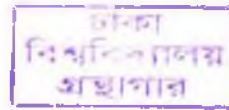


**Participation of Women in Microcredit Program
and Their Reproductive Behavior in Rural
Bangladesh**



Ph.D. Dissertation

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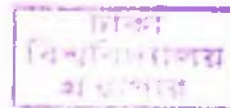
Department of Sociology

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Dhaka-1000, Bangladesh

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A Dissertation

Submitted to the Department of Sociology, University of Dhaka,
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Requirements for the Degree of *Doctor of Philosophy* in Sociology


465337

**Department of Sociology
University of Dhaka
Dhaka-1000, Bangladesh
August 2012**

Dedicated to
My Beloved Parents

Declaration

I do hereby declare with due seriousness that the thesis entitled 'Participation of Women in Microcredit Program and Their Reproductive Behavior in Rural Bangladesh' submitted to the University of Dhaka, Dhaka, Bangladesh, for the Degree of Doctor of Philosophy in Sociology is a completely new and original work done by me. It has not been submitted earlier partly or wholly to any other University or Institution for any Degree, Diploma or Fellowship.



27.8.12

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Certificate

With reference to this thesis entitled 'Participation of Women in Microcredit Program and Their Reproductive Behavior in Rural Bangladesh' submitted by Mr. Md. Abdul Jabbar to the University of Dhaka, Dhaka for the Degree of Doctor of Philosophy (Ph.D.), I certify that he has carried out the research work under my direct supervision and guidance and that the manuscript of the thesis has been scrutinized and carefully checked by me; the entire thesis comprises the candidate's own works and personal achievements and that is a stupendous work done by him. This thesis does not contain any conjoint research work either with me or with anyone else; and the final copy of this thesis, which is being submitted to the University of Dhaka, Dhaka-1000, Bangladesh has been carefully and thoroughly read and verified by me for its material and language; and hence to my entire satisfaction.



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Abstract

Microcredit program is considered to be an effective strategy for promoting socio-economic status, empowerment as well as reproductive health and behavior of the women, more especially, poor women, in developing countries, like Bangladesh. In the present study, an attempt has been made to explore the impact of women's participation in microcredit program on their reproductive behavior in rural Bangladesh. Quasi-experimental and survey research designs were used to carry out the study. A sample of 400 women was selected from two groups of women, *i.e.* the experiment group (consisted of 200 participants in microcredit program) and the control group (consisted of 200 non-participants), living in three Villages at Kalarooa Upazila in Satkhira District of Bangladesh, using the technique of random sampling from the sampling frame prepared through household census. Data were collected from the sample respondents by using an interview schedule, containing both open-ended and close-ended items. In addition, 10 case studies were conducted on the participants in microcredit program for an in-depth knowledge regarding the concerned issues. The fieldwork was carried out during July to December, 2010. Statistical software packages, such as, SPSS 16.0 and STATA 12.0 were used for data processing and analysis.

Findings reveal that, on the average, the participants in microcredit program were 33.48 years old, and the non-participants, on the other hand, were 32.32 years old, however, the difference is not statistically significant ($p>.125$). Majority of both participants (67.5%) and the non-participants (66%) were literate. On the average, the participants had slightly higher length of schooling (3.76 years) than the non-participants (3.64 years), however, the difference is again not statistically significant ($p>.957$). 53 percent of the participants' husbands, compared to 48.5 percent of the non-participants, were literate. Overwhelming majority of both participants (97%) and non-participants (98.5%) were housewives. Only 3 percent of the participants, compared to 1.5 percent of the non-participants, were directly involved in income generating activities. 36 percent of the participants' husbands, compared to 31 percent of the non-participants, were involved in entrepreneurial occupations (petty-business, artisan and cultivator). The participants, on the average, had relatively higher monthly household income (BDT 4734.70) than the non-participants

(BDT 4104.15), however, the difference is not statistically significant ($p>.331$). In contrast, the market price of the non-participants' household assets, on the average, was greater (BDT 164342.81) than that of the participants (BDT 152827.41), however, the difference is not again statistically significant ($p>.883$). For this reason, a significant number of the participants (82%) had low living standard, compared to the non-participants (76.5%), however, the difference is not statistically significant ($p>.399$). Despite the low living standard, the participants had relatively higher BMI (21.14) than the non-participants (20.75), but the difference is still not statistically significant ($p>.552$). Being married off at an early age (88.3% of the total respondents), the participants had, on the average, larger family size (4.53), compared to the non-participants (4.43), and the difference is not statistically significant ($p>.567$).

Microcredit Organizations, in most cases, offer microcredit to the women who are primarily their enlisted members. Findings reveal that about 97 percent of the participants in microcredit program received the credit by becoming a direct member of the respective Microcredit Organizations. On an average, the participants in microcredit program received a credit of BDT 6967.75 for the first time, primarily, to buy livestock (33%), van (8.5%) and land (8%), or to invest in petty-businesses (30.5%), agriculture (6%) and fish farm (3.5%) or meeting household consumption needs (10.5%). However, a quarter of the participants spent their first credit money to defray household consumption needs, and the rest (75% of the participants), invested mainly in petty-business (25%) and agriculture (16.5%) or to buy livestock (12.5%) and land (10%). For the last time (during the survey), the participants, on an average, received a credit of BDT 8982.50, mainly, to buy livestock (26.5%) and van (10.5%) or to invest in petty-businesses (23%) and agriculture (7%) or meeting household consumption needs (14%) and repaying the previous loan (9.5%). Although women are the main target of Microcredit Organizations, they (women) hardly have actual control over the credited money. More than 90 percent of the participants in microcredit program admitted that they did not have any control per se over the credit and could not even decide where to invest it or when and how to repay it. One explanation for such condition is that the loanees, mostly housewives, relied heavily on their husbands or sons' income (92.5%) for weekly loan installments. Due to maladjustment between the targets and the heads of investment, the loanees often changed Microcredit Organizations that in fact, increase their length of association in

microcredit program. On an average, the participants were associated with microcredit program for about 10.71 years.

Findings reveal that participants in microcredit program achieved more controlling power over their household resources than did the non-participants ($p < .000$). Unlike the non-participants, the participants reportedly enjoyed greater access to move outside their households ($p < .000$). As an immediate consequence of greater mobility, the participants enjoyed greater interaction with outside world, compared to the non-participants ($p < .000$). Findings, however, reveal that there is no significant difference between the participations and non-participants with regard to their participation in income generating activities ($p > .185$), household decisions ($p > .535$) and awareness of women's rights and violence against women ($p > .399$). Participants' control over household resources, their extent of mobility, interaction with outside world, participation in income generating activities, household decisions, and social and political events as well as awareness of women's rights and violence against women significantly reflected their (participants in microcredit program) overall improved status of empowerment ($p < .000$), compared to that of the non-participants. Multiple regression equation suggests that for participants in microcredit program, the women empowerment is significantly increased by 8.14 units ($p < .017$).

Empowerment is expected to bring about a significant change in the sex and sexuality of the women. Findings reveal that 90.5 percent of the participants in microcredit program, compared to 91.5 percent of the non-participants, had awareness of sex education ($p > .727$). Majority of both participants (70%) and non-participants (62.5%) had sexual intercourse with their husbands through mutual consents ($p > .153$). 90 percent of the participants, compared to 89.5 percent of the non-participants, enjoyed healthy and safe sex ($p > .869$). 27 percent of the non-participants, two folds higher than the participants (14%), admitted to have sex during menstruation to satisfy the sex needs of their husbands, and the difference between the two groups of women is statistically significant ($p < .001$). However, 77.5 percent of the participants, compared to 70 percent of the non-participants, reported to have been forced for sex by their husbands ($p < .088$). 61.5 percent of the participants, compared to 45.5 percent of the non-participants, felt annoyed, when they were forced to sexual intercourse by their husbands without their consent. 23.5 percent of the participants, against 38 percent of the non-participants, felt disgusted, and

the difference is statistically significant ($p < .016$). 10 percent of the participants, against 20.5 percent of the non-participants, shared their sexual experiences with other members in their community and the difference is statistically significant ($p < .003$). During the week preceding the survey, the coital frequency of the non-participants was, on the average, slightly higher (2.36) than that of the participants (2.19), however, the difference is not statistically significant ($p > .425$). Multiple regression equations suggest that for participants in microcredit program, the sexuality is significantly decreased by 0.87 units ($p < .027$) and the coital frequency is also significantly decreased by 0.87 units ($p < .040$). Participants in microcredit program (49.5%) had more awareness about the chronic and life-threatening diseases, such as, HIV/AIDS, STDs and RTIs than the non-participants (29.5%) and the difference is statistically significant ($p < .000$). In spite of familiarity of sexual diseases, majority of both participants (73.5%) and non-participants (84%) practiced traditional methods (unhygienic old cloths and rags) for menstruation management, mostly, because of their poor socio-economic conditions and the difference is statistically significant ($p < .010$).

Findings also reveal that 80 percent of the participants, compared to 78 percent of the non-participants, underwent vaccination programs during their last pregnancy ($p > .623$). 55 percent of the participants, against 71 percent of the non-participants, consumed supplementary vitamins and iron during their last pregnancy ($p < .001$). Unlike the participants (40%), the non-participants (50%) were reluctant to seek routine check-ups of their health during last pregnancy and the difference is statistically significant ($p < .044$). 92 percent of the participants, compared to 82 percent of the non-participants, delivered their first child aided by untrained TBAs ($p < .012$) in unhygienic conditions, *i.e.* parental or in-laws' houses, instead of medical assistance in hospitals or clinics. 65 percent of the participants, against 71.5 percent of the non-participants, delivered their last child aided by untrained TBAs ($p > .377$). As a result, a large proportion of the respondents (39.5%) suffered from postpartum complications for which they (62% out of 158 respondents) often sought curative supports from the indigenous doctors. During last pregnancy, 59 percent of the participants, compared to 39.5 percent of the non-participants, were visited by FWAs or FWVs, and the difference is statistically significant ($p < .000$). Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their pregnancy management behavior (index). Multiple

regression equation suggests that for participants in microcredit program, the pregnancy management behavior is significantly decreased by 1.33 units ($p < .007$).

Findings reveal that majority of both participants in microcredit program (87.5%) and non-participants (89%) were married off before turning into 18 ($p > .641$), which immediately resulted in early child birth and high fertility rate. On the average, the participants had higher fertility (2.6) than the non-participants (2.4), however, the difference is not statistically significant ($p > .329$). Multiple regression equation suggests that for participants in microcredit program, the fertility is increased by 0.067 units, but the result is not statistically significant ($p > .765$). The participants, on the average, maintained less birth spacing (46.99 months) between their first and second children than the non-participants (51.58 months), however, the difference is not statistically significant ($p > .356$).

Practice of breastfeeding is highly positive among both participants in microcredit program (99.5%) and non-participants (100%). Both of them began to breastfeed their first children soon after the birth. On the average, the participants initiated breastfeeding their first child within 4.59 hours after birth and the non-participants did so within 5.32 hours ($p > .246$). 37.4 percent of the participants, against 33.5 percent of the non-participants, breastfed their first children from birth to three years. 48.5 percent of the participants, against 44.5 percent of the non-participants, breastfed their last child from birth to three years. On the average, the length of breastfeeding of the participants for the last children was slightly greater (30.41 months) than the non-participants (29.48 months). Pearson's Chi-square test, however, finds no significant difference between participants and non-participants in this regard ($p > .169$). Multiple regression equation suggests that for participants in microcredit program, the length of breastfeeding for the last child is decreased by 3.64 months ($p > .193$). During breastfeeding, overwhelming majority of both participants (94%) and non-participants (97.5%) used contraceptives to prevent further pregnancy ($p < .083$).

Though majority of both participants (86%) and the non-participants (85%), were using contraceptives during survey ($p > .776$), 65.5 percent of the participants, compared to 32.5 percent of the non-participants, got advice from FWAs/FWVs with regard to family planning ($p < .000$). However, soon after the marriage, a large percentage of both

participants (64%) and non-participants (68.5%) admitted not to receive any information provided by the FWAs/FWVs ($p>.341$). During survey, 54.5 percent of the participants received information regarding family planning from the staffs of Microcredit Organizations. However, 82.8 percent of the participants (N=172), against 95.3 percent of the non-participants (N=170), expressed their satisfaction about the use of contraceptives during sexual intercourse ($p<.000$). Multiple regression equation suggests that for participants in microcredit program, the family planning behavior is increased by 0.41 units ($p>.207$). Realizing the population pressure over the country as well as the growing burden on their own resources, overwhelming majority of both participants in microcredit program (96.5%) and non-participants (95.5%) insisted that GOs, together with the NGOs, must work on population control and reproductive health measures of the women in rural Bangladesh. So, Microcredit Organizations should collaborate with the local as well as the national government of Bangladesh for logistic and technological supports to moderate and implement population, health and women policies of Bangladesh.

Acronyms and Abbreviations

ADIP	Agricultural Diversification and Intensification Project
AIDS	Acquired Immune Deficiency Syndrome
ASA	Association for Social Advancement
BBS	Bangladesh Bureau of Statistics
BDT	Bangladeshi Taka
BIDS	Bangladesh Institute of Development Studies
BRAC	Bangladesh Rural Advancement Committee
BRDB	Bangladesh Rural Development Board
CDF	Credit and Development Forum
CHCP	Community Health Care Provider
CPR	Contraceptive Prevalence Rate
EPI	Expanded Program of Immunization
FWA	Family Welfare Assistant
FWAs	Family Welfare Assistants
FWV	Family Welfare Visitor
FWVs	Family Welfare Visitors
GB	Grameen Bank
GO	Government Organization
GoB	Government of Bangladesh
GOs	Government Organizations
HA	Health Assistant
HAs	Health Assistants
HCs	Household Chores
HIV	Human Immunodeficiency Virus
ICDDR^B	International Centre for Diarrhoeal Disease Research, Bangladesh
ICPD	International Conference on Population and Development
IGAs	Income Generating Activities
IPV	Intimate Partner Violence
LDCs	Least Developed Countries
MC	Microcredit

MCO	Microcredit Organization
MCOs	Microcredit Organizations
MCP	Microcredit Program
MCPs	Microcredit Programs
MoF	Ministry of Finance
MSC	Microcredit Summit Campaign
NGO	Non-Government Organization
NGOs	Non-Government Organizations
NIPORT	National Institute of Population Research and Training
RH	Reproductive Health
RRF	Rural Reconstruction Foundation
RTIs	Reproductive Tract Infections
RWECF	Rural Women Employment Creation Project
SCGs	Savings and Credit Groups
SPSS	Statistical Package for Social Sciences
STD	Sexually Transmitted Disease
STDs	Sexually Transmitted Diseases
SUS	Satkhira Unnayan Sangstha
SUS	Sabalamby Unnayan Samity
TBA	Traditional Birth Attendant
TBAs	Traditional Birth Attendants
TFR	Total Fertility Rate
TV	Television
UN	United Nations
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children's Emergency Fund
US	United States
USA	United States of America
USAID	United States Agency for International Development
UTBAs	Untrained Traditional Birth Attendants
WB	World Bank
WHO	World Health Organization

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Chapter 1

Introduction

Participation of
women in micro-
programs.

1.1 Statement of the Problem

Microcredit, a small scale loan averaging about US\$ 310, is an important financial instrument to improve the socio-economic and reproductive health status of the participants in microcredit programs in both developed and developing countries of the World (GB 2007). During the last two decades, it has been a burning question in many Least Developed Countries (LDCs) of the World, which have introduced microcredit programs, targeted at the poor, more specifically, poor women, to promote self-employment for income growth and to empower them, financially and socially, and to achieve attitudinal and motivational changes regarding reproductive behavior (Kelkar, Nathan and Jahan 2004; Harty 2007; Afrin, Islam and Ahmed 2008; Strier 2010; Basher 2007; Chowdhury and Bhuiya 2004). For these reasons, microcredit programs have been hailed by the Government Organizations (GOs), Non-Government Organizations (NGOs) and multilateral development agencies as one of the most promising strategies for addressing poverty, reducing human sufferings and empowering the poor, especially, rural women (Snow and Buss 2001; Woller and Woodworth 2001; Harty 2007).

Microcredit Organizations (MCOs) in Bangladesh, apart from microcredit programs, have been working in a wide range of social development components, including nutrition, education, health, empowerment and fertility of the women (Harty 2007; Afrin *et al.* 2008; Strier 2010; Basher 2007; Chowdhury and Bhuiya 2004). For example, many GOs and NGOs in Bangladesh, such as, Bangladesh Rural Development Board (BRDB), Grameen Bank (GB) and Bangladesh Rural Advancement Committee (BRAC), along with microcredit program, have health promotional services, *i.e.* nutrition, sanitation, immunization, family planning awareness programs, implicitly designed to convince their participants to have improved health and minimal family size, thereby, cyclically reduce poverty (Woller and Woodworth 2001; Hadi 2001; Schurmann and Johnston 2009). Hence, microcredit program is widely appreciated as 'a life saving idea' - people lift

themselves out of malnourishment and inadequate housing and use the loans to create income generating enterprises (Packham and Woolamai 2011).

Microcredit Organizations in Bangladesh, generally, target the subsistence level, economically active poor women, the rural women in particular, who do not have access to traditional and formal banking system (Sultana *et al.* 2010; Schurmann and Johnston 2009; Ali 2008). Microcredit Organizations, by and large, consider the poor women as conduit of microcredit, because they are less credit risk and more passive, submissive, as well as vulnerable. Moreover, they are more restricted in the wage labor market than men in Bangladesh (Mahmud 2000; Schurmann and Johnston 2009). Data revealed that out of 26 million beneficiaries of Microcredit Organizations, 23.3 million (88%) were women (Hoque and Itohara 2009).

Microcredit Organizations in Bangladesh not only have been promoting microcredit program, but also strengthening the messages to their participants that women should have the right to control over their own bodies as well as the right to decide when they should have children and how many (Hadi 2001). These interventions of Microcredit Organizations, in fact, increase the autonomy of the female participants in microcredit program and influence their reproductive behaviors (Schuler, Hashemi and Riley 1997; Norwood 2005; Pitt *et al.* 1999). Moreover, the exposure to outside world, through weekly group-meetings, and increased mobility within the family and community evidently reduced life-experience of Intimate Partner Violence (IPV) among the female participants in microcredit program, which has a wide range of positive reproductive, mental and physical health outcomes (Ahmed *et al.* 2006).

Microcredit programs, operated by GOs, NGOs and multilateral development agencies, increase the value of women's market time through the financing of complementary inputs required for self-employment (Pitt *et al.* 1999). Self-employment opportunities and home-based businesses are helping the women to accumulate capital and to energize their economic independence as well as their power and position in the family and community (Sharma 2007). By receiving microcredit, women substitute their time in Income Generating Activities (IGAs), primarily home-based low risk, low productive and low income informal activities (Basher 2010), instead of childbearing. Thereby, they generate higher incomes and gain autonomy and help to alleviate poverty in society at large (Anderson *et al.* 2002; Afrin *et al.* 2008; Premchander 2003). Thus, Microcredit

Organizations in Bangladesh have established a critical social safety net through microcredit programs that offset the vagaries of a subsistence level per capita income (Rahman 2011).

Moreover, microcredit programs, operated by GOs, NGOs and multilateral development agencies, serve as an alternative-risk insurance mechanism for rural women in Bangladesh and change their sense of security and vulnerability (Rahman 2010a; Steele, Amin and Naved 1998). Subsequently, it improves the health and demographic outcomes of the female participants and their families. Because, unlike men, women are more likely to invest their available resources in family well-being, especially, health and nutrition (Kabeer and Mahmud 2004; Roushdy 2004; Littlefield, Morduch, and Hashemi 2003), that immediately translates into the improved health seeking behavior of the participants in microcredit program. Thus, they experienced higher immunization rates, followed by increased use of contraceptives and reduced fertility (Buttenheim 2006; Chowdhury and Bhuiya 2004; Zohir and Matin 2004). On the contrary, it may sometimes increase the demand for children as a good investment, thereby, may affect reproductive behavior (Pitt *et al.* 1999).

It is evident from the above discussion that microcredit programs in Bangladesh have multifaceted impacts, including poverty reduction, women empowerment and capacity building, along with consciousness-raising regarding reproductive health and behavior of the women. Although, in most underdeveloped and developing countries of the World, women still have little control over their sexuality and reproductive decisions, participation of women in microcredit program might be an effective way of changing their reproductive behavior, *i.e.* sexuality, pregnancy management, breastfeeding, fertility and family planning behaviors, in rural Bangladesh. So, in the present study, my attempt was to find out the answer to an important research question: Does participation of women in microcredit program influences their reproductive behavior in rural Bangladesh?

1.2 Rationale of the Study

Women in Bangladesh constitute about half of the total population (BBS 2012), but their status has been ranked as the lowest in the world, on the basis of twenty indicators related to education, health, marriage, children, employment and social equality (NCBP 2000; Parveen 2007; Hossain, Mondal and Akter 2011). During period 1971-1975, women in Bangladesh had, on average, 6.3 children. In 2007, the TFR declined to 2.7 (NIPORT 2009). In rural Bangladesh, women have more children (2.8) than their urban counterparts (2.4) and 29 percent of these children were either unwanted or wanted later (NIPORT 2009). 56 percent of the married women in Bangladesh (62% urban and 54% rural) used contraceptives and the most common method was pill (29%). 56 percent of the women received antenatal care from either doctors or skilled paramedics. 85 percent of the deliveries took place at home and 15 percent in medical center. One in five women (21%) with a live birth received postnatal care from medically trained service provider. 30 percent of the women were chronically malnourished (BMI <18.5), of which 33 percent were rural women against 20 percent of urban women. Among the married women, aged 19-45, 67 percent of them were aware about HIV/AIDS, and urban women were more conscious about this disease (95% urban compared to 62% rural). 11 percent ever married women in Bangladesh experienced Sexually Transmitted Infections (STIs) or their symptoms (NIPORT 2009; Akhter and Khan 1997; BBS 2008b).

Women in rural Bangladesh have limited role in household decisions, limited access and control over household resources, low level of individual assets, heavy domestic workloads, restricted mobility, and inadequate knowledge and skills on their reproductive behavior, which put them to greater degree of vulnerability (Hossain, Mondal and Akter 2011). Microcredit programs, operated by GOs, NGOs and multilateral development agencies, have been contributing to promote the socio-economic status of the women in terms of empowerment and autonomy in their households (Mayoux 1998; Amin, Becker and Bayes 1998) and change their reproductive behavior in rural Bangladesh. It increases the opportunity cost of childbearing by increasing the economic returns on time of women (Steele, Amin and Naved 1998).

It is evident that microcredit program is linked with the reproductive behavior of women in Bangladesh. But, there is no in-depth and complete study in Bangladesh on how

microcredit programs really can affect the reproductive behavior of the women in rural Bangladesh. There are hundreds of studies on microcredit programs, emphasizing mainly on the effect of microcredit programs either on poverty reduction or on women empowerment. On the contrary, only a few studies have emphasized either on fertility or on family planning behavior. But, my attempt in this research was to find out the effect of participation of women in microcredit programs not only on fertility and family planning behaviors, but also on all aspects of their reproductive behavior, including sexuality, pregnancy management, practice of breastfeeding, fertility and family planning behaviors. So, this research work, from academic point of view, would help to develop better theoretical and empirical understanding of the effect of women's participation in microcredit programs on their reproductive behavior. Additionally, it would contribute to the policy initiatives of the Government of Bangladesh (GoB) to enhance participation of women in microcredit programs for promoting their reproductive health and behavior, especially, in rural Bangladesh.

1.3 Objective of the Study

General Objective: The principal objective of the study was to find out the impact of participation of women in microcredit program on their reproductive behavior in rural Bangladesh.

Specific Objectives: Within the broad objective, specific objectives of the study were:

1. To know the effect of participation of women in microcredit program on their sexuality.
2. To investigate the effect of participation of women in microcredit program on their pregnancy management behavior.
3. To explore the impact of participation of women in microcredit program on their breastfeeding behavior.
4. To assess the consequence of participation of women in microcredit program on their fertility.

5. To know the effect of participation of women in microcredit program on their family planning behavior.

1.4 Major Theoretical Approaches to Reproductive Behavior

1.4.1 Fertility and Family Planning

After the Renaissance, as the world is gradually turning from Feudal Manor to Capitalist System, the Mercantilist Populationism dominated the world. Theorists of monarchical absolutism, like Niccolò Machiavelli (1469–1527), Jean Bodin (1530–1596), Thomas More (1478–1535), Thomas Hobbes (1588–1679), proposed that the supreme goal of government of a people, is the power and wealth of the State. The population is an essential factor of the leader's political and military might: his advantage, therefore, lies in the population being large, and he must actively promote its growth. The population policy of the mercantilists was, therefore, a pro-marriage, large family (Caselli, Vallin, and Wunsch 2006). Unlike the Mercantilists, the Physiocrats believed that the real wealth of a nation is not its gold reserves or its population, but its land and agriculture. To them, population growth is no longer the absolute priority. However, they also deny any means to check the natural increase of the population (Caselli *et al.* 2006).

