



Impact of Monthly Repayment System on the Household Income and Food Expenditure of the Rural Women Borrowers: Evidence from Bangladesh

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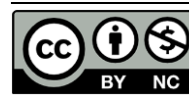
Abstract

Purpose of the study: The main objective of this study was to assess the impact of the Monthly Repayment System (MRS) on the living standard of poor women borrowers in terms of household income and food expenditure.

Methodology: Primary data were collected from the women borrowers of NGOs in the Mymensingh district of Bangladesh using the Simple Random Sampling (SRS) technique. In this study, the Propensity Score Matching (PSM) method was used to assess the impact of the MRS on the household income and food expenditure of the women borrowers. This study demonstrated that the MRS played a significant role in improving the women borrowers' household income and food expenditure. The Five-Point Likert Scale was also used to assess the borrowers' opinions on whether they were economically better off under the MRS or not.

Findings: The majority of the borrowers had opinions that they preferred MRS for their economic well-being.

Implications: This study suggests that the MRS should be practiced among women borrowers who received loans for pursuing agricultural activities.



Article History:

Received: 26 May 2022

Accepted: 24 October 2022

Online: 5 December 2022

Keywords:

Rural Women; Impact; Repayment; Household Income; Bangladesh

I. Introduction

Like other developing countries, the inaccessibility of the rural poor to formal financial institutions is a common phenomenon in Bangladesh (Dowla, 2018; Mitra et al., 2019). Undoubtedly, obtaining credit facilities from formal financial institutions for poor rural women is much more complicated than their male counterparts. Women, especially rural women, are the worst sufferers of exploitation in social and economic aspects because of the existing patriarchal norms of rural society (Mahmud et al., 2021; Hilton et al., 2016; Ali et al., 2017; Zafarullah & Nawaz, 2019). In fact, the traditional banking system in developing countries has failed to cater to the financial needs of the poor because of the collateral requirement which the poor people are incapable of providing (Sohag et al., 2015; Dowla, 2018; Chamboko & Guvuriro; 2022). In order to address their financial needs, these rural poor have to depend on the local money lenders who charge quite a high-interest rate with exploitative terms and conditions (Dowla, 2018; Sohag, et al., 2015). Under these circumstances, microcredit can be a suitable option for the rural poor to obtain credit which is considered worldwide as one of the effective tools to combat poverty (Chirambo, 2017; Bezboruah & Pillai, 2013; Chamboko & Guvuriro; 2022). Under the microcredit programs, without taking any collateral, a small amount of loan is provided to the borrowers for pursuing their Income-Generating Activities (IGAs) through the group-based approach (Dowla, 2018; Mahmud et al., 2017; Bezboruah & Pillai, 2013; Sohag et al., 2015). According to some researchers, microcredit played a significant contribution to bringing a positive change to the lives of rural poor people in economic and social indicators (Terano et al., 2015; Porter, 2016; Rahman et al., 2017; Zafarullah & Nawaz, 2019; Al-Shami et al., 2016). It is important to note that as per the rules and regulations of the microcredit programs, borrowers are bound to repay their loans on a weekly basis (Mahmud et al., 2019; Ali et al., 2017). In fact, by practicing the Weekly Repayment System (WRS), microcredit providers have become successful in achieving quite an impressive repayment rate (Mahmud et al., 2019; Ali et al., 2017; Ministry of Finance, 2022). Some researchers rightly point out that the high repayment rate is crucial for the sustainable growth of Microfinance Institutions (MFIs) and it could bring some benefits to the lenders as well as to the borrowers (Nawai & Shariff, 2012; Godquin, 2004). However, this WRS is not beyond criticism and has several weaknesses (Ali et al., 2017; Mahmud et al., 2019, Ali & Hatta, 2012). According to Field and Pande (2008), the WRS is mainly responsible for increasing the transaction costs of MFIs. Ali and Hatta (2012) reported that microcredit borrowers had no other option but to sell their assets to repay their loans. In a study in Bangladesh, some researchers observed that the tight weekly repayment schedule put tremendous pressure on women borrowers which increased mental anxiety among the borrowers (Ali et al., 2017; Mahmud et al., 2019). It was also indicated by the researchers that the likelihood of occurring Intimate Partner Violence (IPV) was much higher among women borrowers of microcredit programs because of the WRS (Ali et al., 2017). Mahmud et al. (2019) observed that practicing WRS was the major reason behind the borrowers' loan default and drop-out from the microcredit programs. In fact, the microcredit borrowers, who are involved in agricultural activities often face problems in repaying their loans since the repayment starts immediately after the disbursement of loans under the WRS, although, it takes some time for the borrowers to get returns which, in fact, forces them to rely on the informal sources for borrowing (Jane & Mansuri, 2003; Mahmud et al., 2019). Therefore, to ease the pressure of repayment on the borrowers, some NGOs (e.g. BRAC) recently introduced the MRS. As a result, the impact of MRS on the living-standard of women borrowers is still unclear. Thus, a set of logical questions can be raised:

