

# **PARTICIPATION OF RURAL WOMEN IN INCOME GENERATING ACTIVITIES FROM AGRICULTURAL MODEL FARM PROJECT**

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. Author AH, MHB, MSA conceptualized and designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author MNU managed the literature review and statistical data of the study. Author TAR managed the statistical analysis and interpretation. All authors were involved in the results discussion, and preparation of the final manuscript.*

## **ABSTRACT**

This study was conducted mainly to have an understanding about the participation of rural women in Bangladesh in income generating activities initiated by Agricultural Model Farm (AMF) project of Sabalamby Unnayan Samity (SUS), a famous NGO in Bangladesh. This also explained the relationship between extent of women participation in income generating activities initiated by AMF project of SUS and their selected characteristic. Data were collected from a sample of 90 rural women from 12 selected SUS groups in two unions namely Amtala and Singher Bangla of Sadar upazila of Netrokona district in Bangladesh. Data were collected through interview schedule during 20 April 2008 to 20 May 2008. Majority (47.78 percent) rural women had favorable participation, while 36.67 percent had moderate favorable participation and there was no respondent under unfavorable participation. Findings also indicate that 80 percent rural women had high participation in AMF project activities, (81.11 percent) had medium training exposure. Correlation analysis indicates that the characteristics of the rural women such as age, family size, family farm size, farming experience, duration of involvement with SUS and training exposure had no significant relationship with the extent of participation in AMF project activities. On the other hand farming experience had positive relationship with their participation in income generating activities initiated by AMF project of SUS.

**Keywords:** Agricultural Model Farm, SUS, Rural women, Training exposure, Farming experience

## **INTRODUCTION**

Women constitute nearly half of the total population in Bangladesh. The role of women in the economic development of Bangladesh cannot be over looked. Many reports show that women play a significant and crucial role in agricultural development including crop production, livestock production, horticulture, post harvest operation, agro-social forestry, fisheries and poultry. In a developing country like Bangladesh, the underemployed women labour force forms a vast reservoir of human resources. According to some historians women first initiated agricultural practices. They first domesticated crops and animals and developed art and sciences of farming. They were pioneers in plant domestication and planned agriculture (Childe, 1971). Ali and Rahaman (1978) stated that women contribute significantly in various activities under homestead agricultural like composting, transplanting, sowing, weeding, harvesting, drying,

homestead gardening, fruits and tree planting and the like. Lovell (1991) states “Poverty particularly affects women. Traditionally poor women in Bangladesh rural areas have few rights, little choice about the courses of their lives and almost no opportunities to change their situations. They are often deserted when husbands cannot find income in the villages and move away to pursue work”. The UNDP reports also suggested making use of the full potentials of women to accelerate development in Bangladesh (UNDP, 1994). But by social custom Bangladeshi women are suppressed by men in all spheres of their lives. The activities of women are mainly restricted within the household especially in taking care of children and other family members and maintaining homes. In addition the rural women also engage themselves in agricultural and non agricultural productive activities within the homestead (Halim and McCarthy, 1985).

Basic life support systems such as land, water, flora and fauna are conserved by women (Swaminathan, 1985). The nature and extent of women involvement in agriculture varies widely from region to region. But regardless of this variation, women mostly participated in processing and storage of food grain from ancient time. Equal and effective participation of men and women is essential to achieve sustainable development. More than 2500 NGO's are working in Bangladesh (BBS, 2005). Sabalamby Unnayan Samity (SUS) is one of them. Involving women in the development activities many NGO's including BARC, PROSHIKD, and ASA etc, who were incepted at different times. NGOs including BRAC, Proshika and ASA. They successfully incorporated women in their development programme. Sabalamby Unnayan Samity (SUS) is a NGO which is working at Netrokona, Sunamganj and Mymensingh district for the socio-economically deprived people and especially for the distressed rural women. SUS evolved in 1985 out of a small number of women initiatives, it started its journey through introducing careful interventions for improving socially and economically deprived section of society. Agricultural Model Farm Project of SUS is a special task which was initiated in 1994. This project has taken to achieve sustainability in agriculture. Total area of the farm is 2.83 hectare. From these, rice is cultivated in 2.02 ha, vegetables are cultivated in 0.202 ha, fishes are cultured in 0.202 ha, local fruit orchard is in 0.101 ha and office room, training room, seed house, low shed, labor house etc. are in 0.303 ha. All the practices which are performed within the model farm are experimental. Because seeing believes, one believes that what he/she sees by his/her own eyes. Through these demonstration plots of AMF project SUS is able to build awareness, capacity among the target groups as well as encouraging producing jute, mustard and leguminous crops. The main themes of AMF project are, organic agriculture, medicinal plant conservation, local fruits plantation, indigenous knowledge promotion, and my agriculture and culture conservation. These themes are taken to create a balance between the life of farming families and the environment where they live and work.