Thomas Robert Malthus (1798, 1872), a British professor of History and Economics, was one of the staunchest critics of Mercantilist ideals that almost blatantly favored rapid population growth to ensure economic and military strength (Thompson and Lewis 1965). Malthus clearly saw that a mere imbalance between the growth of population and the means of subsistence could possibly bring jeopardy for human welfare (Zopf 1984; Chandna 1986). Analyzing the empirical evidences from contemporary European countries, he assumed two basic postulates: 'First, that food is necessary to the existence of man. Second, that the passion between the sexes is necessary, and it will remain nearly in its present state' (Malthus 1798). Furthermore, if there were no checks on population growth, he believed 'the power of population is indefinitely greater than the power in the earth to produce subsistence for man' (Malthus 1798), that eventually results in geometric population growth, while subsistence increases in arithmetic ratio (Malthus 1872). This situation would be impossible to grip on as population could double in 25 years, if it were

not impeded and about 64 times greater than its original number in 150 years (Thompson and Lewis 1965; Weeks 1978). Malthus believed that the immediate consequence of population growth, especially, by the poor who hardly do better to harness their urge to reproduce and avoid increase in numbers, was poverty (Weeks 1978). To balance between population growth and subsistence, he suggested positive and preventive checks, to avoid population from increasing at a geometrical ratio in every generation (Thompson and Lewis 1965; Weeks 1978). Positive checks were 'vicious customs with respect to women . . . wholesome manufacturers, luxury, pestilence, and war All these checks may be fairly resolved into misery and vice' (Malthus 1798). On the contrary, preventive or prudential checks were 'the true causes of the slow increase of population in all the states of modern Europe' (Malthus 1798), *i.e.* the postponement of marriage, late marriage and so on, by which starvation, pestilence and vice could be avoided (Cox 1976).

David Ricardo, an economist and a friend of Malthus, reinforced the principle of population and developed a wage fund theory. Wages act to regulate the population, because they embody the maximum means of subsistence to which the absolute size of population always necessarily adjusts (Ricardo 1817). John Stuart Mill, a neo-Malthusian, also argued that the working population must restrict its numbers as the only means of achieving stable equilibrium and full employment with decent wages (Mill 1848). Adolph Wagner, a German socialist, believed that regulation of working-class fertility was essential. But, denying the individualism and moral constraints, advocated by Malthus, Wagner (1876) argued for state-imposed restriction of fertility for population control.

Although Malthus's arguments were convincing and widely accepted, it was vigorously criticized by Karl Heinrich Marx (1929). He argued in favor of contraception to prevent birth rather than moral restraint, and more likely criticized natural laws, mentioned by Malthus, to explain population growth (Weeks 1978; Thompson and Lewis 1965). Furthermore, he believed that rampant population, followed by the vicious poverty, is the product of contemporary human social and economic activities, especially, capitalism. 'It is the working population which, while effecting the accumulation of capital, also produces the means . . . relatively superfluous, is turned into a relatively surplus population; . . . This is a law of population . . . in fact, every method of production . . . has its own peculiar, historically valid, law of population' (Marx 1929). Marx, therefore,

rejected that poverty and misery were not entirely natural consequences, but were the evils of capitalism, as the capitalist system could not minimize unemployment and underemployment regardless of how fast new jobs were needed (Weeks 1978; Thompson and Lewis 1965; Chandna 1986). To leap over such condition, Marx recommended social reforms, mainly communist reforms, to free society from capitalism and pleaded technological as well as political change that could possibly increase productivity, check population growth as well as ensure equality of power, authority and property (Thompson and Lewis 1965; Cox 1976; Chandna 1986).

Herbert Spencer (1868), a British philosopher and exponent of 'Social Darwinism', proposed a natural law of population growth, from biological perspective. He believed that after a certain period of time, natural law absolves human being from reproduction, *i.e.* genesis, to personal glory and success, *i.e.* individuation (Thompson and Lewis 1965; Chandna 1986). The more strenuous the effort of the individual for personal advancement, the weaker his will in reproduction, especially, women, as individuation requires more time and energy. 'The absolute or relative infertility is generally produced in women by mental labor . . . is more clearly shown . . . not shown only by the greater frequency of absolute sterility; nor . . . cession of child bearing; . . . but . . . the very frequent inability of such women to suckle their infants' (Spencer 1868). Thus, social evolution, accompanying growing individuation, inevitably results in slower population growth as there is a usual declination in reproductive capacity, such as, fecundity in women (Thompson and Lewis 1965). Spencer, therefore, formulated the natural law of fertility pattern from an evolutionary perspective.

After analyzing data from different countries in Europe during 1908-27, Warren Thompson (1929), for the first time, illustrated a pattern of transitional population growth in the world. Group A countries, he explained, includes USA, North and Western European nations that moved from high natural increase to low rates of increase, and 'will shortly become stationary and start to decline in numbers' (Thompson 1929). Group B, comprising Italy, Spain and Slavic nations, experienced a decline in both birth and death rates, however, 'death rate will decline as rapidly or even more rapidly than the birth rate for some time yet' (Thompson 1929). Thompson saw an insignificant change in both birth and death rates in Group C nations, which contains the rest of the world. Thompson's work was hardly concerned about overpopulation; rather it was an attempt to see the

transitional stages of population growth. After a decade later, Frank W. Notestein (1945) provided labels for the three types of growth patterns. High Growth Potential Stage, exists before fertility begins to decline; population growth slackens once fertility decline becomes well established in the transitional growth stage; and incipient decline occurs when fertility falls below the replacement level and when mortality has already stabilized at a low level (Woods 1979; Weeks 1978).

Arsene Dumont (1901), a professor in the University of Strasbourg, stated that like physical capillarity individual tends to attain higher levels in his social environment, *i.e.* social capillarity. In this process of upward mobility, he becomes more and more interested to gain personal benefit and less motivated to reproduce himself, therefore, drawn away from the welfare of the family as well as of the community at large (Thompson and Lewis 1965). Dumont believed that in a society, where social mobility is easy, social capillarity is as inevitable as gravity (Dumont 1901). He, thus, synthesized that in societies where rigid structure exists like caste system in Indian Sub-continent, the social capillarity is relatively inactive compared to that of advanced nations, where democratic system, together with rapidly growing cities, is pulling individuals towards personal achievements, therefore, hastening the decline in fertility (Dumont 1901; Thompson and Lewis 1965).

Kingsley Davis and Judith Blake (1956) identified certain behavioral and biological variables that directly influence fertility. These particular variables were distinguished from all of the other kinds of variables, as the latter, by necessity, influence fertility. These variables are those affecting exposure to intercourse; those influencing the chances of conception; and those related to gestation and successful parturition (Entwisle, Hermalin and Mason 1982; Weeks 1978; Poston and Bouvier 2010). Davis and Blake (1956) expanded the intermediate variables in the following ways: (1) the extent of intercourse is affected by the proportion of persons who marry, the length of time these persons are married, and their frequency of sexual intercourse while married; (2) the probability of conception is affected by contraception and by voluntary or involuntary infecundity (*i.e.* the inability to conceive); (3) the probability of a birth, resulting from a given conception, depends on the likelihood of miscarriage and abortion. They further emphasized that each intermediate variable can operate to increase as well as decrease fertility intercourse if conception is to occur; if conception occurs, successful gestation is

required, if a baby is to be born alive (Weeks 1978). However, the level of fertility, in a population, depends on the net balance of all the intermediate variables.

John Bongaarts (1975), influenced by David-Blake Model, re-specified the intermediate variables of Davis and Blake in a way that facilitated the quantitative specification of how they influence fertility, and set out seven proximate determinants of fertility: (1) marriage and marital disruption, (2) contraceptive use and effectiveness, (3) prevalence of induced abortion, (4) length of postpartum infecundability, (5) waiting time to conception, (6) risk of intrauterine mortality, and (7) onset of permanent sterility. Bongaarts (1982) took the first four of the proximate determinants and quantified them with indices ranging from 0 to 1, with the lowest value of 0, indicating the greatest possible inhibiting effect and the maximum score of 1 representing no inhibiting effect on fertility of the determinant. The marriage-pattern index, C_m , has a value of 1 when all women of reproductive ages are in a marital or consensual union and 0 when none of them is in such a union. The contraception index, C_c , equals 1 if no contraception is used and 0 if all fecund women are using effective methods of contraception. The postpartum-infecundability measure, C_i , is an index, ranging from a value of 1 when no women are experiencing postpartum infecundability to a value of 0 when all women are. The index of abortion, C_a , ranges from a maximum value, equaling 1 when there is no induced abortion practiced in the population to 0 if every pregnancy that occurs is aborted. He, then, conducted a quantitative analysis of the fertility of 41 historical and contemporary (developing and developed) countries and populations and showed that 96 percent of the variation in fertility could be explained solely by variation in the four proximate determinants of fertility, *i.e.* marriage, contraceptive use, postpartum infecundability, and abortion. The other three of the proximate determinants were less important and did not vary significantly among the populations (Poston and Bouvier 2010).

Modern global family planning or birth control movement is closely allied with feminism and was led by Marie Stopes (1880–1958) in Britain and Margaret Sanger (1883–1966) in United States. Its principal aim was to grant to individuals', especially, women, control over their own reproduction (Sinding 2003). Since the 1960s onward, there existed a virtual consensus among population experts that the rapid population growth in the developing world represented a serious global crisis. This crisis mentality as well as the desire for economic progress among the newly independent nations gave rise to large-

scale family planning efforts that were sponsored and supported by Western nations and development partners (Poston and Micklin 2005). Starting in the 1970s, the experts were advocating voluntary family planning. The population specialists were intent to induce contraceptive practice among the Third World women that would simultaneously improve these individuals' social and economic situation and alleviate the societal problems of their countries (Connelly 2008; Hodgson and Watkins 1997). Affluent countries, along with private foundations and other organizations, provided large amounts of financial assistance to the population-control movement and the world-wide endeavor to limit population growth.

In 1969, the United Nations Fund for Population Activities (UNFPA) was established for population initiatives in developing countries. Three world population conferences were subsequently held in 1974, 1984, and 1994 and framed the story of international family planning that has unfolded since the 1970s (Bouvier and Bertrand 1999). The first World Population Conference, held in Bucharest (1974), was an attempt to bring the government officials together from around the world and to illustrate the facts and consequences of rapid population growth. However, most developing nations stressed on socio-economic development, expressing, 'Development is the best contraceptive.' The second conference was held in Mexico City in 1984. During the ten years, many developing countries changed their opinions about population growth and were interested family planning programs, if not for demographic reasons, then, at least, for the health of women and children. However, United States, a major advocate of family planning programs, refused to fund the family planning activities in the developing countries (Hodgson and Watkins 1997; Bouvier and Bertrand 1999). But, International Conference on Population and Development (ICPD), held in Cairo in 1994, radically altered the international population movement. It defines the population policy from a new perspective, giving prominence to reproductive health and downplaying the demographic rationale for population policy (McIntosh and Finkle 1995). ICPD manifests population stabilization as a desirable, ultimate goal; by enhancing the provision for contraceptives in national population programs; and by empowering women for the enduring low fertility (Hodgson and Watkins 1997).

1.4.2 Sexuality

Henry Maine (1963), explaining the evolution of legal system, argued that prior to the institutionalization of modern law, society was constituted by families, which were universally patriarchal in character (Maine 1963). 'The eldest male . . . is absolutely supreme in his household. His domination extends to life and death, and . . . over his children and their houses as over his slaves; indeed . . . sonship . . . appear . . . the capacity . . . of becoming one day the head of a family himself' (Maine 1963). As patriarchal family was economic unit, it seeks to increase lands, and labor supply by conquest or by adoption. Here, women were governed and disciplined by their husbands without the hindrance of legal or state protections (Waters 1994). Maine (1963) stated 'from her coming of age to her marriage, all the relations she may form are relations of contract (subordination to her husband)'.

Max Weber (1978), considering women's sexuality as a system of organizational domination, regards patriarchalism as a traditional domination based on rules and power (Waters 1994). 'Patriarchalism is the situation where . . . a particular individual governs, who is designated by a particular rule of inheritance' (Weber 1978). Under patriarchalism, women and children constitute property, especially, women are dependent 'because of the normal superiority of the physical and intellectual energies of the male' (Weber 1978).

Talcott Parsons and Robert Bales (1955) differentiated gender roles in family on two dimensions. The first one, differentiates parents from children and the second one, the more controversial, differentiates men from women, based on sexuality and gender expected roles (Waters 1994). Parsons and Bales (1955) suggested that all human beings require the specialization of two types of activity for social stability and equilibrium. These are instrumental activities and expressive activities. The first one is aimed at performing tasks and latter one is designed to maintain solidarity of family by means of affectivity or emotion. This differentiation of instrumental-expressive, by Parsons and Bales, is based on biological formation of men and women. 'The bearing and early nursing of children establish a strong presumptive primacy of the relation of mother to the small children, and this in turn establishes a presumption that the men, who is exempted

from these biological functions, should specialize in the alternative instrumental direction' (Parsons and Bales 1955).

Simone de Beauvoir (1972), in her *The Second Sex*, argued that gender is not biological but learned and one is not born a woman, rather, becomes one (Kirk and Okazawa-Rey 2001). Rejecting masculinist explanations, she held that women's subjugation is reinforced by the construction of body and psyche, prevailing in the mainstream society consequent of social reproduction (Waters 1994). 'The early days of the human species were difficult; . . . too many children were born . . . the extravagant fertility of woman prevented from active participation in . . . resources . . . and that is why woman found in them no reasons for . . . affirmation . . . submitted passively to her biological fate' (de Beauvoir 1972). The biological inferiority following the economic dependence led to legitimate male supremacy that ensures family legacy passed through male lines. 'Little by little . . . , in his symbolic representations . . . male principle . . . has triumphed' (de Beauvoir 1972).

Gagnon and Simon (1973) explained how a set of symbolic constructs, learnt through socialization and are modified through ongoing social interactions with others, drives individual's life course. Gagnon and Simon claimed that sexual conduct is not only socially learnt behavior, but the reason for wanting to engage in sexual activity, also referred as sexual 'drive' or 'instinct', is in fact a socially learnt goal. Unlike Freud (2000), Gagnon and Simon (1973) suggested that social motives, *i.e.* gender, underlie sexual actions. Here, gender is seen as a central organizing principle in the interactional process of constructing sexual scripts that subsequently details different sexual scripts for girls and boys, women and men. In this sense, gender can be seen as constitutive of sexuality, at the same time, as sexuality can be seen as expressive of gender. Thus, Gagnon and Simon (1973) argued that men frequently express and gratify their desire to appear 'masculine' through specific forms of sexual conduct. For example, for young man, first sexual intercourse is a key moment in becoming a 'real man', whereas this is not the same for young woman. It is the first menstruation, rather than, first heterosex that marks being constituted as 'woman'.

Michel Foucault (1979) claimed that sexuality is a modern 'invention' and by taking 'sexuality' as the object of study, various discourses, in particular medicine and psychiatry, have been produced, including a compilation of bodily sensations, pleasures,

feelings, experiences, and actions which we call 'the sexual'. Foucault (1979) understood sex, not as some essential aspect of personality governed by natural laws that scientists may discover, but as an idea specific to certain cultures and historical periods. Foucault drew attention to the fact that the history of sexuality is a history of changing forms of regulation and control over sexuality. Furthermore, Foucault argued that sexuality is regulated not only through prohibition, but is produced through definition and categorization, particularly, through the creation of sexual categories, such as, 'heterosexual' and 'homosexual'. Foucault (1979) argued that while both heterosexual and homosexual behavior has existed in all societies, there was no concept of a person whose sexual identity is 'homosexual' until relatively recently. Although, there is some disagreement among writers as to precisely when the idea of the homosexual person emerged, it has its origins in the seventeenth to nineteenth centuries, with the category lesbian emerging somewhat later than that of male homosexuality. Such analyses have also highlighted how medical and psychiatric knowledge during the late nineteenth and early twentieth century was a key factor in the use of the term 'homosexual' to designate a certain type of person rather than a form of sexual conduct.

Rich (1986) discussed how social institutions, including law, religion, philosophy, popular culture and kinship, are supporting compulsory heterosexuality. To keep women serving masculinist interests, she stated, patriarchy demands heterosexuality. Although women experience intimate emotional caring and physical nurture with other women as they spend together much of their time, care for and depend on one another and enjoy friendship. However, "the societal forces which wrench women's emotional and erotic energies away from themselves and other women and from human identified values" (Rich 1986) teach women to see men as appropriate partners.

Many feminists considered heterosexuality a source of women's vulnerability and sexual violence against women. Dworkin (1987), for example, argued that intercourse is inherently repressive for women, particularly, for unequal power relation between men and women. To repudiate the eroticization of sexuality, women's sexuality should be based on sexual acts that are safe, loving, caring, intimate and monogamous.

Unlike the discourse approach, the radical feminists developed their unique explanations to analyze sexuality from power relation perspectives. Kate Millett, in *Sexual Politics* (1971), argued that sexuality is political, primarily, because the male-female relationship

is the paradigm for all power relationships. Men, by the virtue of the patriarchal ideology that exaggerates biological differences between men and women, always have the dominant or masculine roles and women always have the subordinate or feminine ones. This ideology is so powerful that men are able to secure the apparent consent of women through the institutions, such as, the academy, the Church and the family, to reinforce women's subordination to men. To eliminate male supremacy and control over the institutions, Kate Millett (1971) suggested both men and women to construct androgynous society to replace gender oriented society, specifically, sexual status, role and responsibilities, where men and women will be equal in terms of power, education, property and employment.

Firestone, in *Dialectic of Sex* (1970), claimed that the female submission and male domination is rooted deep in the reproductive roles of men and women, defined by the socially accepted gender stereotypic roles of the sexes. She insisted that to liberate women and to eliminate social discrimination, women should be released from child-bearing and rearing responsibilities. Instead, dual parenting system should be promoted. She, therefore, stressed on social and biological revolution that is artificial reproduction replacing natural reproduction and intentional families switching traditional biological families (Firestone 1970). Once men and women are truly free of genital sex, it is not necessary for men to show off masculine identities and behaviors. Women no longer have to be passive, receptive and vulnerable, sending out signals to men to dominate, possess and penetrate them, in order to keep human procreation cycle spinning (Firestone 1970).

Mary Daly (1973) is the most critical radical feminist, denigrated the traditional masculine traits. In *Beyond God the Father: Toward a Philosophy of Women's Liberation* (1973), she rejected the terms of masculine and feminine as the hopeless products of patriarchy. Moreover, she alleged the God as the bare-fruit of patriarchy that institutionalized the rigid masculine and feminine gender roles in the society and polarized the human community into two groups, conflicting over powers. She rejected the pluralist model of androgyny that promotes both men and women to incline into masculine and feminine traits.

MacKinnon (1982), from a feminist perspective on sexuality, illustrated that sexuality is a type of social process that is responsible for the creation of organizing, expressing, and directing desires for men and women. MacKinnon believed that sexuality is socially

constructed and jointly composed of matter and mind. However, the process benefits the organized expropriation of the sexuality to define the sex roles for women, *i.e.* the reproduction and its control issues.

Molina (1999), explaining human sexuality, stressed on three perspectives, biological, cognitive and learning included. Biologically, human sexual behavior is determined by nothing, but hormones and the different concentration of androgens, estrogens and progestins. The higher concentration of androgens translated into greater sexual drive and possible aggressive behavior among men (Reinisch, Ziemba-Davis and Saunders 1991). Estrogens and progestins, found in higher concentrations within females, regulate the menstrual cycle and are essential for reproduction. On the contrary, the cognitive perspective points out that individual's perception and evaluation is the key determinant of sexual response. Person's ability to identify, label and attribution to specific stimulus situation drives his/her sexual desire upward or downward (Whalen and Roth 1987). At the same time, his/her aptitude to evaluate the stimulus condition, whether positive or negative, also contributes to sexual arousal. The learning theory, stretching on rewards and punishments, examined the role of environment to shape the sexual behavior of the individual (McConaghy 1987). Teenagers masturbate, anticipating sexual pleasure, and their parents often connect this action to guilt and shame. Conversely, punishment tends to suppress behavior in circumstances in which it is expected to occur. Thus, if young people are severely punished for sexual exploration, it may come to associate sexual stimulation in general with feelings of guilt or anxiety. Therefore, according to social learning theory, children acquire the gender roles appropriate in society through reinforcement of gender-appropriate behavior.

1.4.3 Pregnancy Management

The Health Belief Model (HBM) was developed, primarily, to understand the widespread failure of people to accept disease preventives and to compliance with prescribed medical regimen (Rosenstock 1974; Becker 1974). HBM includes concepts of 'perceived susceptibility' and 'perceived severity' which is applicable to pregnant women, particularly, in developing countries, as pregnancy is associated with death or disability of mother and the new born (Stretcher, Champion and Rosenstock 1997; Nancy and Becker

1984). In developing nations, for example, 96 percent underweight babies are born each year (WHO 2008) with greater mortality risk. This poor outcome of pregnancy impairs the economic growth, as it directs to low educational success, worse labor force, and so on. Furthermore, HBM focuses on the 'perceived benefits' and 'perceived barriers', which is related to pregnancy. Prenatal care services and programs, administered by the governments and development partners in developing nations, often reduce the possibilities of infant and maternal mortality (Garrido 2009). These programs, in addition, attempt to remove the misconceptions and malpractices associated with pregnancy in developing nations through conscientization among the women and their intimate partners.

Pender's Health Promotion Model (HPM) develops a theory about behaviors surrounding health and wellness promotion (Pender 2007). This model describes women's paths to pregnancy related cares by including barriers to care, focusing on individual's internal factors, *i.e.* interpersonal and intrapersonal environment.

Khan and Bhardwaj's (1994) model of health care access lays focus on individual as well as communal problems to access existing health care services, particularly, of the pregnant women. In developing nations, for example, women are segregated from economically productive works; thus, remain dependent on men for health expenditure. Additionally, women are not allowed to move without the company of male and are not permitted to be cared by male doctors, particularly, in Muslim countries like Bangladesh. As a result, the pregnancy related morbidity is highest among the rigid developing nations than the developed nations (De Silva 2004).

The Motivation-Ease (M-E) model was developed on women's perceptions of access to prenatal care and clinical practice (McEvoy and Richards 2006; McEwen 2007). The M-E model of access adequately represents health care access of woman during pregnancy as a priority at the clinical level. In this model, all the characteristics of the woman, *e.g.* woman's cultural and personal beliefs regarding prenatal care, her acceptance of the pregnancy, and her own internal drives (Leatherman, Blackburn and Davidhizar 1990), are subsumed under the concept of motivation, which are identified as the most cited reasons a woman failed to access the health care (Phillippi 2009). Compressing all other external aspects of the access process, including cultural and economic barriers, this model focuses on the role of the clinic to promote or optimize any woman's ability to

enter and maintain health care during pregnancy. The goal of the clinic, as suggested by the M-E model, should be to make accommodations to compensate for low motivation to seek care (Phillippi 2009).

Pregnancy is more than a biological state; it involves role transition, relationship changes and acceptance of the birth of a child (Nelson 2003). Van Gennep (1960) describes how a woman exchanges one social status for another into three phases during her fantasies about child. First, the woman starts as an independent person and is viewed by society as different. In the second phase, she starts to look different and to behave differently as pregnancy occurs. The third and final stage is that she is now a mother and has different responsibilities and priorities. Rubin (1967a and 1967b) describes how earnestly and sensitively the woman tries to understand the meaning of becoming a mother. Woman, by going through different stages of social and cultural roles and expectations, *i.e.* mimicry, role play, fantasy, introjection/projection and grief work, identify their roles as mother.

Rogan *et al.* (1997) discussed the experience of woman becoming a mother by describing six stages in the process. 'Realizing' occurs when she becomes pregnant. Being 'drained' refers to the enormous physical, mental and emotional demands that the experience of childbirth makes upon mothers. Lack of confidence and awareness of the woman about pregnancy leads to the third stage, termed 'alone' as partners are not always supportive. 'Unreality' is experienced by woman as she remains unaffected by attendance at antenatal classes. 'Loss' relates to time for a partner, friends and freedom and independent control over one's own life and a sense of self. The final stage, 'working it out', seems to have been experienced by woman, as she feels that she needed resources to trust her own judgments and feelings rather than expert opinion.

Smith (2004) reviewed the aspects of the pregnancy management in a social working situation. Smith, basically, concentrated on the women in workplace condition and how this management is done. She viewed that more and more women and their employers confronted the issue of combining work, pregnancy, and childbirth, as increasing numbers of women enter into the workplace. Unfortunately, very small management or organizational psychology research has reviewed the experiences of pregnant employees in the workplace (Smith 2004). Smith, concentrated on grounded theory, studied the phenomenon of pregnancy and work. In doing so, Smith presents a model of stigmatization and identity management among pregnant women in the workplace. She

also identified several work environment and job characteristics. These might influence the likelihood that pregnant women perceived a threat of stigmatization. Additionally, Smith specified the relation between the perceived stigmatization and efforts; women make to manage their work identities in social context.

