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RESEARCH ARTICLE

UNMET NEED FOR CONTRACEPTIVE: THE CASE OF MARRIED ADOLESCENT WOMEN IN BANGLADESH

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ABSTRACT

Objectives: To find the level and differentials of unmet need for contraceptive of currently married adolescent women and also their causes of non-use of contraceptive.

Methods: For analyzing unmet need for contraceptive and causes of contraceptive non-use of currently married adolescent women (CMAW), data come from Bangladesh Demographic and Health Survey (BDHS)-2004. Attempts have been made, in this study, to look at the levels of and causes of unmet need for contraceptive, by using percent distribution and urban-rural ratio of currently married adolescent women with an unmet need for contraceptive by different characteristics. Logistic regression method has been used for examining differentials in unmet need for contraceptive of currently married adolescent women.

Results: The results of the study revealed that about 16.03% of currently married adolescent women had an unmet need for contraceptive and the figure was higher for (10–14) years age-group than (15–19) years age-group, and also it was more prevalent in rural areas than in urban areas (rural 17.40% Vs urban 12.60%). Husband's opposition and fear of side effects were the most cited causes of non-use of contraceptive.

Conclusion: Interventions should be made, paying special emphasize, for early adolescence group, i.e. for (10-14) years age-group and rural areas of all six divisions in Bangladesh should be considered as priority area in terms of unmet need for contraceptive. Since the results of this study identified a wide disparity between divisions in terms of CMAW's unmet need for contraceptive, therefore, divisions, where unmet need for contraceptive are high (Barisal, Chittagong and Sylhet division), needed more consideration.

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INTRODUCTION

The issue of unmet need for contraceptive has been receiving more attention worldwide and many studies and investigations have been done on it. A study, on unmet need for contraceptive, revealed the importance of investigation on unmet need for contraceptive (Ahmadi and Iranmahboob, 2005) which also focused on the importance for studying unmet need as (i) it (unmet need for contraceptive) has direct impact on total fertility rate, (ii) it can assure women's wellbeing by preventing unwanted pregnancies, (iii) it can be considered as an evaluation of family planning programs. Another study argued that the magnitude of demand for family planning or contraceptive methods is helpful to

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assess the market for services and effectiveness of family planning programs; and demand for family planning can be estimated by adding unmet need for contraceptive with current prevalence of contraceptive use (Westoff and Ochoa, 1991). In Bangladesh, the government, and various NGOs are working for meeting the needs of family planning services (contraceptives) for sexually active persons (married).

In 2004, 11.3 % of Bangladeshi female aged <50 years had an unmet need for contraceptive. Among the currently married Bangladeshi women (under 50 years of ages), adolescent group (10–19 age-group) is the most priority group, because they have the highest unmet need for contraceptive. Early marriage is a social norm for women in Bangladesh. Early marriage means early motherhood (if sexually active and not use any contraceptive method) and which has an influence to increase total fertility rate (TFR) and that to increase unintended (unwanted and mistimed) pregnancies. It has been estimated that almost two in every five pregnancies worldwide are unintended/unplanned [mistimed and unwanted] — the result of non-use of contraception or of ineffective contraceptive use or method failure (The Alan Guttmacher Institute, 1999).