### **Geographical coverage by SUS**

Sl.No	Name of the district	Name of /IDF/Branch office/Upazila
1.	Netrakona	Netrokona sadar, Atpara, Modon, Kendua, Purbadhala, Mohonganj, Barhatta, Kalmakanda, Khaliajuri and Shyamganj,
2.	Sunamganj	Dharmapasha
3.	Mymensingh	Mymensingh sadar , Guoripur and Ishwarganj

Development is a continuous process, which help to bring a better condition of individual, family and society from a vulnerable condition, considering the need of time. SUS was involved itself with sustainable development from 1988-2000. SUS works on right-based approach. Right is derived from values. The major elements of right are relation, respect, honor, morality demands, recognition, duties and responsibilities etc. So, we may define “Right” the opportunities to

explore the personality of human beings that are accepted by the family society and state (SUS, 2002).SUS works with underprivileged and marginalized woman, children, adolescence and disables through a holistic approach, with a prime focus on livelihood development. SUS is committed to bring about positive changes in the quality of lives of the deprived people by making available education, comprehensive health services micro credit as well as other social services that enable them to exercise socio-economic rights. To establish right-based approach SUS undertook many development projects. Agriculture Model Farm Project (AMF) is one of this, through which right of the women was established.

### **Agricultural Model Farm (AMF) Project**

Agricultural Model Farm Project of SUS is a special task which was initiated in 1994. This project has taken to achieve sustainability in agriculture. Total area of the farm is 2.83 hectare. From these, rice is cultivated in 2.02 ha, vegetables are cultivated in 0.202 ha, fishes are cultured in 0.202 ha, local fruit orchard is in 0.101 ha and office room, training room, seed house, low shed, labor house etc. are in 0.303 ha. All the practices which are performed within the model farm are experimental. Because seeing believes, one believes that what he/she sees by his/her own eyes. Through these demonstration plots of AMF project SUS is able to build awareness, capacity among the target groups as well as encouraging producing jute, mustard and leguminous crops. The main themes of AMF project are, organic agriculture, medicinal plant conservation, local fruits plantation, indigenous knowledge promotion, and my agriculture and culture conservation. These themes are taken to create a balance between the life of farming families and the environment where they live and work.

### **Objectives of the Study**

In view of the foregoing discussion, the following specific objectives were formulated for giving proper directions of the study:

- To determine and describe the characteristics of rural women involved in agricultural model farm project of SUS. The characteristics are: Age, Family size, Family Farm size, Farming Experience, Duration of Involvement with SUS, Training received, Organization participation.
- To find out the extent of participation of rural women in income generating activities from agricultural model farm project activities of SUS
- To explore the relationship between women participation of AMF project of SUS and their selected characteristics.

The present study was conducted in Netrokona district where the SUS headquarter is present. In Netrokona, SUS started its activities in 1986. But Agricultural Model Farm (AMF) Project was initiated in 1994. Sadar Upazila of Netrokona district consists of 11 unions along with Netrokona municipality. Eight union of sadar Upazila are under the coverage of AMF project activities of SUS. Among these unions Amtala and Singher Bangla were selected as all of the activities of AMF are in full operation in the two unions. The specific study locations under the Netrokona Sadar Upazila have been shown in Figure 1.



