

Women's Participation in Micro-finance Programs and Gender Related Outcomes in Bangladesh

**Paper Presented at the Annual Meeting of the Population Association of America,
Session 107 Gender and Health, Boston, May 1-3, 2014**

**Sajeda Amin, Population Council
Simeen Mahmud, Brac University
Tareq F. Khan, Comilla University**

Abstract

The purpose of this analysis is to explore how access to finance is associated with gender related outcomes in rural Bangladesh. We contrast two mechanisms of access—through access to credit, specifically micro-finance institution (MFI) membership and access to remittance through labor and other forms of migration, both national and international migration. MFI activities and labor migration have risen dramatically in recent years. Gender norms and behaviors of interest in this analysis are attitudes of acceptance of gender based violence, health seeking behavior, contraceptive use and gender preferences in family building patterns and women's engagement in paid work. The data are from a nationally representative sample survey of ever married women living in 300 communities conducted in 2011-2012. Results show strong association between MFI membership and three indicators of equitable gender norms: improved contraceptive use, ability to access health care and engagement in paid work. By contrast women in remittance earning households are significantly less likely to use contraceptive and engage in paid work. The only positive association of remittance earnings is with access to health care. Gender preferential stopping rule in childbearing is not significantly associated with either MFI membership or remittance earnings whereas both MFI membership and remittance are more likely to condone gender based violence.

Introduction

This paper explores correlates of gender norms and behavior to address how development approaches can be made to work better for women. We examine specific strategies for improving household access to finance in low income and underserved communities and compare two alternative strategies and a range of gender related outcomes. The selection of variables of interest in this analysis is informed by an understanding of forces of change currently underway as well as gender outcomes that are causes for concern. The specific strategies considered are membership in micro-finance institutions and labor migration and remittance. Most national surveys suggest MFI institutions are widespread in rural Bangladesh. About one in five households can be classified as being remittance receiving with equal proportions receiving remittances from within country and international migration. Gender outcomes considered are contraceptive use, access to health care, a measure of childbearing reflecting the influence of son preference, acceptance of gender based violence and paid work by women.

MFI institutions are of interest from a program or policy perspective because they offer a platform for reaching women. Although there are variations of approach across the numerous agencies that work in the field, the targeting of women, organizing women only groups that meet regularly, and the establishment of regular interactions between women who are members and the institution that they belong to, save with or borrow from, are common features. Programs specifically aimed at women can thus utilize a readymade platform for information or service delivery.

Background

Bangladesh serves as an interesting case study for policy alternatives for the contemporary developing world. Since its independence as a nation in 1971, the country's civil society and government have experimented with bold new development initiatives in family planning, micro-finance, public health and women's labor. Since these initiatives were implemented while there was little progress in macro-economic development indicators with poverty levels remaining stagnant at extremely high levels, analysts were confident that specific

observations about changes in fertility, mortality and migration, were a result of sector specific policy and programmatic measures.

Women in Bangladesh have traditionally been particularly hard to reach because of constraints on their mobility through norms associated with women's seclusion or *pardah*. Micro-finance has its origins as a civil society initiative designed specifically to overcome the barriers associated to women's confinement in the home and their exclusion from labor markets. Initially covering very small numbers in specific disadvantaged communities, MFI programs can be found all across the country in urban and rural areas. MFI groups offer small loans to women who are required to join a group and attend meetings regularly. The loans are given free of collateral and membership serves as a substitute for collateral guarantees to credit recipients.

More recently, opportunities for labor migration and improved opportunities for receiving remittance have also become more widely available and a viable alternative means of access to finance for the poorest households in Bangladesh. Measures taken by the national and receiving country governments, accompanied by technological innovations in the financial sector, have smoothed the ability of migrants to send and receive money from urban to rural areas and from overseas and can be credited for the rapid growth of migration and remittance income in the last five decades (Amin, 2013).