1.4.4 Breastfeeding

Clinicians, health advisors and nutrition specialists have long been attempting to promote and increase breastfeeding rates for the last few decades, in developing as well as developed nations (Amir 2011). Because, failure to breastfeed and improper practices like introduction of pre-lacteal foods, rejection of colostrums, delayed initiation of breast feeding, decrease milk intake and premature termination of breast feeding, and so on, contribute to over a million preventable child deaths each year (WHO 2012). Therefore, World Health Organization (WHO) actively promotes breastfeeding as the best source of nourishment for infants and young children (WHO 2012). Breastfeeding, especially, for the first 6 months, evidently protects infants from morbidity, immunizes against common infections, prevents acute and chronic diseases, lays foundation for health and psychological development, therefore, minimizes growth retardation (Rasheed and Ramussen 2007; Ahmed, Islam and Parveen 1998; León-Cava *et al.* 2002).

Studies, especially from developing countries, reveal that artificially fed children are about six to ten times more likely to die due to infectious (Bahl *et al.* 2005; de Zoysa, Rea and Martines 1991) or acute diseases (Gdalevich, Mimouni and Mimouni 2001; Sadauskaitė-Kuehne *et al.* 2004). It is also evident that obesity is less common among breastfed children and they are less likely to suffer heart diseases or other diseases, related to over-weight (Harder *et al.* 2005). Regarding intelligence, breastfed children marks greater intelligence ability than the formula fed children, which eventually contributes to societal development at large (Mortensen *et al.* 2002).

Along with the children, breastfeeding also have enduring benefits for the mothers. The risk of postpartum hemorrhage is lower among mother who breastfed immediately after delivery (Chua *et al.* 1994). It is also evident that Exclusive Breastfeeding (EBF), from birth to next 6 months, serves as a natural method of birth control by delaying the return

of menstruation cycle. It, therefore, reduces fertility, accelerates the recovery of pre-pregnancy weight, minimizes the rates of obesity and lowers the risk of breast and ovarian cancer (Rosenblatt and Thomas 1993; WHO 2009).

Nelson (2006) developed a preliminary situation-specific theory of breastfeeding, using an integrative and inductive approach that can be vitally influential to reproductive behavior. The theory purported varying levels of conflict versus congruity, existing between the mother/infant dyad, mother and her support networks, and both between and within the networks, all of which either block or facilitate breastfeeding. The theory proposed that to decrease conflict, professionals need to carefully consider their approach for promoting and supporting breastfeeding so as to respect the right of maternal decision-making and to avoid semblances of coercion or paternalism. 'Salutary breastfeeding' is proposed as a new, ideal breastfeeding experience that is positive, healthy, and fulfilling, yet encompasses acknowledgement of diversity in maternal/infant dyads and situational context.

1.5 Conceptual Framework of the Study

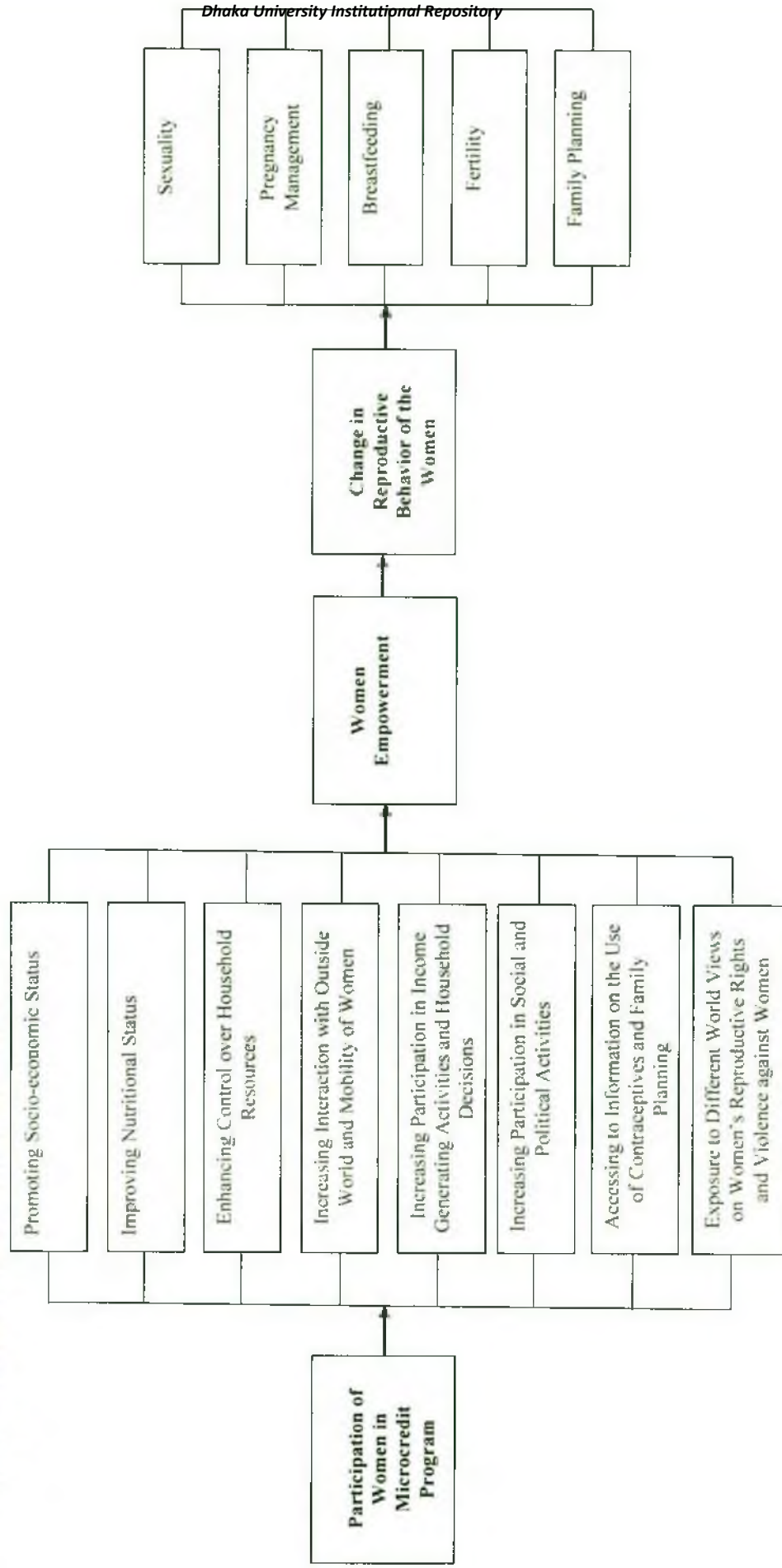


Figure-1.5.1: A Conceptual Framework of Participation of Women in Microcredit Program and Their Reproductive Behavior in Rural Bangladesh

Figure-1.5.1 presents the conceptual framework of the study. It is observed that participation of women in microcredit program promotes their socio-economic and nutritional status. It also increases women's participation in household decisions, control over household resources, mobility and interaction with outside world and access to information about the use of contraceptive and family planning. In addition, participation in microcredit program exposes women to different worldviews, especially, through weekly group-meetings and interaction with program staffs, and so on. All these factors result in women empowerment, more specifically, the female participants in microcredit programs. Subsequently, women empowerment influences the reproductive behavior of the participants in microcredit program, *i.e.* sexuality, pregnancy management, breastfeeding, fertility and family planning behaviors. For example, by receiving microcredit, a woman is self-employed which promotes her socio-economic status. Improved socio-economic status immediately contributes to women empowerment, especially, it increases the participation of women in household decisions, control over household resources, awareness on reproductive rights and so on. These, in turn, influence the magnitude of reproductive behavior of the women, such as, high or low fertility.

1.6 Definition of the Concepts

Microcredit: Grameen Bank, the pioneer Microcredit Organization in Bangladesh, considers microcredit as starting at just US\$ 12 and averaging about US\$ 310 (Grameen Bank 2007). The loans, typically, go to self-enterprise activities, such as, petty-business, rice processing, livestock and poultry rearing, traditional crafts, and so on. For the present study, a loan up to BDT 20000 was considered to be microcredit, made to the poor women by the Microcredit Organizations (both GOs and NGOs).

Women Empowerment: Generally, empowerment is illustrated as: 'A process whereby women become able to organize themselves to increase their own self-reliance, to assert their independent right to make choices and to control resources which will assist in challenging and eliminating their own subordination' (Rowlands 1997). Moser, emphasizing on control over resources as the central means of power, defined empowerment as- '...The capacity of women to increase their own self-

reliance and internal strength. This is identified as the right to determine choices in life and to influence the direction of change, through the ability to gain control over material and non-material resources' (Moser 1989). Women empowerment, for the present study, denotes seven aspects of women empowerment: (a) control over household resources, (b) mobility of the women, (c) participation in income generating activities, (d) participation in social and political activities, (e) participation in household decisions, (f) interaction with outside world, and (g) awareness regarding women's rights and violence against women.

Reproductive Health: Reproductive Health is illustrated as: 'Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. In line with the above definition of reproductive health, reproductive health care is defined as the constellation of methods, techniques and services that contribute to reproductive health and well-being through preventing and solving reproductive health problems. It also includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and sexually transmitted diseases' (ICPD 1994).

Reproductive Behavior: Refers to the behavior related to the production of offspring that includes such patterns as sexuality, pregnancy management, breastfeeding, fertility, and family planning behavior of the women.

Sexuality: Includes awareness on sex education, sexual intercourse, coital frequency, initiation of sex activities, sexual intercourse during menstruation, enjoyment of safe and healthy sex, satisfaction from sex act, forced sex by husband, resuming copulation after childbirth, and knowledge on sexually transmitted diseases.

Pregnancy Management: Includes routine physical check-ups during pregnancy, place of delivery, birth attendant, receiving vaccines, consumption of supplementary vitamins and iron during pregnancy, attending in the meeting during pregnancy, repay the installments during pregnancy, performing household works during pregnancy, and postpartum complications.

Breastfeeding Behavior: Includes length of breastfeeding for the last child, impact of breastfeeding on mothers' health, breastfeeding during household chores and meetings, and use of contraceptives during breastfeeding.

Family Planning Behavior: Includes use of contraceptives after marriage, facing familial obstacles to contraceptive use, current use of contraceptives, type of contraceptives, consultation regarding the use of contraceptives, problems faced for using contraceptives, information, provided by family welfare assistant or family welfare visitor and staff of Microcredit Organizations, on family planning.

Fertility Behavior: Fertility means the actual reproductive performance of a woman or group of women. Fertility behavior includes age at first marriage, age at first child birth, age at last child birth, fertility, birth spacing, and number of living and deceased children, abortion, and number of conceptions.

Women of Reproductive Age: Women of reproductive age are those women who belonged to the age group of 25-45 years. These women are, of both participants in microcredit program and non-participants, currently living with husbands, and sexually active as well as had an experience of having at least one pregnancy outcome in their reproductive span.

1.7 Hypothesis of the Study

Participation of women in microcredit program changes their reproductive behavior in rural Bangladesh. Under this hypothesis, the sub-hypotheses of the study were:

1. Women empowerment is higher among the participants in microcredit program than among the non-participants.

2. Participants in microcredit program are less concerned about sexuality than the non-participants.
3. Coital frequency is lower among the participants in microcredit program than among the non-participants.
4. Pregnancy management is better among the participants in microcredit program than among the non-participants.
5. Fertility rate is lower among the participants in microcredit program compared to the non-participants.
6. Desire for more children is lower among the participants in microcredit program than among the non-participants.
7. Birth spacing between first and second children is larger among the participants in microcredit program than among the non-participants.
8. Length of breastfeeding for the last child is shorter among the participants in microcredit program than among the non-participants.
9. Use of contraceptives is higher among the participants in microcredit program than among the non-participants.
10. Participants in microcredit program are more concerned about family planning than are the non-participants.

1.8 Variables of the Study

Independent Variable: Participation of women in microcredit program: respondents' status (participants=1 and non-participants=0).

Controlling Variables (Independent): Respondents' religious affiliation, current age, first marital age, age at last child birth, size of family, length of schooling, monthly income, nutritional status, amount of credit received for the last time, length of receiving the credit, husbands' length of schooling and occupation, household income, household landed property, household assets and women empowerment.

Dependant Variable: Women empowerment and reproductive behavior, *i.e.* sexuality, coital frequency, pregnancy management, length of breastfeeding for the last child, fertility, and family planning behavior.

1.9 Organization of the Study

The study is divided into 11 chapters. Chapter 1 provides introduction to the research problem and major theoretical approaches to reproductive behavior. Chapter 2 contains a review of literature on microcredit program and empowerment of women and their reproductive behavior. Chapter 3 highlights the methodology of the study. Chapter 4 to 10 contains the findings of the study. Among them, Chapter 4 highlights the socio-demographic and economic status of the women in rural Bangladesh. Chapter 5 analyzes the process of involvement in microcredit program and women empowerment. Chapter 6 examines the sexuality of women in rural Bangladesh. Chapter 7 upholds the pregnancy management in rural Bangladesh. Chapter 8 focuses on the breastfeeding behavior of the women in Rural Bangladesh. Chapter 9 contains the explanations of fertility and family planning behavior of the women in rural Bangladesh. Chapter 10 examines the factors affecting exposure to reproductive behavior of the women. Chapter 11 contains summary and conclusion of the study.

Chapter 2

Microcredit Program and Empowerment of Women and Their Reproductive Behavior

Bangladesh, like many other developing countries, is over populated, consisting about 149.8 million people within an area of only 147570 Km². Half of the population of Bangladesh is women (BBS 2012). Historically, dominated by patriarchal ideology for thousands of years, society of Bangladesh allows only men to engage, directly or indirectly, in Income Generating Activities (IGAs). On the contrary, due to a number of social, religious and other barriers, women are confined within their homestead, especially, in rural Bangladesh. Along with religious barriers, lack of access to fund, education, technology and market mechanism and support from the family members contribute to this inferior status of women (Afrin, Islam and Ahmed 2008). In the backdrop of such traditional socio-cultural values and practices, women, in Bangladesh, are relegated to the status of second-class citizen, enjoying a very few opportunities in the society. Although Bangladeshi women work hard, from dawn to late night within the households, they have no recognition as these works do not generate cash income. Moreover, they are routinely discriminated within the family, and in community as a whole, with regard to allocation of resources, such as, food, education, health care, shelter and workload although they play a very crucial role in the functioning of the family and the community in Bangladesh (UN 2003; Naz 2006). In addition, the gender differentiations force women to remain at home as unpaid labor in Bangladesh. If they are at all allowed for jobs, these (jobs) are either non-farming activities like poultry or livestock, or other home-based semi-skilled activities, such as, weaving or handicrafts (Feiner and Barker 2006; UN 2003; Afrin *et al.* 2008) which keep them confined in households.

Facing widespread discrimination in all spheres of life, women, having least control over household decisions, are often forced to get married at very early age in Bangladesh (Islam 2008). The early marriage inevitably follows undesired sexual relations, restricted

family planning information and use of contraceptives, unsafe abortion or injuries, persistent gynecological as well as psychological problems that substantially violate the reproductive rights of the women (Grimes *et al.* 2006). At the same time, women, being treated unequally due to social construction of sex, do not get proper nutrition, which basically hamper their reproductive health (ICDDRIB 2007; UN 2003). Microcredit programs, however, has been promoted by the Government Organizations (GOs), Non-governmental Organizations (NGOs) and multilateral development agencies in Bangladesh as a strategic solution for addressing both poverty alleviation and women empowerment. This is, because a range of potential outcomes, through participation of women in microcredit programs, make them more assertive of their social, economic, political and legal rights that eventually raise their prestige and status within households and community in Bangladesh (Mayoux 1997; Bayes 1998).

Figure-2.1: Flow Chart Showing How Participation in Microcredit Programs Helps to Reduce Poverty and to Initiate Change in Health Behavior of Women



Source: Hossain and Akhter 2007; Rahman 2010a

2.1 Microcredit Programs in Bangladesh

Microcredit, a concept accepted by international development agencies and supported by unilateral and multilateral donors, has emerged as a major thrust in development policy across the world (Snow and Buss 2001). It denotes a group-based disbursement of money, given to the poor, particularly, women in both urban and rural, for income generating activities, which is repayable, usually within a year, and monitored by either staffs or

group members of the Microcredit Organizations and it does not require any tangible asset (Momen and Begum 2006). Starting as 'the provision of financial services dealing with small deposits and loans' for poor (Bastelaer 1996) in 1976 by Professor Dr. Muhammad Yunus and his colleagues in Bangladesh (Akhter 2000), microcredit program accelerated in the early 1990s, recognizing the array of financial needs of poor people, including credit, savings, insurance and money transfer (Rutherford 2000; Robinson 1996).

Yunus (2003), explaining the prospects of microcredit program to achieve the Millennium Development Goals (MDGs), classifies microcredit as: (a) Traditional Informal Microcredit, like credit from moneylenders, pawn shops, loans from friends and relatives, and so on, (b) Microcredit Based on Traditional Informal Groups, like Tontin, Su Su, ROSCA, and so on, (c) Activity-Based Microcredit through Conventional or Specialized Banks, like Agricultural Credit, Livestock Credit, Fisheries Credit, Handloom Credit, and so on, (d) Rural Credit through Specialized Banks, (e) Cooperative Microcredit like cooperative credit, credit union, savings and loan associations, savings banks, and so on, (f) Consumer Microcredit, (g) Bank-NGO Partnership Based Microcredit, (h) Grameen Type Microcredit, and (i) Other Types of NGO and Non-NGO/ Non- Collateralized Microcredit.

Microcredit Organizations are successfully emerged in Bangladesh for three reasons: (a) Microcredit Organizations provide credit without collateral, while GOs and other financial institutions usually require collateral, such as, land in order to sanction loans, (b) Microcredit Organizations collect installments on a weekly basis, dividing repayments into 40-60 weeks, to place the borrowers in a more convenient position to repay loans, and (c) most of the Microcredit Organizations provide financial services by forming groups, and encourage group responsibility (Rie 2001). Ahmad (2003) developed three models to explain the rapid development of Microcredit Organizations in Bangladesh: (a) international acceptance of the Grameen Bank model of development, (b) transparency and achievement of Microcredit Organizations can easily be measured, which satisfy their donors, and (c) Microcredit Organizations charge interest, paid by their clients, to become self-reliant and to pay some of their staffs and other costs.

Hence, the well-known Microcredit Organizations have emerged in Bangladesh. For example, ASA was established in 1978. It has over 7.2 million members, with a capital of BDT 589 million, of which over 90 percent belongs to women members (ASA 2008). BRAC, established in 1972 for humanitarian relief works, reached the 8 million marks (8.5 millions) in membership and disbursed US\$ R1.2 billion (BRAC 2008). Grameen Bank, the pioneer of microcredit program, started at *Zobra* Village in 1976 by Professor Dr. Muhammad Yunus, serving 7.67 million members and the total disbursement stands for US\$ R7.59 billion (GB 2008). Approximately 745 Microcredit Organizations are engaged in microcredit operations, covering nearly 80 percent of the villages in Bangladesh (MoF 2010; Hoque and Itohara 2009). Data, available as of 2009, show gross loan portfolio of the Microcredit Organizations in Bangladesh stood at US\$ 2.3 billion and total assets at US\$ 3.5 billion. The number of active borrowers was 20.6 million with an average loan balance of US\$ 115.6 per borrower. The number of depositors was 27.8 million at the end of 2009, and their deposits were US\$ 1.8 billion (Rahman 2011).

Table-2.2.1.1: Status of Microcredit Programs of Major NGOs in Bangladesh, 2010

Microcredit Organizations	Inception Year	Disbursement (BDT in Crore)	Recovery (BDT in Crore)	Beneficiaries	Female	Male
Grameen Bank	1983	8754.51	7675.77	8276494	7980581	295913
BRAC	1974	3874.46	3774.28	8357249	7952880	404369
ASA	1991	3719.20	3226.44	5695821	4550530	1145291
PROSHUKA	1976	100	122	193	163	30
Swaminirvar Bangladesh	1979	75.64	65.64	65477	54010	14676
CARITAS, Bangladesh	1983	58.77	66.13	51902	41074	10828
TMSS	1987	758.65	682.85	6027	-	-
Shakti Foundation	1992	513.89	413.96	475976	-	-
BURO, Bangladesh	1990	517.95	463.68	873715	-	-
SSS	1986	554.33	533.93	348187	332728	15459

Source: CDF 2004; MoF 2010

2.2 Women Empowerment

Women empowerment addresses the issues relating to women's subjugation, inequality and inequity as well as their powerlessness in social, economic, cultural and political participation. Wikipedia (2011) stated that the process of empowerment, which enables individuals or groups to fully access personal or collective power, authority and influence,

and to employ that strength when engaging with other people, institutions or society, includes the following capabilities: (1) ability to make decisions in personal/collective events, (2) ability to access information and resources for decision-making, (3) ability to consider a wide range of options to choose not merely yes/no, either/or, (4) ability to exercise assertiveness in collective decision making, (5) having positive-thinking about the ability to make change, (6) ability to learn and access skills for improving personal/collective events, (7) ability to inform others' perceptions through exchange, education and engagement, (8) involving in the growth process and change that is never ending and self-initiated, (9) increasing one's positive self-image and overcoming stigma, and (10) increasing one's ability in discreet thinking to sort out right and wrong.

Malhotra, Schuler and Boender (2002) mentioned three important dimensions of women's empowerment which are dynamic, interlinked and mutually reinforcing at household level to recognize gender equality and development. These dimensions are: (a) Socio-Economic Dimension: It includes economic contribution to household welfare, access to socio-economic resources and ownership of productive and non-productive assets, which, definitely, will increase women's earning capacity, bargaining power, control over resources, role in household economic decision-making, meeting the basic needs, improving self-reliance, thereby, reduce women's economic subordination, (b) Familial Dimension: It includes participation in household decisions, covering six major dimensions that enable women to improve their self-determination, bargaining power, control over resources, self-esteem, autonomy, status and power relations within households, which, in fact, will increase women's dominant role in household decisions and lead to their own well-being and that of their children, and (c) Psychological Dimension: It includes perception on gender awareness regarding basic rights of women and capacity to deal with different household shocks, which will enhance self-confidence, bargaining power, freedom of choices and coping abilities within the households.

Parveen and Leonhäuser (2004) mentioned six indicators of women empowerment: (a) contribution to household income or wife's contribution in subsistence productive activities, both farm activities and non-farm activities, that are not rewarded in cash or kind to household income, (b) access to resources or right, scope, power or permission to use and get benefits from resources, both household and social resources, (c) ownership of assets, both productive and non-productive assets, or ability of a woman to control her

own current assets and enjoy benefits accruing from them, (d) participation in household decisions or the extent of women's ability to participate in formulating and executing decisions regarding domestic, financial, child-welfare, reproductive health, farming and socio-political matters in coordination with family members, (e) perception on gender awareness or a woman's ability to express her opinion with regard to existing gender inequality and discrimination against women in the society, including son preference, attitude towards female child, birth registration, feeding priority, wage differentiation, political awareness and violence against women, and so on, and (f) coping capacity to household shocks or a woman's ability to face sudden risks, crises and periodic stresses (threats to life or happiness) in the household.

Women empowerment, therefore, is more than access to resource and welfare, it is a process by which the beneficiaries obtain and sustain through continued involvement in development process (Reddy 2002) that improve their ability to control material and non-material resources, determine their agenda and enhance their decision making power (Kabeer 1994; Mahmud 2003). UNICEF (1994) prescribed five levels of women empowerment: (1) Welfare: this is the level for material welfare, such as, health care, food supply and income, for females, relative to males where empowerment cannot take place but improve welfare actions to entail increased access to resources, (2) Access to Resources: the poor economic productivity of women arises from their restricted access to the resources like land, credit, labor and services. Because they are burdened with domestic chores and child-care responsibilities and have least time to invest in their own development. Therefore, women's access to resources and power and systematic discrimination against them should be tackled through conscientization process, (3) Conscientization: gender awareness is the crucial ideological element in the empowerment process which can be achieved through conscientization, (4) Participation: women, instead of being passive beneficiaries, must actively be involved in the decision-making process like men, and increased mobilization and representation of women are the result of empowerment - a potential contribution towards increased empowerment, and (5) Control: equality of control means a balance of power between men and women, so that none is dominant where the degree and quality of control indicate the empowerment of women.

2.3 Reproductive Health and Behavior of the Women

During 1970s, the concept of 'Reproductive Health' appeared when World Health Organization (WHO) addressed the issues of 'Human Reproduction'. Primarily the objectives were limited only in research and development of safe and effective methods of controlling population. Afterward, the scope gradually expanded and termed as 'Reproductive Health', which is now internationally recognized human right, necessary for life, survival, equal treatment, education, development and highest attainable standard of health. Reproductive health enfolds both men and women, though the burden of reproductive health problems generally makes women more vulnerable than men throughout their lifespan, including the before and after stage of sexually active life (Akhter and Khan 1997).