**Figure 1:** A map of Netrokona sadar upazila showing Amtala and Singhar Bangla Union (Banglapedia, 2009)

## METHODOLOGY

### Instrument for Data Collection

In order to collect data from the rural women of AMF project of SUS, an interview schedule was prepared in Bengali language to make easy the process of data collection and then the collected data was converted to English. The schedule was prepared according to the objectives of the study. The interview schedule contained both open and closed form questions. Simple and direct question scales, and statements were included in the interview schedule to obtain essential information. Suitable scales were developed to handle different variables of the study.

## Pre-Test

The draft interview schedule was prepared and was pre-tested with 15 rural women. This pre-test result provided opportunity to the researcher to determine the appropriateness of different questions and statements in general. On the basis of pretest result, corrections and

modifications were done in the interview schedule. The interview schedule was pre-tested with 15 rural women during 15 February 2008 to 17 February 2008. Necessary corrections, changes and modifications were made in the interview schedule in the basis of the prôt-test. Then data were collected from the sampled rural women. The English version of the interview schedule is presented as appendix.

### **Collection of data**

The researcher himself collected necessary data through personal interview schedule from the individual respondents during 20 April 2008 to 20 May 2008. Before starting collection of data, the researcher met the AMF project staff of SUS. He first established rapport with the respondents and explained the objectives of the study clearly by using local language as far as possible. While starting interview, the researcher took all possible care so that a respondent did not feel hesitation. Whenever any respondent felt any difficulty in understanding a question, the researcher took possible steps to explain and clarify the same properly. As a result the respondent furnished proper responses to the question and the statement without hesitation.

In some cases, the researcher in his first attempt failed to meet the respondents at their residence for interview. In that case, the researcher attempted to contact them on any repeating visits. No serious difficulty was faced in collecting data. Excellent cooperation was received from the respondents, AMF project staff, local leaders, and elites in various manners such as appointment for interview, locating houses etc,

### **Measurement of Variables**

According to the objective of the research, the researcher selected 13 characteristics of the rural women of the AMF project were considered as the independent variables where participation of rural women in income generating activities under Agriculture Model Farm (AMF) project of SUS.

#### **a) Independent Variables**

In this study the selected independent variables are- **Age**: The age of the respondent was measured in terms of complete years from her birth to the time of interview on the basis of her response. A unit score was assigned for each year one's age (Akter, 2003). **Family size**: The family size of a respondent was measured by the total number of her family members including herself, her husband, children and other dependent who eat and stay together. A unit score was given for each member of the family (Kabir, 2002). **Farm size**: Farm size of respondent was measured in hector in which the household of the respondent women had its entire dwelling unit including home, vegetable land, fruits land, poultry rearing, and cattle husbandry, ponds and others. The data were first recorded in terms of local unit and then converted to hectare. **Farming Experience**: Farming Experience of respondent was measured by the number of years of farming practice. A score one was assigned for one year of farming practice. **Duration of involvement with SUS**: It was calculated in terms of years of the respondent's response and as verified from SUS office. **Organizational participation**: Organizational participation of a respondent was measured on the basis of the nature of her involvement and duration of participation on different organizations. Organizational participation was operated by using the following formula (Hossain, 2000).

Organizational participation score =  $\Sigma(A \times D)$

Where,

A = activities score

D = Duration score

Activities score were assigned in the following manner

Nature of participation	Scores assigned
No participation	0
Ordinary member	1
Executive committee member	2
Executive committee officer/president/Secretary/Treasure	3

Duration scores were assigned in the following manner

Duration of participation	Scores assigned
No participation	0
Participation upto 3 years	1
Participation from 4-6 years	2
Participation above 6 years	3

Organizational participation score of a respondent was obtained by summing up scores of the six organizations according to the above mentioned formula for her activities in the respective organization. Thus, organizational participation score of a respondent theoretically ranged from '0' to '54' where '0' indicated no Organizational participation and '54' indicated maximum Organizational participation. **Training Exposure:** Training exposure was computed by total number of days a respondent attended in different training programmes in her life from SUS and other organizations. A respondent received short term training in her entire life up to the date of interviewing. A score of one (1) was assigned for each day of training attended.

