

CONTRACEPTIVE USE AND METHOD CHOICE IN URBAN SLUM OF BANGLADESH

(Draft version)

A paper presented in the

International Conference on Family Planning: Research and Best Practices

15-18 November, 2009

Kampala, Uganda

Session F05: Contraceptive Practice in Asia

Dated: 17 November, 2009

9:30-11:00 AM

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Abstract:

Background:

The population of urban areas has been increasing in an alarming rate. The people of urban slums increased faster than non-slum areas over the decades. At present more than one-third of the urban people are slum dwellers in Bangladesh.

Objectives:

The study aims to investigate the factors affecting contraceptive use and method choice among women living in the urban slums in Bangladesh. It also aims to examine the source of modern method collection among them.

Data and methods:

The study used a sample weight of 5160 currently married women of reproductive age taking data from the nationally representative 2006 Bangladesh Urban Health Survey. Both bivariate and multivariate statistical analyses have been applied to investigate the relationship between a set of socioeconomic and demographic factors and the dependent variables 'current use of contraceptives' and 'method choice'.

Results:

Overall, the contraceptive prevalence rate was 58.1%. 53.2% of the women were modern method users. Oral pill was the most preferred modern method. Use of condom and male sterilization was very low. More than half of the women (54.0%) bought non-clinical modern methods from pharmacy or shop. The multivariate regression analyses reveal that age, access to TV, number of times married, NGO membership, working status, number of living children and child mortality and wealth index are important determinants of contraceptive use and method choice. Sex combinations of surviving children and women's education were the most important significant determinants of family planning method use and method choice.

Conclusion:

Despite being the poor, the contraceptive use rate was higher among the urban slum dwellers. The method mix was highly skewed towards female methods. Husbands should be inspired to involve in family planning. Efforts should be made to be more educated the urban poor. Programmes should be strengthened to provide non-clinical modern methods free of cost among them. Door-step delivery services of modern contraceptive methods may raise further the use rate of modern methods among slum dwellers in Bangladesh.

Introduction:

At present, worldwide the majority of people live in urban areas (NIPORT et al., 2008). The experts projected that the global population is expected to increase from 6.0 to 8.0 billion by 2030 (Sclar and Northridge, 2003). By 2030, more people in the developing world will live in urban than rural areas; by 2050, two-thirds of its population is likely to be urban (UN, 2008). The world's population as a whole is expected to grow by 2.5 billion from 2007 to 2050, with the cities and towns of developing countries absorbing almost all of these additional people. These demographic transformations will have profound implications for health, including Bangladesh (Montgomery, 2009).

Bangladesh is not exception to its population burden. Despite significant progress in family planning programme, the population of Bangladesh is increasing with an alarming rate. The total population has been doubled from 75 million to about 150 million over the three and a half decades since its independence in 1971. Though still Bangladesh is rural, over one-fourth of its total population is urban residents. The urban population has been growing very rapidly and continuous to do so at over 3.5% annually. The country will likely have an urban population approaching 50 million by 2015. This rapid growth has been due primarily to migration by the rural poor, particularly to slums and squatter settlements for shelter (CUB et al., 2006).

Worldwide at least 1 billion people are estimated to live in slum communities (Riley et al. 2007). The experts projected that this number will rise to 1.6 billion by the year 2020 (World Urban Forum, 2004) and to 2 billion by 2030 (Sclar and Northridge, 2003). In Bangladesh, the slum population is also increasing at an alarming rate especially in the urban areas due to migration by the rural poor. For instance, the proportion of the population living in the slums of Dhaka city has increased from 20% in 1996 to 37% in 2005 (NIPORT et al., 2007). Such a rapid growth of slum populations in Bangladesh is an increasing challenge for local health authorities and deserves intensive investigations, including reproductive behavior, and in particular, contraceptive use pattern of slum dwelling women (CIS et al., 2006; Hussain et al., 1999).