Reproductive health and behavior can be grouped as: (a) family planning, (b) safe-motherhood, (c) safe abortion facilities, (d) infant and child care, (e) male participation and responsible behavior, (f) adolescent reproductive behavior, (g) infertility, (h) Reproductive Tract Infections (RTIs) and Sexually Transmitted Diseases (STDs), (i) HIV/AIDS, (j) cancers of reproductive tract, and (k) reproductive health needs of disable women. The expected outcomes, if given proper attention to, of all these elements include: (1) safer and responsible reproductive and sexual behavior, free from the fear of contracting diseases and unwanted pregnancies, (2) addressing reproduction ability and fertility regulation issues, (3) capacitate to go through pregnancy and safe child birth, (4) assuring well-being and survival of mother and infant, and (5) addressing adolescent health and sexuality (Akhter and Khan 1997).

During the last twenty years, microcredit program, being proven as an effective development device, has been provided to a large number of poor, particularly, low-income women, with sustainable financial services to support their livelihoods (McCarter 2006). Having been the potential link to women, microcredit programs, operated by Microcredit Organizations, integrate women into mainstream development by installing formal banking sector (Von Bülow, Damball and Maro 1995). Before launching microcredit programs, women in Bangladesh had very limited access to credit. With a loss of control over resources and livelihoods, they were systematically excluded from formal economic activities, thus, became more subjugated and marginalized in male-

dominant society. Against this back up, microcredit programs, however, create opportunities, especially, for women, for self-employment, income generating activities and other poverty alleviating programs (Harcourt 2003; Hoque and Itohara 2009).

Mayoux (2001) identified three models outlining why women are often being targeted by microcredit initiatives: (a) Financial Self-sustainability: women are considered to be ideal targets, because of their proven high loan repayment rates compared to men. The financial self-sustainability model assumes that providing women with access to small loans will increase their economic empowerment, (b) Poverty Alleviation: organizations promote microcredit as a means of alleviating poverty and fostering community development. The poverty alleviation model targets women, because of their characteristically high levels of poverty and responsibility for maintaining and running the family unit, and (c) Feminist Empowerment: the overall goal of the feminist empowerment model is to promote economic, social and political empowerment among women. It assumes that the empowerment of women is the result of overall changes in the structure of society at the macro-level, as well as a redefinition of gender roles at the micro-level.

Participation of women in microcredit programs is useful to uplift their status in society by encouraging political participation and by enhancing economic security through savings that subsequently provides much needed information on family planning options for reproductive health care (Norwood 2005). It is claimed that microcredit programs can empower women and alter their perceptions about fertility and contraception. As an outcome of social learning in savings and credit groups, or of the calculations behind the economic arguments, microcredit programs increase contraceptive use among credit members (Buttenheim 2006). Amin, Li and Ahmed (1996) found a strong positive relation between participation in microcredit programs and increased use of contraceptive, which is also subject to the length of membership and the number of times, the loans was received (Pitt *et al.* 1999). Hadi (2001) showed that participation of women from traditional communities in microcredit-based productive activities significantly modifies their perceptions of reproductive decisions. However, this might not be enough to actually modify behavior if, their husbands or families refuse to let them exercise empowerment (Pitt *et al.* 1999).

Schuler and Hashemi (1994) found that participation of women in Grameen Bank increases the rate of contraceptives use, but no significant effect observed in case of the participants of BRAC. Schuler and Hashemi also found that non-program members in Grameen Bank villages (48%) are more likely to use contraceptives than women (43%), living in villages not served by Grameen Bank ($p < .05$). Amin, Chowdhury and Ahmed (1994) showed that credit program beneficiaries are more likely to use contraceptives, are of higher socio-economic status, and better educated than non-beneficiaries. Khandker and Latif (1994) found that the presence of microcredit program in a village has significant and positive impacts on contraceptive use. Shehabuddin (1992) found that 21 out of 32 sexually active female participants admitted to protect themselves from further pregnancies by using contraceptives, although majority of them encountered same problems. Steele, Amin and Naved (1998) also found the positive impacts of the microcredit program on aspirations with regard to children's education, age at marriage, and more importantly, use of modern contraceptives to avoid further pregnancies.

Harty (2007) argued that microcredit program has an effect on decreasing fertility of women and thus, it is an effective way of helping women to achieve a more desired family size, both according to their own preferences and in terms of a broader development standpoint. It increases income and employment opportunities for women and effects on decreasing fertility. It also increases the opportunity costs of childbearing, thereby, lowers fertility (Pitt *et al.* 1999). Microcredit programs promote the empowerment of women and translate into a greater degree of actual decision-making ability that allow women to take a more active and informed stance in decisions about their own fertility (Steele 2001). Pitt *et al.* (1999) found that female participation in microcredit programs has positive, though not always significant, effects on fertility relative to non-participants, and are consistent with the contraceptive results.

Afrin, Islam and Ahmed (2008), in order to justify the effectiveness of microcredit programs to develop entrepreneurship capability of the female participants, observed the group-lending system of two Microcredit Organizations, ASA and BRDB. Both these organizations targeted the poor, especially, the poor rural women, to alleviate poverty by means of lending money to groups. By involving the women in economic activities, ASA and BRDB planned to extend the borrowers financial skills and decision making power within households by enhancing their social and economic contacts and to develop

women entrepreneurship. Unfortunately, majority of the borrowers (75%) did not receive any formal training necessary to become a successful entrepreneur. But still, as Afrin *et al.* found, microcredit programs have positive impact on financial management skills and group identity of the participants ($\beta= 0.24, p<0.008$). Such fund also helped the loanees to initiate businesses of their own to earn money and obtain social status ($\beta= 0.13, p<0.11$), and to become independent ($\beta= 0.08, p<0.14$). However, microcredit could not develop the creative urge and self-interest among the recipients ($\beta= -0.063, p>0.38$). Moreover, the family fund ($\beta= -0.120, p>0.21$) and participation in new jobs ($\beta= 0.035, p>0.67$) were negatively associated with women's entrepreneurship.

Haque and Yamao (2009) conducted the study on 300 female microcredit participants, divided into three groups (extreme poor, moderate poor and vulnerable non-poor), to find out whether it is efficient enough to alleviate poverty in Bangladesh. 69 percent of the participants, surveyed by Haque and Yamao, were young women of which majority (91.67%) were living with their husbands, who were notably (54.33%) engaged in small businesses or other subsidiary occupations. Due to insufficient credit distribution by the Microcredit Organizations (BDT 26950 for extreme poor in contrast to BDT 43320 for vulnerable non-poor), majority of the members (91.66%), particularly extreme poor group, borrowed credit from several NGO-MFIs (on an average, from at least 2.74 NGO-MFIs) simultaneously to meet up additional credit requirement. About one fourth (24%) of the participants failed to use the borrowed money properly as 33.33 percent of the borrowed money were spent for meeting household consumption needs. The growing pressure to pay installments in conjunction with the lack of professional training, the monthly income of the extreme poor declined on a steady scale and with no savings, their diet remained same as before. Before joining Microcredit Organizations, 62.5 percent of the extreme poor lived in *Jhuppi* (shanties), but after their involvement in microcredit programs, 68 percent of the vulnerable non-poor shifted to tin-shed. However, they have still been suffering from physical illness as 95 percent of them have no access to medical facilities and did not have knowledge about hygiene or sanitation. 17.5 percent of them, particularly of the extreme poor, sold their lands and their indebtedness was 1.76 times higher than their assets and properties, including land, poultry, livestock, electric appliances and agriculture/farm machinery. Consequently, majority of them (71.41%) felt

no change in their lives as Microcredit Organizations prefer the vulnerable non-poor over the extreme poor for their credit.

Based on 500 participants, selected randomly from four different branches of Grameen Bank, Basher (2007) analyzed how microcredit program transforms its passive participants into effective agents in economic and non-economic aspects and helps the borrowers to reduce fertility rate. Basher observed that by taking part in microcredit program, there was a significant change, by and large, in the attitude of the rural women towards fertility control. Most of the borrowers (85.48%) were no longer willing to take any additional children; either they have sufficient children (61.93%) or economic hardship (35.32%) or health problems (2.75%). For these reasons, 82.45 percent of them were practicing birth control methods. Although the preference for male children remained strong as before, but after joining the Grameen Bank, the borrowers did not enhance their family size (1.66 children on an average). The levels of education or quantity of household landholdings, however, did not have enough impact on fertility control of the participants. Basher also detected that longer association with microcredit programs implied women's voluntary participation in politics. Being engaged in income generating activities, women were able to motivate and change the attitudes of their family members and neighbors and were, comparatively (81.10% in 1990 against 6.25% in 1995), no longer criticized by them. Therefore, Basher arrived at the conclusion that women's participation in microcredit programs enhanced and boosted their self-confidence through which the objections and hostility of their relatives and neighbors were overcome. In addition, they were appreciated overwhelmingly by intimates and relatives, not only for participation in economic activities, but also for involvement in non-economic humanitarian events.

Bayes (1998) attempted to explore the credibility of microcredit program as the expeditious strategy to empower women in rural Bangladesh, considering interpersonal consultation, individual autonomy and authority indices. Microcredit, given by the NGOs, increased women's involvement in independent and self-governing income generating activities that insisted their autonomy and authority in household and in society. With exposure to new ideas, values and social supports, provided mainly by the group-members and the staffs of Microcredit Organizations, they were enjoying greater participation in household decisions like food, housing, children's education and

marriage, and so on. These promising changes, in the status of women, made them more likely to be more confident, assertive, self-reliant and conscious of their rights compared to the non-participants in rural Bangladesh. The most striking feature of the Microcredit Programs (MCPs), however, is that even the non-participants in MCPs villages have higher autonomy and authority than the people in the non-microcredit program villages. The upsurges of women empowerment, through microcredit programs, attracted many women, waiting enthusiastically, to be incorporated into these life-saving and opportunity-enhancing programs.

Cheston and Kuhn (2000) surveyed 60 Microcredit Organizations, in collaboration with 42 partners of Opportunity International (OI) and Sinapi Aba Trust (SAT), in Ghana to find out how and why women were empowered. They detected a strong association between participation in microcredit program and women empowerment. They found a consistent increase of self-confidence and self-esteem among the female participants in microcredit programs. Most of them were playing crucial role in household decisions, including family planning, children's education and marriage, buying and selling property, and so on. The combination of education and income, as Cheston and Kuhn mentioned, put the borrowers in a stronger position as they earned respect from husbands and children. They were able to negotiate family quarrels over money and established stronger relationship with members in extended families, including in-laws. In addition, the SAT clients experienced expansion of business through improved business relations with suppliers and customers with diversified profitable products. However, the growing workloads, due to business expansion, exposed the female participants in microcredit programs to ill-health and exhaustion. This pressure of work, in some cases, impelled the borrowers to hand it over to their husbands, and thereby, they lost the control over the loans or incomes. Furthermore, they were experiencing physical or mental abuse by their husbands or in-laws. After dealing with the greener side of microcredit program, Cheston and Kuhn focused on the harsh parts of it and, interestingly, they found that most of the participants eventually lost control over credited money and most of them were clustered into lower return businesses. However, considering the overwhelming poor status of women in the society, microcredit programs marked a striking improvement in the status and power, of which these women began.

Harty (2007) examined the role of microcredit on women's desire for small family size. Microcredit, as Harty started with, is the most appreciated strategy to alleviate poverty and empower women in developing countries. Credits are given to the poor, especially, to the poor women, in a small group basis to facilitate and enhance their control over economic resources. This growing control over resources magnifies their households' income, savings, expenditure, education, availing medical treatment for traumatic health events, and so on. With the increased access to financial and economic resources along with active involvement in income generating activities, Harty observed that the fertility began to decrease among the participants compared to the non participants. Women's greater autonomy and mobility lowered the fertility (on an average 2.37). The preference for sons, as insurance and extra earning hands against risk, decreased profoundly. Moreover, the participants used the contraceptives to minimize fertility, though imperfect use of contraceptives resulted in excess fertility in some cases. Therefore, Harty concluded that microcredit program serves as an effective strategy to lift up women's status within the household that effectively declines the overall fertility among the participants, as it enforces fertility reducing behaviors among the participants.

Hoque and Itohara (2009) attempted to assess the effectiveness of microcredit program on women empowerment in rural Bangladesh. In doing so, they surveyed 180 women, both participants and non-recipient housewives of Rampur Village of *Palashbari Upazila* for a comparative study based on four indicators, including contribution to household income, access to resources, participation in family decisions and finally, perception on gender awareness. Hoque and Itohara found that majority of the participants (58%) were taking part in household decisions and most of them (97%) were directly contributing in 'family income' rather than non-participants. Likewise, the participants (89%) were more likely aware about their legal, social and political rights compared to the non-participants (60%). However, it has been observed that the non-participants have better access to resources compared to the participants, as they were mostly poor with minimum economic resources. Findings also revealed that the active participants in microcredit programs (69%) were better empowered, of which only 30 percent were housewives. It is also evident that the participants with long-period of involvement in microcredit programs were more likely empowered as they used the credited money by themselves. These results logically demonstrate that microcredit program is an effective means to

empower women in rural Bangladesh, particularly, poor women, as they use this money in productive purposes. They can earn money and contribute in households' income and establish their control over family affairs and ultimately improve their position in family and in society.

Johnson (1999) examined the efficaciousness of microcredit programs on women empowerment, in relation to the progress of reproductive health behavior of the women and attitudes of others. Inspecting microcredit programs in different nations, Johnson figured it out that the participants in microcredit programs were operating micro-enterprises and contributing to the well-being of the members of the household, providing money for foods, clothing, and school fees for children. Thereby, they were experiencing increased self-confidence and sheer control over household decisions. The growing household decisions by the borrowers eventually influenced their family planning decisions, which, in fact, undersized their family. Moreover, the weekly group-meetings, organized by Microcredit Organizations, helped these participants to address and share their health needs, particularly, at the period of pregnancy and after the childbirth. It also ensured their access to maternal and child care, therefore, improved their overall reproductive health status.

Kelkar, Nathan and Jahan (2004) conducted a study, on 20 Savings and Credit Groups (SCGs) under ADIP project in four districts of Bangladesh, to assess the impact of microcredit programs on gender relations and women's agency. They noticed that a considerable number of loans (35%) were disbursed among women, however, used largely by men. Women, being conduit of loans, formed virtual groups and by chipping in a number of income generating activities, they secured productive resources like homestead lands (45%), livestock (40%), poultry (17%) and small business (29%). These radical economic changes, in turn, enhanced women's controlling power over family decisions, such as, food expenditure, clothing, children's education, health care, and so on. The cruising economic mobility strengthened women's group solidarity and altered them into active labor force from passive recipients which, in fact, changed the subsistence activities from consumption to commercial production, thus, increased household income and savings. The rise of women's micro-enterprises and engagement in outside world overrides religious dictates and prevents domestic violence by intimates and in-laws.

Latifce (2003) called attention to the importance of microcredit as a powerful instrument to fight poverty through creating opportunities for self-employment that liberate both poor and women from the clutches of poverty. Microcredit program, Latifce stated, enables the poor to get involved in active labor force to plan one's destiny and to change the fate of not only the family, but also the society in large. Women's participation in economic activities lift up their status and enhance their control over family through making decisions in different family issues like food, nutrition, children's marriage, education and use of modern contraceptives. They ensure their access to financial (income, savings, loans), human (skills and knowledge, self-esteem, bargaining power, autonomy and control over decisions), physical (housing, land, productive and non-productive possessions) and social (networks, group membership, trust based relations, freedom from violence, and so on) assets. Grameen Bank, for example, provided microcredit to 2.6 million people, most of which (95%) were women and after a decade of operation, about 50 percent of its borrowers have crossed the poverty line and a quarter percent were about to cross it. Grameen Bank, through its microcredit programs, encouraged its borrowers for savings, ensured their access to education, health, sanitation, and secured their participation in politics, especially, in local government. In addition, Grameen Bank developed crisis management to protect its borrowers during disaster and assists the participants during their rehabilitation. All these initiatives were designed to alleviate poverty and enabled the poor, especially, the women to empower.

Mahbub (2001), in collaboration with BRAC and ICDDR, studied the socio-economic changes experienced by the participants of BRAC's microcredit programs compared to the non-participants, based on qualitative data analysis. The BRAC women, Mahbub mentioned, were more conscious about the evils of early marriage, dowry and divorce than those of non-BRAC women. The involvement of BRAC women in income generating activities and participation in training programs, increased their mobility and prestige within their family and community and transformed the ideology of *Purdah* to an abstract level. The BRAC women, despite their active participation in productive activities, were socially obligated to manage their domestic activities all alone. However, the enhanced prestige and status triggered the BRAC women's decision making power to a greater extent, even in the absence of their husband, whereas the non-participants continued to rely on their husband or male members in the household. The BRAC

women, unlike the non-participants, treated their sons and daughters equally and assured, to some extent, equity of food, domestic works and education. The increasing awareness, Mahbub stated, regarding social issues and knowledge of legal facilities allowed the participants to take legal actions against domestic abuse and any violation of human rights. These remarkable changes, in the patriarchal attitudes and ideologies, facilitate women's empowerment in rural Bangladesh.

Despite the positive effects of microcredit programs, Hadi (2001) intended to examine how effective the microcredit programs really are to raise the health knowledge among rural poor women. In Bangladesh, women are considered as the most disadvantaged group, inferior to men, biologically and socially. They do not have rights to own property and to make decisions in the household. Hadi showed that in the study area, majority of the women were illiterate (only 25.6% are literate) and their husbands (57.2%) were involved mostly in non-farming activities as nearly 69 percent households were landless. However, the augmentation of microcredit programs and the formation of groups, to share information and to guide the borrowers, have positive effects on reproductive health issues, particularly, the female borrowers. Knowledge for prenatal issues, such as, vaccines during pregnancy was widespread (60.2%), but the need for vitamins and iron supplementation (13.6%) and routine medical check-ups (6%) was too low. Similarly, majority of the women (52.4%) knew the correct doses of EPI, 75 percent knew how to prevent diseases and one third (36.4%) knew, at least, three measures to prevent child death. This renovation in the awful conditions of women, Hadi argued, was not possible either by print or electronic media. Thus, participation of women in microcredit forum discussion, launched by Microcredit Organizations, is the most suitable means to disseminate health knowledge, such as, prenatal as well as postnatal cares, among the rural poor women.

Although microcredit program has multifaceted positive impacts on poverty reduction and women empowerment, Banu (2002), however, assessed the constraints for the non-improvement in case of 10 rural female participants in microcredit program. The loans, they received from Microcredit Organizations, were either invested in the economic activities of their husbands (60 percent of them were engaged in wage labor) or repaid for loan installments. Due to the improper use of loans, the participants failed to initiate any entrepreneurial activity. Consequently, these women lost their control over both the loan

and its benefits. These situations even worsen as they faced family contingency like death or illness of prime earning members, dowry for daughter's marriage or loss of means of livelihood, such as, livestock, rickshaw/van, power-tiller, and so on. As a result, they altered their consumption patterns to reduce their household expenditure by reducing costly nutrient foods and by gathering minor edibles and fish for subsistence. Additionally, the poor networking, within and outside village, made the participants both socially and economically vulnerable and secluded. Despite the social and economic setbacks, these participants experienced an improvement in their bargaining power within their households as they made small purchase of personal items and met expenses for their children. Furthermore, they claimed ownership over some assets like livestock, jewelry, and so on, and could even sell these without the permission of spouse. In addition, the weekly group-meetings and training programs, organized by Microcredit Organizations, exposed these participants to worldview; therefore, they developed their own views regarding social, political and legal rights and became conscious about the importance of female education, and the evils of child marriage, dowry, polygamy, and so on. Thus, they began to dominate the household decisions.

Nawaz (2009) attempted to identify the critical factors associated with the development of women entrepreneurship in rural Bangladesh. Women in the society of Bangladesh, more precisely in rural Bangladesh, are considered as the inferior being to men. Because of the prevailing patriarchal values and norms, the male-dominated society enforces certain social customs and strong religious constraints on women like *purdah*, that thwarts women's involvement in active labor force or entrepreneurship. In addition, lack of control on loans, capital or entrepreneurial training, knowledge, information, modern technology and more importantly managerial skills are hampering the development of women as entrepreneur in rural Bangladesh. However, with the commencement of microcredit programs, both by GOs and NGOs, there is a sheer change visible in the status of women. Women's activities are now shifted from consumption to development oriented activities. Moreover, these promotional programs generate female employment opportunities, therefore, increases female entrepreneurs in rural Bangladesh.

Newaz (2007), in collaboration with *Sabalambay Umayan Samity* (SUS) of Netrokona District and *Uttaran* of Satkhira District in Bangladesh, focused on the changes that microcredit programs have brought about with respect to rural women's income, work,

relations and their lifestyles. In rural Bangladesh, Newaz stated, women are deprived of their rights in respect to education, health care, productive resources, and so on. However, women's participation in microcredit programs and engagement in income generating activities gradually developed their sense of self-worth, in terms of skills and confidence. Their earning ability improved their social prestige and enhanced decision making as well as negotiation power in family, such as, in favor of girls' schooling, against girls' early marriage, clothing, nutrition, health care, and so on. In spite of the aforementioned positive changes, majority of women have little or no managerial control over the loans, as only a few of them were primary managers of loan or assets to exercise autonomous authority. In addition, women in general were often take part in decisions on minor issues like daily expenditure, childcare, education, and so on. Therefore, they were experiencing a lack of bargaining power within the household, based on a high degree of gender inequalities in practice, including no property ownership, savings, and so on, although microcredit program generate some changes in the lives of the participants.

Oosterhoff *et al.* (2008) observed the potentiality of microcredit programs to empower women, even the HIV⁺ (positives). Illuminating the conditions of the participants (14 HIV⁺ women), Oosterhoff *et al.* stated that all of them were infected by their husbands, through extravagance use of drugs or having been visited with sex workers. The beneficiaries were merely involved in active labor force (only two in sales work and others in in-laws' business), mostly because of their HIV⁺ status and due to short of capital. After the disbursement of microcredit, all of them began small businesses, such as, four in food and beverage stalls, three in animal husbandry projects, two in garment business and others in miscellaneous sectors, including scooter washing, repair and real estate agency. Four of them were not given the extra loan, because of unrealistic plans. Nevertheless, the involvement of the beneficiaries in income generating activities created employment opportunities for themselves and for the members of their family. All these propelled into increased income, growing autonomy and control over property through independent business. That in fact, increased the overall income about 50 percent that eventually increased autonomy and access to landholdings. These rapid changes widely opened their access to participate in household decisions, such as, food and nutrition, children's education, marriage, fertility decisions, and so on. They were able to pay for life saving anti-retroviral drugs, diagnostic tests, treatment and appliances and afforded

standard health measures for their family and gained access to other social and economic services. Unfortunately, few of them were harassed, both physically and mentally, by their husbands or their in laws. Despite some obstacles and social impediments, these participants organized themselves and ensured their access to capital, social, economic, legal and health services, therefore, remained as an example of women empowerment through microcredit programs.

Parvin, Ahsan and Chowdhury (2004) conducted a study at Dumuria Thana of Khulna District in Bangladesh to examine the impact of income generating activities supported by Rural Women Employment Creation Project (RWECP) to empower poor rural women. In doing this, they have considered three indicators, (a) household decisions, (b) control over income, and (c) access to assets, to understand the status of women regarding empowerment through microcredit. After participating in microcredit programs, women have increased level of participation in household decisions like expressing opinion, meeting personal needs, buying household assets, availing medical treatment, recreational facilities, and so on. In spite of their enhanced financial capabilities, they were depended on their husbands to make decisions of children's education and marriage. Irrespective of their growing involvement in income generating activities, one fourth of the participants had no control over their income and among the rest majority had partial control over earnings as they spent their income, consulting with their husbands. Only the widowed (83.3%) and abandoned (66.7%) women (*i.e.* having no male partner) had greater control over their income in comparison to those living with their husbands (only 1.5%). Similarly, women had little and even no assets or savings, depending on the economic activities as well as ethnic groups. Most of the Hindu women, conforming to their traditions, possessed nothing and their husbands were the controller of their income, although these women were involved in microcredit programs. Parvin *et al.* concluded that marital status and ethnic affiliation are the most influential factors to determine the level of women empowerment in rural Bangladesh.