#### b) Dependent Variable

The extent of participation of rural women in income generating activities from AMF project was dependent variable for this research. Participation in Agricultural Model Farm (AMF) project activities of a respondent was measured on the basis of the nature of participation in selected activities. The respondents were asked to mention their frequency of participation on selected activities. A 5-point rating scale was used for computing participation in income generating activities of AMF project.

Pattern of participation	Scores assigned
Regularly	4
Often	3
Occasionally	2
Rarely	1
No participation	0

The obtained scores for all activities were summated together to obtain the extent of participation in income generating activities of AMF project score of the respondent could range from '0' to '36'. Where '0' indicated no participation and '36' indicate highest participation.

#### Hypothesis of the Study

For statistical test it is necessary to develop null hypotheses. A null hypothesis states that "there is no relationship between the independent variables and dependent variable". The following null hypothesis was formulated to examine the relationship between the selected characteristics of the rural women and their participation in income generating activities from AMF projects of SUS.

## Statistical Analysis of Data

At the end of data collection, data were coded, compiled, tabulated and analyzed in accordance with the objectives of the study. Qualitative data were transferred into quantitative data by means of suitable scoring techniques and local units were converted into standard units, the statistical measures such as number and percentage distribution were used for describing the variables. The coded data were put into the computer for statistical analysis. The SPSS computer package was used for processing and analyzing of data. For describing the variable of the study, the respondents were classified into appropriate categories. In developing categories, the investigator was guided by the nature of data and general considerations prevailing in the social system. For exploring the relationship between selected characteristics of the respondents and their participation Person's Product Moment Correlation Coefficient(r) was computed.

## RESULTS AND DISCUSSION

Thirteen selected characteristics of the rural women such as Age, Family size, Family farm size, Farming Experience, Duration of involvement with SUS, Training exposure, Organizational participation and Extent of participation in income generating activities of AMF project.

### Age

Age of the respondent women ranged from 25 to 65 years with a mean of 33.68 years and standard deviation of 5.38. Based on their age the rural women were classified into three categories as young, middle-aged and old. The Table 1 revealed that the highest proportion of the respondents (55.56 percent) were middle aged, while 37.78 percent were young and the remaining 6.67 percent old women were found among the beneficiaries of SUS.

**Table 1: Distribution of rural women according to their Age**

Characteristics (Measuring Unit)	Range		Category	Respondent		Mean	SD
	Possible	Observed		Number	Percentage		
Age (Years)	Unknown	25-65	Young (upto 30)	34	37.78	33.68	5.38
			Middle aged (31-50)	50	55.56		
			Old (>50)	6	6.67		
			Total	90	100		

A close look into the data indicates that involvement in AMF project activities under SUS were in the hands of young and middle-aged individuals. This is quite logical, because the young and middle-aged groups of women are the major target population of NGOs. Finding of the study of Sharmin (2005) showed that the highest proportion of the respondent (57 percent) were middle aged and 43 percent were young. Fardous (2002) observed that the highest proportion (72.7 percent) was middle aged compared to 22.8 percent old and 4.5 percent young.

### Family size

The number of family members of the respondents ranged from 3 to 10. The mean was 5.96 and standard deviation was 1.40. Based on the family size score, the respondents were classified in to three categories small (up to 4), medium (5 to 6), large (>6) as shown in Table 2. Computed data show that majority (45.56 percent) of the rural women had large family size, while 41.11 percent of the respondents had medium family size and the remaining 13.33 percent had small family size.

**Table 2: Distribution of rural women according to family size**

Characteristics (Measuring Unit)	Range		Category	Respondent		Mean	SD
	Possible	Observed		Number	Percentage		
Family size (No. of members)	Unknown	3-10	Small (upto 4)	12	13.33	5.96	1.40
			Medium (5-6)	37	41.11		
			Large (>6)	41	45.56		
			Total	90	100.00		

In the study area it was observed that women of medium family size spent more time in AMF project activities of SUS compared to large family size. Women of large family can not get enough time for AMF project of SUS after completing household works. On the other hand, women of medium and small family size can participate in AMF project activities after completing house hold activities. So majority of women come from medium and small family size.