Do the borrowers prefer to practice MRS?

Can MRS increase the household income and expenditure of the borrowers?

Do the borrowers face problems in practicing MRS?

This study takes an effort to explore the answers to the above-mentioned questions. The main objective of this study was to assess the impact of the MRS on the household income and expenditure of women borrowers by using the Propensity Score Matching (PSM) technique. It is believed that the findings of this study will assist microcredit providers in formulating policies for repayment systems and the smooth implementation of microcredit programs in Bangladesh and elsewhere.

II. Theoretical Underpinning

The Utility Theory (UT) of economics postulates that an increase in the budget of a person would increase his or her income by reaching a higher indifference curve indicating a higher level of purchasing capacity. Our

study is heavily grounded on the above-mentioned utility theory. In fact, providing microcredit support to poor women borrowers under MRS enhances the money-holding capacity of the borrowers instead of a rigid WRS. Undoubtedly, with an increase in the budget, the investment capacity of borrowers under the MRS will increase more to invest in the IGAs resulting in a higher level of income for them. This increased income would ultimately lead these poor borrowers under the MRS in improving their living-standards by increasing their capacity to spend more on food and non-food items.

III. Previous Studies on Borrowers' Repayment Behavior

In a study in Zimbabwe, Chamboko & Guvuriro(2022) observed that the likelihood of loan delinquency was higher for the higher-income group borrowers while the case was completely opposite for the lower-income group borrowers. In fact, the number of previous loans taken by borrowers had a significant role in reducing loan delinquency (Chamboko & Guvuriro, 2022). According to some researchers, women are usually less likely to default the loans than males (Roslan & Karim, 2009; Inekwe, 2019). In a study in Canada, it was observed that female borrowers performed better than males in terms of loan repayment (Alam et al., 2021). The likelihood of being a loan defaulter among borrowers was found higher in business loans as compared to employment and housing loans (Alam et al., 2021). According to Roslan and Karim (2009), the probability is much higher to become a loan defaulter for the borrowers' groups without training as compared to the borrowers' groups that received training. Undoubtedly, providing education and training facilities to borrowers is crucial for reducing the rate of loan delinquency among borrowers (Inekwe, 2019). For example, in Pakistan, the likelihood of loan repayment was found much higher for borrowers who had a higher level of educational attainment than a less educated person (Chaudhary & Ishfaq, 2003). Hossain et al. (2019) observed that the health shock of the household members could reduce the repayment performance of microcredit borrowers in Bangladesh. The sudden economic shocks of borrowers were identified by Tedeschi (2006) as the major reason behind their loan default. Moreover, households having more income earners were less likely to default on loans (Hossain et al., 2019). Onyeagocha et al. (2012) indicated that any 'shock' could significantly reduce the repayment capacity of borrowers. Tundui and Tundui (2013) observed that women had a limited capacity to control loaned money which was often used by their husbands or the male members of the family resulting in serious problems for them in repaying their loans.

