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## Determinants of emergency contraceptive pill use in Bangladesh: An analysis of national survey data

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## ABSTRACT

**Objective:** To examine the determinants of emergency contraceptive pill use in Bangladesh.

**Methods:** Data for this cross-sectional study came from 2017-2018 Bangladesh Demographic and Health Survey. Characteristics of 906 reproductive age women who were potential candidates for using emergency contraceptive pill were analysed in this study. Data were analysed using univariate and multivariate analyses. Stepwise binary logistic regression was employed as multivariate analysis.

**Results:** Only 10.9% candidates were found to ever use emergency contraceptive pill. The odds of using emergency contraceptive pill for women visited by family planning field worker was significantly higher than that for those who were not visited by family planning field worker [odds ratio (OR) 1.94; 95% confidence interval (CI) 1.19–3.17;  $P=0.008$ ], while the odds of using emergency contraceptive pill for women with high socioeconomic status was higher than that for those with low socioeconomic status (OR 3.10; 95% CI 1.61–5.97;  $P=0.001$ ). Additionally, having some media access was linked to an increase in the odds of using emergency contraceptive pill (OR 3.01; 95% CI 1.33–6.83;  $P=0.008$ ). Women empowerment related factors did not show any significant effect on emergency contraceptive pill use.

**Conclusions:** The findings indicate that family planning programme has a great opportunity of playing an important role in increasing emergency contraceptive pill use in Bangladesh by increasing the knowledge and awareness of women about emergency contraceptive pill.

**KEYWORDS:** Emergency contraceptive pill; Unintended pregnancy; Abortion; Bangladesh Demographic and Health Survey; Bangladesh

## 1. Introduction

Complications from unsafe abortions for terminating unintended pregnancies and from unintended births have become very common

in developing countries. About 85.5% of world's total unintended pregnancies (84.9 million) occur in developing regions. About 49% and 38% of the unintended pregnancies in developing regions, respectively, end in abortions and unintended births[1]. About 45% of world's total abortions are unsafe, almost all of which occur in developing countries[2]. The unsafe abortions cause at least 8% of maternal deaths worldwide, almost all of which occur in developing countries. In developing regions, an estimated 6.9 million women each year suffer from complications related to unsafe abortion, and 40% women experiencing complications never receive treatment[3]. Many of these complications and unintended births could easily be avoided by using emergency contraceptive pill. Emergency contraceptive pill is a safe method of preventing pregnancy if used

## Significance

Although taking emergency contraceptive pill is a safe and effective method of preventing unintended pregnancy, studies examining the predictors of emergency contraceptive pill use in South Asia are rare. Our study revealed that visit by family planning field worker, high socioeconomic status, and some media access were linked to an increase in the odds of using emergency contraceptive pill. Our findings can be helpful in designing effective interventions for improving women's health and family relationship by preventing unintended pregnancies.

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within five days after unprotected sex[4]. The United Nation has included emergency contraceptive pill in the list of 13 essential life-saving commodities for women and adolescents[5].

Bangladesh is one of the developing countries characterized by high prevalence of unintended pregnancies, unintended births, and complications from unsafe abortions and menstrual regulations—also considered as induced abortion[6]. Approximately one-third pregnancies and one-quarter births in Bangladesh are unintended[2,7]. About 1.2 million abortions occur in Bangladesh every year[8]. A large proportion of Bangladeshi women of reproductive age (approximately 0.9%) suffer complications from unsafe abortion, and approximately one-third suffering complications do not receive proper treatment[8,9]. Prevention of unintended pregnancies and reduction of complications and maternal deaths caused by unsafe abortions and menstrual regulations have been included as the priority area in the sustainable development goals of Bangladesh ([http://www.sdg.gov.bd/page/thirty\\_nine\\_plus\\_one\\_indicator/5#1](http://www.sdg.gov.bd/page/thirty_nine_plus_one_indicator/5#1)); therefore, increase in emergency contraceptive pill use can play a vital role in achieving sustainable development goals in the country. Although Bangladesh National Family Planning Programme introduced emergency contraceptive pill services (dissemination of information and free provision of emergency contraceptive pill) in 2004 throughout the whole country, very small proportions of Bangladeshi currently married women know about and use the method[6,10]. Only 18% Bangladeshi currently married reproductive age women ever heard of emergency contraceptive pill, and only 11% of those who heard of emergency contraceptive pill ever used that[6,7]. Structured study is required to know the factors that influence the use of emergency contraceptive pill. Existing studies on emergency contraceptive pill use have mainly focussed on the countries in Africa, America and Europe, and studies focussing on countries in other regions are extremely rare.