This paper explores how household responses to these different ways of accessing resources have been associated with gendered outcomes. Rather than arguing specific causal outcomes, we explore associations in a descriptive way. We are not attempting to isolate the independent impact of MFI membership or remittance, but rather seek to describe how these are associated with different gender outcomes, recognizing that there may be selection issues. We wish to identify the outcomes where the relationships are weak, so that programmatic actions may be taken. The primary variables of interest are MFI membership and we contrast impact with another way of accessing finance, i.e. reliance on remittances, essentially to understand whether these two forms of financial access work in similar ways. Gender related variables include contraceptive use, a measure of son preference (whether child bearing stopped after the birth of a son), use of health care services and

women's engagement in paid work. We expect that contrasting how access to finance is associated with a broad range of outcome variables will bring new evidence that can be used to design specific approaches to women's empowerment.

With approximately one in three households in the country being involved in MFIs (see DHS 2007) some form of financial access through MFIs has become a way of life in Bangladesh, particularly for poor rural women. Alongside this reality is the fact that despite significant reductions in gender disparities in development outcomes there is wide spatial variation in the indicators of women empowerment and human development. In fact, improvements in fertility reduction and family planning, female education, utilization of health care services and morbidity, female labor force participation, delayed age at marriage and decline in gender based violence do not occur in a consistent manner and the patterns of variation defy ready explanations.

Access to Finance Strategies and Selectivity of Membership

Widespread as they are, both micro-finance and migration are select processes and those that join the "club" of MFI membership or labor migration are fundamentally different from those who do not. Any attribution of causality needs to take this selectivity into account. In fact selectivity of membership has been at the core of a protracted debate on whether Micro Finance Institutions (MFIs) contribute to poverty eradication. Studies on the impact of access to micro-finance have largely focused on impact on household income, profit and poverty (Bannerjee et al 2014; Karlan and Zinman, 2009), most recently focusing on poverty (Roodman and Morduch, 2014; Pitt and Khandker, 2014).

While the debate on whether access to micro-finance has contributed to poverty eradication continues, the specific attention to issues of selection in this debate offers some important insights. Most researchers do not explore MFI impact on women's empowerment. A few exceptions that are able to allow for selective membership show that both more and less empowered women are likely to join. For example, Steele, Amin and Naved (2001) showed women who were more likely to have experienced various forms of threats of violence or were in unstable relationships were more likely to join. Programs have exclusion criteria and

target the poor, particularly poor families that are labor dependent. After controlling for observed and unobserved heterogeneity and focusing on change in contraception, they find that membership is associated with more contraception. They observed change during the initial years of membership and hypothesized that translation into lower fertility may be a longer term impact. Mahmud similarly found membership was associated with higher contraception but also higher fertility (Mahmud, 1994). More recently Amin and Bajracharya (2013) found that often observed higher reports of violence may be explained when members are compared to a socio-economically matched group of non-members.

Justification for the gender outcomes

It is clear that social transformation occurring in Bangladesh in recent years is composed of change in a broad range of domains from family planning, primary health care and education (Mahmud, 2008). The outcome indicators used in this analysis are current use of modern family planning method, last birth was a son among women who stopped childbearing, respondent says she can independently make decisions about access to health care, responses to attitudinal indicators of acceptance of gender based violence and whether women are involved in paid work or income earning activity (or market work):

Contraceptive use and access to health care have been widely used in empirical research on impact of microfinance on women's empowerment, and there is specific evidence, as discussed above, that MFI membership is associated with outcomes such as contraceptive use (Steele, Amin and Naved, 2001). Since access to credit facilitates self-employment for women in home based enterprises, MFI membership could increase women's labor time in market or income earning work. However, if this reduces their time in paid work outside the home, then the influence may be diluted. Women borrowers have greater mobility outside the home and are likely to have greater access to health facilities and pharmacies and hence greater access to family planning, particularly in the context of withdrawal of community health and family planning workers who earlier made home visits.

MFI members who have greater mobility should also have better access to health care facilities. The argument is similar to one about contraceptive access. An additional reason may be that borrowers are more likely to be able to meet health care expenses from own incomes and not have to rely upon the financial support of male family members.