Unintended pregnancy has an influence to increase the no. of abortion and which leads to maternal mortality and morbidity. Also, family planning programs help to prevent maternal deaths chiefly through reducing the number of pregnancies (Bulatao, 1998). In Bangladesh, maternal mortality ratio (MMR) is one of the highest in developing countries, the figure of MMR was 322 per 100,000 live births in 2001 in Bangladesh (NIPORT et al., 2003). According to BDHS-2004, TFR in Bangladesh is 3.0 and 10-19 year age-group currently married women accounted for 22% of the TFR. As a signatory member of 2000 Millennium summit, Bangladesh government has developed timeframe to achieve those Millennium Development Goals (MDGs) for accomplishing the well being of country's people. Among the 8 Millennium Development Goals, this study indirectly related to MDG 5 — improves maternal health, to achieve this goal Bangladesh government's target for reducing the maternal mortality ratio from 322 to 143 within the year 2015, and Bangladesh government's target to reduce the TFR to 2.2 by the year 2010. Since TFR is a function of age specific fertility rates, TFR can be reduced by reducing birth to adolescents. Also, a vast reduction in maternal morbidity and mortality would be achieved by reducing birth to adolescent, the above argument supported by one study, using Matlab data, Bangladesh, conducted by Fortney (Fortney**,** 1987**)**. Among the currently married adolescent women more than 70% of 10–14 years aged and about 58% of 15–19 years of ages are not using contraceptive and 16.03% have unmet need for contraceptive methods in Bangladesh (calculation of percentages have been made by using BDHS-2004 data). So, for reducing TFR and maternal mortality and morbidity in Bangladesh, it is important to reduce the unmet need for contraceptive (by meeting the need for contraceptive) of currently married adolescent women (CMAW) (as a priority group), as well as others (who has need). There are also variations in unmet need for contraceptive of currently married adolescent women in Bangladesh regarding their place of residence, region, educational level, and wealth_index [(a)]. Proper estimation of the differentials of the unmet need would likely to enable policy makers/ program managers/planners to formulate more realistic target (s).

MATERIALS AND METHODS

Definition of unmet need for contraceptive

According to standard Demographic and Health Survey definition of unmet need for contraceptive, the unmet need group includes all fecund women who are married or are living in union, and thus presumed to be sexually active, who either do not want any more children or who wish to postpone the birth of their next child for at least two more years and are not using any contraceptive. The unmet need group includes all pregnant married women as well whose pregnancies were unintended (mistimed or unwanted) or who unintentionally became pregnant because they were not using contraceptive. Also, amenorrheic women are included in the unmet need group if their last births were unintended (mistimed or unwanted). Pregnant and amenorrheic women are not included in the unmet need group who became pregnant while using a contraceptive method (Westoff and Ochoa, 1991; Westoff and Bankole, 1995).

In this research only (10–19) years aged Currently Married Adolescent Women (CMAW), who were possessing the criteria (described above) to be included in the calculation of unmet need for contraceptive, are considered.

Causes of not using contraceptives

All currently married adolescent women who were not using contraceptive methods and who had indicated that they do not want to have a (another) child very soon (within two years) or at all were asked in Women's Questionnaire of BDHS-2004 to cite their reasons/causes of non-use of contraceptive. Responses were categorized according to whether the causes are related to their perceived low risk of getting pregnant, their own opposition to use contraceptive method or the opposition

of their husband or the opposition of other who are close to them, and causes relate to lack of knowledge including knows no method or knows no source, and causes those relate to contraceptive method including health concerns, fear of side effects, access, and cost, and causes other than those mentioned above (NIPORT et al. 2005).

Objectives

The main objectives of this study are as follows:

i) to find the extent of unmet need for contraceptive of currently married adolescent women.

ii) to explore the causes of not using contraceptive of currently married adolescent women who had an unmet need for contraceptive.

iii) to unfold the disparities of unmet need for contraceptive of currently married adolescent women.

Methods of analysis

Data

For analyzing unmet need for contraceptive and causes of contraceptive non-use of currently married adolescent women (CMAW) in Bangladesh, data come from Bangladesh Demographic and Health Survey (BDHS)-2004. The sample for the BDHS-2004 covered the entire population residing in private dwelling units in the country, and in the survey a stratified and multi stage cluster sampling method has been used. The BDHS-2004 used four questionnaires (a Household Questionnaire, a women's questionnaire, a Men's Questionnaire and a Community Questionnaire). The Women's Questionnaire was used to collect information from ever married women of age 10–49 years. Among the selected household, 11,601 (eleven thousand and six hundred and one) women were identified as eligible for the individual interview and interviews were completed for 11440 of them (NIPORT *et al.,* 2005).

Table 1. Percent distribution and urban–rural ratio of currently married adolescent women by unmet need for contraceptive, according to selected characteristics, Bangladesh, 2004.

