

Knowledge and Attitude regarding Emergency Contraceptive Pills among Non-medical Students of Pokhara University

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ABSTRACT

Introduction: Emergency Contraceptive Pills (ECP) refer to a birth control modality that when used within certain time limits after unprotected intercourse can prevent an unwanted pregnancy and its adverse outcomes especially unintended births and unsafe abortions. The study aims to assess the knowledge and attitude towards Emergency Contraceptive Pills among non-medical students of Pokhara University.

Methods: A cross-sectional research design was used to conduct this study. Study population consisted of students of the School of Business and School of Development and Social Engineering of Pokhara University. A proportionate stratified random sampling technique was used to select 217 students. A self-administered questionnaire was used to collect data. Data were collected in the month of August, 2022 and were then analyzed using descriptive statistics (frequencies, percentage, mean and SD) and inferential statistics chi-square test.

Results: Result revealed that only 36.4% of respondents were aware of ECP, and 28.2% of respondents knew the correct meaning of ECP. Despite the lack of knowledge about ECP, 53.9% respondents showed a favorable attitude towards ECP. None of the demographic variables factors like age, gender, ethnicity, residence, marital status, type of family, and educational level of the respondents were found to be statistically associated with the level of knowledge.

Conclusion: This study concludes that non-medical students tend to have poor knowledge regarding ECP, but a favorable attitude towards ECP. Their demographic characteristics like age, gender, ethnicity, residence, marital status, type of family, and educational level are unlikely to influence their knowledge regarding ECP.

Keywords: *Emergency contraceptive pills, Knowledge, Non-medical students*

INTRODUCTION

ECPs are medications that can be used to prevent pregnancy following sexual contact. The World Health Organisation (WHO) has recommended three regimens of ECPs: levonorgestrel, ulipristal acetate, and combined oral contraceptives (COCs), which are made up of ethinyl oestradiol and levonorgestrel.¹ Adolescents and youths are especially vulnerable to problems of sexual and reproductive health, such as unintended pregnancy, HIV or other sexually transmitted infections (STIs), and unsafe abortion. Globally, STIs affect two million adolescents and are the second leading cause of death in this age group.² Adolescents and youths at risk of unsafe abortion do not have full access to reproductive health information and services because health providers usually avoid them and they do not get treated well because they are not expected to engage in sexual activity at their age. Effective contraception could prevent approximately 90%

of abortion-related and 20% of pregnancy-related morbidity and mortality, as well as 32% of maternal deaths.³

During the period from 2015 to 2019, the average number of unwanted pregnancies per year was 121.0 million, resulting globally yearly rate of 64 unplanned pregnancies for every 1000 women aged 15 to 49 and about half (48%) of all pregnancies were unplanned.⁴ According to WHO (2020), every year at least 10 million unintended pregnancies occur among young girls aged 15–19 in developing nations. Of the estimated 5.6 million abortions performed each year among girls aged 15–19 years, 3.9 million abortions are unsafe, contributing to maternal death, morbidity, and long-term health concerns.⁵

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Each year 27% of all pregnancies end in abortion in Asia, ranging from 22% in Western Asia to 33% in Eastern Asia.⁶ In Nepal, according to Nepal Demographic and Health Survey 2016, knowledge regarding emergency contraception was found to be poor, as only 36% of women and 55% of men have heard about emergency contraception. Similarly, the prevalence rate of contraception was 48% in which there was no proper documentation of the utilization of emergency contraception (EC).⁷

Numerous barriers to EC access have been documented, including their cost, trouble accessing them over-the-counter, low awareness, misconceptions regarding mechanism of action, and challenges that certain populations have in accessing them.⁸ According to the annual report of (DoHS) Department of Health Service of FY-2076/77, 3,235,000 women in Nepal were using a modern method of contraception resulting in the prevention of 1,255,000 unintended pregnancies, 502,000 unsafe abortions, and 1,200 maternal morbidity.¹⁰

A descriptive cross-sectional study of 388 non-medical undergraduate female students done in Kathmandu, Nepal, showed that, 44.8% of the participants had poor knowledge and 55.2% had adequate knowledge, whereas 21.6% of respondents utilizes ECPs. Additionally, a significant relationship between knowledge level and ECP use was observed in the study.¹¹

However, only few research studies have been conducted in Nepal among youth. Youths who engage in unsafe sex practices are more likely to experience unplanned pregnancies, unsafe abortions, and pregnancy-related problems. So, an understanding of the extent to which young people are aware of EC, especially ECPs, is felt to be a crucial area of study. Therefore, the objective of the study was to find out the knowledge and attitude towards Emergency contraceptive pills (ECPs) among non-medical students of Pokhara University, Pokhara-30 Kaski.

METHODS

A cross-sectional research design was used to conduct this study. Study was carried out among the non-medical students i.e. students studying in school other than Health and Allied Sciences of Pokhara University. These school included School of Business and School of Development and Social Engineering.

