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KNOWLEDGE AND ATTITUDE OF EMERGENCY CONTRACEPTIVES AMONG UNDERGRADUATE FEMALE STUDENTS OF GUJARAT

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ABSTRACT

Background of the Study: The rising incidence of high-risk sexual behavior among adolescents, with females becoming sexually active by the age of 18 years, contributes to the global health challenge of unwanted pregnancies and unsafe abortions. Addressing this issue requires improving women's knowledge and attitudes towards emergency contraceptives. **Aim:** This study aimed to assess the effectiveness of a health awareness programme targeting undergraduate female students in selected non-paramedical colleges in Gujarat, India. **Material & Method:** Using a quantitative research approach and a pre-experimental research design, the investigator employed stratified random sampling to select 320 undergraduate female students from the identified colleges in Gujarat. Data collection involved administering knowledge questionnaires and Likert scale assessments to gauge the participants' knowledge and attitudes towards emergency contraceptives. Descriptive and inferential statistical methods, including Standard Deviation, t-test, Chi-square, and Cronbach's alpha test, were used to analyze the data. **Result:** The results demonstrated a significant improvement in post-test mean knowledge and attitude scores compared to pre-test scores. The calculated "t" value for

knowledge was 13.902, exceeding the tabulated value of 3.323 at a 0.05 level of significance. Similarly, the "t" value for attitude was 9.769, surpassing the tabulated value of 1.660 at a 0.05 level of significance. Furthermore, a positive correlation of 0.72 was found between knowledge and attitude scores. This study indicates that the health awareness programme was effective in enhancing the participants' understanding of emergency contraceptives and fostering positive attitudes towards their usage. **Conclusion:** The present study reinforces the positive impact of health awareness programmes on emergency contraception among undergraduate female students. By enhancing knowledge and cultivating positive attitudes towards emergency contraceptives, such interventions play a pivotal role in reducing the prevalence of unwanted pregnancies and contributing to the overall well-being of women in society.

Keywords: Emergency contraceptives, Health awareness programme, Undergraduate female students

INTRODUCTION

Unintended pregnancies and unsafe abortions pose significant global health challenges in the present era. Emergency Contraception (EC) is a vital birth control method for preventing pregnancy in women. It can be employed in various situations, such as after sexual assault, when other contraceptive methods fail, or when no birth control is used during sexual activity **[1]**. In India, EC was introduced in 2002 by the Ministry of Health and Family Welfare, becoming an over-the-counter drug in 2005. Unfortunately, youngsters are increasingly relying on emergency pills without proper medical guidance **[2]**. It is estimated that approximately 44% of pregnancies worldwide between 2010 and 2014 were unintended **[3]**. The Government of India recommends the use of Levonorgestrel (progestogen-only) 0.75 mg as an effective form of emergency contraception **[4]**. ECPs work by preventing or delaying ovulation, and they do not induce abortions. According to the World Health Organization (WHO), EC can prevent up to 95% of pregnancies **[5]**. Several EC methods are registered for emergency use following rape or sexual assault **[6]**. The first dose of EC must be taken within 72 hours (three days) after unprotected sex. Although several methods are available, selecting the most suitable one is crucial **[7]**. However, many women are uninformed about the existence and proper use of emergency contraception, leading to misunderstandings or hesitations in using it when needed **[8]**. The copper intrauterine device is considered the most effective method of EC **[9]**. After using ECPs, women can resume their regular contraceptive methods, and if a copper IUD is used for EC, no additional contraceptive

protection is required **[10]**. WHO recommends that a copper-bearing IUD, when used as an EC method, be inserted within 5 days of unprotected intercourse **[11]**. It is important to note that oral EC's mechanism of action is to delay ovulation, and it is ineffective after ovulation has occurred **[12]**. Some common side effects of emergency contraceptive pills include nausea or vomiting, dizziness, fatigue, headache, breast tenderness, bleeding between periods, heavier menstrual bleeding, lower abdominal pain, or cramps **[13]**. In the event of vomiting within 2 hours of taking the morning-after pill, an additional dose is necessary **[14]**. Levonelle and Ella One are two common ECPs, with Ella One to be taken within 120 hours (5 days) of sexual activity, and even girls under 16 years old can use it **[15]**.