With regard to women's attitude to wife beating the link to women's MFI membership is complicated. It is known that women who themselves experience violence are more likely to justify violence. In MFI borrower households the husband may be more favorably inclined towards his wife (who is bringing the loan) and refrain from beating her. On the hand, many MFI borrower households are more likely to have experienced violence to begin with (Steele, Amin and Naved, 2001), so they are more likely to justify it.

Finally, there is recent evidence (Kabeer, Mahmud, and Huq, 2013) that sex preference of offspring in Bangladesh may be undergoing some transformation in terms of a reduction in the intensity of son preference and a move towards no sex preference. This is in the context of a significant reduction in the number preference as well and the declining reliability of sons for old age support. Since women MFI borrowers are more likely to plan their families it is possible that they are less likely to exhibit son preference.

Data and Methodology

The data used in this analysis were collected in 2011 to 2012 in a nationally representative survey of ever-married women of reproductive age conducted jointly by the Institute of Microfinance, Population Council and BRAC University as part of a research project entitled "The Social Impact of Microfinance on Gender Norms and Behavior" referred to here on as SIMGNB, 2011-2012. The sampling strategy was a two stage stratified sample by divisions and urban/rural location. The survey was conducted in a total of 300 primary sampling units identified in the household sampling frame provided by the Bangladesh Bureau of Statistics. A random sample of 30 households was identified in each PSU, with at least one ever-married woman younger than 50 years old. This resulted in a surveyed sample of 6043 women and their households. Seventy nine percent of the surveyed households were located

in rural areas, the rest in urban areas, metropolitan areas and municipal wards. The current analysis is limited to rural households where micro-finance is more common.

Outcome Variables

The main outcome variables used in this analysis are:

- ***Current Use of Contraception*** (using a modern method = 1, 0 otherwise);

- **Son Preference** based on the sex of last birth of respondents who are sterilized or have not had a birth in the past five years. The variable takes value 1 if the last birth of the respondents is son and 0 otherwise.

- ***Visit health complex/doctor is own decision (can visit*** Yes = 1, no = 0)

- ***Attitude towards violence against women*** (= 1 if disagree with statement “husband can beat wife if argues with him”, 0 = agree);

- ***Paid Work*** (1 = income earning work inside or outside the home, 0 = otherwise);

Each of the gender norm indicators was limited to an appropriate subset of the sample. The sample for questions on use of health care, acceptance of violence and paid work is 4738 respondents. The contraceptive use variable excludes women not currently married and/or currently pregnant and includes 4379 respondents. The son preference analysis was limited to women who did not have a birth in the last five years or were sterilized and includes a total of 2359 respondents. Multivariate Logistic Regression Models are estimated separately for each of the five outcomes using the nestreg:logit command in STATA.

Key Explanatory Variables

The key explanatory variable is MFI membership. Household access to remittance income is also specified as a dichotomous variable. Since both MFI membership and remittance may be sources of access to finance an interaction of the two variables is specified. The reference

category for these two variables taken together includes women who are not members and do not have remittance income. Age of the respondent and their age at first marriage are entered as dichotomous variables. Women older than 30 years of age are contrasted to women 30 or younger and women married at the legal age of 18 or over are compared to women married under the age of 18. The variables household head's education and respondent's education status are categories as 0 to 3 where 0 represents no education, 1 represents up to primary level of education completed, 2 represents maximum secondary level completed and 3 represents any level higher than secondary. For both the variables, the highest level of education is considered as the reference category in regression analysis.

Wealth quintile is generated from a wealth score constructed using principal component analysis from asset ownership related variables. The variables used to evaluate the wealth score are total land owned, ownership of dwelling/business, livestock (including cow, goat, hen/duck), ownership of timber/fruit trees, transport vehicles (van/rickshaw/boat, tempo/baby taxi/engine boat, bi-cycle/motor-cycle, car), durable goods (tv, dvd/cassette player/radio, land phone/ cell phone, computer, refrigerator, microwave oven, electric fan, sewing machine), furniture including wooden box/almirah/chest, cot/*chouki*, chair/table, dressing table/sofa, as well as equipment such as tubewells and husking machine. The richest class is used as the reference category in the multivariate model.