Bangladesh has experienced dramatic increase of contraceptive use and a sensational decline in fertility over the three decades. The fertility has decreased from 6.3 births in the mid-1970s to 2.7 births per woman in 2007 and contraceptive use rate has increased more than seven folds during this period from 7.7% to 55.8% (NIPORT et al, 2009). This progress in population control program in Bangladesh has been well documented with testimony in home and abroad. Although the consecutive Demographic Health Surveys conducted in Bangladesh continually showed that the contraceptive prevalence rate (CPR) was higher in urban than rural areas, however, little is known on contraceptive use pattern among slum dwellers. The rapid growth of population in the informal settlements and urban squatters suggests the urgent need to drive up understanding the contraceptive use and method choice among women living in the urban slums.

Data and methods:

Data for the present study have been taken from the nationally representative 2006 Bangladesh Urban Health Survey (BUHS). The main focus of the survey was the slum and non-slum areas of the six City Corporations of six administrative regions namely Barisal, Chittagong, Dhaka, Khulna, Rajshahi, and Sylhet. The principal objectives of the survey were to obtain a profile of health problems and health care-seeking behavior and to examine

factors associated with health outcomes of the urban people including the vulnerable groups particularly the slums and non-slum dwellers. On the basis of Measure DHS+ model questionnaire, the survey used four different schedules shortly entitled as household, women, men and community level questionnaire.

The survey gathered detailed information on fertility, marriage, nutritional status, knowledge and awareness regarding HIV/AIDS and other sexually transmitted diseases, use of family planning methods of 9179 women of reproductive age from slum and non-slum domains. Such a large data set provided a unique opportunity to examine the contraceptive use and method choice of the slum dwellers. The survey was conducted under the authority of the National Institute of Population Research and Training (NIPORT) by the financial support of the US Agency for International Development (USAID), Bangladesh. The details of the survey have been described elsewhere (NIPORT et al., 2007).

The first part of the paper deals with current use of contraception, while the second part examines the odds of choosing modern or traditional method over non-use. The modern methods included in this study were oral pill, condom, IUD, injectables, male and female sterilization, while the traditional methods were withdrawal, periodic abstinence and herbal. In the first part a binary response was created for current use of contraception. If a woman was currently using any contraceptive method, she was coded as '1' and '0' for otherwise. For the second part, the response was grouped into 'using traditional method', using modern method' and 'not using any method'.

Chi-square tests were applied to examine the association between any contraceptive use, while multivariate binary logistic regression was applied to examine the effects of various socio-demographic and cultural factors on the 'current use of contraceptive method'. Besides, multivariate multinomial logistic regression analysis was performed to examine the relationship between contraceptive method choice and various socioeconomic and demographic factors. The results of the regression analyses have been presented by odds ratios (ORs) with 95% confidence interval (CI). The data has been analyzed by SPSS 17.0 software.

Characteristics of the respondents

The background characteristics of the respondents are provided in Table 1 and Table 2. The mean age of the respondents were 28.9 (SD± 8.5) years. The mean number of children ever born to per woman was 2.6 (SD± 2.0) and 2.3 (SD± 1.7) was surviving. 13.3% of the women had no any living child. Among women, 58.1% were using any contraceptive method and 53.2% were using modern contraceptive methods (Table 1).

Table 2 shows that 46.6% women had no formal education, 29.1% had some primary education and almost one-fourth had at least secondary level of education. The vast majorities (95.6%) were Muslims and 4.4% were from other religions. Only 13.3% did not usually watch television (TV) and 4.2% were married more than once. Almost one-fifth had NGO membership and one-third was working women. About one-fourth had had experience of at least one child death. In terms of sex composition, 18.6% had only daughter(s), 21.0% had only son(s) and 47.0% had both son(s) and daughter(s). With regard to socioeconomic status measured by household wealth index, almost two-thirds (65.0%) were poor, one-fifth (19.5%) was middle class and the rest 15.1% was rich.

Results:

Differentials of contraceptive use and method choice

Differentials of contraceptive use and method choice have been shown in Table 3. Age was significantly associated with current age of the women. Use of any contraception and modern methods was higher among women aged 25-34. Traditional method use rate was higher among the oldest. Use rate of contraception tended to increase with education and then decreased. Both modern and traditional methods uses were higher among women who had some primary education.

Although Muslim women reported higher use rate in using contraception than women of other religions, but the association was not found to be significant. Watching TV showed to have significant association with contraceptive use among slum dwelling women. Modern contraception use rate was also significantly higher among women who usually watched TV than those who did not. Those who were married only once were significantly more likely to practice contraception and to use a modern method than those who were married twice or more.