MATERIAL & METHOD

The present study adopted a pre-experimental design, utilizing a sample of participants who met the defined criteria and were available during the data collection period. The sample was selected through stratified random sampling. The inclusion criteria encompassed undergraduate female students who were present at the college during data collection, willing to participate in the study, and aged between 18 to 26 years. The exclusion criteria involved students enrolled in medical and para-medical courses. The student researcher introduced herself, explained the study's purpose, and obtained written consent from volunteers who fulfilled the inclusion and exclusion criteria. Data collection instruments comprised a demographic information questionnaire, knowledge questionnaires, and a Likert scale. Information on age, marital status, educational stream, religion, place of origin, previous health awareness programs attended, and discussion of emergency contraceptives was collected through the demographic information questionnaire. The data were analyzed using descriptive statistics, such as frequency and percentage distribution, to describe the socio-demographic data, knowledge, and attitudes of emergency contraceptives among undergraduate female students. Mean, mean difference, standard deviation, and t-test were employed to assess the level of knowledge and attitude of emergency contraceptives. Chi-square analysis was utilized to explore associations between knowledge and attitude with selected demographic variables. Paired t-tests were used to compare pre-test and post-test knowledge and attitude scores. The data analysis was performed using SPSS statistical software, version 22. The study obtained ethical clearance from the ethical committee

SVIEC, and consent was obtained from the subjects before data collection.

RESULT

This study presents the distribution of 320 samples of undergraduate female students from selected non-paramedical colleges in Gujarat. The majority of students (51.90%) fell into the age group of 24-26 years and above, while 47.20% belonged to the age group of 21-23 years. Only a small percentage (9%) of students were in the age group of 18-20 years. Regarding marital status, the highest proportion (61.6%) of students were single, 19.8% were engaged, and the lowest percentage (18.8%) were married. In terms of educational qualification, 48.8% of students were from science educational streams, 3.1% from arts streams, and 48.1% from commerce streams. The majority of students (65.6%) belonged to the Hindu religion, while a smaller number identified as Muslim (1.9%) or Christian (2.5%). Residence-wise, 69.4% of undergraduate female students were from rural areas, and 30.6% were from urban areas. When it comes to sources of health-related information, 18.8% gained knowledge from TV and radio, 38.1% from magazines and newspapers, 17.8% from the internet and research studies, and 25.3% from health workers. Furthermore, 30.6% of students had attended health awareness programs, while 69.4% had not participated in such programs. Among the participants, 24.4% had attended health awareness programs specifically related to emergency contraceptives.

The pre-test knowledge scores revealed that 2.5% of students had poor knowledge, 47.5% had satisfactory knowledge, 43.7% had good knowledge, 4.3% had very good knowledge, and 2% had excellent knowledge about emergency contraceptives. Following the health awareness program, the post-test knowledge scores showed that 15% of students had satisfactory knowledge, 46.8% had good knowledge, 22.5% had very good knowledge, and 15.62% had excellent knowledge. In terms of attitudes, the pre-test attitude scores indicated that 32.1% of subjects had inadequate attitudes, 55.6% had moderate attitudes, and 12.1% had adequate attitudes towards emergency contraceptives. After the health awareness program, the post-test attitude scores showed that 1% had inadequate attitudes, 36.2% had moderate attitudes, and 63% exhibited adequate attitudes.

Table 1 shows the mean, mean difference, and standard deviation of pre-test and post-test knowledge scores. The mean post-test score (17.8469) was higher than the pre-test score (13.0750), with a mean difference of 4.51562. The calculated "t" value (13.471)

indicates that the health awareness program significantly improved knowledge about emergency contraceptives among undergraduate female students.

Similarly, **Table 2** presents the mean, mean difference, and standard deviation of pre-test and post-test attitude scores. The mean post-test score (2.6375) was higher than the pre-test score (2.2000), with a mean difference of 0.34939. The "t" value (9.769) indicates that the health awareness program had a significant positive impact on attitudes towards emergency contraceptives among the students.

The study reveals a positive correlation coefficient (r) of 0.72 between knowledge and attitudes, indicating a favourable association between knowledge and expressed practice regarding emergency contraceptives.

Moreover, the chi-square tests (X2) were conducted to explore associations between demographic variables and pre-test knowledge and attitude scores. The results indicate that there were no significant associations, except for the educational stream, which showed a significant association with pre-test knowledge scores. The hypothesis H3, which stated that there would be a significant association between selected demographic variables and pre-test knowledge scores, was rejected. However, in the case of pre-test attitude scores, there were no significant associations with any of the demographic variables, and thus, the hypothesis H3 regarding attitude scores was rejected as well.

Table 1: Assess the Effectiveness of Health Awareness Programme on Knowledge Regarding Emergency Contraceptives among Undergraduate Female Students (N=320)

Variables	Mean	Standard Deviation	Mean difference	t value	Table Value	Inference
Pre-test knowledge score	13.0750	3.70554	4.51562	13.902 Df (319)	3.323	Significant
Post-test knowledge score	17.8469	5.10317				

Table 2: Assess the Effectiveness of Health Awareness Programme on Attitude Regarding Emergency Contraceptives among Undergraduate Female Students

Variables	Mean	Mean Difference	Std. Deviation	t value	Table Value	Inference
Pre-test Attitude score	2.2000	0.34939	0.80116	9.769 Df (319)	1.660	Significant
Post-test Attitude score	2.6375					

DISCUSSION

The findings of this study provide valuable insights into the knowledge and attitudes of undergraduate female students in selected non-paramedical colleges in Gujarat regarding emergency contraceptives. The results indicate that the majority of students had limited knowledge about emergency contraceptives before the health awareness program. However, the health awareness program significantly improved their knowledge levels, with a substantial increase in the post-test scores. This suggests that targeted health awareness programs can effectively enhance awareness and understanding of emergency contraceptives among young women.