Other variables included in the multivariate analysis are exposure to media (whether the respondent watched TV) and division of residence.

Results

Table 1 shows the distribution of the five dichotomous right hand side variables in our statistical analysis. Among all women in the sample who are currently married and not pregnant 59.8 % are currently using a method of contraception to avoid pregnancy. The rate is roughly comparable to the estimate for contraceptive use in the 2011 Demographic and Health Surveys (NIPORT, 2011). Among women who have accepted a permanent method of birth control and have not had a birth in the past five years, 66% had a son for

the last birth— these rates are roughly comparable to high sex ratios at last birth found for states such as Gujarat, although the rates are not strictly comparable since this rate is based on women who have not given birth in the past five years or are sterilized, whereas the Indian rates are based on women who report they want no more children (Bongaarts, 2013). Among all women who responded to the survey 51.8 % said they could, if necessary, decide for themselves whether to visit a doctor or a health complex. The survey asked a series of questions on violence acceptance to assess attitudes that accept, condone and support the idea that men are justified and have the right to beat their wives if their expectations are not met. As an indicator of such condoning attitudes we see that 47.2 % of women have attitudes of acceptance of men’s right to beat or hit their wives if the wife argued with him. Rates of paid work in this survey is higher than comparable surveys such as the DHS because our survey questions were more inclusive and included work in and out of the home, as well as work remunerated in cash or kind¹.

Table 2 shows the distribution of the left hand side variables included in the multivariate models. In the sample of women 53 % had ever been a member in a micro-finance institution². A little over one in three women had no education and about six percent had more than high school education. The education level of the household head is slightly higher consistent with the higher levels of education for men than women in that generation. About 22 percent of the sample report receiving some level of remittance from a family member living away from the household. This is approximately evenly split between internal and international migrants. In Bangladesh, exposure to new ideas

¹ DHS asks only one question about work and about payment in cash and/or kind . We asked a series of questions starting with expenditure saving production, waged work and then income earning work in the home or outside, so as not to miss any type of work and women doing more than one type of work. Enumerators experienced with women’s work questions suggest that the enumerator’s perception of what constitutes work influences the extent to which they can capture paid work. Also, when work is not done for a “sufficient number of hours per day” or on a “regular basis” enumerators are reluctant to classify this as “work”.

² About one in three respondents were current members and shows that the survey is in broad agreement with other national surveys in terms of the level of membership

and knowledge is strongly related to media exposure. In the current sample 58% watch television regularly.

The table shows that there are some important differences in the sample. The subset of women contributing observations to the son preference analysis is older with an average age of 38 years compared to 34 years for the other outcomes. They are more likely to be married earlier, more likely to be micro-finance members and have less education and they are less likely to be in the poorest wealth quintile. However in terms of husband's education, whether they habitually watched television and whether they received income in the form of remittance, ie they had a family member living and working away from the village, there were no differences between the samples.

Does membership in MFI lead to more gender equitable outcomes? The results of bivariate analysis is mixed --members are more likely to use contraception than nonmembers and are slightly more likely to have a last birth that is a son. They are less likely to have visited a health center than non-members and they are also less likely less likely to have received ante-natal care services in bivariate analysis. Finally, members are more likely to have paid work.

Outcomes vary considerably by factors such as age, education, remittance reliance and division of residence and to a lesser extent by wealth and television watching. Older women are less likely to be using contraception and women who are married early are also less likely to be contraceptive users—in Bangladesh younger women are more likely to be married later and are also more likely to be educated and potential confounding of effects need to be taken into account. Women who have more education are more likely to use contraception, visit a health center, and reject violence. They are also less likely to be engaged in paid work. The association with the education of head of household is similar but differences by this variable are smaller in magnitude. With the exception of the violence acceptance outcome, the bivariate differences in wealth quintiles are not large.