The most of the women who had NGO membership reported to be the contraceptive users. They also preferred more to use modern methods. The women having 2-3 living children were more likely to use modern methods, while women with four or more number of living children preferred to use traditional methods. The practice of family planning was higher among working than non-working women.

A significant inverse relationship was observed between contraceptive method use and child mortality. The use of modern method was significantly higher and use of traditional method was lower among women who had no experience of child loss. The sex composition of surviving children revealed significant association with contraception practice. The women, who had no child, as expected, showed the lowest use rate of contraception and highest use rate was among those who had both daughter(s) and son(s). The wealth index showed a U-shaped pattern in traditional method use, while the modern method use rate was highest amongst the poorer. Overall, the poorer were more likely to use any contraceptive method than others.

Contraceptive method mix and sources of modern methods

Figure 1 shows a comparison of contraceptive method mix among slum dwellers and those in national level. As can be seen, oral pill (29.0%) was the most preferred modern contraceptive method in the slum dwelling women, followed by injectables (14.4%) and female sterilization (3.6%). Only 3.4% of the husbands used condom. The use rate of injectables was two times among slum women as compared to that of national level. The male sterilization and use of Norplant/Implant was very low in urban slums. However, the preference of method mix was in the line with those of national level. The modern method use rate was almost 6.0% more, and in contrast, the use rate of traditional method was almost 4.0% lower among slum dwellers than those of national level. Periodic abstinence (4.2%) was the most preferred traditional method among slum women.

Table 4 reveals that equally 22% collected modern methods from government facilities and non-government organizations. Besides, 56.0% of the women bought modern methods from

pharmacy, shop, private clinic or other places. This implies that more than half of the slum dwellers were willing to pay for modern contraceptive materials.

Factors affecting contraceptive use

Table 5 shows the determinants of contraceptive use among women of urban slums. A set of eleven variables were primarily entered into the model. The only variable 'religion' was not found to have net effect after controlling over other socioeconomic factors. Women's current age was a significant predictor of contraceptive use. Compared to younger aged less than 25, the older women aged 35 or more were 62.8% less likely to use any contraception.

Women's education had a highly significant effect. The likelihood of contraception use was 62.5% and 52.4% higher among women with some primary education and those with at least secondary level of education as compared to women who had no formal education. Watching TV appeared as a significant predictor of contraceptive adoption. The women who usually watched TV were 1.53 times more as likely as to use any family planning method as compared to women who did not usually watch TV.

Number of union showed to have a net significant effect on contraceptive use. The women who were married twice or more were 45.5% less likely to use birth control method than those who were married only once. The women having NGO membership were significantly 1.18 times more likely to use any contraceptive method than women who were not NGO members. The working women were 34.5% more likely to use any family planning method than their non-working counterparts.

The multivariate logistic regression analysis reveal that the more a woman had living children the more was the likelihood of contraceptive use. In contrast, the more a woman had had experience of child mortality the lesser was the likelihood of contraceptive use in her. The sex composition of surviving children suggest that, in comparison with women who had only daughter(s), women with at least one son and those with son(s) and daughter(s) were 43.0% and 61.2% respectively more likely to use any contraceptive method. As expected, childless couples were much less likely to use contraception.

The poorer and the middle class women, with respect to wealth index, were significantly more likely to use any contraceptive method than the poorest. Besides, the richest were less likely to adopt contraception compared to the poorest; although the effect was not found to be significant.

Determinants of contraceptive method choice

Table 6 shows the results of multinomial logistic regression analysis on traditional and modern method preference among couples living in the urban slums. The same set of variables which was used in the binary logistic regression analysis was included in the multinomial logistic regression model.

Although age was not found to have significant effect on traditional method choice over non-use, it appeared to be a significant predictor in modern method preference. The young and middle aged women were more likely to prefer modern methods than their older counterparts. In comparison with illiterate women, the risk of traditional method use consistently increased with women's level of education. The women having some primary education and those with

at least secondary level of education were 1.62 times and 1.50 times more likely to prefer modern methods than their illiterate counterparts.