Vogelgesang (2003) argued that in Bangladesh, the borrowers who took multiple loans were less likely to repay the loans because of their inadequate income. According to Vogelgesang (2003), a substantial increase in the income of the borrowers would increase their capacity to repay the loans in time without creating difficulties. Similarly, in a study in Malaysia, Nawai & Shariff (2012) observed that the repayment performance of the borrowers could be increased significantly by increasing their income and sale. In many cases, microcredit borrowers had no options left without selling their valuable assets in order to repay their existing loan burden taken from multiple organizations (Hossain, 2022). Excessive use of social ties for loan repayment can destroy the trustworthiness of microcredit borrowers in society and trigger conflict among group members (Hossain, 2022). The borrowers who had firm faith in religious norms were less likely to default on the loans (Al-Azzam et al., 2012). According to Bhat and Tang (2002), reducing the transaction would play a pivotal role in increasing the loan repayment capacity of poor borrowers. According to Kodongo and Kendi (2013), an inverse relationship exists between the interest rate and loan repayment capacity of the borrowers. On the other hand, increasing land area would reduce the likelihood of loan delinquency among the borrowers (Brehanu&Fufa, 2008). D'espaller et al. (2011) reported that women borrowers usually build better contact with the group members and MFIs, which assisted them in increasing their repayment capacity and also enabled them in repaying the loans in time. In a study in Bangladesh, Mahmud et al. (2019) observed that practicing the MRS played a pivotal role in increasing the household healthcare expenditure of microcredit borrowers in Bangladesh.

The previous studies mainly focused on weekly repayment by identifying the influencing factors of borrowers' repayment behavior. On the other hand, this study emphasizes on assessing the impact of the MRS on household income and food expenditure of the women borrowers.

IV. Methods

Target Group: Landless, marginal, and small women borrowers of NGOs who practiced MRS were the target group of this study. It is important to note that all the women borrowers of the target group were involved in agribusiness which includes selling poultry, livestock, and agricultural equipment.

Location and Time of Survey: The survey was conducted in three Upazilas of Mymensingh district (namely, Fulbaria, Trishal, and Nandail) during the period of mid-December 2019 to mid-February 2020.

Sampling Technique: At the beginning of the study, a list of the local branch offices of the NGOs was collected from the Regional Area Offices (RAOs) of the selected NGOs. Afterwards, a comprehensive borrowers list was prepared based on the total number of borrowers in each branch. Then, using the SRS technique, from the list of comprehensive borrowers, a total of 317 borrowers were selected as samples for this study. An online sample size calculator known as ‘Survey System’ was used to determine the sample size by conceiving five percent of error at the 95% confidence level. It is important to note that the ‘survey system’ was also used by other researchers for determining the sample size (Kabir et al., 2018; Mahmud et al., 2022). The criteria used to select the sample were as follows: (i) landless, marginal, and small female borrowers who were involved in agricultural activities; (ii) households that possessed land up to 149 decimals; (iii) the borrowers who joined the NGO program in January 2018 and utilized the loan money for at least 18 months; (iv) borrowers aged between 20 to 60 years; and (v) borrowers who took loans not exceeding 30,000 Taka after joining the program. These criteria were also used by other researchers to develop the sampling frame (Hilton et al., 2016; Kabir et al., 2018; Mahmud & Hilton, 2020). Purposively, a total of 317 poor women were also selected from other Upazilas of Mymensingh district by following the above-mentioned criteria to form the control group. It is to be noted that all women borrowers under the control group practiced WRS.

Data Collection: Information was collected on borrowers’ demographic status, asset-holding status, household income, and expenditure, credit management, opinion on monthly and weekly repayment systems, and the problems in participation in the microcredit programs operated by the NGOs. Primary data were collected from the borrowers by using a structured questionnaire.