Studies are rarely seen to examine the predictors of emergency contraceptive pill use by using a sound methodology in any South Asian country. A study on emergency contraceptive pill use in Bangladesh showed that education, having any child, wealth index, use of modern contraception, and working status were the significant determinants of emergency contraceptive pill use[11]. This study analysed all the currently married women who had the knowledge of emergency contraceptive pill, but a woman just having knowledge of emergency contraceptive pill may not necessarily be a potential candidate for emergency contraceptive pill use. For example, a woman intentionally trying to conceive is not a potential candidate of emergency contraceptive pill use. Therefore, analysing the currently married women just having knowledge of emergency contraceptive pill in finding the determinants of emergency contraceptive pill use is a serious short coming of the study. The study showed that prevalence of emergency contraceptive pill use among the women who had any child was significantly lower than those who had no child; this relationship may not be consistent. Therefore, limitation of the existing study in Bangladesh and low prevalence of emergency

contraceptive pill in the country make it important to gain in-depth knowledge about the characteristics of the actual candidates for using emergency contraceptive pill that influence them to use that pill in a particular socioeconomic setting.

The current study intended to explore the determinants of emergency contraceptive pill use by analysing the cases that were exposed to the use of emergency contraceptive pill by using a sound methodology. Findings of this study may facilitate the formulation of effective interventions and identification of appropriate audience for new and existing interventions to scale up the emergency contraceptive pill use in Bangladesh and other countries with similar socioeconomic and cultural settings.

## 2. Materials and methods

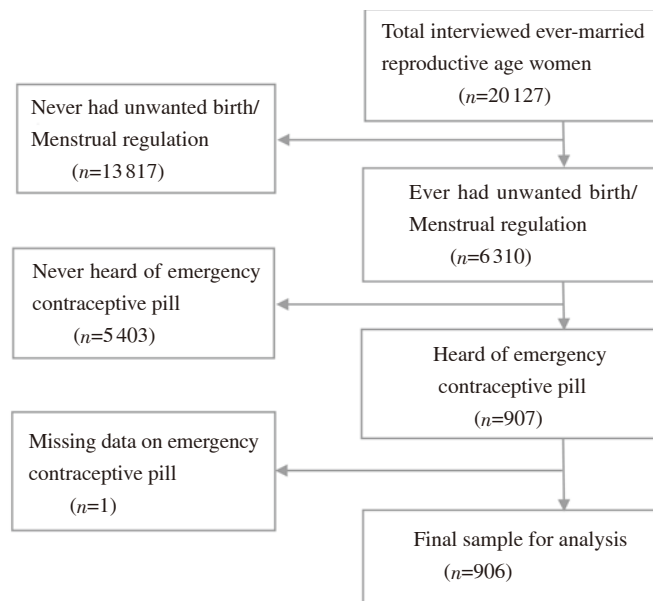
### 2.1. Analytical framework for analysing the use of emergency contraceptive pill

This section briefly explained the causal relationship of different factors with emergency contraceptive pill use. Socioeconomic development was regarded as the primary cause of reducing the demand for children by increasing their survival and cost, and by improving social security[12,13]. This decline in the demand for children increased the demand for birth control (common and emergency contraception, and abortion). Family planning programs increased the use of birth control by reducing its monetary and social costs[12]. This increase in the demand for birth control was offset to some extent by factors like women's empowerment status and lack of awareness, and fear of side effects of contraception[14]. For example, a woman's use of contraception can be prevented by the opposition of her husband or others because of her lower status in family and society. Also, because of women's ignorance about their fertile (ovulation) period, many women have unintended pregnancies that could be avoided using contraception. Using the notion of aforementioned scheme of relationship, this article offered an in-depth explanation of emergency contraceptive pill use by analysing as many predictors as possible with available data.

### 2.2. Data and methodology

#### 2.2.1. Data

This study used the nationally representative data of 2017-2018 Bangladesh Demographic and Health Survey (BDHS) conducted under Demographic and Health Survey (DHS) programme. National and international organisations considered BDHSs as the most reliable sources of demographic data of Bangladesh[15]. DHS programme had assisted more than 400 surveys in over 90 countries and had earned worldwide reputation for collecting and disseminating accurate and nationally representative data[16].



**Figure 1.** Flowchart of sample selection for analysis.

Samples for our analysis were extracted from the 20 127 ever-married reproductive age (15–49 years) women interviewed in 2017–2018 BDHS. These women were interviewed from 20 376 eligible women who were primarily selected for interview using a two-stage stratified sampling from the entire population of Bangladesh residing in private dwellings, giving a response rate of 99%. The sample selection process is presented in Figure 1. Out of the total interviewed women, 6 310 were found to have either an unwanted birth or a menstrual regulation in their lives; we assumed that these women could have avoided the unwanted birth or the menstrual regulations if they would have known about emergency contraceptive pill. A woman was considered to have an unwanted birth if her reported desired number of children was smaller than her total number of living children; this was one of the techniques used by BDHSs for identifying unwanted births. Among those 6 310 women, 907 (14.4%) were found ever heard of emergency contraceptive pill. After excluding one from these 907 cases for missing response against the question related to ever use of emergency contraceptive pill, 906 women were considered as the potential candidates for using emergency contraceptive pill and were finally included in our analysis. As the exclusion of the cases with missing values for the selected predictors could affect the overall rates, they were retained in the analysis.

### 2.2.2. Variables and measures

The dependent variable selected here was the ever-use of emergency contraceptive pill by the selected women. If a woman ever used emergency contraceptive pill, she was coded 1, otherwise she was coded 0.

Selection of independent variables was primarily guided by the analytical framework developed in this article, existing literature and availability of data. Background, programmatic (related to family planning programmes) and socioeconomic characteristics included in the analysis were respondent's age (current), respondent visited by family planning field worker in past 6 months, education, socioeconomic status, religion, residence (rural-urban), and region. Factors related to women's empowerment included health seeking autonomy and justifying wife beating. Factors related to women's awareness included knowledge of fertile (ovulation) period of woman and media access.

In classifying women's (respondent's) education, those who never attended school, who completed 1–5 years of education, and who completed more than five years of education were, respectively, categorised as having no education, primary education, and secondary or higher education[6]. Women's socioeconomic status was measured using the household wealth index scores readily provided in raw data file of 2017–2018 BDHS[17]. The index scores were divided into three categories with equal difference before selecting the cases for analysis. Finally, the socioeconomic status of the women with lowest, middle and highest wealth index score were, respectively, classified as low, medium and high. The category non-Muslim included Hindu, Buddhist, Christian and other. The category Rest of Bangladesh included Chattogram, Dhaka, Khulna, Rajshahi and Rangpur regions. Women's health seeking autonomy was measured using the responses to the question–person who usually decided on her health care? Against this question, selected cases gave following responses: (a) respondent alone, (b) respondent

and husband/partner, (c) Husband/partner alone, and (d) someone else. A woman was considered to have some autonomy on seeking her own health care if she answered either (a) or (b), otherwise she was considered to have no autonomy. A respondent was classified as justifying wife beating by husband if she supported wife beating by husband for any of the following reasons: i) going out without telling husband, ii) neglecting the children, iii) arguing with husband, iv) refusing to have sex with husband, and v) burning the food. Media access of a woman was measured using the responses of three questions asking the frequencies of (i) reading newspaper or magazine, (ii) listening to radio, and (iii) watching television; against these questions, the response options were (a) not at all, (b) less than once a week, (c) at least once a week, and (d) almost every day. If a woman answered (a) to all the questions (i) to (iii), she was considered to have no media access, otherwise she was considered to have some media access.

### 2.3. Statistical analysis

This study analysed data using all univariate, bivariate and multivariate techniques. The association between each characteristic and use of emergency contraceptive pill was measured using *Chi-square* test. Finally, stepwise binary logistic regression model was employed as multivariate analysis for examining the factors affecting the emergency contraceptive pill use, where independent variables were specified using forward selection method with conditional testing. In the current study, the forward stepwise selection method included independent variable at each step based on the probabilities of conditional testing. In conditional testing technique, the entry of the independent variable was based on the probability of score statistic, and the removal was based on the probability of a likelihood-ratio statistic based on conditional parameter estimate. The probabilities for entry and removal were considered, respectively, 0.05 and 0.10. For example, at each step of the forward selection method, the variable not yet in the equation with the smallest probability was entered and this variable was retained in the model as long as the probability value was smaller than 0.05. The procedure stopped when there were no variables meeting the entry criteria. Besides the conditional testing method, other methods (such as Likelihood Ratio and Wald testing method) were also tried; all these three methods specified the same model. Both in *Chi-square* test and regression analysis, an association between a characteristic and emergency contraceptive pill use was considered significant if the *P* value was smaller than 0.05. All the statistical analyses were performed using SPSS for windows.

### 2.4. Ethical statement

This study was based on secondary data of 2017-2018 Bangladesh Demographic and Health Surveys, which were freely available from <https://dhsprogram.com/> upon a formal request for accessing the

data. The survey was conducted under the authority of the National Institute of Population Research and Training of the Ministry of Health and Family Welfare, Bangladesh. The survey was assisted by Inner City Fund International. The survey was conducted under the Demographic and Health Survey programme funded by the United States Agency for International Development, Bangladesh. Procedures and questionnaires for standard Demographic and Health Survey were reviewed and approved by Institutional Review Board of Inner City Fund and National Research Ethics Committee of Bangladesh Medical Research Council.

## 3. Results

### 3.1. Sample characteristics and differentials in using emergency contraceptive pill

Table 1 shows that only 5.0% of the 906 selected women were found in youth age group (15–24 years), whereas 55.6% of the selected women were in middle age group (35–49 years). Among the selected women, a clear majority had secondary or higher education (63.5%), whereas 8.9% had no education. Only 8.6% of the selected women were non-Muslim. A small majority of the selected women were resided in urban area (53.6%), and only 10.3% were from Sylhet region. An overwhelming majority of the selected women had some health seeking autonomy (80.6%) and disapproved wife beating in any situation (83.9%), while a small majority of the women did not have knowledge about fertile period (52.8%). A sizeable proportion of women did not have any media access (20.3%). Besides these, responses of 4.2% women were missing against the questions used to measure their health seeking autonomy.

Only 10.9% (99/906) of the selected women were found to ever use emergency contraceptive pill, while 89.1% were found not to use emergency contraceptive pill (Table 1). Percentage of emergency contraceptive pill use for the women who were visited by family planning field worker (14.1%) was much higher than that of those who were not visited by family planning field worker (10%). Proportion of the women who did not use emergency contraceptive pill among those visited by family planning field worker (85.9%) was lower than that among those who were not visited by family planning field worker (90%). The rate of using emergency contraceptive pill was observed to increase with the increase in women's education, and that rate for women with primary education (6.8%) was about half of that for those with secondary education or higher (13.7%). While the rate of not using emergency contraceptive pill declined with the increase in the level of education. The non-use rates of using emergency contraceptive pill among the women with no education, primary education, and

secondary education or higher were, respectively, 96.3%, 93.2%, and 86.3%. The emergency contraceptive pill use increased with the increase in the socioeconomic status of the women. On the contrary, the socioeconomic status showed negative effect on the non-use of that pill. The rate of emergency contraceptive pill use for the women with low socioeconomic status (6.8%) was about one third of that for those with high socioeconomic status (19.6%). The non-use rate of emergency contraceptive pill among those with high socioeconomic status (80.4%) was much lower than

that among those with low socioeconomic status (93.2%). Urban women were more likely to use emergency contraceptive pill than the rural women, while an opposite tendency was observed among these categories of women in case of non-use of the pill. Finally, the emergency contraceptive pill use rate for the women with some media access (12.7%) was more than three times that for those with no media access (3.8%). On the contrary, the non-use rate of emergency contraceptive pill for those with some media access (87.3%) was lower than that for those with no media access (96.2%).

**Table 1.** Background characteristics of the selected women, and nonuser and user of emergency contraceptive pill in Bangladesh between 2017 and 2018, [n (%)].

Characteristic	Selected women	Nonuser	User	Chi-square value	P value
Age, years					
15-24	45 (5.0)	39 (86.7)	6 (13.3)	3.002	0.223
25-34	357 (39.4)	311 (87.1)	46 (12.9)		
35-49	504 (55.6)	457 (90.7)	47 (9.3)		
Visited by family planning field worker				2.719	0.099
No	700 (77.3)	630 (90.0)	70 (10.0)		
Yes	206 (22.7)	177 (85.9)	29 (14.1)		
Education				13.389	0.001
No education	81 (8.9)	78 (96.3)	3 (3.7)		
Primary	250 (27.6)	233 (93.2)	17 (6.8)		
Secondary or higher	575 (63.5)	496 (86.3)	79 (13.7)		
Socioeconomic status				16.024	<0.001
Low	369 (40.7)	344 (93.2)	25 (6.8)		
Medium	425 (46.9)	373 (87.8)	52 (12.2)		
High	112 (12.4)	90 (80.4)	22 (19.6)		
Religion				0.884	0.347
Muslim	828 (91.4)	740 (89.4)	88 (10.6)		
Non-Muslim	78 (8.6)	67 (85.9)	11 (14.1)		
Residence				5.412	0.020
Rural	420 (46.4)	385 (91.7)	35 (8.3)		
Urban	486 (53.6)	422 (86.8)	64 (13.2)		
Region				1.619	0.445
Rest of Bangladesh	697 (76.9)	619 (88.8)	78 (11.2)		
Barisal	116 (12.8)	107 (92.2)	9 (7.8)		
Sylhet	93 (10.3)	81 (87.1)	12 (12.9)		
Health seeking autonomy				1.528	0.466
No autonomy	138 (15.2)	121 (87.7)	17 (12.3)		
Some autonomy	730 (80.6)	650 (89.0)	80 (11.0)		
Missing	38 (4.2)	36 (94.7)	2 (5.3)		
Justifying wife beating				0.092	0.762
No	760 (83.9)	678 (89.2)	82 (10.8)		
Yes	146 (16.1)	129 (88.4)	17 (11.6)		
Knowledge of fertile period				0.815	0.367
No	478 (52.8)	430 (90.0)	48 (10.0)		
Yes	428 (47.2)	377 (88.1)	51 (11.9)		
Media Access				12.035	0.001
No media access	184 (20.3)	177 (96.2)	7 (3.8)		
Some media access	722 (79.7)	630 (87.3)	92 (12.7)		
Total	906 (100)	807 (89.1)	99 (10.9)	-	-



**Table 2.** Adjusted odds ratio of the factors determining the use of emergency contraceptive pill in Bangladesh between 2017 and 2018.