### Family Farm size

The family farm size of the respondent women ranged from 0.6 to 2.50 hectare with an average of 1.23 hectare and standard deviation 0.43. The respondents were classified in to two categories on the basis of their farm holding as shown in Table 3.

**Table 3: Distribution of rural women according to their farm size**

Characteristics (Measuring Unit)	Range		Category	Respondent		Mean	SD
	Possible	Observed		Number	Percentage		
Farm size (Hectare)	Unknown	0.6-2.50	Small (0.6-1.0)	81	90.00	1.23	0.43
			Medium (<1.0)	9	10.00		
			Total	90	100.00		

Computed data indicated that 90.00 percent of women belong to small farm category, and the rest 10.00 percent under medium farm category. It indicates that majority of the families possessing small farm size. Actually the major reason is that NGOs target the resource poor people of the rural areas for their work. The case for SUS is also that.

### Farming Experience

The observed farming experience score of women ranged from 5 to 13. The average farming experience score of women was 8.09 with a standard deviation of 1.91. Based on the findings women were classified into three categories which is presented in the Table 4.



**Table 4: Distribution of rural women according to their farming experience**

Characteristics (Measuring Unit)	Range		Category	Respondent		Mean	SD
	Possible	Observed		Number	Percentage		
Farming Experience (Years)	Unknown	5.00-13.00	Low (upto 5)	9	10.00	8.09	1.91
			Medium (5-10)	76	84.44		
			High (>10)	5	5.56		
			Total	90	100.00		

Data presented in the Table 4 show that majority (84.44 percent) of the respondents had medium farming experience; while 10.00 percent respondents had low farming experience and remaining 5.56 percent had high farming experience. The findings indicate that high portion of the rural women had medium farming experience i.e. participation of women was highly effective to high farming experience in the study area. The increased of farming experience with the increasing of skilled women.

### **Duration of Involvement with SUS**

The observed duration of involvement with SUS score of women ranged from 4 to 18. The average duration of involvement with SUS score of women was 9.24 with a standard deviation of 3.34. Based on the findings women were classified into three categories which is presented in the Table 5.

**Table 5: Distribution of rural women according to their duration of Involvement with SUS**

Characteristics (Measuring Unit)	Range		Category	Respondent		Mean	SD
	Possible	Observed		Number	Percentage		
Duration of Involvement with SUS (Years)	Unknown	4.00-18.00	Less (upto 5)	14	15.56	9.24	3.34
			medium (5-10)	56	62.22		
			High (>10)	20	22.22		
			Total	90	100.00		

Data presented in the Table 5 show that majority (62.22 percent) of the respondents had medium duration of involvement with SUS, while 22.22 percent respondents had high duration of involvement with SUS and remaining 15.56 percent had low duration of involvement with SUS. The findings indicate that high portion of the rural women had medium involvement with SUS i.e. participation of women was highly effective to high duration involvement in SUS in the study area .i.e. the more involvement of women increased skilled women.

### **Training exposure**

Training exposure scores of the respondents ranged from 0 to 20. The mean was 8.82 with a standard deviation of 2.08. On the basis of training exposure the respondents were categorized in to three groups as shown in Table 6.

**Table 6: Distribution of rural women according to their training exposure**

Characteristics (Measuring Unit)	Range		Category	Respondent		Mean	SD
	Possible	Observed		Number	Percentage		
Training exposure (No. of days)	Unknown	0-20	Less (upto 6)	12	13.33	8.82	2.08
			Moderate (7-12)	73	81.11		
			High (>12)	5	5.56		
			Total	90	100.00		

Data contained in Table 6 indicate that the highest proportion (81.11 percent) of the respondents had medium training, while 13.33 percent had less training exposure and rest of the respondents 5.56 percent had high training exposure. Training exposure plays an important role in motivating the individuals in participating AMF project activities. The present study shows that there was not enough training opportunity for rural women because GOs and NGOs had taken specific training program. This is why, most of the respondents had medium training exposure.

### Organizational participation

The range of organizational participation scores was 4 to 24 against possible range of 0 to 54. The average organizational participation score of women was 11.96 with a standard deviation of 5.71. On the basis of their organizational participation scores the farmers were classified into three categories. The distribution and categories according to their organizational participation is presented in Table 7.

