

# Current situation of utilization of modern family planning methods in Dhaka city

## Abstract

Family planning can play a vital role in the reduction of infant, child and maternal morbidity and mortality by protecting women from the risk of pregnancy and its associated complications. Objective of the study was to find out the current situation of family planning status in Dhaka City. Cross sectional analytical study was conducted for this research. Non-probability convenient sampling was done. The survey collected data through questionnaire-based face-to-face interviews, for lactating mothers of age 14 to 45 years and who had at least one baby. Information of anthropometric, socioeconomic and practice of modern family planning method (FPM) were collected within January, 2014 to December, 2016. In this study, the methods were used by Bangladeshi couples: condom, oral pill, implant, DMPA and natural method. Highest number of mothers took oral pills (26.0%) followed by 20.0% fathers used condom as second choice of methods. 12.8%, 10.0% and 7.4% of mothers used DMPA, implant and permanent methods respectively. About 76.2% couple used any methods altogether. Injectable (22.8%; implant and DMPA) methods were most frequently used. We found that 94.5% mothers used the above mentioned methods willingly. More than one half (63.0%) of mothers didn't feel any problem to use their method of family planning. The FPM was associated with maternal occupation and history of previous abortion. There was association with occupation of father but parental education had a little association with FPM. Number of children and occupations of fathers were associated with willingness. Monthly income, dietary expenditure, maternal occupation and maternal nutritional status were not significantly related with family planning but maternal occupation was an important determinant.

**Keywords:** family planning method, FPM, contraception, Dhaka city

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## Introduction

The healthy future of society depends on the health of the children of today and their mothers, who are guardians of the future.<sup>1</sup> In developing countries, a woman's lifetime risk of dying due to pregnancy and childbirth is 1 in 75, or almost 100 times higher than the 1 in 7,300 risk in developed countries.<sup>2</sup> In sub-Saharan Africa, the risks are the highest in the world; a woman's lifetime chance of dying is 1 in 22.<sup>2</sup> Family planning is documented to prevent mother-child transmission of human immunodeficiency virus, contribute to birth spacing, lower infant mortality risk, and reduce the number of abortions, especially unsafe ones. It is also shown to significantly lower maternal mortality and maternal morbidity associated with unintended pregnancy.<sup>3</sup> In the developing world, an estimated 137 million women who want to avoid a pregnancy are not using a family planning method.<sup>2</sup>

Globally, an estimated 55 percent of those with unmet need for family planning have a need for spacing and 45 percent for limiting.<sup>2</sup> By protecting women from the risk of pregnancy and its associated complications, family planning can play a vital role in the reduction of infant, child and maternal morbidity and mortality. By preventing unwanted or mistimed pregnancies, family planning can also reduce abortions by unskilled providers or under unhygienic conditions. However, the benefits of family planning go beyond improvements in maternal and child health. For girls and women, for example, family planning can result in higher educational attainment, better employment opportunities, higher socioeconomic status and empowerment.<sup>4</sup> Most research on modern family planning utilization

and maternal health has focused on children's benefit. This study is therefore proposed to assess utilization of Modern Family planning methods.

## Methods and materials

The study was a cross sectional analytical study because study carried out at a single point in a specified time period. Considering time period and resource availability, cross-sectional analytical (to show association and correlation among different variables) hospital based study design was most feasible for this study. Non-probability convenient sampling was used. Data were collected through questionnaire-based face-to-face interviews, for lactating mothers of age 14 to 45 years and who have at least one child less than three years. Each respondent (mother) was asked to provide a detailed FPM. Available medical record was checked. The study was conducted at different hospitals, MCH centers and clinics in Dhaka City, the most densely populated area of Bangladesh, which were selected purposively as the study objective fulfill and the place depending upon communication, availability to the sample and other relevant inclusions and exclusions factors. Study was conducted from January 2014 to December 2016 of the time scheduled and following this period was utilized for questionnaire development, data entry, and analysis. Data were collected from January 2014 to December 2016 in the different areas of Dhaka City. The cases were selected by convenient type of non-probability sampling. Rapport was built before initiation of the study. The permission was taken from the superior authority of specific community clinics and hospitals in Dhaka City.

