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Factors influencing fertility preference of a developing country during demographic transition: Evidence from Bangladesh

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Abstract

Fertility preferences indicate the extent of intended control over reproductive outcomes, and are therefore vital components in the analysis of individual fertility behavior and aggregate fertility trends of a country. Despite extensive research, dissimilarities remain regarding the prior stated fertility preferences and subsequent fertility behavior, especially in case of developing countries like Bangladesh; where third stage of demographic transition begun as a result of continuous assessment. The purpose of this paper is to analyze the differentials of fertility preference as well as the possible timing of the next parity progression of those Bangladeshi couples having positive intentions for more children. BDHS-2007 data is used to estimate a series of discrete time event history models of fertility preference and possible timing for next parity progression considering the dynamic nature of fertility preferences, and controlling for changing reproductive life cycle factors and socioeconomic background predictors of fertility. Findings suggest that though death of last child plays a vital role; there is a complex structure of the decision-making around fertility along with gender preference, abortions, couples educational level, mother's participation in labor force. Although socio-economic classes don't have significant influence on fertility preference, mother's age plays vital role on fertility preference and desired waiting time in Bangladesh.

Keywords: Fertility preference, Desired waiting time, Demographic transition, Developing countries, Bangladesh.

Introduction

Fertility desires and intentions are innermost in theoretical and empirical approaches to studying childbearing behavior and it is one of the most significant determinants for future population structure of a country.[1] Evaluating fertility intentions, and determining the extent to which they predict fertility behavior, is also important for population policy and the performance of family planning programs of a country.[1] Theoretically, fertility desires and intentions represent different constructs: preferences return goals or ideals, while intentions integrate policy implementation and may be more reactive to personal circumstances and constraints. Extensive evidence from industrialized and developed countries showed that preferences are associated with childbearing behavior, even after accounting for other socio-demographic characteristics; similarities are also observed for middle income countries, too.[2]

A large literature exists to explain the mechanism which specifies the relationship between desires and intentions and to predict behavior based on fertility desires and intentions.[2-6] There are several cross-national evidence that fertility intentions and preferences predict fertility behavior. The predictive validity of these attitudinal measures has been demonstrated in developed countries.[2] In contrast to these studies, demographic surveys rarely collect prospective measures of both intentions and desires and frequently use 'intentions' as a general term to refer to both concepts.[1] For example, the Demographic and Health Surveys (DHSs) ask women whether they want more children and label these data as 'fertility intentions'.[7] Thus, the terms desire, preference, intention often creates confusion in terms of

Practice Points

- Fertility preference is one of the key factors that trigger a change in fertility rates.
- Dissimilarities remain regarding the prior stated fertility preferences and subsequent fertility behavior in Bangladesh.
- Differentials of fertility preference as well as the possible timing of the next parity progression for Bangladeshi couples have been examined in current study using data of BDHS-2007.
- Fertility preference is related to the social and human capital along with the parity progression related outcomes up to last parity.
- A complex structure to the decision-making around fertility exists along with gender preference, abortions, couples educational level, mother's participation in labor force.

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use and the question of terminology becomes further complicated when analyzing data for developing countries.[1] Since those surveys are often administered in local languages using translations that may not accurately capture the nuances of meaning across the terms.[1,8]

According to previous studies, fertility transition is a process through which people come to extend individual preferences for smaller families rather than considering childbearing to be entirely determined by God, destiny, or the community.[9] Once individual plans for childbearing are formed, the capability to carry out plans may be considered a key factor of the subsequent phase of the fertility transition.[10] In cooperation of individuals' fertility preferences and the degree to which they implement them are dependent on their uniqueness and conditions. Thus, in both high-fertility and low-fertility contexts, the relationship between intentions and behavior vary according to socio-demographic characteristics.[1] For illustration of the variable age, the fertility behavior of older women is steadier with reported preferences than that of younger women. In many circumstances, education is strongly associated with higher consistency between childbearing intentions and behavior for women who want to have no more children.[11,12] Gender preference is another important issue for fertility intention for many developing and under-developed countries and sometime.[13,14] Mother's employment status, regional variation also plays vital role on fertility preference.[1,8] Particularly these moderators are important to understand the role of individual intentions in a setting where the fertility transition is still in its early stages, many developing countries are now passing this phase. Moreover, previous studies on fertility preferences and outcomes in the region have not examined how individual, household, or community effects; less concern on gender preference is also observed to translate fertility preferences into behavior.[8,15]