Analytical Technique: The Propensity Score Matching (PSM) method is used in this study to evaluate the impact of the MRS over the WRS on household income and food expenditure. The PSM technique was also used by the researchers to evaluate the impact of development projects on the living-standard of the poor (Khan et al., 2012; Sohag et al., 2015; Mahmud et al., 2022; Mahamud & Hilton, 2020). PSM focuses on the counterfactual scenario of the performance indicators of the treatment group (Haque & Dey, 2016; Sohag et al., 2015). A propensity score is a conditional probability to receive treatment (Sohag et al., 2015). Using the propensity score, a researcher can match participants from the treatment group with participants from the control group, so that the treatment group and the control group can be balanced. The PSM method estimates the Average Treatment Effects on the Treated (ATT). Under conditional independence ATT can be estimated as:

$$ATT = E(Y_1 - Y_0 | X, I = 1) = E(Y_1 | X, I = 1) - E(Y_0 | X, I = 1)$$

Here Y_1 and Y_0 represent the income of the borrowers involved in the monthly repayment program and weekly repayment program respectively. X is the vector of exogenous explanatory variables (household characteristics), I is the treatment indicator ($I=1$ if the individual households are participants of the monthly repayment program).

The determination of propensity score is based upon a binary choice model such as the logit and probit model (Sohag et al., 2015; Haque & Dey, 2016; Mahmud et al., 2017). In this study probit model was used. Once we estimate the propensity score, we need to match each participant with his/her ‘closest’ non-participant. For this purpose, we have used Nearest Neighbor (NN) and Kernel Matching (KM) methods in this study. These two matching techniques were used by other researchers for matching purposes (Mahmud et al., 2017; Sohag et al., 2015; Weber & Ahmad, et al., 2014; Mahmud et al., 2022). In this study, the age of the borrowers, the age of the household head, family size, nearest distance of the rural market from the borrower’s house; years of schooling of the borrowers, and the nearest distance of the NGO branch office from the borrower’s house were used for matching. Other researchers also used age, family size, and distance of rural infrastructural facilities from the borrower’s house as matching variables (Mahmud et al, 2017; Mahmud et al., 2019).

V. Results and Discussions

Socioeconomic Status of the Borrowers

In this study, the age of the borrowers of both groups was middle-aged and did not vary succinctly. The average age of the women borrowers was 39.18 years and 40.31 years for the control group and the treatment group respectively (Table 1). Similarly, Mahmud et al. (2017) observed that BRAC (a reputed NGO in Bangladesh) preferred to provide microcredit facilities to the middle-aged group than the older group. In fact, microcredit provider targets the middle-aged women group so that they can pursue IGAs properly with the loan. The years of schooling of the borrowers did not also vary significantly between the two groups. The average years of schooling for the treatment group was 3.8 years while it was 3.21 years for the control group (Table 1). Similarly, it was also observed by the researchers that microcredit borrowers had low educational status having less than five years of schooling (Mahmud et al., 2017; Mahmud et al., 2022). The percentage of married borrowers was higher in the treatment group (94.71%) while it was (89.36%) for the control group (Table 1). Family size is such a demographic factor that can influence the economic activities of a household (Mahmud et al., 2021; Hilton et al., 2016; Mahmud et al., 2017). The average family size did not vary significantly between these two groups. The average family size for the treatment group and the control group was composed of 5.19 and 5.42 members respectively (Table 1). Other studies conducted in Bangladesh also revealed that the average family size of microcredit borrowers ranged between 4 to 5 members (Mahmud et al., 2022; Mahmud et al., 2017). The average dependent member in the family was found 1.86 and 1.95 in the treatment group and the control group respectively (Table 1). In fact, rural society in Bangladesh is still dominated by males due to patriarchal norms (Orso&Fabrizi, 2016; Hilton et al., 2016; Mahmud et al., 2021; Mahmud et al., 2014; Zafarullah & Nawaz, 2019).