A standard pretested questionnaire was used to obtain the socioeconomic information, and information about anthropometric status, vaccination status and FPM. Questionnaires were checked each day after interviewing and again these were carefully checked after completion of all data collection to minimize the errors for entering the data set into the computer. The study variables were selected based on epidemiological information, prior studies and several review of the relevant published demographic studies. Education level was defined as less than secondary, secondary, higher education, graduate or above and current occupational status was classified as service, business, part time, and housewife. Income status was classified arbitrarily on the basis of the monthly income of the participants as less than 10000 BDT, 10000 to 20000 BDT, 20000 to 30000 BDT, 30000 to 40000 BDT, 40000 to 50000 BDT, 50000 to 60000 BDT and greater than 60000 BDT per month. Place of residence was classified as in building, tin shed building, slum. All the statistical analysis and all other data processing were done by using SPSS version 17.0 and Microsoft Excel 2010 windows program. Data were analyzed in term of frequency distribution and percentage. To reveal the association and correlation among different parameters Pearson Chi-square and Pearson correlation tests were used. For tabular, charts and graphical representation Microsoft word and Microsoft excel 2010 were used.

## Results

The study included a total number 1155 (385 per year) of females using contraceptive methods.

### Socioeconomic characteristics of mothers

Socioeconomic characteristics participants are given in Table 1. About 23.5% family had more than five members, 23.8% had five members, 29.0% had four and 23.6% had three family members. Monthly income of 3.8% family had less than 10000 BDT followed by 26.1% family had 10000 to 20000 BDT, 24.2% had 20000 to 30000 BDT, 9.5% had 30000 to 40000 BDT, 11.3% had 40000 to 50000 BDT, 13.2% had 50000 to 60000 BDT and 11.9% family had more than 60000 BDT. About 25.3% families had monthly dietary expenditure less than five thousands followed by 32.6% had 5000 to 10000 BDT, 18.9% had 10000 to 15000 BDT, 14.3% had 15000 to 20000 BDT and 8.9% had above 20000 BDT per month. Educational qualification of mother was 46.9% less than SSC followed by 15.2% SSC, 22.2% HSC and 15.8% graduate or higher. Educational qualification of father was 29.2% less than SSC followed by 14.8% SSC, 29.8% HSC and 26.2% graduate or higher (Table 1). Among the participated mother 53.0% lived in building, 38.0% in tin shade building and 9.0% in slum area in Dhaka City. In this study, 66.0% of the mother was housewife followed by 10.4% part time worker, 23.0% full time worker and 0.6% business woman. On the other hand more than half of the father (53.9%) was service holder followed by 31.9% businessman, 6.3% rickshaw puller, 2.4% day labors and 5.5% other workers.

### Information on family planning methods (n=1155)

Highest number of mothers took oral pill (26.0%) followed by 20.0% father used barrier method as second choice. About 12.8%, 10.0%, 7.4% and 4.0% mother used DMPA, implant, permanent and natural methods respectively. About 19.8% couple didn't use any method at all. Table 2 shows that among 926 participants 94.5% mother told that they had used the above mentioned methods willingly on the other hand 5.5% mother used family planning method

unwillingly. More than half (63.0%) mother didn't feel any problem to use their method of family planning and 7.1% felt problem by using this methods. Ten percent mothers felt little problem when they used such methods (Table 2).

### Correlation and association of family planning methods with variables of interest

Family Planning Methods were highly significantly associated with maternal occupation ( $p=0.001$ ), maternal age ( $p=0.000$ ) and history of previous abortion ( $p=0.000$ ). There was significant association ( $p=0.024$ ) with occupation of father. Father's and mother's education were positively but not significantly associated with the method used. Number of children ( $p=0.025$ ) and occupation of father ( $p=0.032$ ) were significantly associated with willingness. Monthly income, dietary expenditure and maternal occupation were positively but not significantly correlated with family planning methods (Table 3).

**Table 1** Socioeconomic characteristics of mothers

Number of family members	Frequency	Percent
Three	273	23.6
Four	335	29
Five	275	23.8
Above	272	23.5
<b>Family Income (BDT per Month)</b>		
Less than 10000	44	3.8
10000 to 20000	302	26.1
20000 to 30000	279	24.2
30000 to 40000	110	9.5
40000 to 50000	131	11.3
50000 to 60000	152	13.2
Above 60000	137	11.9
<b>Dietary Expenditure (BDT per Month)</b>		
Less than 5000	292	25.3
5000 to 10000	377	32.6
10000 to 15000	218	18.9
15000 to 20000	165	14.3
Above 20000	103	8.9
<b>Maternal Education</b>		
Less than SSC	542	46.9
SSC	175	15.2
HSC	256	22.2
Graduate or Above	182	15.8
<b>Father's Education</b>		
Less than SSC	337	29.2
SSC	171	14.8
HSC	344	29.8
Graduate or Above	303	26.2
<b>Household Structure</b>		

Table Continued

Building	612	53
Tin shade Building	439	38
Slum	104	9
<b>Occupation of Mother</b>		
Service	266	23
Business	7	0.6
Part Time	120	10.4
House Wife	762	66
<b>Occupation of Father</b>		
Service	623	53.9
Business	368	31.9
Rickshaw Puller	73	6.3
Day Labor	28	2.4
Others	63	5.5