For a developing country like Bangladesh where third stage of demographic transition has started, fertility preference is one of the key factors that may decline fertility rate. Since parity progression to the next level is based on the joint decisions of couples when confronted with specific related outcomes (number of parity/gender of index child/live birth), a focus on the experiences of individual couples is needed. All of the recent studies indicate TFR of Bangladesh is very close to replacement level; TFR declined from about 6.3 in the early 1970s to 2.74 in the later 2000s; government also promotes the slogan of one child family.[7] Previous research has shown that various variables related to socio-economic status, demographic factors are important determinants of fertility preference for Bangladesh.[7,13,14] Most of the previous research obtained the gender preference is the most significant key factor of fertility preference in Bangladesh.[13,16,17] Mass media campaign help to reduce the fertility boom in Bangladesh, however in terms of fertility preference its impact is not so obvious.[13,17] Thus, little is known about other differentials of fertility preference in the changed status of fertility level along with possible time for next parity progression, especially during the demographic transition when Bangladesh is very close to the replacement level of fertility.

The objective of the current study is to investigate the differentials of fertility preference as well as the next parity progression timing plan of those Bangladeshi couples who have some positive intentions for having more children. Thus, the empirical hypothesis of fertility preference that fertility desire is related to the social and human capital along with the parity progression related outcomes up to last parity; is also re-examined in the current study.

Materials and Methods

The data for this study is obtained from Bangladesh Demographic and Health Survey-2007.[7] Being fifth of its kind and BDHS is a nationally representative sample survey designed to provide information on basic national indicators of social progress; including fertility, childhood mortality, contraceptive knowledge and use, maternal and child health, nutritional status of mothers and children, awareness of AIDS, and domestic violence. BDHS-2007 was conducted under the authority of the National Institute for Population, Research and Training (NIPORT) of the Ministry of Health and Welfare, Bangladesh and funded by USAID. Stratified Multi-stage Cluster Sampling design is used to collect data and BDHS-2007 includes 10996 women of childbearing age of all six divisions in the country.[7]

Women having last birth from the last three years prior to BDHS-2007 survey have been considered for this study, which gave a sample of size 3316. The socioeconomic factors are focused on education attainment of parents, wealth index, and women's participation in the labor force. The control variables are age of mother, gender of last child, husband's desire for next parity, and history of terminated pregnancy. There were other variables which showed a significant bivariate relation with fertility preference and timing of next parity progression, but due to avoid the problem of severe multicollinearity, only selected variables are used in the study; dropping variable technique has been used to select variables.

Bivariate logistic regression analysis is done to obtain significant differential for next parity progression considering different levels of birth order. For timing of next parity progression dependent variable is categorized into three different groups according to their current thinking/opinion about family building. Polytomous logistic regression analysis is done for obtaining significant differentials in this case. *IBM SPSS Statistics* (version 20) is used for statistical analysis.

Results

84.4% of the couples who have one child already are interested to have another. For those who have two children, only 33.3% have intentions to have another. The scenario is different for couples with children more than 2, only 12% of them are interested to have another.

So, clearly the differentials of fertility preference in the case of desire to having another child should not be expected to be same in the context of Bangladesh. Few socio-economic background characteristics are summarized in the following table (Table 1).

Binary logistic regression model is used in this study to examine the differentials of fertility preference for these three groups separately. Among the socio-economic variables; age of respondents, parental education, mothers working status, husband's desire, mass media exposure and regional factor (both division and urban/rural) showed significant effect on having another parity. Others significant determinants of having parity are history of having any abortion and gender preference. For having two more children; parental education, gender preference a regional factors, mothers working status, husband's desire, and mass media showed significant impact along with gender preference. For having more than two children; gender preference, regional factor age of respondent and husband desire plays the most significant role. It should be noted that death of the index child plays a significant role for higher order child (two or more). The results of binary logistic regression model are shown in Table 2.

