

# Knowledge and attitudes regarding the Emergency Contraceptive Pills among the Defence University students in Sri Lanka

GJI Boteju<sup>1#</sup>, MABB Samaratunge<sup>2</sup>, BMR Fernandopulle<sup>3</sup> and MN Priyadarshanie B.Sc. Nursing<sup>4</sup>

<sup>1</sup>Graduate of Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka.

<sup>2</sup>Graduate of Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka.

<sup>3</sup>Senior Lecturer, Head of the Pharmacology Department, Faculty of Medicine, General Sir John Kotelawala Defence University, Sri Lanka.

<sup>4</sup>Lecturer, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka,

# <[isurikaboteju@gmail.com](mailto:isurikaboteju@gmail.com)>

**Abstract** - The emergency contraceptive pill (ECP) is a method of hormonal contraception, which is indicated after unprotected sexual intercourse when regular contraceptive methods are not used. There is very scanty amount of information available in Sri Lanka regarding knowledge on the ECP. Hence, it is an important area to study as there are higher rates of maternal deaths due to unsafe abortions in Sri Lanka. ECP can be a strategy to reduce them. The objective of this study is to investigate the knowledge and attitudes regarding Emergency Contraceptive Pills among Defence University students.

This is a descriptive cross sectional study conducted among 395 undergraduates of Kotelawala Defence University (KDU) using self-administered questionnaires during the period of July to October, 2016. Study participants were selected by stratified random sampling. Data was entered and analyzed using Minitab version 14.

Among the total participants (n = 395), only 69.1% had heard of ECP. The main source of information was reported as formal education 47.1%. From the total participants, less than half, 45.5% students knew that ECP was important in post rape and 20.2% knew that it was important as a preferred contraceptive method. Among the study participants, 42.8% agreed to the idea that if ECP was readily available it might promote promiscuity among student.

Most of the students, 42.5% thought that it was more effective to take ECP soon after unprotected sexual intercourse. Only 13.7% students knew the correct time gap between the doses which was 12 hours. Higher number of students, 57.5% has not received information regarding side effects or problems that might get from ECP. Meanwhile, 13.4% stated that ECP might prevent STI's and HIV. Among the total participants, only 25 (6.5%) had used ECP. From the participants who had used ECP, 52% of them had experienced side effects. Only 23% knew about side effects of ECP.

The current study results on influencing factors for knowledge indicated gender had a significant effect on

every aspect of knowledge and attitudes on ECP while, religion did not have a significant effect on any aspect. Age, gender and year of study have a significant effect on knowledge on ECP while gender, year of study, and department has a significant effect on attitudes.

Although the general awareness on ECP was reasonably good, majority did not have a sufficient knowledge on ECP for an effective usage. Most of the attitudes on ECP were towards positive.

**Keywords** - Emergency contraceptive pills, Knowledge, Attitude, Defence University, Sri Lanka

## I. INTRODUCTION

Emergency Contraception (EC) is a method of preventing pregnancy soon after an unprotected sexual intercourse, after a sexual assault or rape, if a condom breaks or a diaphragm slips out of place, a woman forgets to take birth control pills. EC has been available for more than 30 years, (ICEC, 2012) worldwide and for about 10 years in Sri Lanka.

ECP is not a family planning method (UMM, 2012). It can be taken to prevent pregnancy within 72 hours of unprotected sexual intercourse (Byamugisha et al, 2006). It was found that the sooner the first dose was taken, the greater the effectiveness (Puri et al, 2007). The ECP, available in Sri Lanka is a single pill containing 1.5mg of levonorgestrel (progestogen-only contraceptives). These pills are also known as Postino 1 and 2.

Many pregnancies are mistimed or unwanted. These pregnancies may carry a high risk of morbidity and mortality, particularly in settings where safe abortion is not accessible or where quality obstetric services are not available for those women continuing a pregnancy to term.

According to some unrecorded data, ECP known to be a popular and common contraceptive method in Sri Lanka. Even though, ECP is very popular in the community setting, malpractice and misconceptions are the main

reasons for the poor usage of ECP (Parey, 2010). If the community is aware regarding proper usage of ECP, then it can further reduce the maternal mortality that is associated with unsafe abortions.