**Table 2** Information on family planning methods (n=1155)

Methods of family planning	Frequency	Percent
Male Barrier Method	231	20
Oral Pill	300	26
Implant	116	10
Natural	46	4
Permanent	85	7.4
DMPA	148	12.8
No Methods	229	19.8
<b>Willingly Use of Family Planning</b>		
Yes	1091	94.5
No	64	5.5
<b>Feeling any Problem to use these Methods</b>		
Yes	82	7.1
No	728	63
Sometimes	116	10
No Methods	229	19.8

**Table 3** Correlation and Association of Family Planning methods with variables of interest

Variables	r/ $\chi^2$ Value	p-Value	Comments
Maternal Age	216.545	0	Highly Significant
Maternal Nutritional Status (BMI)	27.468	0.071	Not Significant
Number of Children	0.012	0.679	Not Significant
Number of Family Members	0.002	0.942	Not Significant
Occupation of Mother	43.451	0.001	Highly Significant
Occupation of Father	39.47	0.024	Significant
Maternal Education	28.258	0.058	Not Significant
Father's Education	23.645	0.167	Not Significant

Table Continued

Variables	r/ $\chi^2$ Value	p-Value	Comments
History of Previous Abortion	32.611	0	Highly Significant
Willingly use of Family Planning	-	-	
Number of Children	9.325	0.025	Significant
Monthly Income	0.017	0.555	Not Significant
Dietary Expenditure	0.035	0.231	Not Significant
Maternal Education	5.702	0.127	Not Significant
Occupation of Father	10.571	0.032	Significant

## Discussion

This cross sectional analytical study was attempted to assess the magnitude of modern contraceptive utilization among lactating mothers in Dhaka City, capital of Bangladesh. Family planning is associated with maternal and child health. There are various methods existed for contraception. Mutual understanding between couples is necessary to choose contraceptive method. In this study, following methods were used by Bangladeshi couples, such as condom, oral pill; implant, DMPA and natural method are also used. Highest number of mothers took oral pill (26.0%). Twenty percent father used condom as second choice of method. Besides 12.8%, 10.0%, and 7.4% mother used DMPA, implant, permanent methods respectively. In addition 4.0% parent followed natural method and 19.8% couple doesn't use any method at all. 76.2% couple used any methods altogether. The rate is higher than several previous studies; 40% in Nepal,<sup>5</sup> 65% in Ethiopia.<sup>6</sup> Oral (26%0) and injectable (22.8%; Implant and DMPA) methods were most frequently used. These methods were highly significantly associated with maternal education (p=0.001) and interestingly history of previous abortion (p=0.000).

There was significant association with occupation of father (0.024) but not with father's education. On the other hand mother's education had little association with the method. Even though the percent of FP service use is high, perhaps due to the impact of informal education through printing and electronic media and of community clinics of GO's and NGO's in Dhaka City. Similar association was found in previous studies.<sup>7-8</sup> In contrast, studies of Beekle et al.,<sup>9</sup> showed opposite results in few developing countries.<sup>9</sup> We found that among 1155 participants, 94.5% mother used the above mentioned methods willingly. On the other hand, 5.5% mother used family planning method unwillingly. Number of children was significantly associated with willingness indicated that parents were conscious of children nutrition and burden of large family size. Occupation of father was also significantly associated with willingness (p=0.032).

Monthly income, dietary expenditure and maternal occupation were not significantly related with family planning. No significant association was found between maternal nutritional status (62.3%; normal BMI) and method of family planning revealed that mothers of Dhaka City have better nutritional knowledge and practices regardless of using family planning method. Another study found that 47.1% women had ever used modern contraceptives<sup>10</sup> and about 34.3% were currently using modern contraceptives.<sup>10</sup> Their findings on contraceptive usage were comparable to other studies conducted in urban areas of Ethiopia which reported a 22.8-35.5% current contraceptive use.<sup>11,12</sup> Limited study areas were selected. No fund was available for the research. Respondents were shy to provide real

information in many cases. There was lack of assessing knowledge and attitude of women toward modern FPM.

## Conclusion

Being the citizen of Dhaka City, capital of Bangladesh regardless of education and income, use of modern FPM was significantly high. The prevalence of current modern family planning utilization was 76.2% and injectable was the most utilized methods in mothers, followed by pills and condom for fathers. Maternal occupation is an important determinant in our study. Choice of FPM was dependent on number of children and occupation of father and age of mother, but not on income, dietary expenditure and education.

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## Conflict of interest

The author declares no conflict of interest.

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