Compared with women who did not usually watch TV, the women who usually watched TV were 2.25 times more likely to use traditional methods while the odds of modern method preference was 1.47 times more in using modern methods use over non-use. Although the multivariate statistical treatment yielded decreased risk for both traditional and modern method preference over non-use among women's multiple marriage, the effect of the factor was found insignificant in traditional method choice.

Compared with reference category, the women who had NGO membership were significantly 18.9% more likely to rely on modern methods over non-use, however, the difference of likelihood between traditional method preference and non-use was found to be insignificant. The working women were more likely to prefer both modern and traditional methods over non-use than their non-working counterparts. Nonetheless, the odds ratios indicate that traditional methods rather than modern methods were more preferred among working women.

The likelihood of using both traditional and modern methods significantly increased with the increase of number of living children. On the other hand, although the estimated odds ratios indicate that the using of modern method significantly decreased with the increase of number of child mortality, the difference in the preference of traditional method over non-use was found insignificant.

Each of the traditional and modern methods preference was significantly related with sex composition of surviving children. Women with only daughter(s), only son(s) and both daughter(s) and son(s) were more likely to use either traditional or modern methods. A close inspection suggest that the women having both son(s) and daughter(s) were 52.3% more likely and those with only son(s) were 2.0% less likely to use traditional methods than women with only daughter(s). Besides, women with both son(s) and daughter(s), and only son(s) were 5.6% and 9.8% respectively more relied on modern methods than women with only daughter(s).

Wealth index did not show to have net effects on traditional method use, but it showed to have net effect on modern contraceptive practice. The women who belonged to poorer, medium class and richer women were 1.57, 1.56 and 1.33 times more likely to rely on modern methods. Although the poorest were 25.6% more likely to prefer modern methods, the effect was found to be insignificant. The richest were more relaxed in using modern methods than their other counterparts in terms of household assets.

Discussion and conclusion:

To our knowledge, there is little evidence of the study on contraceptive use pattern among slum dwellers in Bangladesh. The studies conducted on fertility and contraceptive use are confined to micro level and DHS data and focused mainly on rural women or national level. Little attention has been paid on contraceptive behavior among slum dwellers, where 35% of the urban people of Bangladesh live. The principal contribution of this study is to driving up the understanding of contraceptive use and method choice among urban poor living in the slums using a nationally representative survey data conducted in 2006.

The findings of the study reveal that, the overall CPR in the slum dwellers was 58.1%. The prevalence of modern and traditional methods was 53.2% and 4.9% respectively. The BUHS reported that in the non-slum area the CPR was 62.7% and the prevalence of modern and traditional methods was 55.6% and 7.1% (NIPORT et al, 2007). The overall prevalence of family planning method was 4.6% higher in the non-slum areas. The use rate of modern and traditional methods in the slum areas was lower by 2.4% and 2.2% respectively than non-slum areas. In national level, the CPR was 55.8% in 2007, whereas the modern and traditional method use rate was 47.5% and 8.3% (NIPORT et al, 2009). The BDHS data further reveal that, in urban areas the use rate of modern and traditional methods was 52.4% and 9.6% respectively. The corresponding figures for rural areas were 46.0% and 8.0% respectively. These comparisons of contraception practices reveal that the urban poor were more likely to use modern method than their rural counterparts, where the vast majority of the people of Bangladesh live in.

With regard to contraceptive method mix, oral pill was the most preferred method, followed by injectables and periodic abstinence. The preference of method mix among the study urban poor were in the line of national level as reported in the 2007 BDHS data. The responsibility of men in family planning was found negligible as it is evident that the rate of condom use and male sterilization was very low in the study population as compared to that of national level. The rate of female sterilization was also lower in the study urban poor women.

The results suggest that older women were reluctant in contraceptive using than their younger counterparts. Although there was not found significant relationship between age and traditional method use, the younger women of prime reproductive age were significantly more likely to use modern methods than older women. This finding is consistent with those conducted in Bangladesh (Barkat et al, 1997, Khan and Rahman, 1997) and other developing countries (Adanu et al, 2009).

The findings confirmed the most prominent well known effect of women's education on contraceptive practice. Our findings are consistent with most of the literatures of south Asia and elsewhere (Saleem and Bobak, 2005; Al Riyami et al, 2004; Fikree et al, 2001; Castro, 1996; Jejeebhoy, 1995). Although the results showed consistently increased use of traditional method, the practice of modern methods was more prevalent among women with primary education. It is possible that the higher educated women are more informed about various modern methods and their side effects, which influence them to use traditional methods.