Pitt, Khandker and Cartwright (2003) made an educated guess of how competent the microcredit program really is to empower women and to effect the gender relations within the household, based on household survey conducted by Bangladesh Institute of Development Studies (BIDS) in collaboration with World Bank (WB). Pitt *et al.* observed that alongside the superiority of men through unvoiced approval of physical (16%) or

verbal (20%) abuse by inmates and in-laws, women were obliged to depend on husband's decisions on income (78%), savings (85%), and medical treatment. They were not allowed to move outside without husbands/sons (53%) or other women (22%) and were not permitted to spend money to repair house (98%), sale or purchase livestock (98%), borrow money (97%) and even transactions for household equipment (98.5%). Even if they borrowed money, majority of them (56%) either share or lose control over loans to their husbands (38%). Pitt *et al.* argued that after involving in microcredit programs, these women made remarkable changes in that dismayed situation. Women, being benefited from technical and social training from Microcredit Organizations, experienced a dramatic change in their status. Their active participation in income generating activities increased their control over their income, savings, assets, loans, and so on. They made decisions of transaction of assets, such as, poultry, goat, and so on, without the permission of their husbands. They were privileged to take decisions in family matters like food, children's education and marriage or even discussed the issues about birth control methods and numbers of birth with their husbands. All these evidences signified positive effects of microcredit programs on the female participants, which enabled them to be empowered through greater control within the households' financial and economic resources. Additionally, with greater bargaining power and freedom of mobility through social networks, they enhanced their spousal communications that in general, increased their exposure to family planning and prenatal concerns.

Quaraishi (2007) studied the performance of Grameen Bank's scheme of cellular phones to empower women. After interviewing 50 female participants of Grameen Bank, Quaraishi found a remarkable change in their income that rose from nothing to US\$ 500 a month. After this sudden alteration, the borrowers reached a high level of empowerment. They were respected by their husbands and in-laws and reckoned financially responsible, for the first time ever in years. They were no longer being beaten or threatened by husbands and in-laws, instead, allowed to spend money for better food, children's education, and health care facilities, and so on. Most important of all, these families were able to cross the poverty line. However, Quaraishi stated, microcredit program was not successful to alleviate poverty. Because, in most cases, the loanees did not have control over the loans and they were not allowed to contact with strangers in group-meetings. Women, being considered as inferior to men, did not have control over the savings and

even the income. Domestic violence, expenditure on alcohol by inmates and mistresses of money made it harder for the borrowers to retain control over income and loans. Additionally, the exorbitant interest rate, charged by the Microcredit Organizations, together with the failure to reach the hardcore poor constrained the success of microcredit programs.

Rahman (2010b) investigated the efficacy of microcredit programs on the improvement of the consumption behavior of the participants compared to the non- participants. The participants in microcredit programs were found to be at a better position to consume both food and non-food items while put side by side with the non-participants. The participants, considering the food items, were more likely to consume protein items like meat, fish and milk, than the non- participants. Similarly, the participants spent more budgets on protein items than the non-participants. In terms of non-food items like fuel or clothing, the participants were consuming more than the non-participants, whereas the non-participants consumed electricity more than the participants. However, the expenditure for education and health was significantly higher for the participants than their counterparts. All these findings confirm that the microcredit programs were successfully bringing about better consumption practice among the participants as well as signifying an improvement in their living standard.

Sabharwal (2000) attempted to examine the nature of women's empowerment through microcredit programs, promoted by NGOs. Microcredit programs are being designed to empower women, not merely economic but also personal, social and political empowerment. The group-based credit lending system, Sabharwal stated, enhances women's involvement in active labor force and generate independent income. Through group-based meetings and trainings, women promote new ideas and values and raise awareness of social and political issues and amplify their self-confidence, self-worth and self-respect. These remarkable changes in their status, women reduced their dependence on men, increased their bargaining and decision making power in family matters. By means of household resource allocation, they enhanced their autonomy, and negotiated their positions within the household and the community. In addition, participation of women in microcredit programs decreased violence against them, both physical and mental. However, women's involvement in home-based conventional activities and their

least control over the credited money unexpectedly impeded the rate of women empowerment.

Schurmann and Johnston (2009) examined how women's participation in microcredit program in Bangladesh reduces health inequities by addressing social exclusion. In Bangladesh, most of the participants in microcredit programs are poor rural women, the most reliable debtors. By joining microcredit programs in small groups, women are able to participate in active labor force that shifted the passive participants into active agents of income. This change in status, as an active earning member of the family, made the female participants capable to negotiate with *purdah* barriers and balanced microcredit obligations with child care, subsistence and other domestic duties. In addition, women develop social capital and networks to take part in politics in a more organized and bold fashion. This lending group, associated with positive health behavior learning, serves as a medium to disseminate health messages among the participants in regular repayment meetings, providing health education. The health service provisions, sanctioned by the Microcredit Organizations, also increase health knowledge and facilitate the participants about formal health care, including the use of modern contraceptives. Furthermore, availability of credit and mutual support, through group-meetings, assist the poor women to finance health emergencies that enable them to avoid loan defaulting, therefore, help them to cross the poverty line.

Sharma (2007) adopted a descriptive cross-sectional analytical research design to examine how women's participation in group-based microcredit programs in Nepal facilitated women's autonomy and gender relations within the household. Women's participation in microcredit programs boosted mutual decisions in family affairs, such as, schooling of children (71.5%), medical treatment for family members (50%), and sell of domestic animal (37.5%), and so on. Despite the proportionate increase of egalitarian households, no significant change observed in decision making process, Sharma mentioned. Women, by taking part in microcredit programs, were able to put their own interest in family (30.24>7.815) and even their husbands were cooperating and sharing their household chores, such as, child care, cooking, cleaning, washing, and so on. Furthermore, women's involvement in income generating activities allowed them to participate in social and political organizations more often (8%) than before (5%). Women's control over their income also increased from 48 percent to 54 percent. Above

all, they were able to raise their knowledge and understanding on social issues and problems from 35 percent to 54 percent. By increasing control over income, household decisions and knowledge of legal issues, the participants were able to improve their family relations, which in fact, also indicates occurrence of less domestic violence.

Steele, Amin and Naved (1998) conducted two surveys, first in 1993 followed by 1995, to assess how women's membership in microcredit programs influence the use of contraceptives and fertility decisions in collaboration with Save the Children, USA. Women surveyed in 1993, prior to inauguration of microcredit, were asked about the mobility, role in household decisions, availing treatment and attitudes regarding children's education and age at marriage. Their responses were not astounding, because in rural Bangladesh women were usually considered as the inferior being to men, as majority of them were not allowed to move outside of village to see movie (94.3%), to shop or sell (96.1%). They, however, were allowed to visit doctors (54.2%) and relatives (71.0%), if accompanied by male. Furthermore, they were not allowed to make financial decisions, only 0.8 percent of borrowing and 0.7 percent of repairing, and were obliged to discuss about medical assistance (52.3%) or fertility decisions (83.6%) with their husband. They were more often abused, physically or mentally, either by inmates or in-laws, and even threatened to get divorced. However, being a member of microcredit programs, these women have experienced remarkable shift in their status, mostly because of their involvement in formal economic activities. With this mounting economic status, women have developed higher aspirations for female education (with 1.3 to 26.6% increase) and daughter's age at marriage (with 2.3 to 7.5% increase of age). Additionally, the participants were more likely to use modern contraceptives (47.2% in 1995) than the non-participants (34.6% in 1995). Despite the increased use of contraceptive methods, the preference for large family size, especially, for son, remains high in the study area (from 3.7 in 1993 to 3.6 in 1995). But a slight decline is visible among the participants (from 3.6 children in 1993 to 3.2 in 1995). The evidence, therefore, suggests that women's involvement in microcredit programs changed their status within the household and in community, and with the increased use of modern contraceptives; the fertility can be lessened, though it required longer times to be effective.

Strobach and Zaumseil (2007) evaluated the effectiveness of microcredit programs to lift up health related knowledge among the female participants of both rural and urban

Bangladesh. Participation of women in group-meetings, organized by Microcredit Organizations, raises the knowledge regarding health. Such improvement in the knowledge, related to health through group discussions, was more evident among the rural women than the urban participants (9 against 7.17, $p= 0.047$). Another fact is that the exposure to mass media, widely speculated to be more effective to increase awareness, was found successful to raise health related knowledge among the urban women with access to television compared to urban women without television (5.3 in opposition to 7.18, $p= 0.014$). However, mass media was ineffective to raise health related knowledge among rural women, because of their inability to access such facilities. Therefore, the group discussions, designed by the Microcredit Organizations, were more effective to raise health related knowledge among the participants, especially, rural women in Bangladesh.

Sukontamarn (2007) investigated the credibility of microcredit programs, initiated by Grameen Bank, on fertility decisions and empowerment of the female participants. Sukontamarn stated, microcredit programs aim solely the well-being of women in terms of employment, mobility and decision making power within the household. Under the close supervision of the Grameen Bank personnel, women's participation in income generating activities increased dramatically. Being self-dependent, women accomplished a rapid shift from a subordinated role to a dominant role in family through increased economical contribution in household income. This tremendous change in the status of women within the family affected their perception and decision making ability regarding family size. They considered small family with not more than two children (2.37) as the ideal family compared to the non-participants (2.55). In case of knowledge and use of family planning methods, Grameen Bank participants used the family planning methods more often than the non-participants (0.52 of the participants in opposition to 0.43 of the non-participants), which evidently promote the idea of low fertility. Moreover, the participants frequently discussed the family planning issues with their husbands (2.4 times by Grameen Bank beneficiaries than 1.9 times of non-beneficiaries) and got approval to use the family planning methods (0.90 of the participants compared to 0.81 of the non-participants). That in turn, decreased the number of births among the participants in microcredit programs. Therefore, the microcredit programs, according to Sukontamarn,

played a crucial role to empower women and influenced their fertility decisions by increasing participation in income generating activities.

UNFPA (2006), in collaboration with Microcredit Summit Campaign (MSC), reviewed microcredit program as an effective poverty reduction strategy integrated with improved reproductive health outcomes and women's empowerment. Microcredit programs provided credit to more than 92 million clients, most of them were women (80%), in small group-based lending system that enabled the participants to access to modest financial resources to grow small scale business. With the growing presence in income generating activities and mounting economic status in family and in society, the female participants secured assets and savings to manage and recovered traumatic events, such as, death or illness of wage earners. They improved the family's food security and supported children's education. They also participated in household decisions like availing medical treatment, use of contraceptives, birth spacing, and so on. These impressive changes, initiated by Microcredit Organizations, shifted the ultra poor, or more precisely the women, to a stable economic situation by providing employment opportunities. Access to economic resources and assets, enhanced women's control over family affairs, therefore, increased the practice of better reproductive health and behavior among the participants, especially, women. Moreover, microcredit programs pulled the poor women out of inferior position to a governing status, so that they can make decisions in family and in community, and participate in politics to uphold and ensure women empowerment within a patriarchal setting.

Women's increased income followed by change in perceptions and behavior through regular group-meetings, organized by Microcredit Organizations, influence the borrower's fertility and reproductive health behavior. Basher (2007) observed that after being a member of Microcredit Organization, there was a shift in the attitude of the rural women towards fertility control. Majority of the participants (85%) were either no longer willing to take any additional children. They (62%) believed that they have sufficient number of children. Such perception regarding the number of children eventually decreased the excess fertility per woman among the participants (Harty 2007). The radical decrease of fertility is the subsequent of women's growing involvement in IGAs and workloads, which, in fact, decrease their parenting time. The age at marriage of the loanees manipulates the fertility as well. Moreover, the knowledge of reproductive health

issues through health education and social awareness programs, sponsored by Microcredit Organizations, helps the borrowers to change their perception about male children as economic security at the old age, which, indeed, decrease the fertility of the female borrowers by changing their perception regarding ideal number of children (Pitt *et al.* 2003; Sukontamarn 2007; Basher 2007; Harty 2007; Mahbub 2001).

Women's participation in microcredit programs and their independent income affect the practice of family planning methods. A number of studies documented that participation of women in microcredit program increases the likelihood of a woman discussing the use of birth control methods, number of birth as well as birth spacing with her husband (Pitt *et al.* 2003; Steele *et al.* 1998; Sukontamarn 2007; Harty 2007). The immediate impact of mutual decisions regarding the frequent use of modern contraceptives is the reduction in the number of births. Moreover, the community based health interventions, launched by Microcredit Organizations, promote health knowledge among the participants (Davis and Reis 1988). Women's participation in microcredit programs has a significant positive effect on the maternal knowledge of prenatal as well as postnatal care, though their increasing knowledge depends on longer participation in microcredit programs (Hadi 2001; Hadi 2002). In the context of prevailing gender relations in Bangladesh, women's increasing empowerment needs to be located at a position of greater centrality, inclusion and voice, rather than to limiting it to issues of loan control and other similar indicators, which subsequently improve the overall health behavior, especially, reproductive health and behavior of the women in Bangladesh (Sabharwal 2000).

Chapter 3

Methodology of the Study

3.1 Methodology

Methodology generally consists of the techniques, tools and the approaches used in the selection, collection, verification, and interpretation of data. It is the techniques and strategies employed within a discipline to manipulate data and acquire knowledge (Jary and Jary 2000). It is a system of explicit rules and procedures on which research relies on and knowledge is evaluated (Nachmias and Nachmias 1981). For centuries, methodology was a major concern of the social theorists in an attempt to study the society and to attain systematic and scientific knowledge (Jary and Jary 2000; Neuman 1997). Since then, it has been constantly improved upon with unique methods and techniques of observation, inference, generalization and analysis (Nachmias and Nachmias 1981). In order to achieve the objectives of the present study, a planned and systematic methodology has been adopted which denotes the type of research, research design, method of study, study area, population of the study, focus of sampling, techniques of data collection, processing of data, the strategy of interpretation of data and plan of analysis.

3.2 Type of Research

Present research is both descriptive and explanatory in nature. Descriptive research presents a picture of the specific details of a situation, social setting or relationship (Neuman 1997) and aims at exploring accurate background profile of the subjects, specifying categories or groups with clear sequences to stimulate new explanations (Neuman 1997). Explanatory research, on the other hand, stresses on sorting out new explanations to establish the relationship between two or more phenomena or dependent variables, and one or more causes or independent variables. It deals with the identification and explanation of relationships between variables, the testing of hypotheses and the

development of generalizations, principles or theories with universal applicability (Best and Kahn 2006). Explanatory research, therefore, is a methodological approach that is primarily concerned with exploring and identifying the reason why something occurs (Neuman 1997). It aims at advancing knowledge about the determinants underlying the social phenomena, linking different issues to explore new areas of problems and prospects to sort out possible accurate principles or explanations (Neuman 1997).

3.3 Research Design

A research design is the program or a blue print that guides the investigator in the process of collecting, analyzing and interpreting observations to justify the logic, structure and the principles of the research methodology and methods, and how these relate to the research questions, hypothesis or proposition (Nachmias and Nachmias 1981; Davies 2006). Moreover, a specific research design is devised to produce valid and reliable conclusions to draw logical evidences, to set out strategies to benefit the readers as well as the researchers, and to ensure the intellectual credibility, external accountability, coherence and rigor, as well as a useful plan for the researcher (Davies 2006).

Both quasi-experimental and survey research designs were used to carry out the present study. Quasi-experiment, however, is an experiment that attempts to test the effects of an intervention by methods other than those used in a random allocation to experimental and control conditions (Tilley 2006). It enables the researcher to test the hypotheses by reaching valid conclusions about relationships between independent and dependent variables (Best and Kahn 2006). Quasi-experimental research design, for the present study, was used for evaluating and assessing the impact of women's participation in microcredit program on their reproductive behavior in rural Bangladesh through testing the study hypotheses and realizing the objectives which is expected to reveal the difference in reproductive behavior between the two groups *i.e.* participants in microcredit program (experiment group) and non-participants (control group).

3.4 Method of the Study

Survey, the most widely used data gathering method in Sociology, was given preference by the present researcher as the primary method of conducting the study. Survey method, however, is generally used to specify administrative facts on public life, or to investigate cause and effect relationship or to shed light on some aspects of social living to end with empirical measurement and data analysis (Moser and Kalton 1979; Neuman 1997). It is concerned about the demographic characteristics of a group of people, their social environment and activities, they are involved with and their attitudes and opinion about contemporary social happenings (Moser and Kalton 1979).

For the present study, survey method was used under certain reasons: (a) It dealt with a representative sample of a population; (b) It enabled to collect the data directly from the respondents; (c) It helped to collect the data from a large mass of respondents, compared to other methods of data collection, for a well-accepted generalization; and (d) It allowed to collect the data from the respondents in natural, social settings, which facilitates a relatively more reliable responses from the respondents (Lin 1976). Besides, for a logical conclusion and generality from empirical analysis, survey method was used to explore the latent facts behind the social settings.

In addition, case study method was used for an in-depth study that focused attention on a single person, event, community or group to preserve the unitary character of the social object to answer focused questions by producing in-depth descriptions and interpretations over a relatively short period of time (Kalof, Dan and Dietz 2008; Goode and Hatt 1952; Babbie 2007; Lapan 2004). Case studies, generally, allow the researcher to collect the personal documents and life histories to organize, to illuminate and to understand contemporary social data (Goode and Hatt 1952; Lapan 2004). Therefore, case study was used to describe the uniqueness or to yield explanatory insights on a particular case or to discover causal links in settings where cause and effect relationships were complicated and not readily known (Babbie 2007; Lapan 2004).

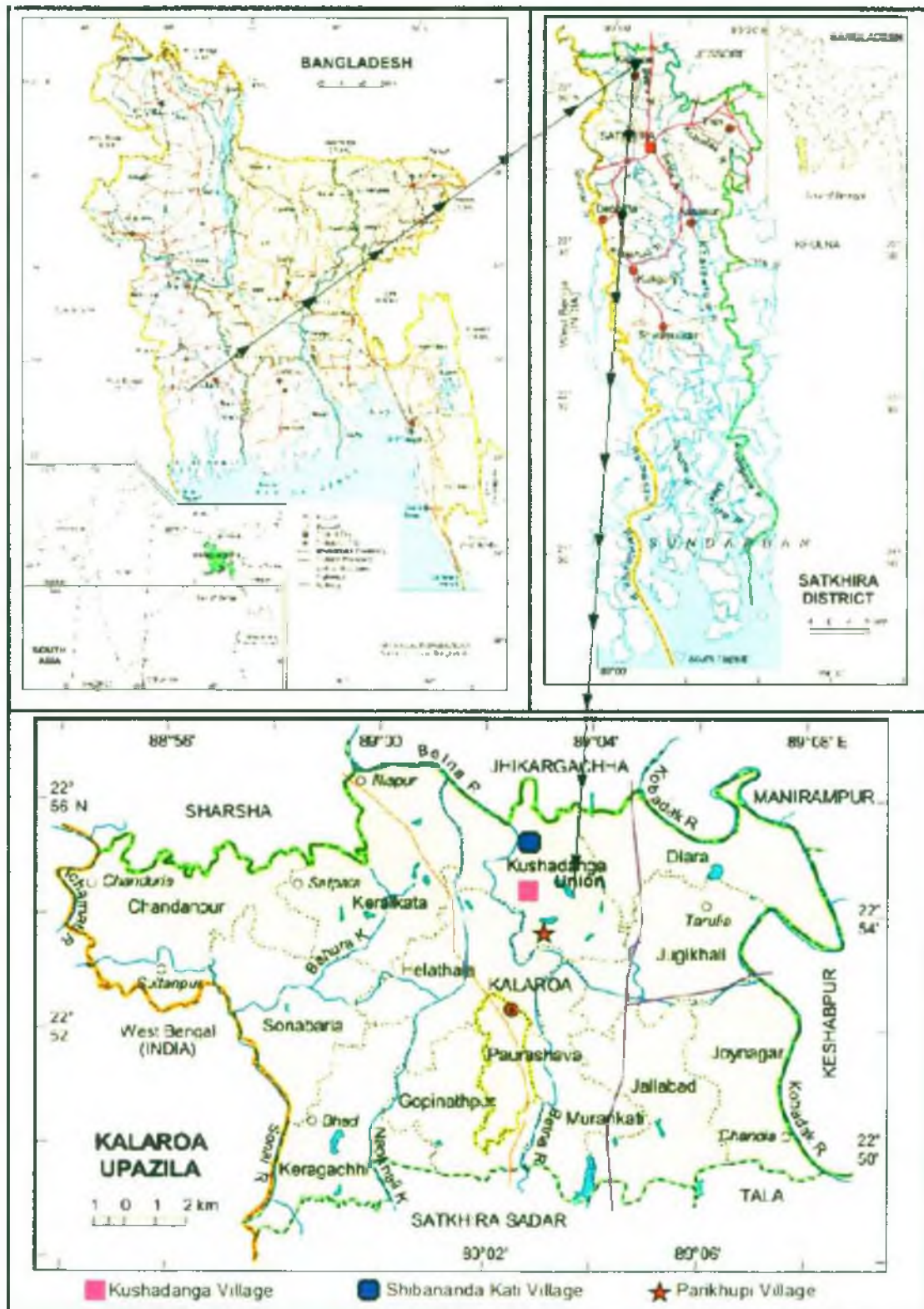
3.5 Locale of Study

For the present study, three villages of **Kushadanga Union** under **Kalaroa Upazila** in **Satkhira District** of Bangladesh were selected randomly from the villages of the Union. The Kushadanga union, established in 1960, consisting of 15 villages and a geographical area of 4838 acres, is situated in the north-east direction of the Upazila Sadar (please see the map). The river *Betraboti* or *Betna* has divided the union into two parts, the upper northern part and the down southern part. The total cultivable land of the union is 3386 acres. Almost 100 percent of the tube wells (1507) of the union are contaminated by arsenic. The total number of households in the union was 3608 and the population was 15921, among which 8091 were males and 7830 were females (BBS 2001). Office of the Kushadanga Union Council and Kalaroa Upazila Health Center informed that the current number of population is 21693 of whom males are 9987 and females are 10776, and the total households are 3952.

Majority of the population in the union is Muslim (83.5%), followed by 14 percent Hindu and 2 percent Christian. Less than a percent (.58%) of the total population is the follower of a local religion, known as *Kartabhoja*. In the union, there are 30 mosques, 5 temples and 4 churches. BBS (2001) showed that the literacy rate of the union was 42.19 percent (male-47.30% and female-36.96%). Office of the Kushadanga Union Council and Kalaroa Upazila Health Center claimed that with the assistance of the government and non-government organizations along with private funding the current literacy rate is 55 percent. There are 5 government and 6 non-government primary schools, following 3 high schools and 4 Madrashes in the Union.

In spite of growing literacy rate in Kushodanga Union, the economic activities are still concentrated around the agricultural enterprises. About 80 percent of the population is directly engaged in agriculture, while the rest are involved either in laboring (9%) or in fish cultivation (1.5%) and other informal activities. Only about two percent of the population is involved in formal economic activities. In Kushodanga Union, there is a health and family welfare center, which to some extent, contributes to minimize the birth (2.24%) as well as the death rate (1.8%) by providing access to modern health facilities to the villagers, especially, women and children.

Map-3.5.1: Study Area in Map



Among the randomly selected villages within the union, Kushadanga is the largest with 779 acres of land (BBS 2001). BBS (2001) documented that the village consists of 628 households with a total population of 2742 (male-1413 and female-1369) persons and the literacy rate was 45.23 percent (male-49.24% and female-41.16%). Office of the Kushadanga Union Council and Kalaroa Upazila Health Center informed that the current number of households of the village is 699.

Shibananda Kati is the second largest village among the studied villages, both geographically and demographically, comprising a land area of 196 acres, with 187 households and a population of 795 persons (male-389 and female-406). 43.54 percent of the total population was literate in the village (BBS 2001). According to the Office of the Kushadanga Union Council and Kalaroa Upazila Health Center, the current number of households of the village is 201.

Parikhupi is the smallest of the three sampled villages, with 91 households and only 155 acres of land. The total population of Parikhupi village was 468 (male-243 and female-225) persons with the literacy rate of 57.49 percent (BBS 2001). According to the Office of the Kushadanga Union Council and Kalaroa Upazila Health Center, the current number of households of the village is 99.

3.6 Population under Study

Generally, population or universe means the unit, *e.g.* individual, household, and so on, about which information is collected to pursue a research project (Marshall 1998). However, in social research, it refers to the aggregate of units to which the survey results are to apply (Moser and Kalton 1979; Babbie 2007). More specifically, population is the aggregate of all cases that conforms to some designated set of specifications and criteria of interest of the researcher (Chein 1959; Lin 1976).

For the present study, the following criteria were followed to identify women as the unit of analysis: (a) Married, aged between 25 and 45 years, sexually active and having at least one pregnancy outcome or a single live birth; (b) Living in the household with her

husband, having less than 50 decimals of landed property; and (c) Involved in microcredit programs for at least 5 years, only for experimental group.

To prepare a list of population of eligible women in the study area, a household census was conducted during February to March, 2010 in the three selected villages of Kushadanga Union under Kalaroa Upazila in Satkhira District of Bangladesh. The list was used for drawing sample of both experimental group (participants in microcredit program) and control group (non-participants in microcredit program). As there have been two groups of sample, the list of women was divided into two, *i.e.*, participants, who were involved in microcredit programs for at least 5 years and non-participants, who never joined in microcredit program. Following the criteria, stated above, 224 households of the participants in microcredit programs and 263 households of the non-participants were identified.