Premarital sexual relationships have increased globally. According to a recent research the global premarital birth percentage was 40.7% in 2012-2014. According to the above study, Asian unmarried mother rate is less when compared to the other ethnic groups in the world and it is 17% (Thalagala, 2012). A previous study conducted among advanced level students in selected districts in Sri Lanka had pointed out that 42.9% of students had engaged in premarital sex and among them only 12.2% of students had used contraceptives (Perera et al, 1999). Another study conducted in Sri Lanka, pointed out that 22% of out of school adolescents had engaged in heterosexual relationships (Thalagala, 2004).

The consequences of premarital sexual relationships are as follows; increased rate of premarital unwanted and unexpected pregnancies, increased criminal abortion rates (Puri et al, 2007), interruption of educational process, socio-economic burden, as well as health issues such as increased mortality and morbidity ratios mainly due to criminal abortions (Thalagala, 2012).

#### *A. Abortions in Sri Lanka and Contraceptive Knowledge*

In the recent decades the number of induced abortion rate has been increased in Sri Lanka (Abeykoon, 2009). Hence, around 1 in 10 pregnancies end up as an unsafe abortion in Sri Lanka (Thalagala, 2012). Unsafe abortion has become the 2nd commonest cause of maternal mortality in 2010 (Atapattu, 2012). As abortions are illegal in Sri Lanka there are no reliable statistical data to be found. Nevertheless, attempts have been made to estimate the incidence of induced abortions in Sri Lanka.

In a study conducted by UNFPA and Ministry of Health in 2009, emphasized the necessity of educational programs regarding the effective use of contraceptive methods and side effects of abortions in order to reduce abortion related maternal mortality in Sri Lanka (Abeykoon, 2009). The government has recommended contraceptive methods to lower the abortion rates. A study conducted by Dr. N. Thalagala revealed the low levels of reproductive health and contraceptive knowledge among adolescents even though they are sexually active (Thalagala, 2004).

The inadequate formal health education regarding contraception, given by schools, universities and community health institutions results in the high rate of unintended pregnancies in Sri Lanka (Kumar, 2013). Furthermore, overall knowledge of contraceptive among out of school adolescents is not up to satisfactory level in Sri Lanka (Kumar, 2013).

Even though community health services target on married couples on family planning, very less facilities and information are provided to the youth who are at the verge of risky sexual behaviours (Perera et al, 1999).

The aim of this study is to determine the knowledge and attitudes of undergraduates; cadets and day scholars in the Defence University regarding Emergency Contraceptive Pills.

## II. METHODOLOGY

Study design is descriptive cross sectional study. It was carried out on both male and female local undergraduate officer cadets and day scholars of Kotelawala Defence University.

To obtain a representative sample, stratified random sampling was applied and students were divided into two stratum as health science and non health science students. Sample size was 480 undergraduates (including 25% non-response rate). Data was collected using a self-administered Questionnaire. The pilot study was carried out on randomly selected 48 students (10% of the sample size) in the Faculty of Allied Health Sciences.

Ethical clearance was obtained from the Ethical Review Committee, Faculty of Medicine, General Sir John Kotelawala Defence University. Data was entered and analysed using Minitab version 14.

## III. RESULTS

Total of 395 students answered the questionnaire (82% response rate). Majority (89.1%) was between the age group 18 to 24 years. Most of the students (97.2%) were unmarried. Majority of the respondents (66.6%) were non-medical students while the others (33.4%) medical. Most of the students (38.2%) were second years. Maximum number of the respondents 345 (87.3%) were Buddhist by religion.

#### *A. Distribution of Knowledge on Emergency Contraceptive Pills*

Majority of respondents (69.1%) had ever heard of ECP. Regarding their source of information about ECP from the total population, 186 (47.1%) reported that they got information through formal education; 177 (44.8%) got information through friends and neighbours; 170 (43%) got information from printed materials, media and internet. Only 97 (24.6%) of participants got information through health professionals.