Table 4 shows results from multivariate models that explore the association between access to finance variables, MFI membership and remittance support, while taking into account individual, household and community characteristics. The results are mixed. While MFI members are more likely to be engaged in paid work, to be contraceptive users and are more likely to say they can independently decide to visit a health care center there is no significant difference in whether their last birth was a son. MFI members are significantly more likely to accept gender based violence towards women as are women who are reliant on remittance income.

Both MFI members and remittance receivers are also more likely to condone/accept wife beating (if wife argues with husband). In this model women who are less educated or live in a household where the head has less education are also similarly more likely to condone and accept violence. There are some regional differences – women who live in Dhaka division (in and around the capital) as well as women living in the relatively wealthy and high migration Sylhet division are also less likely to condone violence, as are women who habitually watch television. These correlates suggest that greater exposure to new ideas and knowledge is associated with this outcome.

In the model that controls for respondent's and household head's education, less educated women are less likely to have a last birth that is a son (or more likely to have a last birth that is a daughter), which might mean that they have stronger number preference than sex preference, i.e. they are more inclined to stop childbearing at their preferred number even if it is a girl. Women who watch television regularly are less likely to have a last birth that is a son. Women in Chittagong, Dhaka and Sylhet are more likely to have a last birth that is a son relative to women who live in Barisal division.

It is interesting to note that the household head's education is significantly associated with the 'does not accept violence' outcome but not for any of the other outcome variables considered. More education is associated with less acceptance of violence. It is noteworthy that the influence of head's education remains strong on women's attitude of acceptance of violence but not on other outcomes.

It is interesting to note some contrast in access to finance through MFI membership, remittance and the interaction of the two. MFI membership is associated with significantly higher contraceptive use while remittance is associated with lower use. Women who are MFI members and also rely on remittance are also less likely to be contraceptive users. There is no significant difference in whether the last birth was a son, ie that the respondent stopped childbearing after a son was born. Both MFI and remittance increase women's say in accessing health care relative to women who are non-members and do not have access to remittance income. MFI members and remittance earners are both more likely to reveal attitudes of acceptance/ condoning violence, accepting wife beating for burning food. MFI members are more likely to be engaged in paid work, while remittance earners are less lively. Women who have access to finance through membership and remittance are also more likely to be engaged in paid work.

Discussion and Conclusion

The analysis presented here suggests specific patterns of association of MFI membership with gender related outcomes. The most positive outcomes are seen in access to services such as contraceptive use and access to health care. One possible mechanism by which these changes may be explained is that MFI membership increases access to and familiarity with modern institutions such as family planning clinics and health care facilities. Membership may also remove barriers to access if they encourage women to interact with the local community and if they increase women's mobility. Similarly, MFI is associated with more paid work.

By contrast MFI membership is NOT positively associated with more equitable gendered outcomes such as the absence of son preference or absence of condoning attitudes towards gender based violence. Both these outcomes are indicators of longer term transformation in values and attitudes. They are also more likely to be associated with household circumstances and relational factors and hence more resistant to change. For

instance, the household head's education has a stronger impact on these outcomes suggesting these circumstances matter more than remittance or access to credit.

The results on access to remittance offers interesting counterpoints and confirms that, relative to MFI membership, access to finance through remittance is associated with less empowered outcomes. While lower contraceptive use among women who have migrant family members may be understandable if the migrant is a partner and women are less likely to use contraception because they are less sexually active, the other indicators also show less of an association. Most striking, women are less likely to work. In one variable, ability to visit a health center, women who are remittance receivers are more empowered than MFI members. Women who have access to finance through both MFI membership and remittance show a mix of characteristics. While they are less likely to use contraception perhaps they are less sexually active, they are more likely than MFI members alone to access health care and less likely to work.