3.7 Sampling

Sampling is the most crucial aspect to draw empirical inferences about the universe by selecting the subset of the population to reflect its characteristics in all significant respects (Jary and Jary 2000; Bryman 2001; Perecman and Curran 2006). It is a method for collecting information and drawing inferences about a larger population or universe, from the analysis of only part, thereof, the sample (Marshall 1998). However, the selection of the representative sample is difficult. Because, the selection may be covertly or overtly influenced by the human choice (in case of non-probability sampling) or it does not cover the population adequately (in case of probability sampling) at all (Moser and Kalton 1979).

Simple random sampling, defined as: ... sampling of ' n ' members of a population is one in which each possible sample of size ' n ' has same chance of being selected (Agresti and Finlay 1986), is considered for the present study as the ideal type of sampling procedure, which leaves no room for bias (Goode and Hatt 1952). Simple random sampling was chosen because, in this sampling, each unit of the population has an equal and calculable chance of appearing in the sample (Lin 1976; Moser and Kalton 1979; Goode and Hatt

1952). In addition, it was used for two reasons: (a) The target households were not spread over a large geographical space; and (b) The units in the universe were more or less homogeneous with respect to the attributes under study. Therefore, a sample of 400 women – 200 each from participants in microcredit program and non-participants – were selected by using simple random sampling techniques from the sampling frame, prepared through household census. By using random number table, the unit of sample was identified and selected from the sampling frame.

3.8 Sample Size

For the present study, the sample size, a sub set of any combination of the sampling units that does not include the entire set of sampling units or population, was determined by using sample size calculator (Creative Research Systems 2010). The sample size was calculated using the following formulas:

$$SS = \frac{Z^2 \times p(1-p)}{C^2}$$

Where,

SS = Sample Size

Z = Z value (e.g. 1.96 for 95% confidence level)

p = Percent picking a choice, expressed as decimal (.5 used for sample size needed)

C= confidence interval, expressed as decimal (e.g., .05 = ±5)

$$FSS = \frac{SS}{1 - \frac{SS - 1}{P}}$$

Where,

FSS= Final Sample Size

SS= Sample Size

P= Size of Population

Allowing an error tolerance of 0.05 at 95 percent level of confidence and 2.27 percent of confidence interval from a 224 census population, the experiment sample size was calculated as 200. On the other hand, a control group of 200 samples was drawn from a

census population of 263 with an error tolerance of 0.05 at 95 percent level of confidence and 3.4 percent of confidence interval.

Table-3.3.8.1: Composition of Proportionate Random Sample of 400 Women

Village	Participants in Microcredit Program		Non-Participants	
	Number of Households	Number of Women in Sample (Proportion of Women)	Number of Households	Number. of Women in Sample (Proportion of Women)
Kushadanga	139(62.05%)	124(124.10)	178(67.68%)	135(135.36)
Shibanandakati	51(22.76%)	46(45.52)	64(24.33)	49(48.66)
Parikhupi	34(15.17%)	30(30.34)	21(7.98%)	16(15.96)
Total	224	200	263	200

3.9 Sources of Data

Both primary and secondary sources of data were used for the present study. Secondary data were collected from different books, journals, articles, magazines, reports, daily news papers, official and non-official documents, and internet and so on.

3.10 Techniques of Data Collection

Data collection is the process of gathering information from the respondents through direct or indirect participation by using obtrusive or unobtrusive methods (Lin 1976). In social research, there are many variations in data collection techniques almost as many as the topics of investigation, which usually involve more than a single technique (Kalof *et al.* 2008; Lin 1976). In survey method, personal interview or interview schedule is the most widely used technique, which is the crucial and better suited procedure in collecting data (Lin 1976; Marshall and Rossman 1999; Bryman 2001; Kalof *et al.* 2008; Nachmias and Nachmias 1981). Interview schedule, however, is a technique of collecting social data at the individual level, in which a set of questions, their wording, and the sequences are fixed by the researcher. The interview schedule is identical for every respondent and it is asked and filled in by an interviewer in a face-to-face situation with another person. This face-to-face technique ensures a higher response rate and helps the researcher probe for

deeper understanding of certain opinions, attitudes, and behaviors of the respondents (Lin 1976; Jary and Jary 2000; Nachmias and Nachmias 1981; Goode and Hatt 1952). For these reasons, an interview schedule, containing both open and close ended items, was administered for data collection in the present study. In addition, the case study technique was also used for deeper and fuller understanding of the research issues.

3.11 Pre-Testing

Pre-test of the interview schedule is required to ensure the population it is to cover; to verify the questions and their applicability; to understand the reactions of the respondents to the questions and to guess their possible answers (Bryman 2001; Moser and Kalton 1979; Faux 2010; Babbie 1990). In social science, it is much desired to test the research instruments, before its actual administration in the field. In fact, pre-test of the interview schedule is overwhelmingly conducted by the social researcher to ensure the best possible questions as well as the efficient functions of the research instrument as a whole. For this study, an interview schedule was developed primarily, reviewing literature and consulting experts. Then, a pre-test of this interview schedule was carried out on 20 respondents (10 from participants in microcredit program and 10 from non-participants). During the pre-test (April to May, 2010), some problems in the interview schedule were identified. Accordingly, the interview schedule was edited and corrected, in the light of the experiences gathered during the pre-test, and finalized for collection of data from the field.

3.12 Fieldwork

The fieldwork was conducted during July to December, 2010 by two female interviewers who had graduate level of education. They were trained up by the researcher and his wife. The interviewers collected the data from the field under the direct supervision of the researcher.

3.13 Processing of Data

Data processing involves the transformation of the observations, gathered in the field, into a system of categories and translation of these categories into codes amenable to analysis (Nachmias and Nachmias 1981; Moser and Kalton 1979). Data processing involves four operations, *i.e.* editing, coding, classification and tabulation of data. It is generally carried out to check the consistency of the questions, to reduce the large mass of the data into manageable proportions, to summarize data into categories to bring out the salient features and finally to present data into tabular forms to be interpreted and presented (Moser and Kalton 1979). After the completion of the fieldwork, the processing of the collected data began in accordance with the outline, laid down by the researcher, for the purpose of meeting the research objectives. Statistical software packages, such as, SPSS 16.0 and STATA 12.0 were used for data processing and analysis in the present study.

3.13.1 Editing

Editing generally refers to the process of detecting incompleteness and inconsistency of the data and the removal of errors, if any. Editing is intended to detect and eliminate errors in the completed questionnaires or interview schedules. In fact, before coding, classification, tabulation and analysis of the data, a careful editing is required for completeness, accuracy, consistency and uniformity (Moser and Kalton 1979). In the present study, a painstaking editing was done to identify the errors and to remove the inconsistencies in the data.

3.13.2 Coding

Coding is the process by which observations, typically in social survey, are transformed from raw data into categories and classifications, which then become the subject of quantitative data analysis (Bulmer 2006). The purpose is to classify the answers into meaningful categories to sort out their essential pattern (Moser and Kalton 1979). Coding can be structured for primary data and unstructured for secondary sources. It generally

follows two steps, (a) decide on the categories to be used, and (b) allocate individual answers to them. Although coding is neglected in social research, but it should be approached carefully as it justifies the validity as well as the efficacy of the data to be generalized (Bateson 1984). For the present study, following the editing of the errors and inconsistencies in the interview schedule, each variable had been assigned a numerical identity to enable the researcher to classify them into meaningful codes.

3.13.3 Classification

Classification is the process of categorizing the statistical data into homogeneous groups or classes in accordance to similar and or identical characteristics or features. The social data often classified into (a) qualitative data, based on quality or attributes, (b) quantitative data, in accordance to numerical characteristics, (c) geographical data, on the basis of geographical regions or locations, and (d) chronological data, arranged by their time of occurrence (Emathzone 2011a). The basic purpose of classification is to remove unwanted observations, to disclose resemblances and differences of data, to demonstrate the data in a comprehensive manner to afford quick but rational comparison to draw inferences. In fact, after removing the errors and assigning the codes, the social data require to be stratified into clusters in accordance to their identical attributes and characteristics (Singh 2006; Walliman 2011; Corbetta 2003). For the present study, data had been classified according to their similarities, attributes and intervals.

3.13.4 Tabulation

Generally, tabulation refers to the process of placing classified data into tabular form (Emathzone 2011b), that summarizes the data from the individuals into a single item (Hagood and Price 1952). It allows the proper presentation of the data to facilitate quick understanding and effective comparison as well as to depict the cause and effect relations between them. The data, in the table, generally organized into vertical and horizontal arrangements. However, based on the complexity of computation and analysis, the table can be classified into simple (one way), double (two way) or complex table (Moser and

Kalton 1979). For the present study, data were tabulated for some practical significance, *i.e.* (a) it minimized the presentation of the data, (b) maximized the understanding of the tabulated data and (c) facilitated the logical comparison to draw empirical inferences. Hence, data had been tabulated into univariate, bivariate and multivariate tables, in accordance to the merit and characteristics of the data, to analyze and to draw rational conclusions.

3.14 Methods of Data Analysis

Data analysis generally refers to the computation of certain measures in order to sort out a distinct pattern of relationship that exists among different variables. In fact, data analysis is a matter of working out statistical distribution, constructing diagrams, and calculating simple measures like averages, measures of dispersion, percentages, correlation coefficients, and so forth (Moser and Kalton 1979). However, for analysis, the data need not to be quantitative or numerical only; qualitative data can also be processed and analyzed through various statistical methods to reach rational conclusions.

For the convenience of the present study, both quantitative and qualitative data were collected and analyzed. In Sociology, quantitative analysis is executed through (a) descriptive or (b) inferential statistics or analysis (Polit and Beck 2003; Best and Kahn 2006). Descriptive analysis, generally presented in univariate table, is the basic statistical method (*e.g.* frequencies, measures of central tendencies and dispersion) that summarizes large sets of data to make descriptive statements about individuals, social groups and societies (Jupp 2006; Hutchinson 2004). It is used to describe individuals (type of personality, attitudinal disposition, level of intelligence, and so on) and social groups or societies (education, social class, ethnicity, gender, demographic structure, and so on) on key variables (Jupp 2006).

Inferential analysis, in contrast, is the statistical method, *e.g.* multivariate analysis of variance, factor analysis, structural equation modeling, and so on, from which inferences are made about situations or social groupings through fairly complex procedures (Crow 2006; Hutchinson 2004). Besides, inferential analysis generalizes from a sample to make

estimates and inferences about a wider population of the social world (Crow 2006; Rowntree 1981; Gayle 2000). It tests the hypotheses about population parameters and examines the differences as well as causal relationships between two or more variables through Chi-square, 't'- test, 'z'- test, Pearson's 'r', regression, ANOVA, and so on (Crow 2006).

Qualitative analysis, unlike the numerical presentation of data in quantitative analysis, is a more explicit and systematic approach that examines social research data without converting them into a numerical format (Babbie 2007; Neuman 1997). Bryman (2001) and Sumner (2006) stated that qualitative analysis, based upon interpretivism, constructivism and inductivism, seeks to explore the subjectivity of the social world and to interpret the social phenomena from the perspective of the actors themselves, avoiding the imposition and influence of the researcher. However, it is also concerned about exploring the change and the flux in social relationships in a time-space continuum.

For the present study, both descriptive (frequencies, percentages, measures of central tendency and measures of dispersion) and inferential statistics (Chi-square test and multiple regression) were used to analyze the data according to study objectives. In addition, case studies were conducted to gain in-depth empirical knowledge about the experiences of the subjects to draw rational inferences.

3.15 Interpretation of Data

Interpretation of data refers to the process of evaluating the analysis of social facts, collected from social settings, to draw generalizations about the life-experiences of the individuals or groups in a community. Data interpretation has two basic purposes: (a) to shed light on social aspects for further research from different perspectives, and (b) to draw some generalized ideas about social phenomena to enable the future researchers to go beyond the causal explanations. Hence, following the lengthy analysis of the social data, the researcher required to interpret the data for the inferences carefully from the findings. For these reasons, the collected data of the present study were interpreted, by

using univariate, bivariate and multivariate tables, based on the merits of the data and their social implications on the life-experiences of the subjects.

Chapter 4

Socio-demographic and Economic Status of the Women in Rural Bangladesh: Sample Respondents

Socio-demographic and economic status of both women and their husbands is a significant determining factor of their reproductive health and reproductive behavior in Bangladesh. In this chapter, some socio-demographic and economic factors of the women and their husbands in rural Bangladesh have been examined. Factors, considered, are respondents' present age, husbands' age, mode of mate selection, type of family, size of family, education, occupation, income, household landed property, household assets, living standard, nutritional status, housing condition, religious and political affiliation.

4.1 Age Composition of the Respondents

Age of the women has a great influence on their reproductive behavior and ability to undertake in economic activities and, thereby, chance of benefiting from the on-going micro-enterprises. Microcredit Organizations, generally, target active women instead of under and over-aged ones for providing microcredit. Women, under the present study, belonged to the reproductive age cohort of 25-44 years, who had a good potentiality to engage themselves in income generating activities and also sexual activities.

Table-4.4.1.1: Respondents' Age Composition and Microcredit Status

Age Composition (in Year)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
25-29	73	36.5	75	37.5	148	37.0
30-34	33	16.5	46	23.0	79	19.8
35-39	50	25.0	51	25.5	101	25.3
40-44	44	22.0	28	14.0	72	18.0
Total	200	100.0	200	100.0	400	100.0
Mean	33.48		32.32		32.90	
Std. Deviation	5.85		5.47		5.69	
Pearson's Chi-Square: 5.732. Df: 3. Sig.: .125						

Findings (Table-4.4.1.1) reveal that 36.5 percent of the participants in microcredit program, compared to 37.5 percent of the non-participants, belonged to the age group of 25-29 years. 25 percent of the participants, against 25.5 percent of the non-participants, belonged to the age cohort of 35-39 years. On an average, age of the participants was slightly higher (33.48 years) than the non-participants (32.32 years). Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their age composition.

4.2 Age Composition of the Respondents' Husbands

Age of the respondents' husbands is also an influencing factor for both their socio-economic status and reproductive behavior. Findings reveal that majority of the respondents' husbands were active in labour force and sexual activities.

Table-4.4.2.1: Age Composition of the Respondents' Husbands and MC Status

Age Composition (in Year)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
25-29	9	4.5	12	6.0	21	5.3
30-34	54	27.0	55	27.5	109	27.3
35-39	39	19.5	44	22.0	83	20.8
40-44	46	23.0	44	22.0	90	22.5
45-49	34	17.0	35	17.5	69	17.3
50-54	15	7.5	6	3.0	21	5.3
55-59	3	1.5	4	2.0	7	1.8
Total	200	100.0	200	100.0	400	100.0
Mean	38.91		38.08		38.49	
Std. Deviation	6.87		6.55		6.71	
Pearson's Chi-Square: 4.798,				Df: 6,		Asymp. Sig.: .570

Findings (Table-4.4.2.1) indicate that 27 percent of the participants' husbands, compared to 27.5 percent of the non-participants, belonged to the age group of 30-34 years. 23 percent of the participants' husbands, against 22 percent of the non-participants' husbands, belonged to the age structure of 40-44 years. Findings also reveal that, on an average, age of the participants' husbands was slightly greater (38.91 years) than the non-participants' husbands (38.08 years). Pearson's Chi-square test, however, finds no significant difference between the participants' husbands and non-participants' husbands with regard to their age composition.

4.3 Age Difference between Respondents and Their Husbands

Being a patriarchal society, men in Bangladesh, generally, tend to marry the women who are younger to them. Besides, early marriages of girls with older males are often found in Bangladesh.

Table-4.4.3.1: Age Difference between Respondents and Their Husbands

Age Difference (in Year)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
1-4	73	36.5	66	33.0	139	34.8
5-8	112	56.0	116	58.0	228	57.0
9+	15	7.5	18	9.0	33	8.3
Total	200	100.0	200	100.0	400	100.0
Mean	5.44		5.76		5.60	
Std. Deviation	2.14		2.27		2.21	
Pearson's Chi-Square: 0.695 Df: 2 Sig.: 0.706						

Findings (Table-4.4.3.1) demonstrate that majority of both participants in microcredit program (56%) and non-participants (58%) were 5-8 years younger than their husbands. Findings also reveal that, on an average, age difference between respondents and their husbands was slightly greater among the non-participants (5.76 years) than the participants (5.44 years). Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants with regard to their age difference with husbands.

4.4 Mode of Mate Selection

Freedom of women for selecting life-partners is one of the most important aspects of their reproductive rights. Women in Bangladesh, however, do not enjoy this freedom as they are very often compelled to marry off against their own will by their parents and other family members, or, sometimes by the society. The causes behind this might be lack of education, economic dependence and subjugation of the women within the family and in society at large. Only education, economic self-sufficiency and freedom of women can reverse this deplorable situation.

Table-4.4.4.1: Respondents' Mode of Mate Selection and Microcredit Status

Mode of Mate Selection	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Members of the Family	181	90.5	184	92.0	365	91.3
Self	19	9.5	16	8.0	35	8.8
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .282 Df: 1 Sig.: .596						

Findings (Table-4.4.4.1) illustrate that overwhelming majority of both participants (90.5%) and non-participants (92%) were married off by the choice of their parents and other family members. Therefore, Pearson's Chi-square test finds no significant difference between the participants and non-participants with regard to their mode of mate selection.

4.5 Types of Family

Family is the most important primary social institution that provides the best basic setting for nurture and development of human capital. However, the family type depends on the social and economic formation of a society. Bangladesh is an agro-economy based society, where extended family is preferred by the rural people in order to ensure helping hands in farm activities and also for old age security. The members of the extended families get fewer opportunities in comparison to those of nuclear families; because the extended families cannot ensure facilities for income generation or capital among their members. Consequently, the members of these families opt for microcredit to meet the cash or capital needs. However, at present, due to expansion of education, modernization and availability of family planning services, the number of nuclear families is increasing gradually.

Table-4.4.5.1: Respondents' Family Types and Microcredit Status

Family Types	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Nuclear	119	59.5	107	53.5	226	56.5
Extended	81	40.5	93	46.5	174	43.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.46 Df: 1 Sig.: .226						

Findings (Table-4.4.5.1) reveal that 59.5 percent of the participants in microcredit program, compared to 53.5 percent of the non-participants, belonged to the nuclear families. On the other hand, 40.5 percent of the participants, against 46.5 percent of the non-participants, belonged to extended families. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their family types.

4.6 Size of Family

Size of the family is an important cause for resorting to microcredit in rural Bangladesh. It is observed that large size of the family, with few income earners, creates poverty where husband is often the only breadwinner. Such family likely remains in poverty. For this reason, members of the large families mostly seek microcredit to defray the family expenditures or to generate income by this credit.

Table-4.4.6.1: Respondents' Family Size and Microcredit Status

Size of Family	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
3-4	112	56.0	117	58.5	229	57.2
5-6	77	38.5	75	37.5	152	38.0
7-8	11	5.5	7	3.5	18	4.5
9-10	0	0.0	1	0.5	1	0.3
Total	200	100.0	200	100.0	400	100.0
Mean	4.53		4.43		4.48	
Std. Deviation	1.12		1.11		1.11	
Pearson's Chi-Square: 2.024 df: 3 Sig.: .567						

Findings (Table-4.4.6.1) demonstrate that 56 percent of the participants in microcredit program, compared to 58.5 percent of the non-participants, had the family size of 3-4 members. 38.5 percent of the participants, against 37.5 percent of the non-participants, had a family of 5-6 members. Findings also reveal that, on an average, participants had larger family size (4.53) than the non-participants (4.43). Since participants had better household income and scope for income generating activities as well as high fertility, these might be the cause of their larger size of family. Pearson's Chi-square test,

however, finds no significant difference between the participants and non-participants with regard to their family size.

4.7 Respondents' Length of Schooling

Education not only facilitates the economy of the nation, but also influences the reproductive behavior of the people. Especially, it enables women to have knowledge about nutrition, improved hygiene, low mortality and fertility rates and economic development. Women, having higher education, can easily take part in economic activities and change their reproductive behavior.

Table-4.4.7.1: Respondents' Length of Schooling and Microcredit Status

Length of Schooling (in Year)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
0 (Illiterate)	65	32.5	68	34.0	133	33.3
1-5	82	41.0	82	41.0	164	41.0
6-8	34	17.0	30	15.0	64	16.0
9-10	18	9.0	18	9.0	36	9.0
11-12	1	0.5	2	1.0	3	0.8
Total	200	100.0	200	100.0	400	100.0
Mean	3.76		3.64		3.70	
Std. Deviation	3.27		3.32		3.29	
Pearson's Chi-Square: .651 Df: 4 Sig.: .957						

Findings (Table-4.4.7.1) reveal that 32.5 percent of the participants in microcredit program, compared to 34 percent of the non-participants, were illiterate. On the contrary, 67.5 percent of the participants, against 66 percent of the non-participants, were literate. Findings also reveal that, on an average, length of schooling of the participants was slightly higher (3.76 years) than that of non-participants (3.64 years). Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their length of schooling.

4.8 Length of Schooling of the Respondents' Husbands

Education of the husbands also plays an important role to determine the reproductive behavior of the women in Bangladesh.

Table-4.4.8.1: Length of Schooling of the Respondents' Husbands

Schooling (in Year)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
0 (Illiterate)	94	47.0	103	51.5	197	49.3
1-5	70	35.0	59	29.5	129	32.3
6-8	17	8.5	15	7.5	32	8.0
9-10	16	8.0	16	8.0	32	8.0
11-12	1	0.5	4	2.0	5	1.3
13-15	2	1.0	3	1.5	5	1.3
Total	200	100.0	200	100.0	400	100.0
Mean	3.01		2.96		2.99	
Std. Deviation	3.41		3.69		3.55	
Pearson's Chi-Square: 3.474 DF: 5 Sig.: .627						

Findings (Table-4.4.8.1) explain that 47 percent of the participants' husbands, compared to 51.5 percent of the non-participants, were illiterate. On the contrary, 53 percent of the participants' husbands, against 48.5 percent of the non-participants' husbands, were literate. Findings also reveal that, on an average, length of schooling of the participants' husbands was slightly higher (3.01 years) than the non-participants' husbands (2.96 years). Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their husbands' length of schooling.

4.9 Occupation of the Respondents

Women, in rural Bangladesh, are not traditionally expected to be engaged in income generating activities. Even the guardians of poor families prefer such position. However, the chronic poverty has forced women to venture out for an earning, even if in informal economic activities (comprising mostly of manual labor).

Table-4.4.9.1: Respondents' Occupation and Microcredit Status

Type of Occupation	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Housewife	194	97.0	197	98.5	391	97.8
Labor	3	1.5	1	0.5	4	1.0
Tailor	1	0.5	2	1.0	3	0.8
Service	2	1.0	0	0.0	2	0.5
Total	200	100.0	200	100.0	400	100.0

Pearson's Chi-Square: 3.356 Df: 3 Sig.: .340

Findings (Table-4.4.9.1) reveal that majority of both participants (97%) and non-participants (98.5%) were housewives. Only 3 percent of the participants, against 1.5 percent of the non-participants, were directly involved in income generating activities. Pearson's Chi-square value, thus, indicates no significant difference between the participants and non-participants with regard to their types of occupation.

4.10 Occupation of the Respondents' Husbands

Occupation of the respondents' husbands is an important indicator of the living standard of their families. Men, in rural Bangladesh, are generally engaged in physical labor, due mainly to insufficient capital and skills.

Table-4.4.10.1: Occupation of the Respondents' Husbands

Husbands' Occupation	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Van-puller	41	20.5	23	11.5	64	16.0
Unemployed	5	2.5	12	6.0	17	4.3
Day Labor	82	41.0	103	51.5	185	46.3
Artisan	17	8.5	20	10.0	37	9.3
Cultivator	19	9.5	13	6.5	32	8.0
Petty-businesses	36	18.0	29	14.5	65	16.2
Total	200	100.0	200	100.0	400	100.0

Pearson's Chi-Square: 12.451 Df: 5 Sig.: 0.029

Findings (Table-4.4.10.1) demonstrate that 36 percent of the participants' husbands, compared to 31 percent of the non-participants, were involved in entrepreneurial occupations (petty-business, artisan and cultivator). In contrast, 61.5 percent of the participants' husbands, against 63 percent of the non-participants' husbands, were

involved in non-entrepreneurial occupations (van-puller and day labor). Thus, Pearson's Chi-square value indicates a significant difference between the participants' husbands and non-participants' husbands with regard to their types of occupation.

4.11 Respondents' Monthly Income

For households and individuals, income is the sum of all the wages, salaries, profits, interests' payments, rents and other forms of earnings received in a given period of time.

Table-4.4.11.1: Respondents' Monthly Income and Microcredit Status

Income (in BDT)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
No Income	21	10.5	35	17.5	56	14.0
001-200	112	56.0	101	50.5	213	53.3
201-400	33	16.5	29	14.5	62	15.5
401 and Above	34	17.0	35	17.5	69	17.3
Total	200	100.0	200	100.0	400	100.0
Mean	341.6		246.4		294	
Std. Deviation	555.59		316.79		454.18	
Pearson's Chi-Square: 4.341. Df: 3. Sig.: .227						

Findings (Table-4.4.11.1) reveal that majority of both participants (56%) and non-participants (50.5%) had a monthly income in the range of BDT 1-200. 16.5 percent of the participants, against 14.5 percent of the non-participants, had a monthly income in the range of BDT 201-400. On an average, participants had greater monthly income (BDT 341.6) than the non-participants (BDT 246.4). Since most of the respondents were housewives, they barely had the opportunity to be engaged in highly paid income generating activities, even, though they became the conduits of microcredit. Pearson's Chi-square test, therefore, finds no significant difference between the participants and non-participants with regard to their monthly income.