Higher number of students, 286 (72.4%) knew that they can obtain ECP from pharmacy. Most of the students, 172 (43.7%) said that there was no need of a prescription to

obtain ECP while 49(12.4%) said that they need a prescription to obtain ECP.

Out of 395 students, 95 (24.6%) agreed with the idea that ECP was effective when taken before sexual intercourse, while majority 200 (51.7%) did not have any idea regarding the effectiveness of ECP before taken sexual intercourse. Most of the students, 167 (42.5%) thought that it was more effective to take ECP soon after unprotected sexual intercourse. However, 159(40.5%) stated that they did not know whether it was more effective to take ECP soon after unprotected sexual intercourse. Meanwhile, 122 (31.2%) students were disagreed to the idea of ECP was effective when taken 72 hours after unprotected sex; 52 (13.4%) students agreed and 212 (54.6%) stated that they did not know.

Only 54 (13.7%) students knew the correct time gap between the doses which was 12 hours. Higher number of students, 284 (71.9%) stated that ECP prevents a pregnancy while 80 (20.2%) thought that ECP terminates a pregnancy. Only, 123 (31.4%) students agreed with the idea that ECP was effective more than natural methods of contraception.

Majority of the students, 341 (88.3%) answered that they had never used ECP while 25 (6.5%) students stated that they had used. Majority of the students, 156 (39.5%) stated that ECP should be taken soon after an unprotected sex while 127 (32.1%) students answered that it was within 24 hrs. Meanwhile, 113 (28.6%) answered that ECP should be taken within 72 hrs. 17 (4.3%) stated that it was after 72 hrs. and 12 (3%) stated that it was within 5 days. Majority of the participants, 268 (67.8%) did not know that how often that they can use ECP. Only 43 (10.9%) knew that there should be at least 3 months gap while, 21 (5.3%) answered that they can use ECP weekly or monthly and 17 (4.3%) answered that they can use it frequently.

From those who had used ECP, only 13 (52%) students had experienced side effects. Higher number of students, 227 (57.5%) have not received information regarding side effects or problems that might get from ECP. Only 31 (7.9%) students received information about precautions regarding side effects or problems of ECP. Many students 188 (47.6%) had mentioned that ECP might prevent future pregnancy, 64 (16.2%) thought that ECP was illegal and 53 (13.4%) stated that ECP might prevent STI's and HIV.

#### *B. Distribution of Attitudes on Emergency Contraceptive Pills*

Less than half, 180 (45.5%) students mentioned that ECP was important in a situation like post rape, 177 (44.8%) answered that it was important as back up when condom breaks, 121 (30.6%) stated that it was important if oral

pills were forgotten and 80 (20.2%) stated that it was important as a preferred contraceptive method. Majority of the students, 142 (35.9%) was uncertain that whether availability of ECP might promote promiscuity among students. While, 169 (42.8%) agreed to the idea that if ECP was readily available it might promote promiscuity among student.

Most of the students, 178 (45%) agreed to the idea that ECP should be easily accessible. Majority of students from those who had an opinion that ECP should be low cost, 162 (40.9%) agreed to the idea. Minority of 75 (18.9%) students answered that ECP should only be available for victims of rape while majority of the students, 179 (44.3%) answered that it should not. Majority of the respondents, 142 (38.4%) mentioned that ECP should be available without prescription while 89 (22.5%) mentioned that it should not. To the idea of that ECP should be available only for women over 18 years, majority of 145 (36.7%) agreed while others, 107 (27.1%) disagreed.

Majority of the respondents, 228 (57.7%) had answered that they might not use ECP in the future while 120 (30.4%) had answered that they might. Higher number of students, 170 (43%) had mentioned that they would recommend ECP to a friend or a relative if needed while 114 (28.8%) had mentioned that they would not recommend.