Next, multinomial logistic regression analysis has been conducted to obtain significant differentials for timing of next parity progression which is completely a question with un-predictive answer. To collect data on

Table 1: Socio-economic characteristics and fertility preference of Bangladeshi women (BDHS-2007)

Independent variables	Fertility preference		Desired waiting time for next parity		
	No more child	Will have 1 or more children	Within next 2 year	After next 2 year	Still undecided about timing
Age					
15-19	126	563	73	485	5
20-24	547	635	83	535	18
25-29	602	200	29	164	7
30-34	361	50	16	35	0
35-39	165	8	5	3	0
40-44	46	5	2	3	0
45-49	7	0	0	0	0
Gender of index child					
Male	979	673	93	568	12
Female	874	788	114	657	18
Division					
Barishal	114	91	13	73	5
Chittagong	403	319	46	269	3
Dhaka	582	471	71	390	9
Khulna	177	131	14	116	1
Rajshahi	428	328	29	293	6
Sylhet	149	122	34	83	5
Place of residence					
Urban	426	294	33	257	4
Rural	1427	1168	175	968	26
Mother's Education					
No education	587	192	38	147	7
Primary	593	418	59	350	8
Secondary	562	733	93	629	11
Higher	112	118	16	98	4
Mother's working status					
Unemployed	1296	1165	168	978	19
Employed	558	297	39	247	10
Father's Education					
No education	701	385	69	308	8
Primary	517	418	68	342	8
Secondary	444	477	48	422	8
Higher	191	181	22	153	6
Wealth index					
Very poor	458	244	43	197	4
Poor	404	293	46	238	9
Middle	343	299	37	259	3
Rich	316	337	43	286	8
Very rich	332	288	39	245	4
Mass media exposure					
Not exposed	789	468	96	359	12
Less than once a week	154	127	18	105	3
At least once a week	357	322	33	289	0
Very often exposed	553	544	59	471	14

Table 2: Binary Logistic Regression for predicting the determinants of desire for another child for Bangladeshi women (BDHS-2007)

Independent variables	Have one child		Have two child		Have more than two child	
	β	S.E. (β)	β	S.E. (β)	β	S.E. (β)
Age						
15-19 (ref)						
20-24	-0.395**	0.172	-0.888***	0.211	-0.096	0.588
25-29	-1.030***	0.276	-1.071***	0.230	-0.851	0.580
30-34	-0.259	0.759	-0.997**	0.311	-1.676***	0.596
35-39	-2.872***	0.751	-1.380**	0.641	-2.139***	0.630
40-44	-2.737**	1.234	1.688	1.489	-2.703***	0.770
45-49	-	-	-	-	-2.836*	1.700
Index child Alive						
Yes (ref)						
No	-2.406	1.243	-1.520***	0.542	-1.196***	0.304
Gender of index child						
Male (ref)						
Female	0.003*	0.153	0.610***	0.131	0.632***	0.152
History of any abortion						
No (ref)						
Yes	0.251*	0.262	-0.462***	0.200	0.118	0.179
Husband's desire for more child						
Both want same (ref)						
More						
Fewer	1.253***	0.255	0.218*	0.204	0.604**	0.243
Undecided	0.999**	0.439	1.271***	0.255	0.223	0.267
	-0.845**	0.341	0.453*	0.453	-0.677*	0.456
Division						
Barishal (ref)						
Chittagong	-0.147	0.409	0.334	0.282	0.369	0.334
Dhaka	0.106	0.400	-0.196	0.273	0.351	0.320
Khulna	-0.600	0.420	-0.731	0.315	0.014	0.430
Rajshahi	-0.822**	0.391	-0.434*	0.283	-0.404	0.358
Sylhet	-0.189***	0.491	0.561	0.355	0.980***	0.350
Place of residence						
Urban (ref)						
Rural	0.085*	0.214	0.313**	0.185	0.669**	0.258
Mother's Education						
No education (ref)						
Primary	0.706**	0.281	0.331	0.202	0.160	0.178
Secondary	0.636**	0.283	0.381*	0.213	0.035	0.256
Higher	-0.886**	0.401	-0.228*	0.357	0.034	0.597
Mother's working status						
Not employment (ref)						
Employed	-0.338**	0.172	-0.428***	0.151	-0.050*	0.166
Father's Education						
No education (ref)						
Primary	0.105	0.299	-0.459***	0.173	-0.017	0.183
Secondary	-0.187	0.293	-0.511**	0.203	-0.205	0.239
Higher	-0.275*	0.375	-0.492*	0.289	-0.206	0.413
Wealth index						
Very poor (ref)						
Poor	-0.172	0.270	-0.025*	0.205	0.078*	0.203
Middle	0.196	0.281	0.224	0.222	0.003	0.234
Rich	-0.044	0.291	0.233	0.248	-0.053	0.288
Very rich	-0.080	0.346	0.133	0.300	0.094	0.350
Mass media exposure						
Not exposed (ref)						
Less than once a week	0.418	0.342	0.215	0.232	-0.082	0.270
At least once a week	0.138	0.224	-0.191*	0.186	-0.031	0.224
Very often exposed	-0.013**	0.227	-0.119	0.194	-0.177	0.220