**Table 7: Distribution of rural women according to their organizational participation**

Characteristic (Measuring Unit)	Range		Category	Respondent		Mean	SD
	Possible	Observed		Number	Percentage		
Organizational participation (Scale score)	0-54	4-24	Low (up to 10)	43	47.78	11.96	5.71
			Moderate (11-20)	33	36.67		
			High (>20)	14	15.56		
			Total	90	100.00		

Data presented in Table 7 reveal that the majority (47.78 percent) of the respondents had low participation in organizations, 36.67 percent of them had moderate participation and only 15.56 percent had high organizational participation. An individual while comes in contact with organization, learns new ideas and new ways of doing thing. It is interesting to observe from earlier findings that while the farmers seem to be in a favorable position for adoption behavior in many characteristics like age, education, farm size and annual income than they are in a relatively worse position in organizational participation.

### Extent of participation in income generating activities of AMF project

The participation in AMF project activities scores of the respondents varied from 16 to 30 against the possible range score 0 to 36. The mean and standard deviation were 22.46 and 2.50 respectively. On the basis of their participation in AMF project activities scores, the respondents were classified into three categories, such as "low" (upto 9), medium (10 to 18) and "high" (>18). The distribution of the respondents is shown in Table 8.

**Table 8: Distribution rural women according to their extent of participation in income generating activities of AMF project**

Characteristic s (Measuring Unit)	Range		Category	Respondent		Mean	SD
	Possible	Observed		Number	Percentage		
Extent of participation in income generating activities of AMF project (Scale score)	0-36	16-30	Low (upto9)	0	0.00	22.46	2.50
			Medium (10-18)	18	20.00		
			High (>18)	72	80.00		
			Total	90	100.00		

Data contained in Table 8 indicate that majority (80 percent) of the respondent had high participation, while 20.00 percent had medium participation and none had high participation. This findings shows that large portion of the rural women had high to medium participation in income generating activities of AMF project of SUS due to high social and religious restrictions.

#### **Relationship between selected characteristics of the rural women and their extent of participation in income generating activities of AMF Project**

In determining the relationship between rural women selected characteristics and their extent of participation in income generating activities of AMF project, the following null hypothesis was tested, “there is no relationship between eleven selected characteristics of rural women and their extent of participation in income generating activities of AMF project”. Pearson’s Product Moment Correlation of coefficient (r) has been computed. The relationships of rural women selected characteristics and their extent of participation in income generating activities of AMF project have been shown in Table 9.

**Table 9: Coefficient of correlation (r) between the respondents' selected characteristics and their Extent of participation in income generating activities of AMF project (N = 90)**

Dependent Variable	Independent variable (rural women selected characteristics)	Value of "r" with 88 df
Extent of participation in income generating activities of AMF project	Age	-0.041NS
	Family size	-0.028 NS
	Family farm size	0.098 NS
	Farming Experience	0.265*
	Duration of Involvement with SUS	0.098 NS
	Annual family income	0.190 NS
	Extension media exposure	0.017 NS
	Training exposure	0.175 NS
	Organizational participation	0.143 NS

\* Significant at 0.05 level of probability (tabulated value = 0.210)

\*\* Significant at 0.01 level of probability (tabulated value = 0.280)

### **Age and Extent of participation in income generating activities of AMF project**

The correlation of coefficient between the age of the rural women and their extent of participation in income generating activities of AMF project was -0.041 as shown in Table 9. The computed score led to the following observations.

- a) The computed value of 'r' (-0.041) was found smaller than that of the tabulated value (0.210) with 88 degrees of freedom at 0.05 level of probability.
- b) The relationship between the two concerned variables was not significant.

Based on the above findings, the concerned null hypothesis was not rejected. Therefore, it could be concluded that age of the rural women had no significant relationship with their extent of participation in income generating activities of AMF project. Age of an individual is one of the most important factors to participate in AMF project activities. To adopt the AMF technology youth are thought to more enthusiastic than that of older. However, all ages of women had option to be the member of SUS and participated AMF project activities.