The study also revealed a positive correlation between knowledge and attitudes. As students' knowledge about emergency contraceptives increased, their attitudes towards its usage also improved. This positive relationship underscores the importance of empowering young women with accurate information about emergency contraceptives, as it may influence their attitudes towards its adoption as a contraceptive option.

Regarding demographic factors, the study found no significant associations between age, marital status, religion, place of origin, and sources of health-related information with pre-test knowledge and attitude scores. This implies that irrespective of these demographic variables, the students' initial knowledge and attitudes towards emergency contraceptives were similar. However, there was a significant association between the educational stream and pre-test knowledge scores. This suggests that students from different educational streams may have varied levels of awareness and understanding of emergency contraceptives. Thus, it is essential to tailor health awareness programs to address the specific needs and knowledge gaps of students from different academic backgrounds.

The study also highlighted that a significant proportion of students did not attend health awareness programs related to emergency contraceptives previously. This points to the need for targeted efforts to encourage participation in such programs to equip young women with crucial information about reproductive health and contraception options.

It is noteworthy that the health awareness program had a positive impact on students' attitudes towards emergency contraceptives. Post-test attitude scores showed that a majority of the students exhibited adequate attitudes, indicating a positive shift in their

perceptions and openness towards emergency contraceptive methods.

Nevertheless, the study also identified a small percentage of students who continued to hold inadequate attitudes towards emergency contraceptives even after the health awareness program. This underscores the importance of addressing any lingering misconceptions or apprehensions through continuous education and support. The study's findings have several implications for nursing colleges and healthcare providers. Implementing regular health awareness programs focusing on emergency contraceptives can play a vital role in enhancing women's knowledge and attitudes, leading to informed decision-making and safer sexual practices. Such programs should be integrated into the curriculum to ensure maximum reach and impact.

The findings of our study align with the results of several similar studies conducted in different countries, including Thailand, Brazil, and Tanzania, which also focused on undergraduate female students' knowledge and attitudes towards emergency contraceptives. The study conducted by Siranee Youngpraderm *et al* . in Southern Thailand revealed that the average knowledge of emergency contraceptive pills (ECPs) among first-year students was at a moderate level. This emphasizes the need for targeted educational interventions to enhance students' understanding of emergency contraceptives. Similarly, our study demonstrated a significant improvement in knowledge scores among undergraduate female students after the implementation of the health awareness program **[16]**.

Another study conducted by Christiane Borges do Nascimento Chofakian *et al* . in Brazil examined contraceptive patterns after the use of emergency contraception among female undergraduate students. The results showed that most women resumed regular contraception after using emergency contraception, suggesting that emergency contraception can serve as a potential precursor to regular contraceptive use. This finding supports the notion that health awareness programs on emergency contraceptives, like the one implemented in our study, can play a crucial role in promoting safer reproductive practices and reducing the risk of unintended pregnancies **[17]**.

In Tanzania, a study conducted by Magreat J Somba, Milline Mbonile *et al* . among female undergraduate students highlighted that the majority of sexually active students had started sexual activity at a young age. This underscores the importance of early sexual education and

access to contraceptive services among university students. Our study's findings, which revealed a positive correlation between knowledge and attitudes towards emergency contraceptives, align with the Tanzanian study's implication that advocating for adolescent reproductive health education can promote the use of available contraceptive services **[17]**.

Overall, these similar studies, along with our own research, emphasize the importance of targeted health awareness programs on emergency contraceptives for young women in university settings. By providing accurate information about emergency contraceptives and promoting positive attitudes towards their usage, we can empower undergraduate female students to make informed decisions about their reproductive health and reduce the incidence of unwanted pregnancies.

CONCLUSION

The results of our study contribute to the growing body of knowledge on emergency contraceptives and its impact on undergraduate female students' knowledge and attitudes. The findings support the effectiveness of health awareness programs in improving knowledge levels and promoting positive attitudes towards emergency contraceptives. To further enhance reproductive health outcomes, future efforts should focus on continuous education and access to contraceptive services, considering the cultural and contextual factors specific to each region. By addressing the knowledge gaps and attitudes towards emergency contraceptives, we can work towards reducing the global burden of unintended pregnancies and promoting safer sexual practices among young women in university settings.

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