Access to mass media played important role in contraceptive adoption and method choice. The influence was found somewhat stronger for traditional methods choice than modern methods. Media can both inform and motivate couples, even about such complex subjects as their reproductive means and goals. Communication efforts have become increasingly widespread in the developing world as part of international technical assistance and government programs designed to reduce fertility (Westoff and Rodriguez, 1995).

NGO membership showed to have significant positive effect on contraceptive use and modern method preference. This finding is also consistent with an earlier study on Bangladeshi women (Amin et al, 1996). Participation in credit programs increases women's economic status and empowers women through the experience of group solidarity, increased mobility, access to information about modern contraceptive methods and services, and support from program staff. Moreover, women's involvement in credit programs increases their interaction outside of the home, relieving social isolation and exposing them to new role

models and behaviours, the adoption of which are reinforced through group membership (Amin et al, 1996).

Women's work status is also an important determinant of contraceptive use as well as method choice. The increased likelihood of using any method and higher preference of both modern and traditional method for economically active women may be partly attributed to 'cost and benefit' of childbearing and childrearing. This finding supports the hypothesis that "child care would seem to be a time-intensive activity that is not productive (in terms of earnings) and uses many hours that could be used at work which is earnings-intensive activity" (Becker, 1965). Moreover, the paid work especially outside the home raises women's bargaining power in the household and hence autonomy. The bargaining power and higher autonomy of economically active women results into higher likelihood of contraceptive use among them. This finding is also in the line of earlier studies (Ali et al, 2004; Fikree et al, 2001; Khan, 1997).

Number of living children and child mortality are also two determining factors of contraceptive use and method choice. The use of contraception increased with the increase of number of living children. The women, as expected, with two and more living children were more likely to use contraception. According to 2007 BDHS, 70.0% of ever married women of Bangladesh considered a two-child family as ideal and 69.0% women with two living children wanted to limit childbearing, reflects that Bangladeshi women are now highly motivated to have a two-child family size. In contrast, the use of contraception decreased with the increase of child mortality. The more a woman had experience of child loss the lesser was the risk of contraception use in her. This is likely that the women who have had experience of child mortality are likely to replace the lost child immediately with another one, resulting into lower use of any method and also modern method adoption.

Sex preference, particularly son over daughter appeared as the most single significant predictor of contraceptive use and method choice. The likelihood of modern method use was highest among those who had at least one son and the risk of any method use was the highest among women having both son(s) and daughter(s). This may be explained by the way that son preference over daughter is still prevailing among the urban poor of Bangladesh, although some women prefer to have both son and daughter in the family. While many studies have analyzed this relationship, conclusion have varied about the influences of son preference on contraceptive use (see Arokiasamy, 2002; Muthurayappa et al., 1997; Arnold et al., 1998).

A close inspection of the influence of wealth index reveals that the poorer were more likely to use family planning methods and preferred to use modern methods over non-use. The strong effect of the wealth on method choice suggests the possibility of a strong demand of modern method among the poor of the slums than the richer. This is attributed to the fact that, comparatively the richer than the poor in the urban slums are more reluctant to have some additional children in their family, resulting into lower use of contraceptives among them. There also need further research to explore why the poorer are more likely to use contraception and also prefer modern methods than their richer counterparts in urban slums.

In summary, women's education, exposure to mass media, current work status and number of living children are important determinants that demonstrate highly significant positive relationships with contraceptive use and method choice in the slum dwelling women of Bangladesh. Although age showed to have no significant relationship with the use of

traditional method, it showed to have negative relationship in the use of any contraceptive method, and in particular, modern method. NGOs played important role to adopt modern methods among their clients. Child mortality displayed significantly negative relationship with family planning adoption and modern method use. Sex composition of children appeared as the most single determinant factor for contraceptive and method selection. Wealth index is also an important determinant of contraceptive use in the urban poor of Bangladesh.

The findings of the study suggest recommending that efforts should be made to be more educated the slums dwellers, particularly the women. Opportunities should be created equally for men and women to provide them formal and informal jobs to reduce poverty in the slums and sex preference of children. Mass media may play important role to inspire couples to use modern contraceptive method. Effective measures should be made to reduce child mortality in the slum areas which may further increase the use rate of contraception among the urban poor. Men's participation should be ensured and they should be inspired to use condom not only for birth control but also to protect them from HIV/AIDS and other sexually transmitted diseases as they are more vulnerable than non-slum dwellers. Door-step delivery services of modern methods should be strengthened and those should be provided free of cost to raise further the contraceptive prevalence rate in the slum dwellers in Bangladesh.

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Table 1: Background profile of the women of urban slum in Bangladesh (N=5160)

Characteristics	Mean \pm SD or %
Mean age	28.9 \pm 8.5
Mean number of living children	2.3 \pm 1.7
Mean no. of children ever born	2.6 \pm 2.0
Women without having children	13.3%
Currently using any contraceptives	58.1%
Currently using modern contraceptives	53.2%
Currently using traditional method	4.9%

Table 2: Percentage distribution of currently married women by socio-demographic background characteristics

Background characteristics	Women	
	N	%
Current age		
<25	1895	36.7
25-34	1869	36.2
35-49	1397	27.1
Women's education		
Illiterate	2405	46.6
Primary	1503	29.1
Secondary+	1252	24.3
Religion		
Islam	4934	95.6
Others	226	4.4
Usually watch TV		
No	684	13.3
Yes	4476	86.7
Number of unions		
Once	4941	95.8
Twice or more	219	4.2
NGO membership		
No	4221	81.8
Yes	940	18.2
Current work status		
Not working	3459	67.0
Working	1701	33.0
No. of living children		
0-1	1851	35.9
2-3	2178	42.2
4+	1131	21.9
Children died		
None	3990	77.3
One	823	15.9
Two+	347	6.7
Sex composition of living children		
No children	688	13.3
Only daughter	961	18.6
Only son	1085	21.0
Both	2425	47.0
Wealth quintile		
Poorest	1917	37.1
Poorer	1440	27.9
Middle	1021	19.8
Richer	600	11.6
Richest	182	3.5
Total	5160	100.0

Note: Level of significance *** p<0.001; ** p<0.01; * p<0.05; † p<0.10 and ^{ns} not significant.

Table 3: Percentage distribution of currently married women using contraceptives by sex composition of surviving children and other background characteristics

Background characteristics	% using contraceptives by method			Total user	chi-square
	No	Trad.	Mod.		
Current age					174.16 ^{***}
<25	46.0	2.9	51.1	54.0	
25-34	31.6	5.2	63.2	68.4	
35-49	50.0	7.2	42.7	50.0	
Maternal education					39.55 ^{***}
Illiterate	45.7	5.1	49.2	54.3	
Primary	35.8	4.8	59.4	64.2	
Secondary+	41.8	4.6	53.6	58.2	
Religion					0.22 ^{ns}
Islam	41.8	4.9	53.3	58.2	
Others	43.5	4.9	51.6	56.5	
Usually watch TV					29.44 ^{***}
No	51.3	3.5	45.2	48.7	
Yes	40.4	5.1	54.5	59.6	
Number of unions					39.06 ^{***}
Once	41.0	4.8	54.1	59.0	
Twice or more	61.1	6.3	32.6	38.9	
NGO membership					16.60 ^{***}
No	43.2	4.9	51.9	56.8	
Yes	36.1	4.8	59.1	63.9	
Current work status					7.12 ^{**}
Not working	42.6	4.4	53.0	57.4	
Working	40.3	5.9	53.8	59.7	
No. of living children					239.75 ^{***}
0-1	54.5	2.9	42.5	45.4	
2-3	31.1	5.5	63.4	68.9	
4+	41.9	6.9	51.2	58.1	
Children died					33.19 ^{***}
None	40.4	4.5	55.1	59.6	
One	44.5	6.0	49.5	55.5	
Two+	52.9	6.3	40.8	47.1	
Wealth quintile					26.83 ^{***}
Poorest	45.3	5.1	49.6	54.7	
Poorer	38.6	4.8	56.6	61.4	
Middle	39.3	4.0	56.7	60.7	
Richer	41.5	5.7	52.8	58.5	
Richest	48.0	5.8	46.2	52.0	
Sex composition of living children					404.85 ^{***}
No children	76.2	2.5	21.4	23.8	
Only daughter	38.0	3.7	58.3	62.0	
Only son	37.3	3.6	59.2	62.7	
Both	35.7	6.6	57.7	64.3	
Total	41.9	4.9	53.2	58.1	

Note: Level of significance ^{***} p<0.001; ^{**} p<0.01; ^{*} p<0.05 and ^{ns} not significant.