The lack of association with son preference and the negative association in attitudes towards violence suggests that these are battles that will be hard won. Son preference and gender based violence are likely rooted in deep seated societal preferences and associated with entrenched patriarchal values. Change in these attitudes and related behaviors may require more targeted efforts. These patterns of association suggest that micro-finance institutions may provide an important platform for addressing issues such as gender based violence and son preference. The pattern of association with husband's education suggests that it may not be enough to target women alone with these messages and services. It will be important to reach these messages to influence the other household members of women who are MFI members. Finally, the consistently positive influence of watching television suggests this as an important medium by which to reach gender equitable messages to women and their families.

Table 1: Distribution of Gender Related Outcome Variables, Ever-married Rural women, SIMGNB Survey, 2011-2012

Outcome Variable	Frequency	Percentage
<i>Currently using Contraception</i>		
No	1,761	40.20
Yes	2,620	59.80
Total	4,381	100.00
<i>Son Preference</i>		
No	812	34.41
Yes	1,548	65.59
Total	2,360	100.00
<i>Visit to Health Complex/Doctor</i>		
No	2,295	48.21
Yes	2,465	51.79
Total	4,760	100.00
<i>Acceptance of Violence</i>		
Accept (0)	2,515	52.84
Does not Accept (1)	2,245	47.16
Total	4,760	52.84
<i>Paid Work</i>		
No	2,235	46.95
Yes	2,525	53.05
Total	4,760	100.00

Note: 1. The sample for the outcome variable currently using contraception is selected for those currently married women who are currently using any contraception method but not currently pregnant in rural area.

2. The Son preference sample includes those women who had no birth in the 5 years preceding the survey & had birth in the last 5 years but sterilized.

3. The sample of women for the outcome variables visit to doctor, acceptance of violence and paid work are same and include all women of reproductive age of 15-49 years.

Table 2: Background Characteristics of the Sample of Ever-married Rural women, SIMGNB Survey, 2011-2012

Independent Variable	Sample by Outcomes				
	Currently using Contraception	Son Preference	Visit to Health Center	Acceptance of Violence	Paid Work
<i>N</i>	4,381	2,360	4,760	4,760	4,760
<i>MFI Membership Status</i>					
Non-member	2,020 (46.11)	987 (41.82)		2,142 (46.57)	
Member	2,361 (53.89)	1,373 (58.18)		2,458 (53.43)	
<i>Average Age (in years)</i>					
	34.01	38.20		34.02	
30 years or less	1,743 (39.79)	398 (16.86)		1,900 (39.92)	
Above 30 years	2,638 (60.21)	1,962 (83.14)		2,860 (60.08)	
<i>Average Age at First Marriage (in years)</i>					
	15.73	15.34		15.75	
Less than 18 years	3,424 (78.16)	1,969 (83.43)		3,708 (77.90)	
18 years and above	957 (21.84)	391 (16.57)		1,052 (22.10)	
<i>Education of Respondent</i>					
No education	1,626 (37.11)	1,127 (47.75)		1,783 (37.46)	
Primary	1,395 (31.84)	699 (29.62)		1,514 (31.81)	
Secondary	1,102 (25.15)	419 (17.75)		1,179 (24.77)	
Higher	258 (5.89)	115 (4.87)		284 (5.97)	
<i>Education of HH Head</i>					
No education	1,913 (43.67)	1,060 (44.92)		2,098 (44.08)	
Primary	1,215 (27.73)	616 (26.10)		1,330 (27.94)	
Secondary	812 (18.53)	445 (18.86)		864 (18.15)	
Higher	441 (10.07)	239 (10.13)		468 (9.83)	
<i>Wealth Quintile</i>					
Poorest	843 (19.25)	403 (17.08)		953 (20.03)	

Independent Variable	Sample by Outcomes				
	Currently using Contraception	Son Preference	Visit to Health Center	Acceptance of Violence	Paid Work
Poorer	869 (19.84)	463 (19.63)		951 (19.99)	
Middle	884 (20.19)	482 (20.43)		951 (19.99)	
Richer	890 (20.32)	493 (20.90)		951 (19.99)	
Richest	893 (20.39)	518 (21.96)		952 (20.01)	
<i>Received Any Remittance</i>					
No	3,395 (77.49)	1,834 (77.71)		3,682 (77.35)	
Yes	986 (22.51)	526 (22.29)		1,078 (22.65)	
<i>Watch TV</i>					
No	1,828 (41.73)	963 (40.81)		1,991 (41.83)	
Yes	2,553 (58.27)	1,397 (59.19)		2,769 (58.17)	