The sample size was calculated using the Fishers' formula $n = Z^2pq/e^2$ with 95% confidence interval (Z), 5% margin of error (e) and 17% prevalence rate (p).¹² The final sample size was 217. A convenient sampling technique was used for selecting the School of Business and School of Development and Social Engineering. Considering the distribution of population, stratified proportionate random sampling technique was used to ensure reasonable distribution of samples from each semester of each program. Among 217 respondents 70.5% respondents were from School of Business and 29.5% were from School of Development and Social Engineering. The roll numbers of the students were written on identical paper slips then the slips were kept inside the box and shuffled. Then the required number of slips was drawn one by one. Students with their roll no. on the drawn slips were included in the sample.

A self-administered questionnaire consisting of three parts was developed through review of literature. The first part included 14 questions regarding demographic information of the respondents. The second part included 18 questions that assess the knowledge of the respondents on ECP among which 6 questions were multiple responses type. The level of knowledge was classified as good (mean and above the mean) and poor (below the mean). In third part 12 statements where 10 were positive and 2 were negative was used to assess the attitude of the respondents on ECP.

Pre-testing of research instrument was carried out among 22 students (10% of the total sample size) from the School of Engineering from Pokhara University. After the pre-test, no modification was required. The reliability of the instrument was calculated by using Karl Pearson's correlation coefficient test by adopting the Split Half technique for knowledge items (0.80) and Cronbach alpha for attitude items (0.7). Ethical approval of the research proposal was taken from the Institutional Review Committee of Pokhara University and permission to collect data was also obtained from the administration heads of the School of Business and the School of Development and Social Engineering. Informed written consent was taken from each respondent prior to collecting data from them. Data were collected through self-administered

questionnaire method in the classroom setting. Anonymity of the obtained information was ensured by instructing the respondents not to write their names in the questionnaire. Respondents filled questionnaires in the presence of the researchers to prevent information contamination. They were requested to check for completeness and consistency of filled questionnaire before submission. The period of data collection was from 7/1/2022 till 7/14/2022.

The collected data were edited, coded and entered in Epi data. SPSS (Statistical Package for Social Sciences) version 16 program was used to analyze the data. Descriptive statistics such as mean, standard deviation, frequency, and percentage were used to analyze the demographic variables and knowledge and attitude variables. The Chi-square test was used to analyze the association of level of knowledge with the selected demographic variables.

RESULTS

Table 1: Socio- demographic Characteristics of the Respondents (n = 217)

Socio- demographic Variables	Number	Percent
Age in completed years		
≤ 21	116	53.5
>21	101	46.5
Gender		
Male	96	44.2
Female	121	55.8
Ethnicity		
Brahmin/Chhetri	166	76.5
Others*	51	23.5
Religion		
Hinduism	199	91.7
Others**	18	8.3
Residence		
Rural	9	4.1
Urban	208	95.9
Marital status		
Married	17	7.8
Unmarried	200	92.2

Age range: 18-25 years, Mean age \pm S.D: 21.30 \pm 1.83

*Dalit, Janajati, Madeshi and Muslim

**Buddhism, Christianity, and Islam

The data depicted in table 1 shows that over half (53.5%) of the respondents were \leq 21 years old and 55.8% of the respondents were female. With regards to ethnicity, more than three quarters (76.5%) of the respondents belonged to Brahmin/Chhetri. Almost all (95.9%) respondents were residents of urban area. Likewise, 92.2% were unmarried.

Table 2: Knowledge of Meaning, Source of information, and Indication to use ECP (n =217)

Knowledge Variables	Number	Percent
Meaning of ECP		
Use of contraceptive pills soon after unsafe sex	59	27.2
Source of information about ECP*		
Family	19	8.8
Friends	70	32.3
School/college	130	59.9
Internet	77	35.5
Health institution	32	14.7
Hospital/ Nursing home/ clinic		
Pharmacy	20	9.2
Newspaper/Journals /Articles		
	31	14.3
Indication to use ECP		
After unsafe sex	194	89.4

*Multiple responses

Table 2 reveals that only 27.2% of the respondents knew the correct meaning of ECP and majority (59.9%) had source of information regarding ECP as school/college. Most respondents were aware of the indication of ECP.

Table 3: Respondents' Knowledge regarding Mechanism and Recommended Timing and Dose of ECP (n=217)

Knowledge Variables	Frequency	Percent
Mechanism of ECP		
Preventing or delaying ovulation	41	18.9
Recommended timing of taking ECP		
Within 5 days	12	5.5
Recommended dose of ECP		
1 dose	107	49.3

Table 3 illustrates that only 18.9% knew the correct mechanism of ECP. Likewise, only 5.5% of the respondents were aware of the recommended time to take ECP after unsafe sex. Nearly half (49.3%) of the respondent knew the recommended dose of ECP to be single dose.

Table 4: Respondents' Knowledge regarding Advantages, and Effect of ECP (n=217)

Knowledge Variables	Number	Percent
Advantages of ECP		
Prevents pregnancy	188	86.6
Effectiveness of ECP		
Highly effective (>95%)	82	37.8
ECP as a regular means of contraception		
No	116	53.5

Table 4 illustrates that most (86.6%) of the respondent were aware about the advantage of ECP as preventing pregnancy whereas only 37.8% of the respondents stated ECP to be >95% effective in preventing pregnancy. more than half (53.5%) of the respondents were aware that ECP cannot be used as a regular method of contraception.