Characteristic	Adjusted OR	95% CI	P value
Visited by family planning field worker			
No <sup>®</sup>	1.00		
Yes	1.94	1.19-3.17	0.008
Socioeconomic status			
Low <sup>®</sup>	1.00		
Medium	1.59	0.95-2.68	0.079
High	3.10	1.61-5.97	0.001
Media access			
No media access <sup>®</sup>	1.00		
Some media access	3.01	1.33-6.83	0.008
Constant	0.03		<0.001

Notes: Estimates from stepwise logistic regression model. <sup>®</sup> = reference category. OR: odds ratio; CI: confidence interval. *n*=906.

### 3.2. Stepwise logistic regression analysis

Table 2 shows the result of stepwise logistic regression analysis which specified a model with three variables. The odds of using emergency contraceptive pill for the women who were visited by family planning field worker (OR 1.94; 95% CI 1.19–3.17; *P*=0.008) was higher than that for those who were not visited by family planning field worker. The odds of using emergency contraceptive pill for those with high socioeconomic status (OR 3.10; 95% CI 1.61–5.97; *P*=0.001) was higher than that for those with low socioeconomic status. Finally, compared to no media access, having some access to media was linked to a significant increase in the odds of using emergency contraceptive pill (OR 3.01; 95% CI 1.33–6.83; *P*=0.008).

## 4. Discussion

This study explored the factors that influenced the potential candidates to use emergency contraceptive pill in Bangladesh. Only 10.9% of the potential candidates were found to use emergency contraceptive pill. The findings show that visit by family planning field worker, high socioeconomic status, and having some media access were the statistically significant determinants of emergency contraceptive pill use, which exerted positive effect on emergency contraceptive pill use. None of the factors related to women's empowerment showed significant impact on emergency contraceptive pill use in Bangladesh.

In the current study, family planning field worker's visit was positively associated with the emergency contraceptive pill use, where visiting by family planning field worker was linked to increase in the likelihood of emergency contraceptive pill when compared with not visiting by family planning field worker. Family planning field worker's visit to the women in the selected areas

is one of the key activities of the family planning programme in Bangladesh, and it is argued that family planning field worker's visit played a vital role in accelerating the increase of contraceptive use in the country[18–20]. Also, emergency contraceptive pill services were introduced in Bangladesh National Family Planning Programme in 2004[10]. Family planning field workers visit women at their doorsteps in selected areas and provide counselling and contraception.

Although *Chi*-square test showed a significant relationship between emergency contraceptive pill use and education of the women where use of emergency contraceptive pill among the women with secondary or higher education was more than that among those with no education, women's education was not specified by the stepwise logistic regression line and the relationship turned nonsignificant in stepwise logistic regression model. The studies in Sydney and African countries also found a positive relationship between emergency contraceptive pill use and education[21,22]. Contrary to these findings, however, the study of Alam *et al* found that Bangladeshi women with secondary or higher education were less likely to use emergency contraceptive pill than those with no education[11]. The study in Szeged of Hungary also found a negative relationship between education and emergency contraceptive pill use[23].

As recognized by the analytical framework, socioeconomic status of women emerged as a very important predictor of emergency contraceptive pill use. The current study found that having high socioeconomic status increased the odds of using emergency contraceptive pill in comparison to having a low socioeconomic status. This finding is analogous to that of Alam *et al*[11]. As women with high socioeconomic status on average have desire for lower number of children than those with low socioeconomic status (2.1 children *versus* 2.3 children; calculated from 2017-2018 BDHS raw data), and women with higher socioeconomic status have more access to resources, and they were more likely to use emergency contraceptive pill.

In this study, having some media access showed a large and positive impact on emergency contraceptive pill use. Among the potential candidates for emergency contraceptive pill use, some media access was associated with a significant increase in the odds of using emergency contraceptive pill. The study of Alam, Islam and Sultan, however, found that women had access to media were less likely to use emergency contraceptive pill, even though the association between these were statistically nonsignificant[11]. Access to media increases knowledge and awareness about the development of contraception among women, which in turn perhaps influence them to adopt a new method like emergency contraceptive pill[6].