**Table 3: Bivariate Distribution of Gender Outcomes by Backgroup Characteristics, Ever-married
Rural women, SIMGNB Survey, 2011-2012**

Independent Variable	Currently using Contraception	Son Preference	Visit to Health Center	Acceptance of Violence	Paid Work
<i>MFI Membership Status</i>					
Non-member	53.32	64.84	54.02	51.73	45.76
Member	65.35	66.13	49.82	43.15	59.46
<i>Age of the Respondents</i>					
30 years or less	65.86	71.36	47.05	49.21	46.79
Above 30 years	55.80	64.42	54.93	45.80	57.20
Average Age of the Respondents (in years)	32.59	38.20	34.78	33.73	34.88
<i>Age at First Marriage</i>					
Less than 18 years	60.78	67.52	50.16	45.04	55.53
18 years and above	56.32	65.21	57.51	54.66	44.30
Average age at first marriage (in years)	15.68	15.32	15.93	16.03	15.47
<i>Education of the Respondents</i>					
No education	55.60	65.66	49.52	41.33	57.49
Primary	62.15	65.24	51.12	45.31	53.57
Secondary	62.98	65.39	54.20	52.67	46.73
Higher	60.08	67.83	59.51	70.77	48.59
<i>Education of HH Head</i>					
No education	60.38	65.57	49.48	41.47	55.62
Primary	60.00	67.21	52.78	45.64	53.53
Secondary	57.51	63.60	55.09	55.09	47.45

Independent Variable	Currently using Contraception	Son Preference	Visit to Health Center	Acceptance of Violence	Paid Work
Higher	61.00	65.27	53.21	62.39	50.43
<i>Wealth Quintile</i>					
Poorest	62.40	69.48	51.42	42.50	50.37
Poorer	61.45	67.39	50.26	43.11	53.10
Middle	60.63	65.15	50.37	44.37	58.36
Richer	59.55	64.91	50.68	49.11	53.42
Richest	55.10	61.97	56.20	56.83	50.00
<i>Received Any Remittance</i>					
No	65.89	66.74	47.28	46.69	55.84
Yes	38.84	61.60	67.16	48.79	43.51
<i>Watch TV</i>					
No	59.19	66.46	42.39	42.54	58.41
Yes	60.24	65.00	58.54	50.49	49.19

Note: In the bivariate table, the percentages are shown only for “yes” categories. For example, 64.43 percent of the women are using contraception those who have microfinance membership. The categories of acceptance of violence are defined under the heading 0: accept and 1: does not accept and the percentages given in the above table are only for those who have not accepted the statement.

Table 4: Estimated Odds Ratios Associated with Access to Finance and other correlates, from Multivariate Logistic Regression, Ever-married Rural women, SIMGNB Survey, 2011-2012