Table 4: Percentage distribution of women by contraceptive method mix by survey in Bangladesh

Contraceptive method mix	UHS 2006		BDHS 2007	
	N	%	N	%
Not using	2161	41.9	4506	44.2
Pill	1497	29.0	2904	28.5
IUD	39	0.8	93	0.9
Injections	745	14.4	718	7.0
Condom	174	3.4	460	4.5
Female Sterilization	188	3.6	51	5.0
Male Sterilization	32	0.6	75	0.7
Norplant/Implant	71	1.4	75	0.7
Any modern method	2746	53.2	4376	47.4
Periodic Abstinence	218	4.2	499	4.9
Withdrawal	22	0.4	292	2.9
Other	13	0.3	58	0.6
Any traditional method	253	4.9	849	8.4
Using any method	2999	58.1	5225	55.8
Total	5160	100.0	10192	100.0

Table 4: Sources of contraceptive methods

Sources	%
Government facilities	22.0
NGO facilities	22.1
Pharmacy/Shop/Private clinic	53.9
Others	2.1
Total	100.0

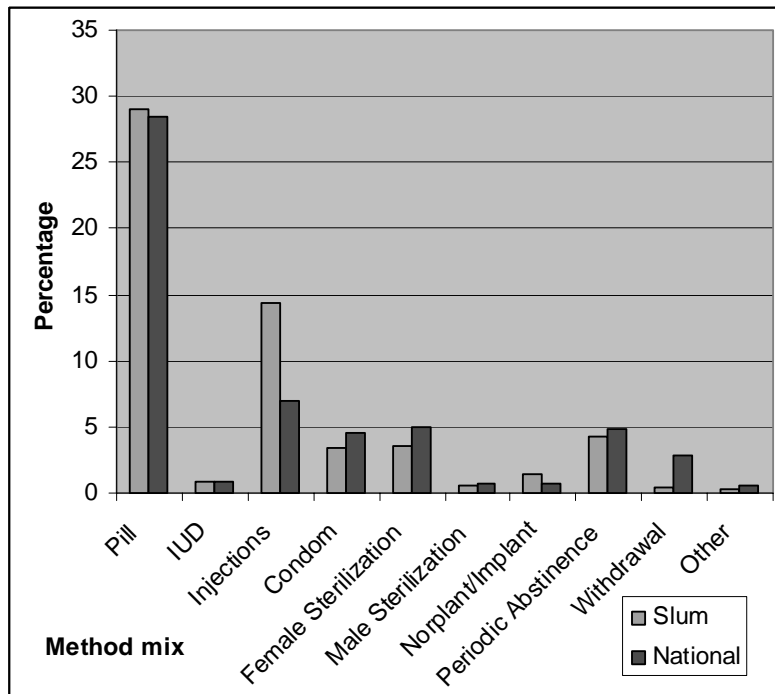


Figure 1: Contraceptive method mix in the slums and in national level of Bangladesh.

Table 5: Logistic regression analysis showing the odds ratio with 95% Confidence Interval (CI) of contraceptive use of the slum women by socio-demographic factors (New)