Note: Reference category is denoted by (ref). Significance: ***p<0.01, **p<0.05, *p<0.1

timing of fertility intentions, women and men are asked a series of questions including their desire to have another child and possible length of time they would like to wait before having another child. In current study, three possible categories (dependent variable) was obtained for next parity progression- 'within next 2 year', 'after next 2 year' and 'still undecided about timing'. The results are presented in Table 3.

For the first case; gender preference, history of abortion are found to be a highly significant determinant for timing of parity progression along with husband's desire for more parity. But in case of rest two categories, history of abortion does not have a significant impact, effect of gender preference is absent is absent in case of undecided couples. Also, socio-economic class or wealth index is not found to be a significant determinant.

Discussion

From the frequency of desiring next parity progression it is already clear that the differentials of fertility preference in the case of desire to having another child should not be expected to be same in the context of Bangladesh. Binary logistic regression model is used in this study to check out the differentials of fertility preference for these three groups separately. Among the demographic variables, age of the mother is found to be inversely related to the fertility preference. With the increase of age the chance of having another child decreases in all age groups. Mothers having one child aged 35 to 39 years are 48.5% less likely to take the second child $[(1-e^{-2.872})/(2-e^{-2.872})=0.485]$ compared to adolescent mothers (15-19). In case of mothers having more than two children, mothers aged 45 to 49 years have the least chance $[(1-e^{-2.836})/(2-e^{-2.836})=0.484]$, they are 48.4% less likely to have another child. Clearly fertility decline with ages, which was also shown in previous studies also.[17,18]

Gender preference is found to be significant differential for next parity progression, which was also observed in previous studies.[16] Due to lack of education and socio-economical backgrounds, still a son is much more preferable for many newly married couples in Bangladesh. A son can earn money when he is adult, he may take care of the parents when they are older, he can protect/enlarge the real-estate properties; while a daughter will leave the family when she get married, she can't do the previously explained works which might be done by a son- from these beliefs a massive part of the society expect son over daughter.[19] Again, in rural areas, even sometimes in urban areas; mothers are neglected if they give birth of a daughter; sometimes they are hesitated by the society, by the father-in-law, mother-in-law; even sometimes it cause the possible divorce in many families of Bangladesh. All of these stuffs create the gender preference, which sometimes make the mothers to expect a son as a child.[16,19,20] Mothers are more likely to take another birth if they have daughter in last parity. It is less likely in the case of lower order births, but increases with higher order births if they don't have a son. For mother of one daughter, the chance is only 50% $[(e^{0.003})/(1+e^{0.003})=0.500]$, while for mothers with higher number of parity this probability is 0.653 $[(e^{0.632})/(1+e^{0.632})=0.653]$ compared to mothers having a son as last child. Death of the first child is not found to be significant differential for next birth, but found to be a significant determinant in the case of two or more children family. Terminated pregnancies differ in this sense, for lower order birth it significantly increase the chance of taking another child, but for higher order birth it does not have any significant impact, as they already have enough parity.[17] Results suggest that on family building dynamics husbands decisions are still major dominating factor, as desire for more child according to husband's decision a significant differential for all birth order, just like the previous studies.[20] For one child family the chance is 77.7% $[(e^{1.253})/(1+e^{1.253})=0.7778]$, while for more than two children the probability is 64%. However, most of the couples are satisfied with two children, as fathers of two children are 55% more likely to take another child.