Table 1: Demographic and Socioeconomic Characteristics of the Borrowers

Variables	Treatment Group		Control Group		t-value
	%	Mean	%	Mean	
Age of the borrower (years)	-	40.31	-	39.18	1.58
Years of schooling of the borrower (number)	-	3.82	-	3.21	0.72
Percentage of married borrowers	94.71	-	89.36	-	-
Family size of the borrower (number)	-	5.19	-	5.42	1.13
Dependent members in the family (number)	-	1.86	-	1.94	0.69
Percentage of male-headed households	89.35	-	94.12	-	-
Total land possessed by the household (decimal)	-	92.56	-	87.31	1.72
Distance of the nearest rural bank (kilometer)	-	4.19	-	3.54	8.25
Distance of the nearest rural market (kilometer)	-	1.32	-	1.24	1.02
Livestock possessed by the household (%)	27.41	-	33.18	-	-
Electricity connection (%)	14.83	-	9.67	-	-
Distance of the nearest NGO Office (kilometer)	-	0.78	-	0.75	0.18

Distance of the nearest AEO (kilometer)	3.29	-	3.35	0.67
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Source: Survey, 2021

In this study, the percentage of the male-headed household was found higher in the control group than in the treatment group. The percentage of the male-headed household was 89.35 % in the treatment group while it was 94.12% in the control group. In the context of Bangladesh, land is a valuable asset that is scarce too (Hilton et al., 2016). As a result, the rural farming communities in Bangladesh usually possess small pieces of land (Sohag et al., 2015; Mahmud et al., 2021; Mahmud et al., 2017). This study also confirmed that the household of the women borrowers under this had a small piece of land (Table 1). The average area of land possessed by the households under the treatment group was 92.56 decimals and it was 87.31 decimals for the control group (Table 1). Under the control group, 33.18% of households possessed livestock while it was 27.41% for the treatment group (Table 1). Under the treatment group, the percentage of households having electricity connection at home was 14.83% while it was found 9.67% for the control group (Table 1). The average distance of the NGO branch office was 0.78 kilometers and 0.75 kilometers for the treatment group and the control group respectively. The average distance of the rural market was 1.32 kilometers and 1.24 kilometers for the treatment group and the control group respectively (Table 1). The average distance of the nearest Agricultural Extension Office (AEO) was 3.29 kilometers and 3.35 kilometers for the treatment group and the control group, respectively (Table 1).

Borrowers’ Opinion on the MRS

Table 2: Opinions of the Borrowers about the Monthly Repayment System (number)

Statement	SA	A	N	DA	SDA
S1	18	192	11	82	14
S2	31	165	5	93	23
S3	22	173	9	103	10
S4	9	148	17	112	31
S5	15	181	7	97	17
S6	19	143	9	119	27
S7	24	169	5	107	12

Source: Survey, 2021

Note: SA= Strongly Agree; A= Agree; N=Neutral; DA=Disagree; SDA= Strongly Disagree

This study has also focused on assessing the opinions of the borrowers about their economic well-being under the MRS. The borrowers were asked to provide their opinions on the following five aspects: (i) MRS system increases my family income (S1); (ii) MRS increases my ability to invest in IGAs (S2); (iii) MRS increases my purchasing capacity of food items (S3); (iv) MRS increases my ability to spend more on the healthcare of the household (S4); (v) MRS increases my opportunity to diversify my agricultural activities (S5); (vi) MRS increases my ability to spend more on children’s education (S6), and (vi) MRS reduces my borrowing from the informal sources (S7). This study revealed that the majority of the borrowers opined that they had benefited from microcredit interventions on the above-mentioned economic indicators (Table 2). For example, an overwhelming portion (66.25%) of the borrowers agreed that MRS played a significant role in increasing their family income, while only a few borrowers opposed it.

In this study, borrowers were also asked to provide their opinions about the most suitable repayment system for those who took loans for agricultural and non-agricultural activities. It was observed that the majority (86.43%) of the borrowers agreed that MRS was the most suitable system for pursuing agricultural activities. On the other hand, most borrowers (72.8%) believed that the WRS was the most appropriate system for pursuing non-agricultural activities.