4.12 Monthly Income of the Respondents' Husbands

Both respondents and their husbands were mostly involved in low-income informal economic activities. For this reason, their monthly income was expectedly low.

Table-4.4.12.1: Monthly Income of the Respondents' Husbands

Income (in BDT)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Below 2000	32	16.0	37	18.5	69	17.3
2001-4000	138	69.0	140	70.0	278	69.5
4001-6000	25	12.5	19	9.5	44	11.0
6001-8000	1	0.5	4	2.0	5	1.3
8001 and Above	4	2.0	0	0.0	4	1.0
Total	200	100.0	200	100.0	400	100.0
Mean	3249.25		3031.25		3140.25	
Std. Deviation	1464.28		1225.62		1352.95	
Pearson's Chi-Square: 6.995. Df: 4 Sig.: .0136						

Findings (Table-4.4.12.1) reveal that 69 percent of the participants' husbands, against 70 percent of the non-participants' husbands, had the monthly income in the range of BDT 2001-4000. On an average, participants' husbands had greater monthly income (BDT 3249.25) than the non-participants (BDT 3031.25). Since participants' husbands had greater involvement in entrepreneurial occupations and were less unemployed than the non-participants' husbands, these might be the cause of their higher income. Pearson's Chi-square value, however, indicates no significant difference between the participants' husbands and non-participants' husbands with regard to their monthly income.

4.13 Household Income

Household income is the sum of income earned by the members of the family and other heads of household assets.

Table-4.4.13.1: Respondents' Household Income and Microcredit Status

Income (in BDT)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Below 4000	106	53.0	122	61.0	228	57.0
4001-6000	58	29.0	50	25.0	108	27.0
6001-8000	17	8.5	18	9.0	35	8.8
8001-10000	9	4.5	7	3.5	16	4.0
10001-12000	5	2.5	2	1.0	7	1.8
12001and Above	5	2.5	1	0.5	6	1.4
Total	200	100.0	200	100.0	400	100.0
Mean	4734.70		4104.15		4419.43	
Std. Deviation	3231.16		2353.89		2840.81	
Pearson's Chi-Square: 5.946. Df: 5 Sig.: .311						

Findings (Table-4.4.13.1) reveal that 53 percent of the participants' households, compared to 61 percent of the non-participants, had a monthly income of below BDT 4000. On an average, the monthly household income of the participants was slightly greater (BDT 4734.70) than the non-participants (BDT 4104.15). One explanation for such is that women's involvement in microcredit programs increased their participation in income generating activities, even in low-productive, informal activities, that eventually contributed to their growing household income. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their monthly household income.

4.14 Housing Condition

Housing condition is an important indicator to understand the socio-economic condition of an individual, especially, woman. Woman living in *pucca* house is well of both economically and hygienically, whereas, woman living in semi-*pucca* or *kutchra* house is, economically and hygienically, vulnerable.

Table-4.4.14.1: Respondents' Housing Condition and Microcredit Status

Housing Condition	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
<i>Pucca</i>	6	3.0	14	7.0	20	5.0
<i>Semi-pucca</i>	50	25.0	52	26.0	102	25.5
<i>Kutcha</i>	134	67.0	131	65.5	265	66.3
Thatched	10	5.0	3	1.5	13	3.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 7.042. Df: 3. Sig.: .071						

Findings (Table-4.4.14.1) expose that majority of both participants (67%) and non-participants (65.5%) lived in *kutcha* houses. 25 percent of the participants, against 26 percent of the non-participants, lived in *semi-pucca* houses. Pearson's Chi-square value, thus, indicates no significant difference between the participants and non-participants with regard to their housing conditions.

4.15 Size of Households' Landed Property

Land is the most valuable asset of the people in Bangladesh. But, a large number of people in Bangladesh are landless. BBS (2008a) reported that out of 28.67 million households in Bangladesh, 4.48 million households are absolutely landless. It also revealed that there are 3.26 million landless households (12.85%) in the total number of households (25.35 million) in rural Bangladesh.

Table-4.4.15.1: Size of Households' Landed Property and Microcredit Status

Land (in Decimal)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
0 (Landless)	18	9.0	15	7.5	33	8.3
01-09	99	49.5	100	50.0	199	49.8
10-19	14	7.0	15	7.5	29	7.3
20-29	28	14.0	17	8.5	45	11.3
30-39	13	6.5	10	5.0	23	5.8
40-49	28	14.0	43	21.5	71	17.8
Total	200	100.0	200	100.0	400	100.0
Mean	14.85		16.53		15.69	
Std. Deviation	15.47		17.32		16.42	
Pearson's Chi-Square: 6.561. Df: 5. Sig.: 0.255						

Findings (Table-4.4.15.1) illustrate that majority of both participants (49.5%) and non-participants' households (50%) owned only 1-9 decimals of landed property. 9 percent of the participants' households, compared to 7.5 percent of the non-participants' households, were landless. On an average, non-participants' households had slightly greater amount of landed property (16.53 decimals) than the participants (14.85 decimals). Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants with regard to their size of households' landed property.

4.16 Respondents' Ownership of Landed Property

Findings (Table-4.4.16.1) reveal that overwhelming majority of both participants (95.5%) and non-participants (97%) had no landed property of their own. Pearson's Chi-square test, thus, finds no significant difference between the two groups of women with regard to their ownership of landed property.

Table-4.4.16.1: Respondents' Size of Land Ownership and Microcredit Status

Land (in Decimal)	Microcredit Status				Total	
	Participants		Non-Participants		Number	Percent
	Number	Percent	Number	Percent		
0 (Landless)	191	95.5	194	97.0	385	96.2
1-4	3	1.5	1	0.5	4	1.0
5-9	2	1.0	2	1.0	4	1.0
10-14	4	2.0	3	1.5	7	1.8
Total	200	100.0	200	100.0	400	100.0
Mean	.37		.26		0.31	
Std. Deviation	1.95		1.61		1.79	
Pearson's Chi-Square: 1.166 Df: 3. Sig.: 0.761						

4.17 Household Assets

Peoples' living standard can easily be gauged or estimated by reeking of their household assets. For estimating the living standard of the women, belonging to both participants in microcredit program and non-participants categories, all movable and immovable properties of the households were assessed in terms of current market price.

Table-4.4.17.1: Valuation of the Respondents' Household Assets and MC Status

Assets (in BDT)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Below 100000	115	57.5	110	55.0	225	56.3
100001-200000	36	18.0	32	16.0	68	17.0
200001-300000	15	7.5	19	9.5	34	8.5
300001-400000	11	6.5	16	8.0	27	6.8
400001-500000	9	4.5	9	4.5	18	4.5
500001 and Above	14	7.0	14	7.0	28	7.0
Total	200	100.0	200	100.0	400	100.0
Mean	152827.41		164342.81		158585.11	
Std. Deviation	169757.74		186782.64		178342.72	
Pearson's Chi-Square: 1.743 Df: 5 Sig.: .883						

Findings (Table-4.4.17.1) reveal that 57.5 percent of the participants in microcredit program, against 55 percent of the non-participants, owned the household assets worth below BDT 100000. Findings also reveal that, on an average, participants had less household assets (BDT 152827.41) than had the non-participants (BDT 164342.81). Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants with regard to their household assets.

4.18 Living Standard

Living standard is an important variable which influences the reproductive health and reproductive behavior of the women in Bangladesh. Living standard of the women has been measured by assessing the value of their households' movable and immovable properties or assets at the current market price. The minimum assessed value was BDT 950 and maximum was BDT 807800 (Table-10.1). Women who owned properties or assets of BDT 950-269267 are considered as having low living standard and women who had properties or assets worth BDT 269268-538533 are considered as having a medium living standard. Again, women who possessed properties or assets worth BDT 538534-807800 are considered as having a high living standard.

Table-4.4.18.1: Respondents' Living Standard and Microcredit Status

Living Standard (Assets in BDT)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Low (950-269267)	164	82.0	153	76.5	317	79.3
Medium (269268-538533)	26	13.0	34	17.0	60	15.0
High (538534-807800)	10	5.0	13	6.5	23	5.8
Total	200	100.0	200	100.0	400	100.0
Mean	152827.41		164342.81		158585.11	
Std. Deviation	169757.74		186742.64		178342.72	
Pearson's Chi-Square: 1.84 Df: 2 Sig.: .399						

Findings (Table-4.4.18.1) reveal that 82 percent of the participants, compared to 76.5 percent of the non-participants, belonged to low living standard. 13 percent of the participants and 17 percent of the non-participants possessed medium living standard. Only 5 percent of the participants, against 6.5 percent of the non-participants, belonged to high living standard. Pearson's Chi-square test, however, finds no significant difference between the two groups of women with regard to their living standard.

4.19 Nutritional Status (BMI) of the Respondents

Women have special nutritional needs throughout their life, due to hormonal changes that occur with menstruation, pregnancy, lactation and menopause. Of the many diseases, that affect women, some have direct connection to nutrition, *i.e.* iron-deficiency, anemia, osteoporosis, heart disease, Type-2 diabetes, low weight, and so forth. Furthermore, adequate nutrition is essential for the survival of women as well as for conception and sound reproductive health. For this reason, government and non-government organizations have sorted different awareness and policy implementation campaigns and strategies to reduce malnutrition among women in Bangladesh. However, chronic poverty and women's inferior status in society constantly over shadow their nutritional demands and status. To measure the nutritional status of the women, of both participants and non-participants, BMI (Body Mass Index) method was used. Empirically, it is the best quantitative anthropometric indicator of body composition and thus, nutritional status (Joshi 2003). The following cut off points was used to determine the different level of nutritional status of the women. BMI 16-16.99 = Second Degree Malnutrition, BMI 17-

18.49 = First Degree Malnutrition, BMI 18.5-24.99 = Normal, and BMI 25 and above = Obese (Joshi 2003).

Table-4.4.19.1: Respondents' Nutritional Status (BMI) and Microcredit Status

Nutritional Status/BMI	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Second Degree Malnutrition	0	0.0	1	0.5	1	0.3
First Degree Malnutrition	16	8.0	22	11.0	38	9.5
Normal	173	86.5	167	83.5	340	85.0
Obese	11	5.5	10	5.0	21	5.3
Total	200	100.0	200	100.0	400	100.0
Mean	21.14		20.75		20.95	
Std. Deviation	2.11		2.11		2.12	
Pearson's Chi-Square: 2.101 Df: 3. Sig.: .552						

Findings in Table-4.4.19.1 illustrate that 86.5 percent of the participants in microcredit program, compared to 83.5 percent of the non-participants, had normal BMI. 8 percent of the participants, against 11.5 percent of the non-participants, belonged to malnutrition. Findings also reveal that, on an average, the participants had better nutritional status (BMI 21.14) than the non-participants (BMI 20.75). For such improvement in the nutritional status of poor women in rural Bangladesh, the participants in particular, can be attributed to their involvement in microcredit programs. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their nutritional status.

4.20 Religious Affiliation

Religion is undoubtedly a factor that influences the limit of women's economic empowerment and social position. It also plays a vital role to shape the reproductive behavior of the women in rural Bangladesh. The religious rigidity sometimes obstructs women's participation in microcredit program as well as adoption of the family planning methods that consequently, leads to both financial and physical vulnerability of the women.

Table-4.4.20.1: Respondents' Religious Affiliation and Microcredit Status

Religion	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Islam	178	89.0	168	84.0	346	86.5
Hindu	18	9.0	28	14.0	46	11.5
Christian	4	2.0	0	0.0	4	1.0
<i>Kartabhaja</i>	0	0.0	4	2.0	4	1.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 10.463. Df: 3. Sig.: .015						

Findings (Table-4.4.20.1) demonstrate that majority of both participants (89%) and non-participants (84%) were Muslims. 9 percent of the participants and 14 percent of the non-participants were Hindus. Besides, 2 percent of the non-participants belonged to *Kartabhaja*, a local religious sect existing in the south-western part of Bangladesh. Pearson's Chi-square test, however, finds a significant difference between the participants and non-participants with regard to their religious affiliation.

4.21 Political Affiliation

With the huge expansion of both electronic and print media, people now have greater access to get information about different social, economic, environmental and political issues. As people are exposed to increasing sources of information, they become more aware about social, economic, political and environmental aspects. Women in rural Bangladesh are no exception to this trend either. Although majority of the women in rural Bangladesh do not directly exercise political power, a large number of them are affiliated to different national political parties of Bangladesh.

Table-4.4.21.1: Respondents' Political Affiliation and Microcredit Status

Political Affiliation	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Affiliated	200	100.0	197	98.5	397	99.2
Did Not Affiliate	0	0.0	3	1.5	3	.8
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 3.02. Df: 1. Sig.: .082						

Findings (Table- 4.4.21.1) demonstrate that cent percent of the participants in microcredit program, compared to 98.5 percent of the non-participants, supported different political parties of Bangladesh. Pearson's Chi-square value, thus, indicates no significant difference between the participants and non-participants with regard to their political affiliation.

4.22 Respondents' Affiliation with Political Parties

Bangladesh has a fading two-party system, which means that there are two dominant political parties, with extreme difficulty for anybody to achieve electoral success under the banner of another party. However, though the center-left Awami League (AL) and center-right Bangladesh Nationalist Party (BNP) dominated Bangladesh politics for a long time, currently both are heading coalitions of like-minded parties with the Awami League leading the secular and liberal elements while BNP is rallying the right-of-centre parties (Wikipedia 2012a).

Table-4.4.22.1: Respondents' Party Affiliation and Microcredit Status

Affiliation with Political Party	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Bangladesh Awami League	106	53.0	105	53.3	211	53.1
Bangladesh Nationalist Party	51	25.5	43	21.8	94	23.7
Bangladesh Jamaat-e-Islami	43	21.5	48	24.4	91	22.9
Jatiya Party	0	0.0	1	0.5	1	0.3
Total	200	100.0	197	100.0	397	100.0
Pearson's Chi-Square: 4.96. Df: 4. Sig.: .291						

Findings (Table-4.4.22.1) reveal that 53 percent of the participants (N=200), against 53.5 percent of the non-participants (N=197), supported Bangladesh Awami League. 25.5 percent of the participants and 21.8 percent of the non-participants supported Bangladesh Nationalist Party. 21.5 percent of the participants, compared to 24.4 percent of the non-participants, supported Bangladesh Jamaat-e-Islami. Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants with regard to their party affiliation.

Chapter 5

Microcredit and Women Empowerment in Rural Bangladesh

Microcredit denotes very small, collateral-free loans to the poor, allowing them to engage in self-employment activities and earn a return on their initial loan based investment (Harty 2007). It is an important economic stimulant to bring about both qualitative and quantitative changes in the socio-economic status and empowerment of the women in rural Bangladesh. Women in rural Bangladesh, in general, do not have significant resources to be engaged in income generating enterprises. To remedy this situation, majority of the Microcredit Organizations in Bangladesh provide the credit to the poor women to invest in income generating enterprises to improve their socio-economic conditions and enhance their power welding capacity. This chapter has examined the mode of adaptation of the women in microcredit program and its impact on their empowerment.

5.1 Process of Receiving the Microcredit

Although microcredit is an important financial instrument to promote the living standard of the poor women, expectant recipients of the microcredit require fulfilling certain terms and conditions, in order to become eligible for the credit. Membership in the Microcredit Organization is one of those conditions. Findings (Table-5.5.1.1) of the present study reveal that 96.5 percent of the participants received the credit after acquiring the membership of the respective Microcredit Organizations.

Table-5.5.1.1: Membership Status of the Participants in MCP

Membership Status	Number of Women	Percent
Member	193	96.5
Non-member	7	3.5
Total	200	100.0

5.2 Purpose of Receiving Microcredit

Women in rural Bangladesh seek the microcredit for various purposes. Table-5.5.2.1 shows that 33 percent of the participants received the microcredit for the first time to buy livestock. 30.5 percent received the credit to carry on the petty-businesses. 8 percent of the participants received the credit to buy land and 10.5 percent sought the credit to meet household consumption needs.

Table-5.5.2.1: Purposes of Receiving Microcredit for the First Time

Purposes	Number of Women	Percent
Buying Livestock	66	33.0
Petty-Business	61	30.5
Household Consumption	21	10.5
Buying Van	17	8.5
Buying Land	16	8.0
Agriculture	12	6.0
Fish Cultivation	7	3.5
Total	200	100.0

5.3 Amount of Credit Received for the First Time

Amount of credit, received by the participants in microcredit program, varies with the heads of investment, nature of income generating activities, and the degree of repayment capacity. Table-5.5.3.1 shows that majority (50.5%) of the participants received BDT 2000-5999 as credit for the first time and 26 percent received BDT 6000-9999. About 4 percent of the participants received BDT 18000 and above for the first time. On an average, the participants received a credit of BDT 6967.75 for the first time.

Table-5.5.3.1: Amount of Credit Received for the First Time

Amount of Credit (in BDT)	Number of Women	Percent
2000-5999	101	50.5
6000-9999	52	26.0
10000-13999	33	16.5
14000-17999	7	3.5
18000 and Above	7	3.5
Total	200	100.0
Mean – 6967.75		Standard Deviation – 3852.09

5.4 Approached Microcredit Organizations for the First Time

Many government and non-government organizations provide microcredit to the rural women in Bangladesh. Table-5.5.4.1 shows that majority of the participants (39%) received the microcredit for the first time from ASA. 24 percent received from BRAC and 11.5 percent received the credit for the first time from Grameen Bank.

Table-5.5.4.1: Approached Microcredit Organizations for the First Time

Organizations	Number of Women	Percent
ASA	78	39.0
BRAC	48	24.0
Grameen Bank	23	11.5
Ad-Din	18	9.0
Jagoroni Chakkra Foundation	14	7.0
RRF	12	6.0
Local NGOs	7	3.5
Total	200	100.0

5.5 Heads of Investment of the First Loan

Recipients of microcredit in rural Bangladesh, generally, invest their credited money in such heads as, petty-businesses, agriculture, buying livestock, buying land, buying van, fish cultivation and household consumption. Table-5.5.5.1 shows that one-fourth of the participants used the credit for household consumption needs. All other credits (75%) were invested in some income generating projects. Most frequent invested sector was petty-business (25%).

Table-5.5.5.1: Heads of Investment of the First Loan

Heads of Investment	Number of Women	Percent
Petty-Business	50	25.0
Household Consumption	50	25.0
Agriculture	33	16.5
Buying Livestock	25	12.5
Buying Land	20	10.0
Buying Van	16	8.0
Fish Cultivation	6	3.0
Total	200	100.0

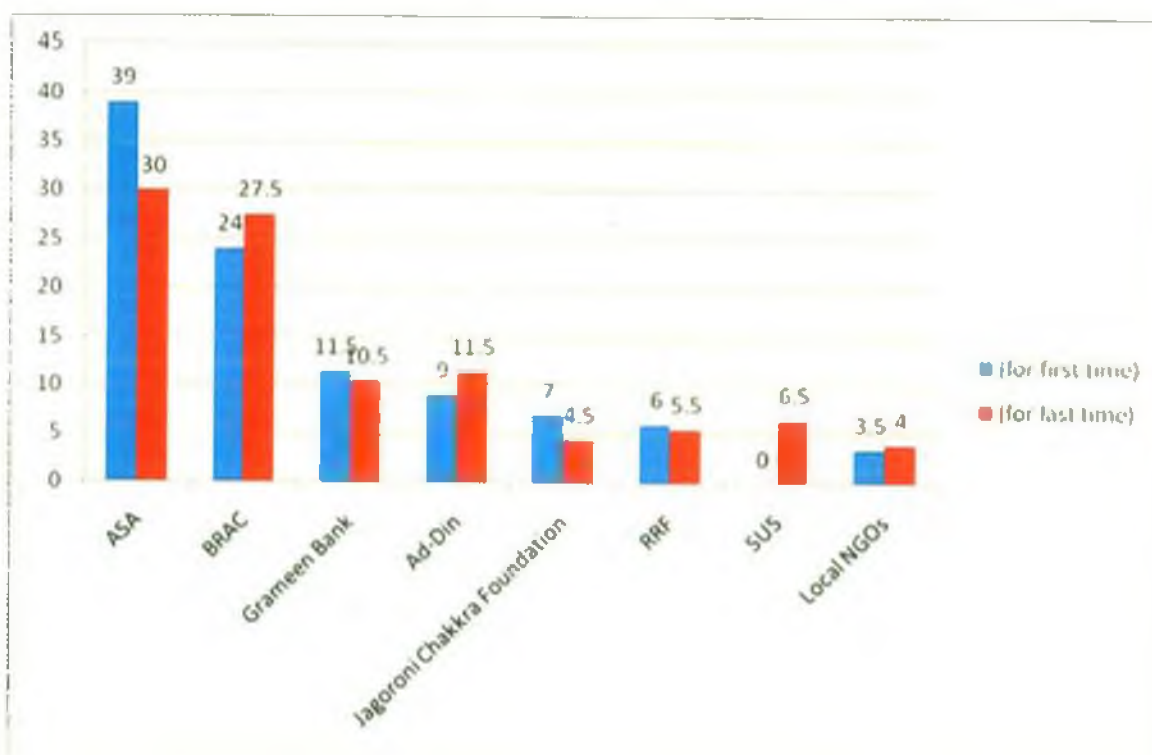
5.6 Credit Providing Organizations during Survey

During the survey, all the participants received the credit from non-government Microcredit Organizations. Findings (Table-5.5.6.1) show that 30 percent of the participants received the credit from ASA and 27.5 percent from BRAC. 11.5 percent of the participants received the credit from Ad-Din and 10.5 percent from Grameen Bank.

Table-5.5.6.1: Credit Providing Organizations during Survey

Organizations	Number of Women	Percent
ASA	60	30.0
BRAC	55	27.5
Ad-Din	23	11.5
Grameen Bank	21	10.5
SUS	13	6.5
RRF	11	5.5
Jagoroni Chakka Foundation	9	4.5
Local NGOs	8	4.0
Total	200	100.0

Chart-5.5.6.1: Credit Providing Organizations for the First and Last Time



5.7 Awareness about Rate of Interest

An overwhelming majority of the women (99%) were aware about the rate of interest of the credit, received from various NGOs (Table-5.5.7.1). Only 1 percent of them had no knowledge about the interest rate of the microcredit.

Table-5.5.7.1: Information Regarding the Rate of Interest

Responses	Number of Women	Percent
Informed	198	99.0
Did Not Inform	2	1.0
Total	200	100.0

5.8 Repayment of the Credit

Findings (Table-5.5.8.1) reveal that 97.5 percent of the participants paid the installments weekly and the rest 2.5 percent paid the installments monthly.

Table-5.5.8.1: Pattern of Repaying the Installments

Pattern of Repaying	Number of Women	Percents
Weekly	195	97.5
Monthly	5	2.5
Total	200	100.0

5.9 Regularity of Repaying the Installments

About 94 percent of the participants paid the installments regularly, whereas, the rest (6.5%) were a bit irregular in repaying the installments as they struggled to earn profit from their investments (Table-5.5.9.1).