Besides the aforementioned factors, the studies in African countries found that use of emergency contraceptive pill was significantly positively associated with being in 20s, previous use of

contraception, being unmarried, being Muslim and good knowledge about emergency contraceptive pill[4,22,24,25]. While the studies in the countries of America, Europe and Australia showed that being younger, non-cohabitation, awareness of pregnancy risk, experience of non-ambivalent pregnancy, experience of prior pregnancy, use of condom, having unprotected sex, supply of emergency contraceptive pill in advance, racial/ethnic group (Latina), lower income, residing in urban areas, prior use of emergency contraceptive pill, and good knowledge about emergency contraceptive pill were positively associated with the use of emergency contraceptive pill[21,23,26–30].

Because of the limitation of data, impact of women's level of knowledge (poor or good knowledge) about emergency contraceptive pill could not be analysed in the current study. We also did not investigate the determinants of knowledge about emergency contraceptive pill in this article because of keeping the article concise and focused. A new and thorough study on the influence of the level of knowledge about emergency contraceptive pill on its use in Bangladesh may reveal important information, which can be very helpful in designing new intervention for increasing emergency contraceptive pill use in the country.

None of the woman empowerment related factors that were analysed in this study showed significant effect on emergency contraceptive pill use. Besides the two included women empowerment related factors, inclusion of other fertility enhancing factors relative to desired family size could be very useful. Some such factors are equality between husband's and wife's desired number of children, consideration of women's opinion in spending their own earnings, intimate partner violence, and experience of side effect of using contraception. These factors could not be included in the analysis because of either very high proportion of missing values, or unavailability of information in 2017-2018 BDHS. Existing studies are also found to rarely analyse the effects of these factors on emergency contraceptive pill use. Finally, although women who ever had an induced abortion and knew about emergency contraceptive pill are the additional potential candidates for emergency contraceptive pill use, they could not be included in the analysis because of the lack of information.

Although emergency contraceptive pill should be used when necessary, its increased use is expected in a country like Bangladesh where unintended pregnancy and health complications from abortion and menstrual regulations are widespread. Findings of this study indicate that increase in the socioeconomic status of women may increase the use of emergency contraceptive pill among the potential candidates, but increasing that status is a long-term process. Therefore, besides the steps for improving the socioeconomic status, other short-term interventions should be designed for increasing the emergency contraceptive pill use quickly. Knowing of emergency contraceptive pill by a very small proportion of overall currently married women (18%), and visit by family planning field worker

to a small proportion of women (19.1%), and significant impact of family planning field worker visit and media access on emergency contraceptive pill use indicate that family planning programme of Bangladesh has a great opportunity of playing important role in scaling up the use in the country[6]. It is evident in other countries that the use of a contraception primarily depends upon the knowledge about that[27,29]. As Bangladeshi women already showed willingness to use emergency contraceptive pill and very few Bangladeshi women were found to ever hear about that pill, dissemination of detailed information about the pill by family planning field worker visits and mass media, and the advance supply of the pill by the family planning field worker may play an effective role in increasing its use in Bangladesh[10]. As the high socioeconomic status of women was found to be linked with higher use of emergency contraceptive pill in our study, dissemination of detailed information about the pill among all women with a special emphasis on women with lower socioeconomic status may be very helpful in increasing its use in the country. Finally, it can be said that use of the findings of this study in formulating and implementing interventions can be very helpful in improving women's health and family relationship by reducing the sufferings caused by unintended pregnancies in Bangladesh, as well as in other countries with similar socioeconomic and cultural settings.

In conclusion, this study provides important insights into the influence of different factors on emergency contraceptive pill use among Bangladeshi women, which can be very helpful in designing new interventions and selecting target audiences for new and existing interventions.

### Conflict of interest statement

The authors declare that they have no competing interests.

### Authors' contributions

Md. Rahman Mahfuzur developed the main idea of the study and devised the study question. Also, Md. Rahman Mahfuzur wrote the methodology section and documented the manuscript. Md. Rashed Alam and Md Arif Billah assisted in analysing the data, interpreting the results, and formatting the document. All authors read and approved the final manuscript.

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