Problems Faced by the Borrowers under the MRS

Borrowers provided their opinions about whether they faced difficulties in repaying loans under MRS or not (Table 3). This study revealed that borrowers mainly encountered seven problems in repaying the loans under the MRS (Table 3). The types of problems borrowers faced were: (i) sudden damage to agricultural production due to natural hazards, (ii) sickness of the earning members, (iii) lack of skill-building training received from the microcredit providers, (iv) delay in loan disbursement, (v) lack of marketing facilities, (vi) higher interest rate charged by the NGOs, and (vii) verbal abuse by the NGO staff for loan repayment (Table 3). It was observed that most of the borrowers (38.17%) faced problems in marketing their agricultural products mainly because of the lack of processing and storage facilities.

Table 3: Problems Faced by Borrowers under Monthly Repayment System (number)

Type of Problems	Total	Faced problem	Did not face the problem
Damage to agricultural production	317	58	259
Sickness of the earning members	317	31	286
Lack of skill-building training	317	104	213
Delay in loan disbursement	317	18	299
High-interest rate charged by the NGOs	317	113	204
Lack of marketing facilities	317	121	196
Verbal abuse by the NGO staff	317	12	305

Source: Survey, 2021

Impact of the MRS on Living-Standard

Income is regarded as an economic indicator that is closely related to the living standard of a person (Mahmud et al., 2019). It is generally believed that an increase in the income of microcredit borrowers can play a pivotal role in increasing the borrowers’ capacity to invest in the IGAs, spend more on food and non-food items, repayment of loans as well as increase their social status. Undoubtedly, a repayment system can influence the economic performance of a person (Ali et al., 2017; Mahmud et al., 2019). In fact, charging a higher interest rate by microcredit providers can create an adverse impact on the poor borrowers in pursuing their economic activities. In this study, it was assumed that providing microcredit support would increase the living standard of poor borrowers in terms of household income because of practicing the MRS. Since most households were involved in agricultural activities (such as crop cultivation, livestock, poultry rearing, fisheries, nursery raising, etc.) and business activities, getting returns from the IGAs required time (Jain & Mansury, 2003; Mahmud et al., 2019). Practicing MRS would assist them in increasing their ability to invest more in multiple IGAs, which, in turn, would help improve their income. This study confirmed that the household income of the borrowers was increased due to practicing the MRS. The income of the treatment group increased by Taka 19282.39 and Taka 19812.72 under the Nearest Neighbor Matching (NNM) and Kernel Matching (KM) methods, respectively (Table 4).

Table 4: Impact of MRS on Household Income and Food Expenditure (BDT)

Variable	Matching Technique	ATT	t-value
Household Income in 2020	NNM	19282.39	2.31
Household Income in 2020	KM	19812.72	2.98
Household Food Expenditure in 2020	NNM	11329.51	3.72
Household Food Expenditure in 2020	KM	11829.47	4.10

Source; Survey, 2021

Increasing a borrower's capacity to spend more on food and non-food items indicates an improvement in the living standard of a borrower (Rahman & Ahmad, 2010). Therefore, one of the prime goals of microcredit programs is to improve the food security status of poor women borrowers. It is worth noting that the sample borrowers of this study were poor with little income and productive resources which ultimately reduced their expenditure capacity on both food and non-food items.

It was also assumed that due to the MRS, households would be able to spend more on food items. In this study, food expenditure referred to borrowers' spending on food items which include cereals, meat, milk, fish, vegetables, and beverage. This study revealed that practicing the MRS played a positive role in increasing the household food expenditure of the borrowers (Table 4). The household food expenditure of the treatment group increased by Taka 11329.51 and Taka 11829.47 under NNM and KM methods, respectively (Table 4).