Characteristics ↓	Unmet need for contraceptive			
	National % (n)	Urban % (n)	Rural % (n)	(Urban–rural ratio)x100
Age at interview				
10-14	22.06(30)	9.10(4)	28.30(26)	15.4
15-19	15.49(232)	13.00(56)	16.50(176)	31.8
Division				
Barisal	19.70(39)	17.50(7)	20.30(32)	21.9
Chittagong	22.19(67)	14.90(15)	25.90(52)	28.9
Dhaka	11.89(39)	7.60 (9)	14.30(30)	30.0
Khulna	12.84(33)	12.90 (9)	12.80(24)	37.5
Rajshahi	14.32(53)	10.70(12)	13.20(41)	29.3
Sylhet	24.60(31)	24.2 (8)	24.70(23)	34.8
Education				
No education	18.26(42)	7.90 (5)	22.20(37)	13.5
Primary incomplete	16.24(57)	11.70(12)	18.10(45)	26.7
Primary complete	16.13(30)	14.60 (7)	16.70(23)	30.4
Secondary incomplete	15.26(119)	14.60(33)	15.50(86)	38.4
Secondary complete or higher	16.09(14)	8.82 (3)	20.75(11)	27.3
Marital duration				
<5	16.98(241)	13.40(56)	18.5(185)	65.9
5-9	9.77(21)	7.10 (4)	10.7(17)	23.5
Sex of Household Head				
Male	14.84(238)	12.60(57)	16.90(181)	70.4
Female	22.01(24)	13.00 (3)	24.40(21)	14.3
Ever Use Contraceptive				
Never used	28.11(151)	27.40(34)	28.30(117)	29.1
Used	10.12(111)	7.40(26)	11.40(85)	30.6
Wealth Index				
Poor	16.55(49)	13.00 (6)	17.20(43)	14.0
Poorer	17.07(56)	14.50 (9)	17.70(47)	19.1
Middle	15.65(59)	11.90(10)	16.70(49)	20.4
Richer	17.81(57)	11.90(10)	19.90(47)	21.3
Rich	13.09(41)	12.60(25)	13.90(16)	156
Total	16.03(262)	12.60(60)	17.40(202)	29.7

Note: The number of women is within brackets.

Source: Author's calculation based on Bangladesh Demographic and Health Survey (BDHS)-2004.

Table 2. Percent distribution of married adolescent women with unmet need for contraceptive who were not using contraceptive according to various reasons/causes, Bangladesh, 2004.

Causes ↓	Reasons/ causes of not using contraceptives % (n)			
	National (total=200)	Urban (total=45)	Rural (total=155)	(Urban-rural ratio)x100
Fertility related				
Not having sex	14.5 (29)	06.7 (3)	16.8 (26)	11.5
Infrequent sex	14.0 (28)	11.1 (5)	14.8 (23)	21.7
Menopause/hysterectomy	01.0 (2)	02.2 (1)	00.6 (1)	100.0
Postpartum amenorrheic	15.0 (30)	11.1 (5)	16.1 (25)	20.0
Fatalistic	05.5 (11)	04.4 (2)	05.8 (9)	22.2
Opposition to use				
Respondent opposed	02.5 (5)	04.4 (2)	01.9 (3)	66.7
Husband opposed	08.5 (17)	11.1 (5)	07.7 (12)	41.7
Others opposed	03.0 (6)	04.4 (2)	02.6 (4)	50.0
Lack of knowledge				
Knows no method	01.0 (2)	00.0 (0)	01.3 (2)	00.0
Knows no source	01.0 (2)	00.0 (0)	01.3 (2)	00.0
Method related				
Health concerns	03.5 (7)	04.4 (2)	03.2 (5)	40.0
Fear of side effects	06.5 (13)	06.7 (3)	06.5 (10)	30.0
Lack of access/too far	02.0 (4)	02.2 (1)	01.9 (3)	33.3
Cost too much	01.0 (2)	02.2 (1)	00.6 (1)	100.0
Others	29.5 (59)	35.6 (16)	27.7 (43)	37.2

