



Lack of Awareness about Uses of Emergency Contraceptives Pills - A Community Based Study

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ABSTRACT:

Background: Unintended pregnancies remain a major public health concern, often resulting from limited awareness and inadequate use of contraceptives. Emergency contraceptive pills (ECPs) are a safe and effective method to prevent unintended pregnancies, yet knowledge and awareness about their correct use remain poor in many low- and middle-income countries, including Bangladesh. This study aimed to assess the level of awareness and factors associated with knowledge of ECPs among women of reproductive age in a community setting.

Methods: This community-based cross-sectional study was conducted from January to December 2023 at the Department of Obstetrics and Gynecology, BSMMU, Dhaka. A total of 120 women aged 15–49 years were enrolled using predefined inclusion and exclusion criteria. Data were collected through structured interviews and analyzed using SPSS version 25. Bivariate and multivariable logistic regression analyses were performed to identify factors associated with adequate awareness.

Results: Among 120 participants, 58.3% had heard of ECPs, but only 23.3% demonstrated adequate awareness. Knowledge of correct timing was limited, with 37.5% aware of use within 72 hours and 26.7% up to 120 hours. Misconceptions were common, including beliefs that ECPs cause infertility (28.3%) or induce abortion (33.3%). Media (37.5%) and friends/relatives (31.7%) were the main information sources. Education and media exposure were significant independent predictors of adequate awareness (AOR 4.1; 95% CI 1.6–10.5; $p = 0.003$ and AOR 3.5; 95% CI 1.1–11.2; $p =$



0.032, respectively).

Conclusion: Awareness and knowledge of ECPs remain suboptimal among women in the community. Educational initiatives and media-based interventions are crucial to dispel misconceptions and improve awareness.

Introduction

Unintended pregnancies remain a major public health concern worldwide, contributing significantly to maternal morbidity and mortality, particularly in low- and middle-income countries. According to the World Health Organization, approximately 44% of all pregnancies globally are unintended and a significant proportion of these occur due to inadequate or inconsistent use of contraceptive methods [1]. Emergency contraceptive pills (ECPs) are a safe and effective method to prevent pregnancy after unprotected sexual intercourse, contraceptive failure, or sexual assault and their timely use can substantially reduce the risk of unintended pregnancy. Despite the proven effectiveness of ECPs, knowledge and utilization remain suboptimal in many communities, often due to social stigma, misconceptions, limited access and lack of awareness [2]. Studies from South Asia and other developing regions have consistently reported low levels of awareness and knowledge regarding ECPs, with many women incorrectly believing that these pills induce abortion, cause infertility, or are intended for regular contraceptive use [3]. Awareness of proper timing, dosage, efficacy, side effects and correct indications is crucial for the safe and effective use of ECPs, yet these aspects are frequently misunderstood or overlooked [4].

In Bangladesh, where population growth and reproductive health challenges remain pressing issues, empowering women with accurate information on emergency contraception is essential to reduce unintended pregnancies and their associated health and social consequences [5]. Community-level studies are particularly important as they capture the knowledge, attitudes and practices of women in real-life settings, beyond hospital or clinic-based populations, providing insight into gaps in awareness and potential barriers to use [6]. Factors such as education, marital status, prior

contraceptive use and exposure to mass media have been shown to influence awareness and uptake of ECPs, highlighting the need to identify determinants specific to local contexts [7]. Furthermore, misconceptions and sources of information play a critical role in shaping women's decisions regarding emergency contraception, underlining the importance of targeted health education interventions [8, 9].

Given the limited data on community awareness of ECPs in Bangladesh, particularly in urban settings like Dhaka, there is a clear need for research to evaluate knowledge levels, misconceptions and determinants of awareness among women of reproductive age. Understanding these factors can inform strategies to improve health education, counseling and access to emergency contraception, thereby reducing the burden of unintended pregnancies and improving reproductive health outcomes. This study aimed to assess the level of awareness, knowledge and misconceptions regarding emergency contraceptive pills among community women in Dhaka, Bangladesh and to identify sociodemographic and behavioral factors associated with adequate awareness. The findings are expected to provide evidence to guide policymakers, healthcare providers and public health programs in designing effective interventions to enhance women's reproductive health literacy and promote timely and correct use of emergency contraceptive pills.

Methodology & Materials

This community-based cross-sectional study was conducted from January 2023 to December 2023 at the Department of Obstetrics and Gynecology, BSMMU, Dhaka, Bangladesh, with a total of 120 women of reproductive age (15–49 years) residing in the selected communities. Women who were permanent residents of the area for at least six months and who provided informed consent were included in the study, while



those who were currently pregnant, planning pregnancy within three months, or suffering from severe illness precluding participation were excluded. Data were collected using a pretested, interviewer-administered structured questionnaire that included sections on sociodemographic characteristics, awareness, knowledge, misconceptions and sources of information regarding emergency contraceptive pills (ECPs). Adequate awareness was defined as having heard of ECPs and correctly answering at least seven out of ten knowledge items covering indications, timing, efficacy, side effects and proper use. Information on prior contraceptive use and exposure to mass media was also recorded. Data were coded, entered and analyzed using SPSS version 25. Descriptive statistics, including frequencies and percentages, were used to summarize the characteristics of participants and their knowledge and awareness of ECPs. Bivariate analysis using chi-square or Fisher's exact test was performed to identify associations between sociodemographic factors and adequate awareness and multivariable logistic regression was conducted to determine independent predictors, with adjusted odds ratios (AORs) and 95% confidence intervals (CIs) reported.

