|| ISSN(online): 2589-8698 || ISSN(print): 2589-868X ||

Available online on http://www.ijmbs.info

International Journal of Medical and Biomedical Studies; 2025; 9(6); 179-186

Assessment of Knowledge, Attitudes, and Practices Regarding Emergency Contraceptive Methods among Females Aged 19–40 Years at a Tertiary Care Hospital in Eastern India

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Received: 25-09-2025 / Revised: 16-10-2025 / Accepted: 14-12-2025
DOI: https://doi.org/10.32553/ijmbs.v9i6.3189
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Conflict of interest: No conflict of interest

Abstract:

Background: Emergency contraception (EC) is an effective method for preventing unintended pregnancies when used after unprotected sexual intercourse or contraceptive failure. Despite its availability in India, its utilization remains limited due to inadequate knowledge, unfavorable attitudes, and socio-cultural barriers.

Objective: To assess the knowledge, attitudes, and practices regarding emergency contraceptive methods among women aged 19–40 years attending a tertiary care hospital in Eastern India.

Methods: This prospective cross-sectional questionnaire-based study was conducted in the Department of Obstetrics and Gynaecology at Indira Gandhi Institute of Medical Sciences (IGIMS), Patna, over a period of one year. A total of 150 women aged 19–40 years were included in the analysis. Data were collected using a structured, pre-validated questionnaire covering socio-demographic details and components of knowledge, attitude, and practice related to emergency contraception. Data were analyzed using descriptive statistics and presented as frequencies and percentages.

Results: Although 44% of participants were aware of emergency contraception, correct knowledge regarding timing, safety, and use during breastfeeding was poor. Fear of side effects and misconceptions equating EC with abortion were common attitudinal barriers. Actual use of emergency contraception was reported by only 4.7% of participants. Lack of adequate knowledge and fear of adverse effects were the most common reasons for non-use.

Conclusion: The study demonstrates a significant gap between awareness and actual utilization of emergency contraception among women of reproductive age. Strengthening counseling services and implementing targeted educational interventions at healthcare facilities are essential to improve knowledge, dispel misconceptions, and promote appropriate use of emergency contraceptive methods.

Introduction

Emergency contraception (EC) is an essential component of reproductive health care that provides women with a safe and effective means to prevent unintended pregnancy following unprotected sexual intercourse, contraceptive failure, or sexual assault. Commonly used emergency contraceptive methods include levonorgestrel (LNG) pills, ulipristal acetate, and copper-bearing intrauterine contraceptive devices (IUCDs). When used within the recommended time frame, these methods significantly reduce the risk of unwanted pregnancy and associated complications [1].

Unintended pregnancy continues to be a major public health challenge worldwide, particularly in low- and middle-income countries. The World Health Organization estimates that approximately 56 million induced abortions occur globally each year, a substantial proportion of which are unsafe and preventable [2]. In India, unsafe abortions contribute significantly to maternal morbidity and mortality, highlighting the urgent need for effective contraceptive strategies, including emergency contraception [3]. EC serves as a critical backup method that can bridge gaps in regular contraceptive use and prevent adverse reproductive health outcomes.

Despite the inclusion of emergency contraceptive pills in national family planning programs and their over-the-counter availability in India, utilization remains suboptimal. Several studies have demonstrated that although awareness of emergency contraception exists among women of reproductive age, detailed knowledge regarding correct timing, dosage, mechanism of action, and safety is often inadequate [4,5]. Misconceptions such as equating emergency contraception with abortion, fear of side effects, and concerns regarding future fertility are commonly reported barriers to its acceptance [6].

Socio-demographic factors such as age, education level, marital status, and socioeconomic background play a crucial role in influencing knowledge, attitudes, and practices related to emergency contraception. Previous studies from different regions of India have shown that women with higher educational attainment and better access to healthcare information are more likely to have accurate knowledge and a favorable attitude toward EC use [7]. Conversely, lack of counseling by healthcare professionals and reliance on informal sources such as peers or social media often contribute to misinformation and inappropriate use.

Assessing the knowledge, attitudes, and practices (KAP) related to emergency contraception among women of reproductive age is essential for identifying existing gaps and designing targeted educational interventions. Understanding these factors in a tertiary care setting can provide valuable insights into the barriers affecting EC utilization and inform strategies to improve awareness, acceptance, and correct usage. This study aims to assess the knowledge, attitudes, and practices regarding emergency contraceptive methods among females aged 19–40 years attending a tertiary care hospital in Eastern India.

Materials and Methods

Study Design and Setting

This was a prospective cross-sectional questionnaire-based study conducted in the Department of Obstetrics and Gynaecology at Indira Gandhi Institute of Medical Sciences (IGIMS), Patna, over a period of one year.