VI. Conclusion and Implications

In fact, the MRS system was introduced by selected NGOs in this study to overcome the problems of tight WRS. As mentioned earlier, the WRS created mental anxiety as well as financial stress in repaying loans on a weekly basis for poor borrowers leading to an increase in the rate of loan default. The prime objective of this study was to assess the impact of MRS on the living standard of the borrowers in terms of income and expenditure. This study confirmed that the MRS had a pivotal role in increasing the household income and expenditure of the borrowers. An overwhelming proportion of the borrowers also opined that economically they became much benefitted because of practicing MRS. Therefore, it is suggested that the MRS should be practiced by microcredit providers, especially poor borrowers who are provided loans for pursuing agricultural activities. This study also revealed that the lack of marketing facilities and higher interest rates were the major problems encountered by the borrowers. Policy-makers should emphasize the following aspects to enhance the living standard of poor borrowers:

In fact, the loan provided to the borrowers under the microcredit programs is inadequate to pursue their IGAs properly. Therefore, necessary steps should be taken to provide an adequate amount of microcredit by critically assessing the needs and the nature of the IGAs pursued by the household (Mahmud et al., 2017; Hilton et al., 2016). Focus should be given to disbursing loans on time without any complexities. Credit programs should strictly be monitored so that the borrowers can utilize the borrowed money for the assigned purpose properly. It is important to note that solely providing credit facilities would not be an effective strategy for sustainable improvement in the living standard of the poor. Therefore, the credit plus approach, which ensures the access of the poor to legal, natural, and physical facilities should be emphasized. Moreover, the microcredit providers should take necessary steps to provide loan facilities to poor borrowers at a lower interest rate focusing on the nature of the IGAs pursued by the borrowers. Focus should be given to providing adequate financial support (e.g., grants, subsidies, etc.) to the NGOs by the government agencies for operating the microcredit programs which can ultimately assist them in reducing the interest rate.

Infrastructural facilities in rural areas of Bangladesh are still quite inadequate (Kabir et al., 2018), which severely hampers the economic activities of the rural people. Thus, proper steps should be taken to establish an adequate number of Agricultural Extension Offices (AEOs), and agricultural banks in rural areas with the effective support of government agencies, NGOs, and donor agencies for accelerating and diversifying agricultural activities. More emphasis should be given to ensuring the agricultural services to the farming communities efficiently and promptly by establishing a close relationship among the farmers and other stakeholders of the rural society. It is also essential to ensure necessary marketing facilities (e.g., rural market, cold storage, landing stage, processing units, etc.) for the rural farming communities by establishing an effective partnership among the different stakeholders of the rural areas (such as NGOs, farming communities, traders, and government agencies, etc.).

Women borrowers usually lack the skills to pursue agricultural activities. Thus, it is also essential to provide an adequate number of skill-building training to the borrowers by the NGOs after critically analyzing the training needs of the borrowers. In the context of Bangladesh, the mobility of rural women outside their household chores is still restricted (Mahmud et al., 2014; Orso and Fabrizi, 2016). Necessary steps should be taken to provide training materials to the borrowers free of cost as most of them are poor. Emphasis should be given to selecting the training venue in a convenient location as near as possible to the villages so that women have easy and frequent access to the training programs. Moreover, flexibility in timing to participate in the training

program should be offered as the overwhelming number of rural women are primarily responsible for their household chores.

In addition, poor microcredit borrowers often face several risks (e.g., financial, production, marketing, environmental hazards, etc.) in pursuing their agricultural activities which cause severe economic loss to them. Thus, necessary steps should be taken to introduce agricultural insurance policies for the borrowers under the microcredit programs to recover the loss if any disaster occurs.

Like other studies, this study has also some weaknesses. Only one district of Bangladesh, Mymensingh was considered in this study in order to assess the impact of MRS on household income and food expenditure of the borrower due to fund and time constraints. Thus, it is difficult to generalize the findings of this study. Moreover, this study primarily focused on the impact of the MRS solely on the women borrowers ignoring their male counterparts. It would have been better if a comparative analysis had been conducted focusing on gender dimensions to assess the impact of the MRS on the living standard of poor microcredit borrowers. In fact, this study became unsuccessful to conduct such an analysis mainly due to the designs of the microcredit programs operated by the selected NGOs for this study. A separate study can be conducted in the future focusing on different socio-economic aspects (e.g., gender dimension, location, income, occupation etc.) covering all the districts of Bangladesh for generalizing the findings of the study.

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