#### *C. Investigating of Influencing Factors to Knowledge and Attitudes on ECP*

**Table 1: Association between the knowledge with selected socio-demographic variables.**

Socio-demographic variable	P- Value	Significant Association
Age with ECP awareness	0.001	✓
Gender with ECP awareness	0.006	✓
Department of study with ECP awareness	0.384	×
Year of study with ECP awareness	0.003	✓
Religion with ECP awareness	0.477	×

  

✓	There is a significant association
×	There is no significant association

It was revealed that there was an association between age and attitudes on promiscuity (P-value: 0.006). But there was no association between the attitudes on promiscuity and gender (P-value: 0.983), department of study (P-value: 0.569), year of study (P-value: 0.547) and religion (P-value: 0.486).

**Table 2: Association between attitudes on future usage of ECP with selected socio-demographic variables.**

Socio-demographic variable	P- Value	Significant Association
Age	0.220	×
Gender	0.013	✓
Department of Study	0.002	✓
Year of Study	0.045	✓
Religion	0.178	×

**Table 2: Association between attitudes on future recommendation of ECP to a friend or relative with selected socio-demographic variables.**

Socio-demographic variable	P- Value	Significant Association
Age	0.119	×
Gender	0.007	✓
Department of Study	0.001	✓
Year of Study	0.006	✓
Religion	0.432	×

#### IV. DISCUSSION

Young adults from various areas in Sri Lanka enter the University for their Tertiary Education. They are from different socio - economic backgrounds and as Sri Lanka is a multi-cultural society, they are from different religious backgrounds as well. After entering for tertiary education they experience enormous freedom therefore, it instigates them to establish new relationships. Considerable proportion of male and female school age adolescents in Sri Lanka has exposed to risky sexual activities within their secondary education (Perera et al, 1999)(Thalagala, 2004). Those adolescents enters the University for their Tertiary Education therefore, university students have a relatively higher chance of unprotected sexual intercourse. Usually, relationships compel the couple to engage in various sexual activities.

In Sri Lanka abortions are not legalized. Therefore, very less number of surveys has been conducted on unsafe abortions. From those limited surveys, it has been proved that the rate of unsafe abortions have been gradually increased from 2001 to 2008 from 8% to 13%. Unsafe abortion has been a leading cause for the maternal mortality during recent 8 years period (Kumar, 2013). Maternal mortality is an important health indicator which has a huge impact on measuring a country's development. In order to address this health burden, the Ministry of Health has suggested introducing contraceptive methods to the people and those contraceptive services at the grass root level targets married women. Even though it has implemented likewise, previous researches has

highlighted the low levels of awareness in contraceptive methods (Kumar, 2013).

Furthermore, youths as a group who are at the reproductive age, they also have a risk for unintended pregnancies. Even though youth is sexually active, they are not targeted for providing adequate information regarding contraceptives. Among those who engaged in premarital sexually activities, very few has used contraceptives (Ratnayake, 2000). Due to the fact that young women engaged in pre-marital sexual intercourse, it is better for them to have adequate knowledge to prevent unintended pregnancies. Therefore, recommended contraceptive methods should be introduced to them. Emergency contraceptive is one method that can be introduced to them.

According to present study, considerable number of defence university students had heard about ECP, 69.1% of the respondents. Studies done in Trinidad and Iran respectively had reported 63.1% and 95.4% awareness (Parey et al, 2010)(Delaram & Rafie, 2012). Similar studies had done in Uganda and Ethiopia, the awareness on EC was respectively, 45.1% and 84.2% (Byamugisha et al, 2006)(Ahamed et al, 2012).

Main source of information was reported as formal education and friends and neighbours. Similar studies had shown media, (Ahamed et al, 2012) medical professionals (Parey et al, 2010) and friends (Byamugisha et al, 2006) as their main source of information. Less than half of the students (43.7%) knew that they do not need a prescription to obtain ECP. Two- third of the participants knew that they can obtain ECP from pharmacy. In parallel studies pointed out that 78.3% (Ahamed et al, 2012) participants said that they can obtain ECP from health institutions while 65.7% (Parey et al, 2010) stated that they can obtain ECP from the pharmacy.