Fertility preference is not same in every place of the country; divisions are not in the same level in the case of fertility preference. Like the previous studies, couples of rural areas are still different than couples of urban areas in the question of next parity. Lack of education, mass media exposure and socio-economic status may be responsible for this variation.[13,19] For all births, they are more likely to take another child compared to urban couples. Education plays vital role in this case, higher educated couples (both father and mothers) are less likely to have another parity compared to uneducated mothers, similar results were obtained in previous studies, too.[17] One of the illustrious findings of the current study is fertility preference is independent of socio-economic status. For all ordered births, wealth index is found to be insignificant determinant for next parity progression. Mothers participating in labor force are less likely to take another parity compared to unemployed mothers. Mass media play an important role, exposed couples are less likely to take another child compared un-exposed couples.

Previous studies have demonstrated that longer birth intervals are better for the health of the mother and the child.[13,19] It has already been argued that, decision-making regarding fertility and family planning involves a complex progression of discussion and negotiation by married couples.[12] These decisions may be influenced by the approaches and intentions of one or both spouses. Nevertheless, discussion about waiting time to the next birth between spouses remains uncommon.[6] In the current study, multinomial logistic regression analysis is done to obtain significant differentials for timing of next parity progression which is completely a question with un-predictive answer. In this analysis three possible categories (dependent variable) was obtained for next parity progression - 'within next 2 year', 'after next 2 year'

Table 3: Polytomous logistic regression for predicting the determinants of desired waiting time according to fertility preference for Bangladeshi women (BDHS-2007).

Independent variables	Within next 2 year		After next 2 year		Still undecided about timing	
	β	S.E. (β)	β	S.E. (β)	β	S.E. (β)
Age						
15-19 (ref)						
20-24	-2.208***	1.991	-2.002***	1.192	-1.014	0.958
25-29	-2.625***	1.943	-2.649***	1.109	-2.062**	0.857
30-34	-2.202***	1.929	-2.230***	1.085	-2.111**	0.826
35-39	-2.579***	1.960	-0.282***	1.140	-2.068**	0.903
40-44	-2.726**	1.770	-2.062***	.822	-2.957	0.020
45-49	-1.686	1.674	-1.460*	.000	1.050	0.038
Number of parity						
1 (ref)						
2	-2.761***	0.620	1.634**	0.672	0.633	0.630
3	-0.606	0.576	1.207*	0.634	0.641	0.591
≥4	0.110	0.619	1.341**	0.678	0.639*	0.638
Gender of index child						
Male (ref)						
Female	0.633**	0.299	0.245*	0.312	0.231	0.299
History of any abortion						
No (ref)						
Yes	0.073*	0.404	0.063	0.427	0.042	0.407
Husband's desire for more child						
Both want same (ref)						
More	1.223**	0.510	1.160**	0.546	1.633***	0.512
Fewer	1.311**	0.638	0.830	0.683	1.037	0.645
Undecided	0.084	0.639	0.500	0.689	1.156*	0.642
Division						
Barishal (ref)						
Chittagong	0.501	0.581	-0.451	0.619	0.014	0.586
Dhaka	0.962*	0.497	0.319	0.518	0.711	0.500
Khulna	0.887*	0.462	-0.018*	0.485	0.544	0.466
Rajshahi	2.795***	0.964	1.291	0.981	1.932**	0.964
Sylhet	2.048***	0.585	0.136	0.610	1.145*	0.586
Place of residence						
Urban (ref)						
Rural	0.817*	0.470	0.232	0.490	0.605*	0.479
Mother's Education						
No education (ref)						
Primary	0.277*	0.750	-0.288	0.787	0.052	0.748
Secondary	0.227	0.672	-0.159	0.703	0.204	0.667
Higher	0.673	0.588	0.507*	0.613	0.593*	0.581
Mother's working status						
Not employment (ref)						
Employed	-0.428	0.369	-0.156*	0.385	-0.158**	0.369
Father's Education						
No education (ref)						
Primary	0.180*	0.636	0.619*	0.664	0.343	0.635
Secondary	0.155	0.589	0.381	0.613	0.116	0.587
Higher	0.345	0.540	-0.066	0.564	0.347*	0.536
Wealth index						
Very poor (ref)						
Poor	0.242	0.699	0.264	0.728	0.355	0.699
Middle	-0.402	0.615	-0.406	0.642	-0.356*	0.614
Rich	0.473	0.661	0.482	0.683	0.697	0.659
Very rich	-0.243	0.503	-0.259*	0.524	-0.145	0.499
Mass media exposure						
Not exposed (ref)						
Less than once a week	0.039	0.419	0.363	0.438	0.017	0.418
At least once a week	-0.084	0.540	0.083	0.570	0.037	0.539
Very often exposed	1.960**	0.805	1.832**	0.816	1.993**	0.804