### **Family size and Extent of participation in income generating activities of AMF project**

The correlation of coefficient between family size of women and their extent of participation in income generating activities of AMF project was -0.028 as shown in Table 9. The computed score led to the following observations.

- a) The computed value of 'r' (-0.028) was found to be smaller than that of the tabulated value (0.210) with 88 degrees of freedom at 0.05 level of probability
- b) The relationship between the two concerned variables was not significant.
- c) The relationship showed a negative trend between the concerned variables.

Based on the above findings, the concern null hypothesis could not be rejected. Therefore, it could be concluded that family size of the rural women had no significant relationship with their extent of participation in income generating activities of AMF project.

### **Family farm size and extent of participation in income generating activities of AMF project**

The correlation of coefficient between family farm size of women and their extent of participation in income generating activities of AMF project was 0.098 as shown in Table 9. The computed score led to the following observations.

- a) The computed value of 'r' (0.098) was found to be smaller than that of the tabulated value (0.210) with 88 degrees of freedom at 0.05 level of probability.
- b) The relationship between the two concerned variables was not significant.

Based on the above findings, the concern null hypothesis could not be rejected. Therefore, it could be concluded that family farm size of the rural women had no significant relationship with their extent of participation in income generating activities of AMF project. Begum (1998) observed that the farm area of the rural women had no significant relation with their poverty alleviation due to their participation in ASA development activities. The finding is interesting and it deserves some explanation. It is not true that all the SUS activities were connected with large family farm size. Those having negligible or very small family farm size did not necessarily depend on their family farm size for performing the SUS activities. This implies that family farm size of rural women does not play any significant role in their extent of participation in income generating activities of AMF project.

### **Farming experience and extent of participation in income generating activities of AMF project**

The correlation of coefficient between farming experience of women and their extent of participation in income generating activities of AMF project was 0.262 as shown in Table 9. The computed score led to the following observations.

- a) The computed value of 'r' (0.265\*) was found greater than that of the tabulated value (0.210) with 88 degrees of freedom at 0.05 level of probability.
- b) The relationship between the two concerned variables was significant.

Based on the above findings, the concern null hypothesis was rejected. Therefore it could be concluded that farming experience of the rural women had a significant positive relationship with their extent of participation in income generating activities of AMF project. This finding indicates that women, who had more farming experience, had relatively higher level of extent of participation in income generating activities of AMF project of SUS.

### **Duration of involvement with SUS and extent of participation in income generating activities of AMF project**

The correlation of coefficient between duration of involvement with SUS and their extent of participation in income generating activities of AMF project was 0.098 as shown in Table 9. The computed score led to the following observations

- a) The computed value of 'r' (0.098) was found smaller than that of the tabulated value (0.210) with 88 degrees of freedom at 0.05 level of probability.
- b) The relationship between the two concerned variables was not significant.
- c) The relationship between the two concerned variable shows positive trend.

Based on the above findings, the concerned null hypothesis could not be rejected. Therefore, it could be concluded that duration of involvement with SUS had no significant relationship with their extent of participation in income generating activities of AMF project.

### **Organizational participation and extent of participation in income generating activities of AMF project**

The correlation of coefficient between organizational participation of women and their extent of participation in income generating activities of AMF project was 0.145 as shown in Table 9. The computed score led to the following observations.

- c) The computed value of 'r' (0.145) was found smaller than that of the tabulated value (0.210) with 88 degrees of freedom at 0.05 level of probability.
- d) The relationship between the two concerned variables was not significant.

Based on the above findings, the concerned null hypothesis could not be rejected. Therefore it could be concluded that organizational participation of the rural women had not significant positive relationship with their extent of participation in income generating activities of AMF project.

### **Training exposure and extent of participation in income generating activities of AMF project**

The correlation of coefficient between training exposure of women and their extent of participation in income generating activities of AMF project was 0.143 as shown in Table 9. The computed score led to the following observations

- d) The computed value of 'r' (0.143) was found smaller than that of the tabulated value (0.210) with 88 degrees of freedom at 0.05 level of probability.
- e) The relationship between the two concerned variables was not significant.

f) The relationship between the two concerned variables shows positive trend.