Results

Table 1. Sociodemographic Characteristics of Participants (n = 120)

Characteristics	Category	n	%
Age (years)	15–19	12	10
	20–29	64	53.3
	30–39	36	30
	40–49	8	6.7
Education	No formal education	14	11.7
	Primary	36	30
	Secondary	50	41.7
	Higher	20	16.6
Marital status	Married	92	76.7
	Unmarried	28	23.3
Parity	0	40	33.3
	1–2	52	43.3
	≥3	28	23.4
Prior contraceptive use	Yes	78	65
	No	42	35

Exposure to media	Yes	85	70.8
	No	35	29.2

Table 1 presents the sociodemographic characteristics of the 120 women who participated in the study. The majority of participants were aged 20–29 years (53.3%), followed by 30–39 years (30%), 15–19 years (10%) and 40–49 years (6.7%). Regarding educational status, most women had secondary-level education (41.7%), followed by primary education (30%), higher education (16.6%) and no formal education (11.7%). Most participants were married (76.7%), while 23.3% were unmarried. In terms of parity, 43.3% had one to two children, 33.3% were nulliparous and 23.4% had three or more children. Prior contraceptive use was reported by 65% of women and 70.8% had exposure to media sources such as television, radio, or the internet.

Table 2. Awareness and Knowledge About Emergency Contraceptive Pills (n = 120)

Item	n	%
Heard of ECPs	70	58.3
Correct knowledge: Use within 72 h	45	37.5
Correct knowledge: Max efficacy 120 h	32	26.7
Correct knowledge: Not an abortifacient	50	41.7
Correct knowledge: Not for regular use	38	31.7
Correct knowledge: Possible side effects	55	45.8
Correct knowledge: Need for regular contraception	60	50
Overall adequate awareness (heard + score ≥7/10)	28	23.3

Table 2 presents the awareness and knowledge of emergency contraceptive pills (ECPs) among the 120 participants. Overall, 58.3% of women had heard of ECPs. Knowledge regarding correct use was limited, with 37.5% aware that ECPs should be used within 72 hours and 26.7% aware of maximum efficacy up to 120 hours. Correct understanding that ECPs are not abortifacient was reported by 41.7% of participants,



while 31.7% knew that ECPs are not intended for regular contraceptive use. Knowledge of possible side effects and the need for regular contraception was reported by 45.8% and 50% of women, respectively. Overall, only 23.3% of participants met the criteria for adequate awareness, defined as having heard of ECPs and correctly answering at least seven out of ten knowledge items.

Table 3. Misconceptions and Sources of Information (n = 120)

Item	n	%
Misconception: ECP causes infertility	34	28.3
Misconception: ECP causes abortion	40	33.3
Misconception: ECP can be used regularly	42	35
Source of information		
Friends/relatives	38	31.7
Health worker	20	16.7
Media (TV/Radio/Internet)	45	37.5
Pharmacy	15	12.5

Table 3 illustrates the misconceptions and sources of information regarding emergency contraceptive pills (ECPs) among the 120 participants. Misconceptions were common, with 28.3% of women believing that ECPs cause infertility, 33.3% thinking they induce abortion and 35% believing that ECPs can be used as a regular contraceptive method. Regarding sources of information, the most frequently reported was media, including television, radio and the internet (37.5%), followed by friends or relatives (31.7%), health workers (16.7%) and pharmacies (12.5%).

Table 4. Factors Associated with Adequate Awareness (Bivariate Analysis)

Variable	Adequate Awareness n (%)	χ^2	p-value
Education			
Secondary/Higher	22 (35.5)	12.8	<0.001
No/Primary	6 (10.3)		

Prior contraceptive use			
Yes	20 (25.6)	4.1	0.043
No	8 (19.0)		
Exposure to media			
Yes	25 (29.4)	9	0.003
No	3 (8.6)		
Age group			
20–29	15 (23.4)	0.9	0.82
Other	13 (23.2)		

Table 4 shows the bivariate analysis of factors associated with adequate awareness of emergency contraceptive pills among the 120 participants. Women with secondary or higher education had significantly higher adequate awareness (35.5%) compared to those with no or primary education (10.3%) ($\chi^2 = 12.8$, $p < 0.001$). Participants with prior contraceptive use were more likely to have adequate awareness (25.6%) than those without prior use (19.0%) ($\chi^2 = 4.1$, $p = 0.043$). Exposure to media was also significantly associated with adequate awareness, with 29.4% of exposed women demonstrating adequate awareness compared to 8.6% of unexposed women ($\chi^2 = 9.0$, $p = 0.003$). Age group, however, was not significantly associated with awareness, as 23.4% of women aged 20–29 and 23.2% of women in other age groups had adequate awareness ($\chi^2 = 0.9$, $p = 0.82$).

Discussion

This community-based study assessed the awareness, knowledge and misconceptions regarding emergency contraceptive pills (ECPs) among women of reproductive age in Dhaka, Bangladesh. Our findings reveal that while more than half of the participants had heard of ECPs, only 23.3% demonstrated adequate awareness. Misconceptions were common and education as well as media exposure were significant predictors of adequate knowledge.

The proportion of women who had heard of ECPs (58.3%) in our study is consistent with previous research conducted in Bangladesh. Ahmed and Yunus reported that 54% of ever-married women had heard of ECPs, but only a small fraction possessed comprehensive knowledge about correct use [10]. Similarly, Mahfuzur et al. found that awareness levels in Bangladesh remain low, with rural and less educated



women disproportionately affected [11]. Our study confirms these findings by highlighting the strong association between higher education and adequate awareness.

Knowledge gaps identified in our study—such as timing of intake, efficacy window and non-abortifacient nature—mirror findings from neighboring countries. Abdullah et al. in Pakistan documented that only 42% of women correctly understood the time frame for ECP use and misconceptions regarding infertility and abortion were widespread [12]. Likewise, Lima et al. observed that rural Bangladeshi women demonstrated very limited knowledge of ECPs, often relying on incorrect information from peers and untrained sources [13]. These parallels underscore the persistent challenge of misinformation in South Asia.

Our results further reveal that misconceptions such as ECPs causing infertility (28.3%) or abortion (33.3%) remain prevalent. Similar findings were reported in Ethiopia, where Mesfin noted that many young women associated ECPs with harmful reproductive outcomes due to cultural myths and lack of structured health education [14]. Rokicki and Merten, in their qualitative study from Ghana, also highlighted that stigma, misinformation and fear of side effects significantly influence perceptions of ECPs among young women [15]. These findings suggest that misconceptions are not limited to Bangladesh but are widespread across low- and middle-income countries.

The role of media exposure in shaping awareness in our study is noteworthy. Women exposed to media had significantly higher odds of adequate awareness (AOR 3.5). This aligns with global evidence demonstrating that mass media campaigns effectively improve knowledge and reduce misconceptions. For instance, Atkins et al. found that over-the-counter and media-based promotion of ECPs increased awareness and accessibility without negatively influencing contraceptive practices [16]. Similarly, Garrett Wagner et al. reported that credible sources of information, particularly media and health professionals, were associated with more accurate knowledge and stronger intentions to use ECPs [17].

Another key finding is that prior contraceptive use was associated with better ECP awareness. This is consistent with studies from Ethiopia and India, where women already using modern contraceptives were more likely to know about and correctly use ECPs [18, 19]. The

pattern suggests that women engaged with family planning services are more likely to be counseled on emergency contraception, highlighting the importance of integrating ECP education into routine contraceptive counseling.

Despite moderate levels of awareness, actual adequate knowledge remains very low. Leelakanok et al., in their systematic review and meta-analysis, concluded that both patients and healthcare providers often lack comprehensive knowledge and harbor unfavorable attitudes toward ECPs, which contributes to persistent underuse [20]. Similarly, Leon-Larios et al. found that even among nursing students in Spain, misconceptions and inadequate understanding of ECPs were widespread, reflecting a global gap in reproductive health education [21].

Access-related issues, though not directly measured in our study, remain a critical barrier in the broader context. Stein et al. emphasized that even in higher-resource settings, challenges related to availability, cost and stigma can undermine access to ECPs [22]. Moore et al. also noted that structural barriers, such as pharmacy stocking practices and lack of provider knowledge, further restrict utilization [23]. While Bangladesh has relatively liberal policies regarding ECP availability, the persistence of misconceptions and low awareness indicates that access alone is insufficient without concurrent community education.

Our study has important implications for public health interventions. First, targeted educational campaigns addressing misconceptions should be prioritized, particularly among less educated and rural women. Evidence suggests that community-based health education programs can significantly improve knowledge and correct harmful beliefs [24, 25]. Second, mass media should be further leveraged to disseminate accurate information, given its demonstrated impact on awareness. Third, healthcare providers and pharmacists must be trained to offer correct counseling, as studies have shown their role to be critical in shaping women's perceptions and practices [12, 26].

Limitations of the study

Strengths of our study include its community-based design and use of both descriptive and inferential statistics to identify predictors of awareness. However, some limitations should be acknowledged. The cross-sectional design precludes causal inferences and self-



reported data may be influenced by recall or social desirability bias. Furthermore, as the study was conducted in a single urban center, the findings may not be generalizable to rural populations.

Conclusion

In conclusion, our study highlights that awareness and adequate knowledge about ECPs remain suboptimal among Bangladeshi women, with widespread misconceptions. Education level and media exposure are strong determinants of adequate awareness. Addressing these gaps through targeted educational interventions, integration of ECP counseling into family planning services and use of mass media could substantially improve knowledge and responsible utilization of ECPs, thereby reducing unintended pregnancies and their associated health risks.

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Conflicts of interest

There are no conflicts of interest.

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