Note: Reference category is denoted by (ref). Significance: ***p<0.01, **p<0.05, *p<0.1

and 'still undecided about timing'. A reason behind such grouping is, previous studies mentioned infecundability as the strongest predictor of waiting time to next birth.[20,21] In most countries, cohabiting couples with fewer children and couples with infecund wives are more likely to agree on waiting time to next birth.[21] For having child within 2 years; gender preference, history of abortion are found to be a highly significant determinant of parity progression along with husband's desire for more parity and other demographic and socioeconomic factors. Abortion was also mentioned as a vital event for considering next parity progression in previous studies as it manipulates the course of family planning and implementation of contraceptive use patterns.[20] But in the case of others two categories, history of abortion does not have a significant impact.

The effect of gender preference is absent in case of undecided couples, which was also obtained in previous studies.[17] For timing of next parity progression, husband's desire to have another child play a major role. Previous studies also found spousal communication as a major driver for timing of the next birth as spousal communication and negotiation about fertility preferences and choices occur within specified social contexts.[21] Social norms and values are known to influence individual reproductive preferences and behaviors, such as spacing of births, stopping child-bearing, and practicing contraception which are the intermediate state for decision regarding the timing of next birth.

A regional difference is also present in case of timing of the next birth; rural peoples are more likely to have the next child within next two years compared to urban couples. Rural peoples are $[(e^{0.817})/(1+e^{0.817})=0.693]$ 69.3% more likely to take the next birth than urban couples. Similar foundlings were also obtained in previous studies.[13,14] Mothers involved in income generating activities are less like to have many children, as it becomes harder for them to take good care of them after maintaining the job.[19] Similar result is obtained in the current study, for all of three categories, employed mothers are less likely to take another child. However, one of the interesting findings of the current study is, socio-economic classes do not a play vital role on timing of next parity progression. About the timing of next parity, wealth index is not found to be a significant determinant in the current study. Thus, findings of current study regarding timing of next birth can be summarized as that the demographic factors are the primary determinants of spousal agreement on waiting time to next birth, not the socioeconomic factors.