Table 7: Association of the Respondents' Levels of Knowledge with Selected Socio-demographic Variables (n=217)

Variables	Knowledge Level		Chi-square value	df	P-value
	Good	Poor			
Age in years			0.398	1	0.528
≤ 21	40	76			
>21	39	62			
Gender			2.856	1	0.091
Male	29	67			
Female	50	71			
Ethnicity			1.305	1	0.253
Brahmin/Chhetri	57	109			
Others*	22	29			
Residence			0.269	1	0.604
Rural	2	7			
Urban	77	131			
Marital status			0.904	1	0.342
Married	8	9			
Unmarried	71	129			

*Dalit, Janajati, Madhesi and Muslim

Table 5: Respondents' Level of Knowledge regarding ECP

Level of Knowledge	Number	Percent
Good	79	36.4
Poor	138	63.6
Total	217	100.0

Mean ± S.D:16.50±2.87, Minimum: 7, Maximum: 24, Total score 27

Table 5 illustrates that majority (63.6%) had a poor level of knowledge and remaining 36.4% of the respondents had a good level of knowledge on ECP.

Table 6: Respondents' Level of Attitude regarding ECP

Attitude level	Number	Percent
Positive Attitude	117	53.9
Negative Attitude	100	46.1
Total	217	100.0

Mean ± S.D: 42.36±6.21, Minimum: 24, Maximum: 55

The data in table 6 reveals that majority of the respondents, (53.9%) had positive attitude and remaining 46.1% had negative attitude towards ECP.

Table 7 illustrates that the level of knowledge of the respondents was not found to be statistically significant with the selected socio-demographic variables like age, gender, ethnicity, residence, marital status, type of family, and educational level of the respondents at $p < 0.05$.

DISCUSSION

This study shows that only 27.2% of the respondents had correct knowledge of the meaning of ECP. This finding corresponds with the study done in Delhi, India which revealed a small minority (11%) of the respondents knew the correct meaning of ECP.¹³ The lower knowledge in this study may be attributed to the fact that it was conducted among students with non-medical backgrounds, and 92.2% of the respondents were unmarried, so they may not be aware of the precise meaning of ECP. However, another study which was conducted in, Bayelsa State, Nigeria, contradicts to the findings of this study which showed the majority of (69%) knew the correct meaning of emergency contraceptive pills.¹⁴

In this study, more than three-quarters (78.3%) of the respondent stated the indication of ECP as unsafe sex. This result is similar to the study undertaken among students in Portugal which showed that majority (63.8%) of the respondents stated forgetfulness to take a contraceptive as a major indication to use ECP.¹⁵ However, study done in Kathmandu valley among undergraduate female student revealed that less than a half (43.9%) stated contraceptive failure as the indication to use ECP.¹⁶ One possible explanation for female students' low knowledge levels may be due to unequal or biased sex education.

In this study, more than half (59.9%) of the respondent responded school and college are the greatest source of information regarding ECP which is different to the finding of a study done in Ghana where respondents indicated internet is the main source to obtain information regarding ECP.¹⁷ This study was conducted among students from different cultural backgrounds where the information regarding ECP are likely to be better informed through social media in Ghana rather than in Nepal which accounts for the differences in results.

Minority (5.5%) of the respondent knew the exact timing for the consumption of ECP. This is consistent with a study conducted in Uganda, in which

only 1.6% were aware of the timings for consumption of ECP.¹⁶ The findings of the study showed, one-third (37.8%) of the respondents knew that ECP is highly effective to prevent pregnancy which is similar to the findings of the study conducted in Arba Minch town.¹⁷

In this study, just over half (53.5%) of the respondents knew that ECP cannot be used as a regular contraceptive method. This result is in opposite to the result of the study done in Parbat which showed that only (13.82%) of the respondent knew that ECP cannot be used as a regular contraceptive method.¹² These results indicated the inconsistency of knowledge probably due to the location of the respondents. Students who live in Pokhara might have better opportunity to receive more knowledge than in rural area of Parbat.

This study showed that only about one-third (36.4%) of the respondents had good knowledge about ECP. This study finding is similar to the finding of the study done in Delhi which showed only 34.1% had good knowledge about ECP.¹³

Attitude towards ECP

The attitude level was positive towards ECP in over half of (53.9%) of the respondents. This result is similar to findings of the study done in Southern Ethiopia which showed that half (50%) of the respondents had a positive attitude towards ECP.¹⁷

CONCLUSION

The study concludes that despite being educated and easily accessible to social media non-medical youth students in general possess insufficient knowledge about ECP, particularly in relation to proper timing and effectiveness of ECP hence, it is a need to promote awareness among youths about ECP. Respondents possess a positive attitude towards the application of ECP which will be beneficial in applying knowledge into practice if they have adequate resourceful information. Hence, it is crucial to improve their knowledge about ECP using different possible sources such as formal education, health professional communication and through mass media to disseminate precise and accurate information among youths.

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