Note: Some women may have chosen more than one causes

The data set for individual women aged 10–49 years ever married women (Individual Recode Data File in SPSS) will provide an opportunity to study various aspects of adolescents women's contraceptive utilization behaviors. The analysis considers only CMAW, because, in Bangladeshi society, women, who are unmarried, widowed, divorced or separated from their husbands, usually expected to have a celibate (abstaining from sex) life. For analyzing unmet need for contraceptive and causes of non-use of contraceptives, data extracted from individual recode file of BDHS-2004, and excluding missing cases, only 1634 CMAW were included in this study sample.

Statistical analysis

Percent distributions have presented to look at the levels/ extents of and causes of unmet need for contraceptive among currently married adolescent women. Percent distribution and urban-rural ratio of currently married adolescent women with an unmet need for contraceptive by different characteristics are provided in Table 1. Among the currently married adolescent women with unmet need for contraceptive, 200 women (45 urban and 155 rural) have cited reasons of not using contraceptive. Percent distribution and urban–rural ratio of currently married adolescent women, with an unmet need, who cite each causes, from among the most commonly cited causes for non-use of contraceptive, have presented in Table 2.

For examining disparities in unmet need for contraceptive of currently married adolescent women (CMAW), logistic regression method can be used (considering unmet need for contraceptive as dependent variable assigning value 1 to those having an unmet need for contraceptive and value 0 to those not having an unmet need for contraceptive). Logistic regression method provides an opportunity to examine the disparities in unmet need for contraceptives regarding covariates possess by CMAW. Binary logistic regression used to examine the disparities of unmet need for contraceptive by the effects of different covariates. For getting logistic regression estimates, we considered total unmet need for contraceptive (considered here as dependent variable) of currently married adolescent women only, assigning value 1 to those having an unmet need for contraceptive and value 0 to those not having an unmet need for contraceptive. Several covariates were used as independent variables, such as marital duration, ideal number of children, number of living children, place of residence, work status, access to media, religion, place of region (division), educational attainment, wealth index[(a)] (NIPORT *et al.,* 2005), discussion about family planning with husband, sex of household head, ever used contraceptive method.

The various covariates were coded as: marital duration <5 years=0, (5-9) years =1); ideal no. of children (1 child=0, 2 children=1, 3 children=2, non-numeric response=3); no. of living children (no child=0, 1 child=1, 2 and 2 or more children=2); place of residence (urban=0, rural=1); work status (not working=0, working=1); access to media (no access=0, has access=1); religion (Islam=0, other=1); place of region (Dhaka or Khulna=0, Rajshahi=1, Barisal,

Table 3. Logistic regression estimates of married adolescent women's unmet need for contraceptive, Bangladesh, 2004.

Covariates	Regression coefficient, B	Odds ratio= exp(B)
Marital duration		
0-4 (RC)		
5-9	-0.94	0.39[d]
Ideal no. of children		
1 (RC)		
2	-0.713	0.49[c]
3	-0.788	0.46[c]
Non-numeric response	-2.122	0.12[d]
Number of living children		
0 (RC)		
1	0.478	1.61[d]
2+	1.525	4.59[e]
Place of residence		
Urban (RC)		
Rural	0.245	1.28
Work status		
Not working (RC)		
Working	-0.013	0.73
Access to media		
No (RC)		
Yes	-0.285	0.75
Religion		
Islam (RC)		
Other than Islam	-0.712	0.49[c]
Region		
Dhaka/Khulna (RC)		1.00
Rajshahi	0.033	1.03
Barisal, Chittagong or Sylhet	0.427	1.53[c]
Educational attainment		
No education (RC)		1.00
Primary	0.074	1.08
Primary and above	0.202	1.22
Wealth Index		
Poor(RC)		1.00
Poorer	0.294	1.34
Middle	0.171	1.19
Richer	0.360	1.43
Rich	0.260	1.30
Discussion about family planning with husband		
No (RC)		
Yes	-0.260	0.77
Sex of household head		
Male (RC)		
Female	0.461	1.59
Ever used contraceptive methods		
No (RC)		
Yes	-1.286	0.28[e]
Constant	-0.826	0.44