Variables	Odds Ratio				
	Currently Using Contraception	Son Preference	Visit to Health Center	Does not Accept Violence	Paid Work
N	4,379	2,359	4,758	4,758	4,758
Ever NGO member only	1.44***	1.02	1.20**	0.79***	1.36***
Receiving remittance only	0.33***	0.83	2.10***	0.93	0.70***
Ever NGO member & receiving remittance	0.64***	1.00	1.53***	0.70***	1.24*
Non-member & not receiving remittance (Reference)	1.00	1.00	1.00	1.00	1.00
Category: respondent's age (0: 30 years or less, 1: over 30 years)	0.72***	0.96	1.52***	1.02	1.50***
Age at first marriage (0: ≥ 18 , 1: < 18)	1.12	1.00	0.29***	0.93	0.46***
Educational qualification of the respondent					
No education/schooling	0.68*	0.50***	0.58***	0.42***	0.95
Primary or less	0.86	0.55**	0.68**	0.46***	0.99
Secondary	1.05	0.69	0.77*	0.52***	0.95
SSC & above (Reference)	1.00	1.00	1.00	1.00	1.00
Educational qualification of the household's head					
No education/schooling	1.11	1.19	1.05	0.67***	1.16
Primary or less	1.06	1.22	1.03	0.75**	1.26*
Secondary	0.94	1.10	1.02	0.98	1.00
SSC & above (Reference)	1.00	1.00	1.00	1.00	1.00
Wealth quantile					
Poorest (0-20%)	1.19	1.19	1.21	0.90	0.85
Poorer (20-40%)	1.12	1.06	1.16	0.86	0.87
Middle (40-60%)	1.15	1.16	1.15	0.84*	1.11
Richer (60-80%)	1.12	1.19	0.95	0.93	1.00
Richest (80-100%) (Reference)	1.00	1.00	1.00	1.00	1.00
Watch TV	1.20**	0.82**	1.75***	1.16**	0.80***
Division dummy					
Barisal (Reference)	1.00	1.00	1.00	1.00	1.00
Chittagong	0.56***	1.47*	6.42***	1.15	0.55***
Dhaka	0.63***	1.49**	0.80	1.81***	1.80***
Khulna	0.76	1.24	0.86	0.81	1.54***
Rajshahi	0.83	1.23	0.51***	1.25	3.21***
Sylhet	0.36***	1.65*	2.79***	1.50**	0.38***
Constant	2.36***	1.71	2.05***	2.30***	1.22

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

References:

- Bajracharya, Ashish and Sajeda Amin 2013. “Microcredit and domestic violence in Bangladesh: An exploration of selection bias influences” *Demography* 50(5): 1819-1843
- Bannerjee, Abhijit, Esther Duflo, Rachel Glennerster and Cynthia Zinnan. 2014. The Miracle of Microfinance: Evidence from a Randomized Evaluation. <http://www.povertyactionlab.org/publication/miracle-microfinance-evidence-randomized-evaluation> (accessed April 28, 2014)
- Bongaarts, John. 2013. “The Implementation of Preference for Male Offspring”. *Population and Development Review*, Volume 39, Issue 2, pages 185–208, June 2013
- Karlan, Dean and Jonathan Zinman 2009. Expanding Microfinance Credit Access: Using Randomized Supply Decisions to Estimate the Impacts in Manila http://www.povertyactionlab.org/papers/122_Karlan_expandingaccess.pdf
- Kabeer, Naila, Simeen Mahmud and Lopita Huq, 2013. Diverging Stories of “Missing Women” in South Asia: Is Son Preference Weakening in Bangladesh? *Feminist Economics Volume 20(1)*.(accessed April 28, 2014).
- Mahmud, Simeen 1994. The Role of Women’s Employment Programs in Influencing Fertility Regulation in Rural Bangladesh. *The Bangladesh Development Studies Volume XXII:2&3*:93-120.
- Mahmud, Wahiduddun 2008. Social Development in Bangladesh: Pathways, Surprises and Challenges. *Indian Journal of Human Development* 2(1).
- Pitt, Mark M., Shahidur R. Khandker, and Jennifer Cartwright. 2006. Empowering Women with Micro Finance: Evidence from Bangladesh. *Economic Development and Cultural Change* 54(4): 791–831.
- Roodman, David and Jonathan Morduch 2014. The Impact of Microcredit on the Poor in Bangladesh: Revisiting the Evidence. *Journal of Development Studies*. v.50, no.4 (2014) pages 583-604.
- Pitt, Mark M, 2014. Response to ‘The Impact of Microcredit on the Poor in Bangladesh: Revisiting the Evidence’. *Journal of Development Studies*. v.50, no.4 (2014) pages 605-610.
- Steele, Fiona, Sajeda Amin and Ruchira T. Naved 2001. Savings/Credit Group Formation and Change in Contraception, *Demography*, Vol. 38, No. 2 (May, 2001), pp. 267-282