Study Population

The study population included women aged 19–40 years attending the outpatient department of Obstetrics and Gynaecology at IGIMS during the study period.

Sample Size and Sampling Technique

A total of 250 participants were enrolled in the study using convenience sampling. The sample size was calculated using the formula $n = (Z^2 \times p \times (1 - p)) / E^2$, considering a 95% confidence interval, estimated prevalence from previous studies, and an acceptable margin of error. Sample size estimation was performed using G*Power software.

Inclusion Criteria

Women aged between 19 and 40 years who were willing to participate and provided informed consent were included in the study.

Exclusion Criteria

Women who were unwilling to participate, those younger than 19 years or older than 40 years, were excluded from the study.

Data Collection Tool

Data were collected using a structured, pre-validated questionnaire administered in the local language to ensure better comprehension. The questionnaire consisted of two sections: the first section recorded socio-demographic and obstetric details, while the second section assessed knowledge, attitudes, and practices related to emergency contraception, including awareness, timing of use, side effects, prior use, accessibility, and prevailing misconceptions.

Data Collection Procedure

Participants were interviewed in a private setting to ensure confidentiality and encourage honest responses. After completion of the questionnaire, participants were counseled regarding the correct use, effectiveness, and safety of emergency contraceptive methods, and myths and misconceptions were clarified.

Statistical Analysis

Collected data were entered into Microsoft Excel and analyzed using descriptive statistics. Categorical variables were expressed as frequencies and percentages. The findings were presented in tables and figures where appropriate.

Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee of Indira Gandhi Institute of Medical Sciences (IGIMS), Patna. Written informed consent was obtained from all participants prior to enrollment. Confidentiality and anonymity of the participants were strictly maintained throughout the study.

Results

A total of **150 women** aged between **19 and 40 years** were included in the final analysis. The socio-demographic characteristics, knowledge, attitudes, and practices related to emergency contraception were evaluated.

Socio-demographic Characteristics

Most participants belonged to the **26–30 years age group (34.7%)**, followed by 19–25 years (30.7%). The majority of women were from **urban areas (85.3%)** and belonged to the **middle socioeconomic class (64.7%)**. More than half of the participants lived in **nuclear families (58.7%)**.

Table 1: Socio-demographic profile of participants (n = 150)

Variable	Frequency	Percentage (%)
Age group (years)		
19–25	46	30.7
26–30	52	34.7
31–35	32	21.3
36–40	20	13.3
Residence		
Urban	128	85.3

Rural	22	14.7
Socioeconomic status		
Middle	97	64.7
Lower	53	35.3
Type of family		
Nuclear	88	58.7
Joint	62	41.3

Knowledge and Awareness Regarding Emergency Contraception

Out of 150 participants, **66 women (44.0%)** had heard about emergency contraception. However, correct knowledge regarding **timing of intake**, **side effects**, and **use during breastfeeding** was poor. Only **27.3%** knew the correct time limit for EC use, and less than one-fourth were aware of possible side effects.

Table 2: Knowledge and awareness regarding emergency contraception

Knowledge parameter	Yes n (%)	No n (%)
Heard about emergency contraception	66 (44.0)	84 (56.0)
Knowledge of correct timing of EC	41 (27.3)	109 (72.7)
Awareness of side effects	38 (25.3)	112 (74.7)
Knowledge of EC use during breastfeeding	29 (19.3)	121 (80.7)
Awareness that EC is not abortion	54 (36.0)	96 (64.0)

Attitude Towards Emergency Contraception

A positive attitude toward EC was observed in less than half of the participants. While **40.7%** reported that they would use EC after unprotected intercourse, fear of side effects was reported by **61.3%** of women. Nearly one-third believed that emergency contraception could be used regularly, reflecting significant misconceptions.

Table 3: Attitude of participants towards emergency contraception

Attitude statement	Agree n (%)	Disagree / Don't know n (%)
Would use EC after unprotected intercourse	61 (40.7)	89 (59.3)
Would advise EC to a friend	69 (46.0)	81 (54.0)
Fear of side effects prevents use	92 (61.3)	58 (38.7)
Belief that EC causes abortion	67 (44.7)	83 (55.3)
EC can be used regularly	49 (32.7)	101 (67.3)

Practices Related to Emergency Contraception

Actual use of emergency contraception was **very low**, with only **7 women (4.7%)** reporting prior use. Among EC users, **menstrual disturbances** were reported by three participants. Most women had never used EC despite its availability.

Table 4: Practices related to emergency contraception

Practice parameter	Frequency	Percentage (%)
Ever used emergency contraception	7	4.7
Never used emergency contraception	143	95.3
Menstrual disturbance after EC use*	3	2.0
EC obtained without prescription	5	3.3

*Among users only

Reasons for Non-Use of Emergency Contraception

The most common reasons preventing EC use were **fear of side effects (61.3%)** and **lack of adequate knowledge (58.7%)**. Social pressure from family members and social stigma also contributed significantly to non-use.

