nepal. Data were collected from 530 respondents by using interview scheduled questionnaire. Data were analyzed using SPSS Version 20. Descriptive statistics such as frequency distribution and mean were calculated to assess the knowledge, attitude and practice and non parametric chi-square test was applied for determining the association between socio-demographic factors and level of knowledge.

A little less than one-third of the respondents were from age 19-21 years age group with mean 19.84±1.5 years. Most were from health science field, above 90% were unmarried and Hindu and half were Brahmins. More than one –third was from nuclear family and two-third stayed with their parents.

In regard to knowledge, more than one-third of them knew about Emergency Contraceptives and its meaning, less than half knew from course of study and mass media. Likewise about half had heard of i-pill that is available in pharmacy and can be procured without prescription. While little less than one-third do not know about IUDs that can be used as EC but one –third did knew that EC can be used effectively within 24-72 hrs after having unprotected sexual intercourse.

Majority of the respondents, 86 per cent had poor level of knowledge and less than one-third had positive attitude towards EC. 11.4 per cent respondents were found to be sexually active and among them more than half had ever used EC.

The study found statistically significant association between level of knowledge and age (p=0.000), living status (p=0.002), field of study (p=0.016). There was no statistical significant association between religion (p=0.503), caste (p=0.263), type of family (p=0.330) and level of knowledge of the respondents.

5.2 CONCLUSION

The study showed high level of EC awareness with poor knowledge and positive attitude towards EC in undergraduate female students in contrast to other studies. However, it was shown that there was low practice. The study concluded that there was statistically significant association between level of knowledge and age, field of study, living status.

5.3 RECOMMENDATIONS

- Strengthening information education and communication in colleges on sexual reproductive health, with special emphasis on different family-planning methods – including emergency contraception – will be a problem-solving procedure for female college students.
- There is also a need to empower young people to discuss sexual and reproductive health issues with their parents, friends and others.
- Emergency contraception should also be included in the curriculum of the students along with other family planning methods.
- "Reproductive Health Clubs" in college could be the venue for disseminating information on reproductive health issues. Thus, formation of such clubs is highly recommended.

LIMITATIONS OF THE STUDY

There were a number of limitations with regard to this study.

- Firstly, there was less time period and scattered affiliated colleges and universities all over Nepal. It was difficult to stay outside and expensive too. Thus for the feasibility Pokhara university and its constituent colleges were taken for the study.
- Secondly, the data were collected only from female students in colleges and cannot be generalized to all youth in the study area.
- Thirdly, self-reported information is subject to reporting errors, missed values and bias, since the study touches on sensitive issues.

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