Conclusion

Fertility preference has a noteworthy function during the demographic transition of a country; for developing country this role becomes very important for policy implication regarding population strategy, too. Timing of next parity progression also has a significant role in fertility scenario of a country. Investigation of the determinants of fertility preference of Bangladesh suggests that the effect of family size does not play vital role in case of next parity progression; while next parity depends mainly on gender preference, history of any terminated abortion and husband's desire for another child. Also, fertility preference and desired waiting time both are independent of socio-economic status. However, the relatively modest fit of individual models suggests that while death of last child play a vital role it is also clear that there is a complex structure to the decision-making around fertility, along with couples educational level, mothers participation in labor force, regional difference. Steps should be taken to improve the spousal communication about family planning; promoting small family norms and optimum spacing between pregnancies. Additional attention should be given to newlywed couples as well as implementation of reproductive health programs for the adolescents will be effective in this stage of fertility transition. Also, further research on investigating the potential influence of partners and family on young women's fertility preference formation and change will help the policy makers to understand the underlying mechanism of fertility preference more precisely.

References

1. Hayford SR, Agadjanian V. From desires to behavior: Moderating factors in a fertility transition. *Demo Res* 2012; 26:511-42.
2. Quesnel-Vallée A, Morgan SP. Missing the target? Correspondence of fertility intentions and behavior in the U.S. *Popul Res Pol Rev* 2003; 22(5-6): 497-525.
3. Ajzen I. The theory of planned behavior. *Organ Behav Hum Decis Process* 1991; 50(2):179-211.
4. Bongaarts J. Do reproductive intentions matter? *Int Fam Plann Perspect* 1992; 18(3):102-108.
5. Martin CT. Women's education and fertility: Results from 26 demographic and health surveys. *Stud Fam Plann* 1995; 26(4):187-202.
6. Perugini M, Bagozzi RP. The role of desires and anticipated emotions in goal-directed behaviours: Broadening and deepening the theory of planned behavior. *Br J Soc Psychol* 2001; 40(1):79-98.
7. NIPORT, Mitra and Associates, Macro International. Bangladesh Demographic and Health Survey 2007, Dhaka, Bangladesh and Calverton, Maryland, USA: 2009.
8. Kodzi IA, Johnson DR, Casterline JB. (2010). Examining the predictive values of fertility intentions among Ghanaian women. *Demo Res* 2010; 22(30):965-84.
9. Walle VD. Fertility transition, conscious choice, and numeracy. *Demography* 1992; 29 (4):487-502.

10. McCarthy J, Oni GA. Desired family size and its determinants among Urban Nigerian women: a two-stage analysis. *Demography* 1987; 24(2):279-90.

11. Silva DW. Consistency between reproductive preferences and behavior: The Sri Lankan experience. *Stud Fam Plann* 1991; 22(3):188-97.

12. Balk D. Individual and community aspects of women's status and fertility in rural Bangladesh. *Popul Stud* 1994; 48(1):21-45.

13. Balk D. Defying gender norms in rural Bangladesh: a social demographic analysis. *Popul Stud* 1997; 51(2):153-72.

14. Desai S. When are children from large families disadvantaged? Evidence from cross-national analyses. *Popul Stud* 1995; 49(2):195-210.

15. Bankole A, Westoff CF. The consistency and validity of reproductive attitudes: Evidence from Morocco. *J Biosoc Sci* 1998; 30(4):439-55.

16. Chowdhury MK, Bairagi R. Son Preference and Fertility in Bangladesh. *Popul Dev Rev* 1990; 16(4): 749-57.

17. Chowdhury MK. Mother's education and effect of son preference on fertility in Matlab, Bangladesh. *Popul Res Pol Rev* 1994; 13 (3):257-73.

18. Arends-Kuennin M, Hossain MB, Khuda BE. The Effects of Family Planning Workers' Contact on Fertility Preferences: Evidence from Bangladesh. *Stud Fam Plann* 1999; 30(3):183-92.

19. Rabbi AMF. Mass Media Exposure and its Impact on Fertility: Current Scenario of Bangladesh. *J Sci Res* 2012; 4(2):383-95.

20. Bairagi R. Effects of sex preference on contraceptive use, abortion and fertility in Matlab, Bangladesh. *Int Fam Plann Perspect* 2001; 27(3):137–143.

21. Pollak RA, Watkins SC. Cultural and economic approaches to fertility: Proper marriage or mésalliance? *Popul Dev Rev* 1993;19(3):467-96.