Background characteristics	Odds ratio	95% CI	
		Lower	Upper
Current age			
<25	1.00	---	---
25-34	1.050 ^{ns}	0.885	1.245
35-49	0.372 ^{***}	0.298	0.463
Maternal education			
Illiterate	1.00	---	---
Primary	1.625 ^{***}	1.398	1.888
Secondary+	1.524 ^{***}	1.274	1.824
Usually watch TV			
No	1.00	---	---
Yes	1.528 ^{**}	1.277	1.828
Number of unions			
Once	1.00	---	---
Twice or more	0.545 ^{***}	0.402	0.738
NGO membership			
No	1.00	---	---
Yes	1.175 ^{**}	1.003	1.375
Current work status			
Not working	1.00	---	---
Working	1.345 ^{***}	1.177	1.536
No. of living children			
0-1	1.00	---	---
2-3	2.216 ^{***}	1.800	2.729
4+	2.596 ^{***}	1.722	2.963
Children died			
None	1.00	---	---
One	0.862 [‡]	0.727	1.023
Two+	0.712 ^{**}	0.558	0.908
Sex composition of living children			
No children	1.00	---	---
Only daughter	4.840 ^{***}	3.815	6.140
Only son	5.270 ^{***}	4.158	6.681
Both	5.452 ^{***}	4.106	7.238
Wealth quintile			
Poorest	1.00	---	---
Poorer	1.220 ^{***}	1.047	1.421
Middle	1.193 [*]	1.001	1.421
Richer	1.046	0.837	1.306
Richest	0.790	0.558	1.120

Note: Level of significance *** p<0.001; ** p<0.01; * p<0.05; ‡ p<0.10; and ^{ns} not significant.

Table 6: Multinomial logistic regression analysis showing the odds ratio with 95% Confidence Interval (CI) of traditional and modern contraceptive use of the slum women by socio-demographic factors

Background variables	Traditional vs. non-use			Modern vs. non-use		
	Odds ratio	95% CI		Odds ratio	95% CI	
		Lower	Upper		Lower	Upper
Current age						
<25	0.947 ^{ns}	0.575	1.558	2.978 ^{***}	2.379	3.728
25-34	1.242 ^{ns}	0.886	1.741	2.483 ^{***}	2.094	2.944
(35-49) ^{RC}	1.00	---	---	1.00	---	---
Women's education						
(Illiterate) ^{RC}	1.00	---	---	1.00	---	---
Primary	1.650 ^{**}	1.186	2.296	1.622 ^{***}	1.392	1.890
Secondary+	1.750 ^{**}	1.169	2.622	1.504 ^{***}	1.253	1.805
Usually watch TV						
(No) ^{RC}	1.00	---	---	1.00	---	---
Yes	2.246 ^{***}	1.427	3.536	1.471 ^{***}	1.225	1.767
No. of times married						
(Once) ^{RC}	1.00	---	---	1.00	---	---
Twice or more	0.880 ^{ns}	0.487	1.590	0.505 ^{***}	0.367	0.694
NGO member						
(No) ^{RC}	1.00	---	---	1.00	---	---
Yes	1.036 ^{ns}	0.732	1.468	1.189 [*]	1.013	1.396
Working status						
(Not working) ^{RC}	1.00	---	---	1.00	---	---
Working	1.645 ^{***}	1.237	2.189	1.316 ^{***}	1.149	1.508
No. of living children						
(0-1) ^{RC}	1.00	---	---	1.00	---	---
2-3	1.807 ^{***}	1.078	3.029	2.258 ^{***}	1.828	2.789
4+	1.883 ^{***}	1.012	3.503	2.297 ^{***}	1.741	3.029
No. of children died						
(None) ^{RC}	1.00	---	---	1.00	---	---
One	0.919 ^{ns}	0.642	1.315	0.856 [‡]	0.719	1.020
Two+	0.902 ^{ns}	0.549	1.482	0.690 ^{**}	0.536	0.888
Sex composition of children						
No children	1.00	---	---	1.00	---	---
Only daughter	2.518 ^{***}	1.324	4.788	5.103 ^{***}	3.994	6.520
Only son	2.467 ^{***}	1.295	4.700	5.605 ^{***}	4.391	7.154
Both	3.835 ^{***}	1.867	7.879	5.587 ^{***}	4.178	7.471
Wealth index						
Poorest	1.351 ^{ns}	0.642	2.840	1.257 ^{ns}	0.879	1.799
Poorest	1.308 ^{ns}	0.625	2.740	1.570 ^{***}	1.101	2.241
Middle	1.006 ^{ns}	0.475	2.127	1.569 ^{***}	1.100	2.238
Richer	1.248 ^{ns}	0.591	2.634	1.331 [‡]	0.925	1.917
Richest	1.00	---	---	1.00	---	---

Note: Level of significance *** p<0.001; ** p<0.01; * p<0.05; ‡ p<0.10; and ^{ns} not significant.