RC= reference category, c= p<.05, d= p<.01, e= p<.001

Chittagong or Sylhet=2); educational attainment (no education=0, primary=1, above primary=2); wealth index (poorer=0, poor=1, middle=2, richer=3, rich=4); discussion about family planning with husband (no=0, yes=1); sex of household head (male=0, female=1); ever used contraceptive method (never used=0, used=1). Covariates ideal no. of children, no. of living children, educational attainment, place of region and wealth index are considered as categorical independent variables. Logistic regression estimates of odds ratio of characteristics of currently married adolescent women on unmet need for contraceptive are provided in Table 3.

RESULTS AND EXPLANATIONS

Table1 shows the percentage distribution and urban-rural ratios of currently married adolescent women who have unmet need for contraceptive, according to various characteristics they are possessing. At the time of interview of BDHS-2004 survey, among currently married adolescent women (CMAW), about 16.03% of them had an unmet need for contraceptive in Bangladesh and it was higher in rural areas than in urban areas (17.40% among rural CMAW vs. 12.60% among urban CMAW). Unmet need for contraceptive was higher in (10–14) years age-group than (15–19) years age-group, and also it was higher in rural areas for both of age-groups. Unmet need for contraceptive, of currently married adolescent women, was highest in Sylhet and lowest in Dhaka division respectively.

Among the married adolescent women, who were living in urban areas, unmet need was lowest in Dhaka division and highest in Sylhet division respectively. Lowest and Highest unmet need for contraceptive, among the currently married adolescent women who were living in rural areas, was in Khulna division and Chittagong division respectively. Contrasting urban-rural disparities regarding unmet need for contraceptive by place of region (division), table1 shows that urban-rural ratio for unmet need was highest in Khulna division (about 37%) and lowest in Barisal division (about 21%). That means, in Khulna division, if there were 100 married adolescent women with unmet need for contraceptive in rural areas then 37 married adolescent women with unmet need for contraceptive were in urban areas, and in Barisal division, if there were 100 married adolescent women with unmet need for contraceptive in rural areas then 21 Married adolescent women were in urban areas.

Among the married adolescent women in Bangladesh, highest and lowest percentage of unmet need for contraceptive was in no education group and secondary incomplete group respectively. In urban areas of Bangladesh, married adolescent women's unmet need for contraceptive was highest (percentage) in primary complete and secondary incomplete groups, and lowest in no education group. But in rural areas, it was highest (percentage) in no education group and lowest (percentage) in secondary incomplete group. Highest and lowest urban-rural ratio of unmet need for contraceptive was in secondary incomplete and no education group of married adolescent women respectively, in Bangladesh. Among the currently married adolescent women, percentages of women, whose marital duration (5-9)

years, were lower in national, urban and rural areas than those women whose marital duration <5 years at the time of interview. Percentage of currently married adolescent women, who were living in female headed households, with unmet need for contraceptive was higher than those who were living in male headed households in Bangladesh (national level, urban and rural areas).

Table 2 shows the Percent distribution and urban-rural ratio of currently married adolescent women, with an unmet need, who cite each causes, from among the most commonly cited causes for non-use of contraceptive methods. Among the currently married adolescent women, with unmet need for contraceptive, percentage of women cited husband's opposition as cause of non-use (comparing other causes in the opposition to use category) of contraceptive method was the highest in Bangladesh, and also this figure of percentage (% of currently married adolescent women who cited husband's opposition as cause of non-use) was higher in urban areas than in rural areas. On the basis of table 2, among the currently married adolescent women, with unmet need for contraceptive, about 99 percent of them knew any contraceptive method and same percent of them knew any source of contraceptive method.