Less than half (42.5%) of the students knew that ECP was more effective when taken soon after unprotected sexual intercourse. A study conducted in Trinidad reported that 62% knew ECP were more effective when taken soon after unprotected sexual intercourse (Parey et al, 2010). Only 13.7% students knew the correct time gap of ECP which was 12 hours. It seems that majority of the students did not know the correct time gap between the doses. In parallel studies in Iran and India noted that respectively 57.7% (Delaram & Rafie, 2012) and 38.2% (Puri et al, 2007) knew about the correct time gap.

Most of students 71.9% knew that ECP prevents a pregnancy. Majority of the students did not know the effectiveness of the ECP in preventing a pregnancy. In addition to that, majority of the students did not know whether ECP is more effective than natural methods. Majority (67.8%) of the students did not know how often

they can use ECP. Only 6.5% students had ever used ECP. From those who had used ECP 52% had experienced side effects. While 57.5% had not received information on side effects and problems of ECP. Only 7.9% had received information about precautions for side effects of ECP. Similar studies revealed 11.1% (Puri et al, 2007) did not know about the side effects.

Less than half had mentioned that ECP might prevent future pregnancies while in similar studies 31% (Parey et al, 2010) stated that ECP might prevent future pregnancies. In current study, 16.2% had answered that ECP was illegal. Moreover, 13.4% stated that ECP might prevent STIs and HIV.

In current study 45.5% of participants had answered that ECP was important in a situation like post rape. Similar studies were reported that 82.1% (Ahamed et al, 2012) and 32.4% (Puri et al, 2007) respectively from Ethiopia and India ECP was important in a situation like post rape. Less than half 44.8% of the study population had answered that ECP was important as a backup when condom breaks. Above mentioned Ethiopian study reported that, 49.9% (Ahamed et al, 2012) knew the worth of ECP as a backup when condom breaks. In our study 30.9% had answered that ECP was important when oral pills were forgotten. Another study revealed that only 11.1% (Ahamed et al, 2012) thought that ECP was important when oral pills were forgotten. Considerable proportion of respondents 20.2% reported ECP is suitable as preferred contraceptive method whereas ECP was not recommended as a preferred contraceptive method (ICEC,2012).

If ECP should be readily available, 45.8% of students answered that it might promote promiscuity while 13.5% disagreed and majority of the students were unsure. Related studies showed similar outcomes (Parey et al, 2010)(Byamugisha et al, 2006). Present study revealed that majority of the students, 138 (34.9%) agreed to the idea that ECP should be easily accessible. Parey et al in 2010 revealed a similar finding. As our study results indicates majority of the students (32.1%) had an opinion that ECP should be low cost. This is in line with another study (Parey et al, 2010). Very less number of students thought that ECP should only be available for victims of rape, while majority thought it should be available for all. Maximum number of students agreed to the idea that ECP should be available only for women who are over 18 years. This is similar with the study conducted in Trinidad (Parey et al, 2010). The present study revealed higher number of students (57.7%) responded that they might use ECP in future. In addition to that 43% respondents intended to recommend ECP to a friend or relative. A similar study suggested that only 33.2% (Ahamed et al, 2012) respondents had an intention to use or suggest to a friend or relative.

The current study results on influencing factors for knowledge indicated gender had a significant effect on every aspect of knowledge and attitudes on ECP while, religion did not have a significant effect on any aspect. In addition to that, age, gender and year of study have a significant effect on knowledge on ECP. Apart from that, it was found that gender, year of study, and department played a major role as influencing factors on attitudes.

## V. CONCLUSION

According to the present study finding it can be concluded, the awareness on ECP is at a considerable level. However, there were many misconceptions on knowledge, to illustrate, most of the students stated that ECP can be used as a preferred contraceptive method. Most of the attitudes on ECP were towards positive. Even though, it was found from the present study that undergraduates had heard about ECP through formal education, they did not have a sufficient knowledge on ECP.

Therefore, it is recommended that health professionals should step in and interfere with current issue and provide sufficient knowledge to youth. In addition to that, undergraduates had negative attitudes towards ECP. Therefore, it is necessary to change attitudes on ECP.

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