Table-5.5.9.1: Nature of Repaying the Installments

Regularity of Repaying	Number of Women	Percent
Regular	187	93.5
Irregular	13	6.5
Total	200	100.0

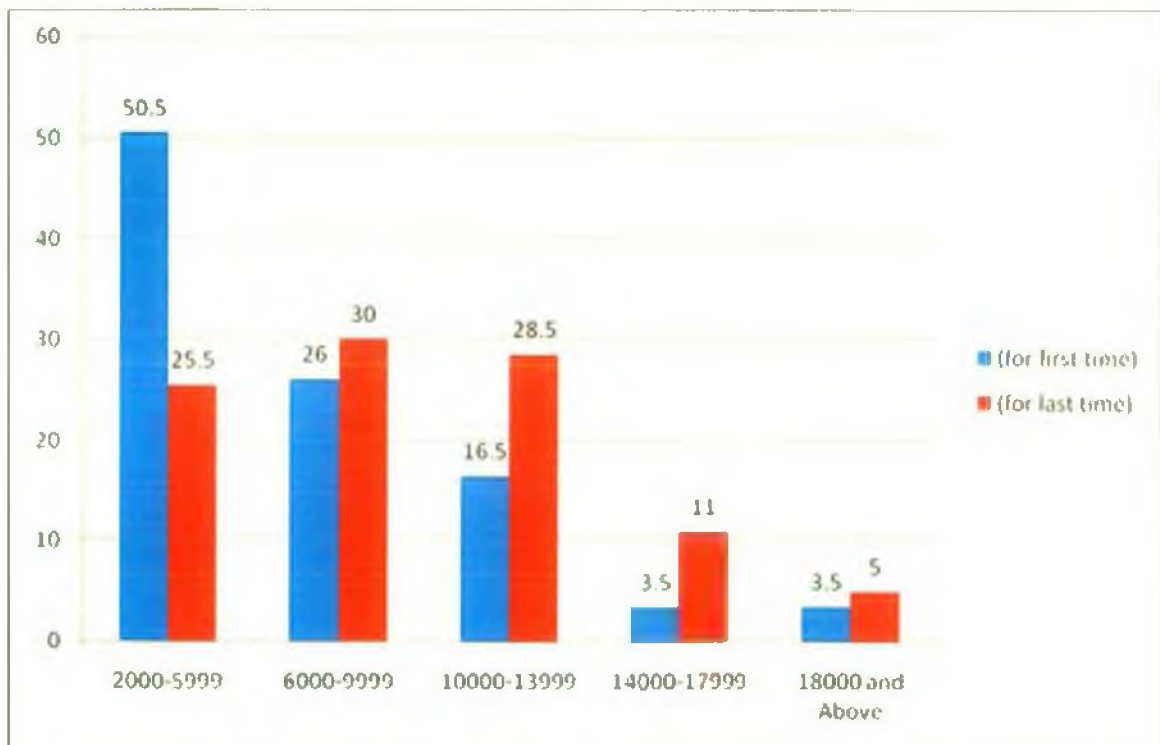
5.10 Amount of Credit Received for the Last Time

Findings (Table-5.5.10.1) reveal that 25.5 percent of the participants received BDT 2000-5999 as credit for the last time and 30 percent received BDT 6000-9999. About 29 percent received between BDT 10000 and 13999. Only 5 percent of the participants received BDT 18000 and above for the last time. On an average, the participants received a credit of BDT 8982.50 for the last time.

Table-5.5.10.1: Amount of Credit Received for the Last Time

Amount (in BDT)	Number of Women	Percent
2000-5999	51	25.5
6000-9999	60	30.0
10000-13999	57	28.5
14000-17999	22	11.0
18000 and Above	10	5.0
Total	200	100.0
Mean – 8982.50		Standard Deviation – 4281.07

Chart-5.5.10.1: Amount of Credit Received for the First and Last Time



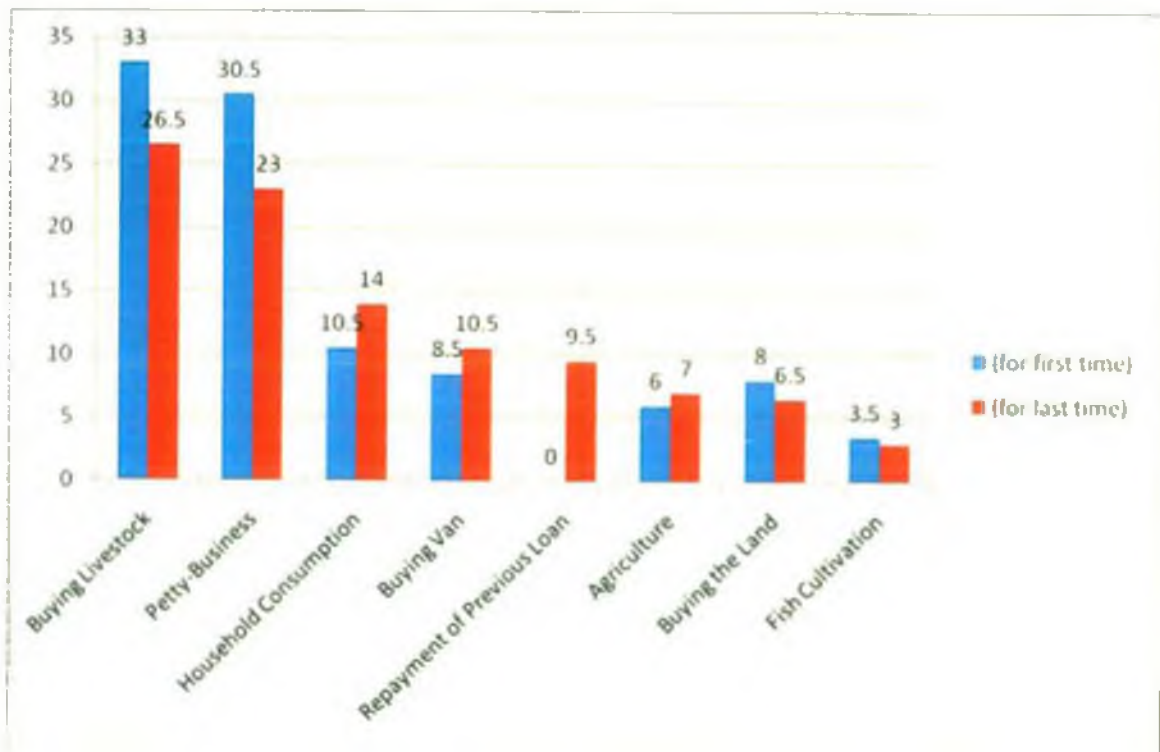
5.11 Purpose of Receiving the Last Loan

Findings (Table-5.5.11.1) reveal that 26.5 percent of the participants received the credit for buying livestock and 23 percent stated their purpose as starting petty-businesses. 14 percent received the microcredit for household consumption needs. It is significant that 9.5 percent of the participants received the credit to repay the previous loan.

Table-5.5.11.1: Purpose of Receiving the Last Loan

Purposes	Number o Women	Percent
Buying Livestock	53	26.5
Petty-Business	46	23.0
Household Consumption	28	14.0
Buying Van	21	10.5
Repayment of Previous Loan	19	9.5
Agriculture	14	7.0
Buying the Land	13	6.5
Fish Cultivation	6	3.0
Total	200	100.0

Chart-5.5.11.1: Purpose of Receiving the First and Last Loan



5.12 Investment of Last Loan

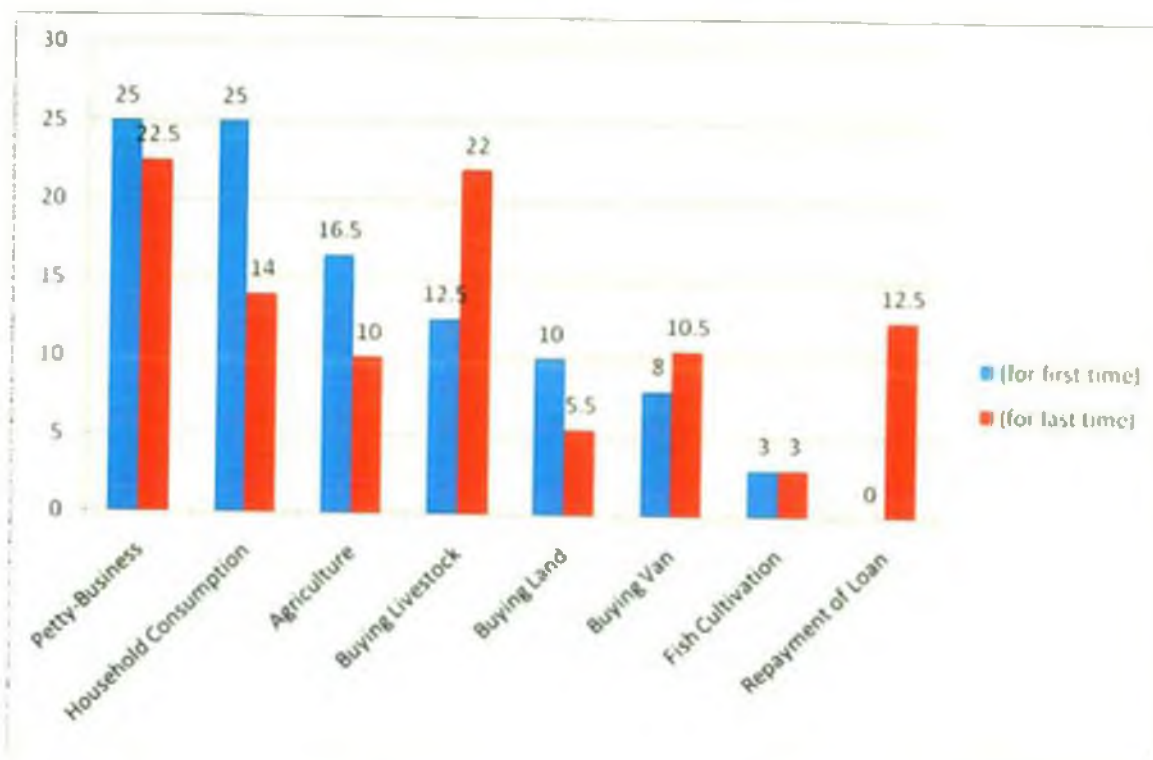
Findings (Table-5.5.12.1) reveal that 22.5 percent of the participants invested the credit in petty-businesses, whereas 22 percent bought livestock. 14 percent spent their last credit money to defray household consumption needs. Interestingly, 12.5 percent of the participants repaid the previous loan.

Table-5.5.12.1: Heads of Investment of the Last Loan

Heads	Number of Women	Percent
Petty-Business	45	22.5
Buying Livestock	44	22.0
Household Consumption	28	14.0
Repayment of Loan	25	12.5
Buying Van	21	10.5
Agriculture	20	10.0
Buying the Land	11	5.5
Fish Cultivation	6	3.0
Total	200	100.0

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Chart-5.5.12.1: Heads of Investment of the First and Last Loan



5.13 Provider of Money for Repayment the Installments

Table-5.5.13.1 shows that majority of the participants (92.5%) were dependent on either their husbands or sons' income to repay the installments of loan and only 7.5 percent of the participants earned the money themselves for repaying the installments.

Table-5.5.13.1: Provider of Money for Repayment the Installments

Provider	Number of Women	Percent
Husband	181	90.5
Self	15	7.5
Son	4	2.0
Total	200	100.0

5.14 Sources of Income for Repayment of Installments

Findings (Table-5.5.14.1) reveal that the main source of repaying the installments was wage labor (60%), 22 percent paid the installments from the earnings of petty-businesses and 10.5 percent paid the installments by income from pulling the van.

Table-5.5.14.1: Sources of Income for Repaying the Installments

Sources	Number of Women	Percent
Wage Labor	120	60.0
Petty-Business	44	22.0
Pulling the Van	21	10.5
Selling Agricultural Crops	11	5.5
Selling Milk	4	2.0
Total	200	100.0

5.15 Length of Association with Microcredit Program

Findings (Table-5.5.15.1) reveal that about 58 percent of the participants were associated with microcredit program for 9-12 years. 32 percent of the participants had been receiving it for 5-8 years and 10.5 percent for 13-16 years.

Table-5.5.15.1: Length of Association with Microcredit Program(s)

Length (in Years)	Number of Women	Percent
5-8	64	32.0
9-12	115	57.5
13-16	21	10.5
Total	200	100.0
Mean: 10.71		Std. Deviation: 2.86

5.16 Control over the Credited Money

Although women are the main target of Microcredit Organizations, they (women) hardly have actual control over the credited money. More than 90 percent of the participants in microcredit program admitted that they did not have any control per se over the credit and could not even decide where to invest it or when and how to repay it. (Table-5.5.16.1). One explanation for such condition is that the loanees, in general, rely on better judgement and ability of their husbands or male children to invest and repay the weekly installments.

Table-5.5.16.1: Control over the Credited Money

Controlled by	Number of Women	Percent
Husband	182	91.0
Self	15	7.5
Son	3	1.5
Total	200	100.0

5.17 Impact of Credit on Income Generating

Majority of the participants (69.5%) acknowledged that microcredit brought about a positive change in their household income (Table-5.5.17.1). In contrast, more than thirty percent of the participants (30.5%) reported that microcredit did not generate their household income. One explanation for such is that more than a quarter percent of the loanees (26.5%) invested the credit in non-productive activities, such as, household consumption needs and repayment of previous loan.

Table-5.5.17.1: Impact of Credit on Income Generating

Responses	Number of Women	Percent
Generated	139	69.5
Did not Generate	61	30.5
Total	200	100.0

5.18 Reasons for Not Seeking the Microcredit by Non-Participants

Although microcredit brings about a positive change, especially, in household income of the poor women in rural Bangladesh, they are apprehensive of repaying the installments in due time. Because failure to pay the installments in due time may lead to loss of their valuable property. That is why, many women in rural Bangladesh do not feel encouraged to seek microcredit. Findings (Table-5.5.18.1) reveal that 61 percent of the non-participants did not involve in microcredit program for the possible difficulties of repaying regular installments. About forty percent of the non-participants expressed that they disliked seeking loan (19.5%) and did not feel any necessity (19.5%) to go for the credit, mostly because of their better financial position.

Table-5.5.18.1: Reasons for Not Seeking the Microcredit

Reasons	Number of Women	Percent
Apprehended Difficulties in Repaying the Installments	122	61.0
Disliked Seeking Loan	39	19.5
Was Not Necessary	39	19.5
Total	200	100.0

Microcredit Program and Women Empowerment

5.19 Dimensions of Women Empowerment

Majority of the women in rural Bangladesh are socio-economically and politically powerless due to poverty, illiteracy and lack of financial bases to expand or sustain their sources of livelihood. Being members of the Microcredit Organizations, the microcredit beneficiaries, especially, the poor women, extend their ability to empower themselves not only financially, but also socio-politically. In fact, microcredit program has both direct and indirect effects on their clients (participants) with regard to women empowerment. In the present study, women empowerment in rural Bangladesh was measured on the basis of seven aspects, suggested and used by Longwe (March, Smyth and Mukhopadhyay 1999), Moser (1989), UNICEF (1994), Malhotra, Schuler and Boender (2002), and Parveen and Leonhäuser (2004). These are: (i) controlling power over household resources, (ii) mobility of the women, (iii) participation in income generating activities, (iv) participation in social and political activities, (v) participation in household decisions, (vi) interaction with outside world, and (vii) consciousness on women's rights and violence against women. Questions were asked to the respondents and scores were measured according to their responses to measure the extent of women empowerment. Following sub-chapters present the details.

5.19.1 Controlling Power over Household Resources

Controlling power over household resources of the women in rural Bangladesh was measured by asking six questions about respondents' nature of control over household resources, *i.e.* income, expenditure, assets, credit, saving, and so on (Appendix-3, Section-C, and Question No. 24). Each respondent was asked to indicate the extent of her control by checking only one of the responses (of 'high', 'medium', 'low' and 'not at all') with respect to each statement. The weights, assigned to these response categories, were 3, 2, 1 and 0 respectively. Thus, the maximum score of controlling power over household

resources could be 18 and the minimum could be 0. The score of each individual respondent on controlling power over household resources was, then, cumulated and categorized roughly into Low (having score 0-6), Medium (having score of 7-12) and High (having score of 13-18).

Table-5.5.19.1.1: Respondents' Controlling Power over Household Resources

Level of Control	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Low (0-6)	22	11.0	61	30.5	83	20.8
Medium (7-12)	174	87.0	139	69.5	313	78.3
High (13-18)	4	2.0	0	0.0	4	1.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 26.239 Df: 2 Sig.: .000						

Findings (Table-5.5.19.1.1) reveal that 87 percent of the participants in microcredit program, compared to 69.5 percent of the non-participants, exercised medium control over their household resources. 2 percent of the high category belonged to participants and none to non-participants. In fact, women's involvement in microcredit program, which eventually contributed to growing household income, expenditure and assets of both productive and non-productive, enhanced their control over the household resources. Additionally, being conduit of microcredit, the participants' husbands allowed them to exercise control over the household resources. Therefore, Pearson's Chi-square test finds a significant difference between the participants and non-participants with regard to their controlling power over the household resources.

5.19.2 Mobility of the Women

Mobility of the women was measured by asking 6 selected questions about their mobility outside the respective household (Appendix-3, Section-C, and Question No. 25). A respondent was asked to indicate her frequency of visits against each of the response categories, such as, times 'Per Week', 'Per Month', 'Per Six Month', 'Per Year' and 'Not at All'. The weights assigned to these response categories were 4, 3, 2, 1 and 0 respectively. Thus, the maximum score of mobility of the woman was 24 and the minimum was 0. The scores of each respondent on mobility were cumulated and

categorized roughly into Low (having score of 0-8), Medium (having score of 9-16) and High (having score of 17-24).

Table-5.5.19.2.1: Mobility of the Women and Microcredit Status

Level of Mobility	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Low (0-8)	168	84.0	195	97.5	363	90.8
Medium (9-16)	32	16.0	5	2.5	37	9.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 21.711 Df: 1. Sig: .000						

Findings (Table-5.5.19.2.1) reveal that 16 percent of the participants in microcredit program, against 2.5 percent of the non-participants had medium mobility outside their households. About 98 percent of the non-participants, compared to 84 percent of the participants, recognized least mobility outside their households. Participants' greater mobility can be attributed to their exposure to weekly group-meetings, organized by Microcredit Organizations, and their growing autonomy, intrigued by their involvement in microcredit programs, within the household, that in fact, increased their movement outside the households. Therefore, Pearson's Chi-square test finds a significant difference between the participants and non-participants with regard to their mobility outside the households.

5.19.3 Participation in Income Generating Activities

Participation in income generating activities of the women was measured through 11 questions items about their nature of participation in income generating activities (Appendix-3, Section-C, and Question No. 26). A respondent was asked to indicate her frequency of participation against each of the items having response categories of 'Frequently', 'Occasionally' and 'Not at All'. The weights assigned to these response categories were 2, 1 and 0 respectively. Thus, the maximum score of participation in income generating activities was 22 and the minimum was 0. The scores of each respondent on the participation in income generating activities were cumulated and categorized roughly into Low (having score of 0-7), Medium (having score of 8-15) and High (having score of 16>).

Table-5.5.19.3.1: Respondents' Participation in Income Generating Activities

Level of Participation	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Low (0-7)	113	56.5	126	63.0	239	59.8
Medium (8-15)	87	43.5	74	37.0	160	40.2
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.757 Df: 1 Sig.: .185						

Findings (Table-5.5.19.3.1) reveal that 56.5 percent of the participants in microcredit program, compared to 63 percent of the non-participants, had low participation in income generating activities. More than forty percent of the participants (43.5%), against 37 percent of the non-participants, scored into medium participation in income generating activities. Though participants had slightly higher involvement in income generating activities, compared to the non-participants, the conventional socio-cultural barriers, existed in rural Bangladesh, impede women's involvement in works, especially, outside of their households. Thus, Pearson's Chi-square value indicates no significant difference between the participants and non-participants with regard to their participation in income generating activities.

5.19.4 Participation in Social and Political Activities

Participation in social and political activities of the respondents was measured by asking 9 selected questions (Appendix-3, Section-C, and Question No. 27). A respondent was asked to indicate her frequency of participation against each of the items having response categories of 'Frequently', 'Occasionally', 'Seldom' and 'Not at All'. The weights assigned to these response categories were 3, 2, 1 and 0 respectively. Thus, the maximum score of participation in social and political activities was 27 and the minimum was 0. The scores of each respondent on the participation in social and political activities were cumulated and categorized roughly into Low (having score of 0-9), Medium (having score of 10-18) and High (having score of 19-27).

Table-5.5.19.4.1: Respondents' Participation in Social and Political Activities

Level of Participation	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Low (0-9)	133	66.5	103	51.5	236	59.0
Medium (10-18)	67	33.5	97	48.5	164	41.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 9.301 Df: 1 Sig.: .002						

Findings (Table-5.5.19.4.1) reveal that 66.5 percent of the participants, compared to 51.5 percent of the non-participants, were reluctant to get involved in social and political activities. However, about 49 percent of the non-participants, against 33.5 percent of the participants, scored into medium participation in social and political activities. Since the participants had poor socio-economic condition and had to get them involved in income generating activities directly or indirectly, compared to the non-participants, these might be the cause of their lower participation in social and political activities. Thus, Pearson's Chi-square value indicates a significant difference between the participants and non-participants with regard to their participation in social and political activities.

5.19.5 Participation in Household Decisions

Participation in household decisions was measured by asking 14 questions on family matters with 4 points response categories (Appendix-3, Section-C, and Question No. 28). A respondent was asked to point out her extent of participation in household decisions against each of 4 points continuum- 'Entirely Own Decision', 'Main Role in Joint Decision', 'Decision Shared with Husband and Other Family Members' and 'No Participation'. The weights to these response categories were 3, 2, 1 and 0 respectively. Thus, the maximum score of participation in household decisions was 42 and the minimum was 0. The scores of each respondent on the participation in household decisions were cumulated and categorized roughly into Low (having score of 0-14), Medium (having score of 15-28) and High (having score of 29-42).

Table-5.5.19.5.1: Respondents' Participation in Household Decisions

Level of Participation	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Low (0-14)	7	3.5	11	5.5	18	4.5
Medium (15-28)	174	87.0	167	83.5	341	85.3
High (29-42)	19	9.5	22	11.0	41	10.3
Total	200	100.0	200	100.0	400	100.0
		Pearson's Chi-Square: 1.252		Df: 2	Sig.: 0.535	

Findings (Table-5.5.19.5.1) reveal that majority of the participants (87%), compared to 83.5 percent of the non-participants had medium level of participation in household decisions. 9.5 percent of the participants, against 11 percent of the non-participants, exercised high participation in household decisions. Since both participants and non-participations possessed more or less same education, occupation, religious affiliation and demographic status, women's involvement in microcredit program did not contribute to bring about a significant change in their role in household decisions, mostly because the participants often lost their control over the credit that subsequently impedes the participants to take an effective role in household decisions. Thus, Pearson's Chi-square value suggests no significant difference between the participants and non-participants with regard to their participation in household decisions.

5.19.6 Interaction with Outside World

Interaction of the woman with outside world was computed for each respondent on the basis of her extent of contact with 8 selected agents, such as, local leaders, NGO workers, health workers, group discussants, training program, reading newspapers, watching television and listening to radio programs (Appendix-3, Section-C, and Question No. 29). A respondent was asked to indicate her frequency of contacting each of the agents with 5 points response categories, as times 'Per Week', 'Per Month', 'Per Six Month', 'Per Year' and 'Not at All'. The weights assigned to these response categories were 4, 3, 2, 1 and 0 respectively. Thus, the maximum score of interaction with outside world was 32 and the minimum was 0. The scores of each individual respondent were cumulated and categorized roughly into Low (having score of 0-10), Medium (having score of 11-21) and High (having score of 22>).

Table-5.5.19.6.1: Respondents' Interaction with Outside World

Level of Interaction	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Low (0-10)	84	42.0	138	69.0	222	55.5
Medium (11-21)	116	58.0	62	31.0	178	44.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 29.517 Df: 1 Sig.: .000						

Findings (Table-5.5.19.6.1) reveal that more than half of the participant (58%), compared to 31 percent of the non-participants, had medium interaction with outside world. 42 percent of the participants, against 69 percent of the non-participants, scored into low interaction with persons or agents outside the households. Women, involved in microcredit programs, obviously had greater interaction with outside world, compared to the non-participants. Thus, Pearson's Chi-square value indicates a significant difference between the participants and non-participants with regard to their extent of interaction with outside world.

5.19.7 Consciousness on Women's Rights and Violence against Women

Consciousness regarding women's rights and violence against women was measured by asking 9 questions on women's rights and violence against women (Appendix-3, Section-C, and Question No. 30). A respondent was asked to point out her extent of awareness on women's rights and violence. Each of the questions had the response categories of 'Yes' and 'No'. The weights to these responses were 1 (for yes) and 0 (for no) respectively. Thus, the maximum score was 9 and the minimum was 0. The score of each respondent was cumulated and categorized roughly into Low (having score of 0-3), Medium (having score of 4-6) and High (having score of 7-9).

Table-5.5.19.7.1: Consciousness on Women's Rights and Violence against Women

Level of Consciousness	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Low (0-3)	53	26.5	64	32.0	117	29.3
Medium (4-6)	124	62.0	111	55.5	235	58.8
High (7-9)	23	11.5	25	12.5	48	12.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.837 Df: 2 Sig.: 0.399						

Findings (Table-5.5.19.7.1) reveal that majority of both participants (62%) and non-participants (55.5%) demonstrated medium consciousness about women's rights and violence against women. 11.5 percent of the participants, compared to 12.5 percent of the non-participants, scored into high consciousness regarding women's rights and violence against women. Participants' growing awareness about contemporary issues of women's rights and violence against them was increased, mainly, through their participation in weekly group-meetings and interaction with outside world. The non-participants, on the contrary, were familiar about the aforementioned issues, probably, through mass media, television and radio in particular, which was, to some extent, not possible for the participants, due to their growing work burden. Pearson's Chi-square test, however, indicates no significant difference between participants and non-participants with regard to their consciousness on women's rights and violence against women.

5.20 Women Empowerment (index)

Women Empowerment was measured, for the present study, by computing the scores of each individual respondent on controlling power over household resources, mobility of women, participation in income generating activities, participation in social and political activities, participation in household decisions, interaction with outside world and consciousness regarding women's rights and violence against women. