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Research Article

A Study on Knowledge and Attitudes on Emergency Contraceptive Pill among the Females at Selected Educational Institutes of Kamrup District

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ABSTRACT

Background: The modernization and technological improvement changing influence younger generation, are more vulnerable to get involved in it, and may involve in premarital sex. Pre-marital sex may lead to an unwanted pregnancy. Most of these unplanned pregnancies are not carried to full term but aborted often in unhygienic conditions leading to serious consequences. Emergency contraception gives a woman the last opportunity to prevent herself from unsafe abortion. However, one should be aware that emergency contraceptive pills (ECPs) are not recommended for regular use. **Materials and Methods:** This was a descriptive quantitative study carried out at selected educational institutes, i.e., in higher secondary schools, junior colleges, and colleges of Kamrup district among 1127 higher secondary and degree female students selected with the help of non-probability sampling technique. Structured knowledge questionnaire with 20 questions on five subheadings and three-point Likert scale with ten positive statements were used to assess the knowledge and attitudes on the ECP. Both the descriptive and inferential statistics were used to analyze the collected data. **Result:** Of total 1127 females, most of the females, i.e., 763 (67.70%) had moderately adequate knowledge with the aggregate mean knowledge 10.08 and SD 2.933 on ECP, and most of the females, i.e., 844 (74.89%) had an unfavorable attitude toward ECP. **Conclusion:** Female students do not have adequate knowledge of the ECP and do not have favorable attitudes toward the ECP.

Keywords: Emergency contraceptive pill, Females, Unwanted pregnancy

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Introduction

Although people of India follow traditional beliefs, nowadays rapid modernization and technology modifying the lifestyles and moral values are fading slowly.[1,2] These changes easily influence the younger generation.[2,3] More than a quarter of Indian youngsters have pre-marital sex.[4] Pre-marital sex may lead to unwanted pregnancy due to high chance of contraceptive failure. Unwanted pregnancy can also occur as a result of rape or sexual assault.[5] Almost 8–30 million unwanted pregnancies occur from contraceptive failure each year.[6] Womenseek the abortion and sometimes die of complications due to unsafe abortion.[7] These induced abortions can be prevented by the correct use of emergency contraceptive (EC) pill.[8] Emergency contraception gives a woman the last opportunity to prevent an unwanted pregnancy.[9]

However, one should be aware that EC pills (ECPs) are not recommended for regular use.[9,10] ECPs contain higher doses of the same hormones, which are found in regular oral contraceptive pills.[5] ECP is contraindicated to

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female with conditions of pregnancy, breastfeeding, blood disorders, long-term illness, obesity, heart attack, angina, heart valve disease, irregular heartbeat, moderate-to-severe high blood pressure, high cholesterol levels, severe diabetes with complications, female who smokes >40 cigarettes per day, female with the age above 50 years, and allergic to one or any of the ingredients of ECP.[5] Side effect of ECP occurs due to the frequent use of ECPs (WHO).[11]

There are many potential common short-term side effects of ECPs, such as severe pain in the leg, severe abdominal pain, chest pain loss of vision, trouble in speaking, skin allergies, vaginal thrush, change in menstrual bleeding, decreased sex drive, and steepening of corneal curvature.[5]

ECPs also cause long-term side effects such as lessen the chances of a pregnancy in later life,[12] bleeding unrelated to expected menses,[13] ovarian damage, ovarian cancer, ectopic pregnancy, depression in later life, and heart disease.[14]

The convenience of ECP use to avoid unwanted pregnancy may lead to irresponsible sexual behavior such as unprotected sex. This consumption could lead to a number of infections or harms.[12,14] One should always use other contraceptive devices while having sex and should not depend on ECP routinely.[15] ECPs are not as effective as regular methods of contraception such as oral contraceptive pills or condoms.

A TV advertisement in the year 2009 misleads many teenage girls to treat ECP as a regular form of contraception. These caused worry among the parents, government officials, and medical professionals. Later, in the year 2010, the government decided to hold the product with the inclusion of usage warnings in advertisements.[9,16] Now, in India, ECP is available over the counter with the inclusion of usage warnings. Still, the rate of ECP use on multiple occasions is high. The rate of ectopic pregnancy is high among the unmarried females.[17,18]

Incorrect information was published in the Government booklet (NRHM, Allahabad in 2014) that ECPs can be used many times without any hindrance. Criticizing this health expert stated that the health of an individual taking ECPs on a regular basis can endanger their health safety.

Indian teenagers indulge in pre-marital sex to enhance their relationship. Taking ECP has become a habit for some of the teenage girl as a solution of pre-marital sex.[19] Therefore, the researcher of the present study assumes that the females do not have sufficient knowledge of ECP, especially it's correct timing and side effects.

Materials and Methods

Study design and setting

The descriptive study designed was adopted for the present study. The selected educational institutes, mainly the higher secondary schools, junior colleges, and colleges of Kamrup District, were taken as study setting because these locations were the most appropriate specific places where females studying in higher secondary 1st year, 2nd year, and degree first semester, third semester, and fifth semester were available from diverse background such as students from urban as well as rural areas, students from different caste, religion, students both day scholar, and hostellers.

According to the available data collected from the Government of Assam, Office of the Inspector of School, Kamrup district circle, and Government of Assam, Office of the Director of Higher education, Assam, Kahilipara, there were 61 numbers of coeducation and 5 girls higher secondary school, 32 numbers of coeducation and 3 girls junior colleges, and 35 numbers of coeducation and 3 numbers of girls colleges were available in Kamrup district.

Sample size and sampling method

Non-probability purposive sampling technique was used to select the category of educational institutes: Higher secondary school, junior college, and colleges, to collect information from the females studying in higher secondary and degree course. With the help of proportionately stratified sampling technique, the females were divided into two strata, i.e., females of HS and females of degree. The fairly accurate number of students of higher secondary courses at HS schools, both coeducation and girls (both science and arts), was 12,200 and 1200, respectively. The number of HS female students in coeducation and girl's junior colleges (both science and arts) was 6400 and 720, respectively. The number of female students of higher secondary courses in coeducation and girl's colleges (both science and arts) was 7000 and 720, respectively. The number of degree, female, students in coeducation and girl's colleges (both science and arts) was 4550 and 720, respectively. Thus, the fairly accurate total number of students in higher secondary was 28,240 and degree were 5270 in the educational institutes of Kamrup District. Hence, the total population was 33,510.

Data collection tools and technique

The data were collected using validated tools developed by the researcher herself with eight demographic variables, 24 structured questions to assess the knowledge on ECP under six subheadings, and three-point Likert scale with ten positive statements for measurement of attitudes of the females on ECP.

Respondents were asked to select the correct option out of four given options in each question in the structured knowledge questionnaire and asked to give their view by giving tick (√) in any alternatives among "disagree," "undecided," and "agree" placed under the box of the opinion of three-point Likert scale. Participants were given 30–35 min to complete

answering the questions, and the answered questionnaires were collected by the researcher in the same sitting.

For the correct answer of each question, "one" mark and, for the incorrect answer, "zero" mark were given. The females who scored marks less than mean minus standard deviation were considered as having inadequate knowledge, the females who scored marks between the mean minus standard deviation and mean plus standard deviation were considered as having the moderately adequate knowledge, and the females who scored marks more than mean plus standard deviation were considered as having adequate knowledge.

For the opinion of disagree, "one" mark, for the opinion of agree, "two" marks and, for undecided, "zero" marks were allotted in the three-point Likert scale. The females with a score of less than mean minus standard deviation were considered as undecided, females with the score between the mean minus standard deviation to mean plus standard deviation were considered as having unfavorable attitude, and the females with score more than mean plus standard deviation was considered as having favorable attitudes toward the ECP.

Ethical consideration

Ethical consideration has been obtained from the Ethical Committee of Guwahati Medical College and Hospital for the study. Anonymity and confidentiality of the participants were maintained during the study. The researcher has obtained permission from the Government of Assam, Office of the Inspector of schools, Kamrup District circle, for collecting data from higher secondary school and junior colleges of Kamrup District. The researcher has also taken permission from the Government of Assam, Office of the Director of higher education, Assam, Kahilipara, and Government of Assam, Higher Education Department, for collecting data from provincialized colleges. After due permission from the head of the institute, again permission was taken from the departmental head of each subject for fixing a particular date according to their departmental convenience without hampering the course syllabus. The participants were given assurance by the researcher that the information given by them will be kept confidential and secured their consent before collecting data.

Results

Demographic variables of the females under study

Most of the females 989 (84%) were higher secondary and 178 (16%) were degree students; most of the females, i.e., 913 (81.01%) were residing in their own house; most of the females, i.e., 978 (86.78%) were unmarried; most of the females, i.e., 713 (63.27%) were from the family with the household income of <Rs. 10,000; most of the females, i.e., 745 (66.10%) were from urban area; most of the females, i.e., 304 (26.97%) were using their leisure time by studying; most of the females, i.e., 689 (61.14%) attended some kind of sex education; and most of the females, i.e., 467 (41.43%) gained information about ECP from the source of TV.

Level of overall knowledge on ECP

Most of the females, i.e., 763 (67.70%) had moderately adequate knowledge with the aggregate mean knowledge 10.08 and SD 2.933; most of the females, i.e., 564 (50.04%) had adequate knowledge on pregnancy with mean knowledge 2.47 and SD 1.248; most of the females, i.e., 533 (47.3%) had moderately adequate knowledge on contraceptive pill with the mean knowledge 2.06 and SD 1.271; most of the females, i.e., 638 (56.61%) had inadequate knowledge on ECP with the mean knowledge 1.28 and SD 0.996; most of the females, i.e., 551 (48.9%) had inadequate knowledge on correct use of ECP with the mean knowledge 1.49 and SD 0.87; most of the females, i.e., 461 (40.9%) had moderately adequate knowledge on short-term side effects of ECP with the mean knowledge 0.97 and SD 0.836; most of the females, i.e., 742 (65.8%) had moderately adequate knowledge on long-term side effects of ECP with the mean knowledge 1.82 and SD 0.959; and most of the females, i.e., 844 (74.89%) had unfavorable attitude.