Based on the above findings, the concerned null hypothesis could not be rejected. Therefore, it could be concluded that training exposure of the rural women had no significant relationship with their extent of participation in income generating activities of AMF project. Similar finding was obtained by Sharmin (2005). This happened because new knowledge and information obtained by women did not apply in performing AMF project activities.

## **CONCLUSIONS**

The researcher was influenced for drawing several conclusions by the findings of the present study and logical interpretation of other relevant facts. The activities which are taken by AMF project demand physical forces. But educated people keep them away from it. Thus it can be concluded that educated people do not want to involve them in AMF project activities. The largest part a 5.56 percent had high training exposure. Training is the process improving knowledge, increasing skill and changing attitude. So, training exposure is the best way to perceive new things. In the present study it was found that training exposure of the rural women had a non-insignificant relationship with their participation. Therefore, it can be concluded for the present study that people did not apply training outcomes in AMF project activities. The highest portion (47.78 percent) of the rural women had low organizational participation. However, organizational participation of the rural women showed a non-significant positive relationship with the participation of benefits. Organizational participation can help rural women to involve in AMF project activities as well as other development activities taken by GOs and NGOs. Thus it can be concluded that organizational participation can bring better result for increasing participation of in income generating activities of AMF project activities of SUS. The largest portion (84.44 percent) of the rural women had medium farming experience. Further, extent of participation of the rural women in AMF project activities showed significant positive relationship with the farming experience. Participation in any activities can help to perceive its outcome. Thus, it can be concluded that participation in AMF activities will faster the rural women to perceive high experience. Age, family size, family farm size and duration of involvement with SUS of rural women were not significantly related with their participation of income generating activities from AMF project of SUS. Thus it may be concluded that at least for the present study, these characteristics of rural women did not play any significant role in their participation of AMF project activities of SUS.

## **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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## **REFERENCES**

- Akter. T. 2003. Participation of Women in Income Generating Activity (IGA) of SUS. M. S. (Ag. Ext. Ed.) Thesis, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Ali, R and M.M Rahaman. 1978. An Evaluation of Women Development Programme of Mymensingh District. *Workshop Proceeding*. Graduate Training Institute, Bangladesh Agricultural University, Mymensingh, Bangladesh.

- Bangladesh Bureau of Statistics (BBS). 2005. Bangladesh Bureau of Statistics, Statistical Division, Ministry of Planning, Government of the People's Republic of Bangladesh.
- Begum, A. 1998. Poverty Alleviation of the Rural Women organized by Association for Social Advancement. *M.S. (As. Ext. Ed) Thesis*, Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh.
- Banglapedia (2009) National Encyclopedia of Bangladesh, Asiatic Society of Bangladesh.
- Childe, G.V. 1971. Rural Development Participation: Concept and Measurement for project Design, Implementations and Education. Ithaca, New York University.
- Fardous, M.T. 2002. Farmer's Participation of Afforestation Program in Barind Area at Rajshahi District. *M. S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Hossain, S.M. 2000. Farmer's Knowledge and Perception of *BINA* Dhan-6 in the Boro Season. *M. S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Halim, A and F.E. McCarthy. 1985. *Women Labour in Rural Bangladesh: a Socio-Economic Analysis*. Graduate Training Institute, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Kabir, M.T. N. 2002. Perception of Farmers on the Effects of Barind Integrated Area Development Project Towards Environmental Upgradation. *M. S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Lovell, C.H. 1991. *Breaking the Cycle of Poverty: The BRAC Strategy*. USA: Kumarian Press.
- Sharmin H. 2005. Rural Women Participation of Benefits of Involvement in Income Generating Activities Under a Non Government Organization. *M. S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- SUS. 2002. *Annual Report, 2002*. Netrokona, Bangladesh.
- Swaminathan, M.S. 1985. Imparting Rural Women Users Perspective to Agricultural Research and Development. *A Draft paper for Discussion, Project Design Workshop in Rice Farming System, 10-13 April*. Banos, Philippine.
- UNDP. 1994. Poverty Alleviation Report, Dhaka, Bangladesh.