Among the currently married adolescent women, with unmet need for contraceptive, percentage of women cited fear of side effect as cause of non-use (comparing other causes in the health related causes of non-use category) of contraceptive method was the highest in Bangladesh, and within health related causes of non-use category, figure of percentages (% of currently married adolescent women who cited fear of side effect as cause of non-use) were highest both in urban and in rural areas at the time of interview. Percentage of currently married adolescent women, with unmet need, who cited other causes as cause of non-use of contraceptive method, was higher in urban areas than rural areas in Bangladesh.

Table 3 shows the logistic regression estimates of odds ratios for selected covariates of married adolescent women on unmet need for contraceptive in Bangladesh. The group of currently married adolescent women (with marital duration (5–9) years) were less likely ($p<0.01$) to have an unmet need for contraceptive than the group (with marital duration <5 years) in Bangladesh. The estimate of odds ratio shows that number of living children was the best predictor for predicting total unmet need for contraceptive of currently married adolescent women. Unmet need for contraceptive increased with increase of number of living children. Number of living children had significant effect on unmet need for contraceptive. The women who had one child were 1.61 times more likely ($p<0.05$) to have an unmet need for contraceptive compared with those who had no child, and women who had 2 and / more children were 4.59 times more likely ($p<0.001$) to have an unmet need for contraceptive than those who had no child. It should be noted that unmet need for contraceptive is the cause of having children not the consequence (Ahmadi and Iranmahboob, 2005). There were disparities in unmet need for contraceptive contrasting urban and rural areas in Bangladesh. Currently married adolescent women resided in rural areas were 1.28 times more likely (but not statistically significant) to have an unmet need for contraceptive than those currently married adolescent women who resided in urban areas. There were regional disparities in unmet need for contraceptive of currently married adolescent women in Bangladesh. Currently married adolescent women from Barisal, or from Chittagong, or from Sylhet division were 1.53 times more likely ($p<0.05$) to have an unmet need for contraceptive than those from Dhaka/ Khulna division. Ever use of contraceptive method had a significant effect on unmet need for contraceptive of currently married adolescent women in Bangladesh. Currently married adolescent women who used contraceptive method any time were less likely to have an unmet need for contraceptive than those who did not use contraceptive method. The expected odds of currently married adolescent women who used contraceptive method any time in the past having unmet need for contraceptive decreased by 72% than currently married adolescent women who did not use contraceptive method.

CONCLUSION

The analyses of this study may help to provide information on (i) levels of unmet need for contraceptive of the most priority group (i.e. CMAW), (ii) causes of not using contraceptive methods, and (iii) relations between CMAW's unmet need for contraceptive and other covariates. The information on level of unmet need for contraceptive may be helpful for policymakers, program managers, and donor agencies to make policy, interventions and to provide resources effectively. Interventions should be made, paying special emphasize, for early adolescence group, i.e. for (10-14) years age-group and rural area of all six divisions in Bangladesh should be considered as priority area concerning CMAW's unmet need for contraceptive. Since the results of this study identify a wide disparity between divisions in terms of CMAW's unmet need for contraceptive, therefore, divisions, where CMAW's unmet need for contraceptive are high (Barisal, Chittagong and Sylhet), need more consideration. For designing programs, concerning program designer should consider these variations among divisions, so that programs should focus on the CMAW's unmet need for contraceptive.

CMAW with no education had highest unmet need for contraceptive in whole of Bangladesh (national level), and also it was higher to CMAW with no education in rural areas of Bangladesh. But interestingly, in urban areas, CMAW with no education had lowest unmet need for contraceptive than CMAW with other educational levels. This may be happened because they (CMAW with no education) want child very soon or don't want to use contraceptives. The matter, explained above, encourages concerned researchers for further research. This study reveals that level of CMAW's unmet need for contraceptive was lower in that group of CMAW who used contraceptive method in the past than the group of CMAW who never used.

Note

a. An index of household economic status was created in the BDHS 2004 report depending on household ownership of assets (durable goods and land) and use of selected services (electricity, source of drinking water, sanitation facility, cooking fuel, main roof material, main wall material, and floor material). A single wealth index was developed for the whole sample and the sample was divided into quintiles from lowest to highest (fifth), which is also available in the individual recode file of BDHS-2004 data file.

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