Table 5: Reasons for non-use of emergency contraception

Reason	Frequency	Percentage (%)
Lack of knowledge	88	58.7
Fear of side effects	92	61.3
Pressure from husband/family	47	31.3
Social stigma	39	26.0
Non-availability	21	14.0

Although nearly half of the participants had heard about emergency contraception, **detailed knowledge, favorable attitude, and actual practice were markedly low**. Fear of side effects and misconceptions were the predominant barriers to utilization, highlighting the need for targeted education and counseling by healthcare professionals.

Discussion

Emergency contraception is an important yet underutilized strategy for preventing unintended pregnancies, particularly in settings where access to regular contraceptive methods may be inconsistent. The present study assessed the knowledge, attitudes, and practices regarding emergency contraceptive methods among women aged 19–40 years attending a tertiary care hospital in Eastern India. The findings reveal substantial gaps between awareness and actual utilization of emergency contraception.

In the present study, less than half of the participants had heard about emergency contraception, and only a small proportion demonstrated correct knowledge regarding its timing, safety, and mechanism of action. Similar findings have been reported in previous studies conducted among university students and reproductive-age women, which documented superficial awareness but poor comprehensive knowledge of emergency contraceptive methods [8,9]. Inadequate understanding of correct timing and dosage significantly reduces the effectiveness of emergency contraception and may contribute to unintended pregnancies.

Misconceptions regarding emergency contraception were common in this study. A considerable proportion of women believed that emergency contraception is equivalent to abortion, reflecting persistent myths. Earlier studies have highlighted similar misconceptions, emphasizing that

lack of correct information leads to moral, cultural, and religious resistance to emergency contraceptive use [10]. Such beliefs may discourage women from using EC even when it is medically indicated and safe.

Attitudinal barriers played a significant role in limiting EC utilization in the present study. Fear of side effects was the most commonly reported deterrent. This finding is consistent with earlier research demonstrating that exaggerated perceptions of adverse effects, often fueled by misinformation, negatively influence acceptance of emergency contraception [11]. Studies have shown that women who receive accurate counseling from healthcare professionals are more likely to develop positive attitudes and appropriate usage behaviors [12].

Despite availability, the actual practice of emergency contraception was remarkably low in the present study. Only a very small percentage of participants reported prior use, indicating a wide gap between awareness and practice. Similar low utilization rates have been documented in studies from other developing countries, where social stigma, partner opposition, and limited counseling services were identified as major contributing factors [13]. This highlights the importance of addressing not only knowledge deficits but also socio-cultural barriers.

Pressure from family members and spouses was another notable factor preventing EC use in this study. Reproductive health decisions in many parts of India are often influenced by family dynamics, limiting women's autonomy. Previous studies have emphasized that male partner involvement and family attitudes significantly affect contraceptive decision-making among women [14]. Interventions aimed at improving emergency contraception use should therefore include partner and family-centered educational approaches.

The present study also revealed reliance on informal sources of information, such as peers and media, rather than healthcare professionals. This pattern has been previously documented and is concerning, as inaccurate information from non-medical sources may reinforce misconceptions [15]. Strengthening the role of healthcare providers in counseling and disseminating accurate information about emergency contraception is essential.

Overall, the findings of this study underscore the need for structured educational interventions, particularly in tertiary care settings, where women can be counseled during routine healthcare visits. Educational programs addressing myths, safety concerns, and correct usage can significantly improve attitudes and practices related to emergency contraception. Integrating emergency contraception counseling into existing reproductive health services may play a crucial role in reducing unintended pregnancies and unsafe abortions.

Conclusion

The present study highlights inadequate knowledge, unfavorable attitudes, and poor utilization of emergency contraception among women aged 19–40 years attending a tertiary care hospital. Although nearly half of the participants had heard about emergency contraception, detailed understanding regarding its correct use, timing, and safety was insufficient. Misconceptions, particularly the belief that emergency contraception is equivalent to abortion, along with fear of side effects, significantly influenced attitudes and practices.

Actual use of emergency contraception was remarkably low despite its availability, indicating a wide gap between awareness and practice. Socio-cultural factors, family pressure, and lack of professional counseling further contributed to underutilization. These findings emphasize the need for structured educational and

counseling interventions by healthcare providers to address myths, improve knowledge, and encourage informed decision-making.

Integrating emergency contraception counseling into routine reproductive health services and promoting accurate information dissemination can play a vital role in reducing unintended pregnancies and unsafe abortions. Strengthening awareness at the community and healthcare levels is essential for improving reproductive health outcomes among women of reproductive age.

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