Association between the knowledge of the females on ECP and their selected demographic variables

There was no significant association between levels of knowledge on ECP and selected demographic variables of the females except educational qualification and knowledge on ECP.

Association between the attitude of the females toward ECP and the selected demographic variables of the females

There exists no association between attitude levels on ECP and selected demographic variables with an exception for the source of information about ECP, where the calculated Chi-square value (39.655; df = 14) was greater than the tabulated Chi-square value (31.3193; at 5% probability level) which showed highly significant.

Relationship and association between the knowledge of females on ECP and attitude toward ECP

Pearson product moment correlation coefficient, linear regression, and scatter-plot showed a positive correlation, i.e., increase in knowledge on ECP would show a substantial increase in attitude toward ECP.

Relationship between all six aspects of knowledge, i.e., pregnancy, contraceptive pill, ECP, correct use of ECP, and short-term side-effect and long-term side-effect of ECP

Pearson correlation half matrix test showed a positive correlation between knowledge on contraceptive pill and ECP, knowledge on pregnancy, contraceptive pill, ECP, and short-term side effects of ECP; test showed a negative correlation between knowledge on pregnancy and contraceptive pill and knowledge on correct use of ECP and short-term side effect of ECP; however, findings did not show sufficient evidence to establish significant association between six aspects of knowledge i.e., pregnancy, contraceptive pill, ECP, correct use of ECP, and short-term side-effect and long-term side-effect of ECP.

Discussion

The findings of the present study contradict the findings of most of the studies like the study by Agrawal *et al*., Bareilly (UP),[20] Abraham *et al*., Mekelle, Northern Ethiopia,[21] and Aneblom *et al*., Swedish.[22] The findings of the present study were similar to the findings of most of the studies such as the study by Giri *et al*. (2013) India,[23] Rahman *et al*. (2013), Sikkim, India.[24] and Tilahun Dadama University, Puri *et al*., Chandigarh, India.[17] A study by Kongnyuy *et al*. showed similar findings on Knowledge on ECP but contradicts to the aspect of attitudes on ECP.[25] Though the findings of those supported studies showed females having good knowledge on ECP, but did not reveal them having good knowledge on the correct use of ECP; this was one of the main aspects of the present study that the researcher sought to know.

The demographic variables in the present study showed a majority of females, i.e., 978 (875%) were single and 745 (66%) females were from the urban area. Majority, i.e., 713 (63%) females were from the family with household income of Rs. <10,000; 304 (27%) females were using leisure time by studying, 913 (81%) females were staying in their own house, 689 (61%) females attended some kinds of sex education, whereas a study by Agrawal et al. showed that 80% had idea on various aspects of sex education and 80.4% of girls had undergone sex education. The findings of the present study on the source of information of ECP was also supported by the study by Tajure, Southwest Ethiopia,[23] and Rahman *et a*l. (2011, 2012), Sikkim, India.[24]

The findings of the present study on the level of knowledge on correct use and side effects of ECP are also similar to the findings of the study by Puri *et al*., Chandigarh, India,[17] Dahia *et al.* at PGIMS, Rohtak,[26] and Rocca *et al*. in Bengaluru, India.[27]

The findings of knowledge on short-term side effects and long-term side effects of ECP were similar to the findings of the study by Gopal, JIPMER,[28] Tilahun *et al*.,[29] Archana *et al*.,[30] and Ramathuba, South Africa.[31]

The present study showed that there was a significant association between the knowledge on ECP with educational qualification, whereas the study by Tajure *et al*. of Jimma University showed significant finding only in awareness on ECs and origin of residence,[32] and the study by Tesfaye Jimma showed place of origin and literacy level.[33]

The present study revealed that there was significant association only with a source of information about ECP and attitude, whereas the study by Kongnyuy *et al*. showed that the students with favorable opinions about ECP receive information on ECPs from informal networks such as friends and family members.[25]

The present study revealed a positive correlation between knowledge on ECP and attitude towards ECP. The study by Kongnyuy *et al.* also shows a similar finding, where it showed that students with adequate knowledge generally showed favorable attitudes toward ECPs.[25]

Conclusion

The present study revealed that most of the females had the moderately adequate knowledge and unfavorable attitudes toward the ECP. Lack of adequate knowledge may be the reason of unfavorable attitude. Therefore, the present researcher came to the conclusion that the expectation of having the right attitudes of the females toward ECP is unlikely unless having satisfactory knowledge of the females on ECP.

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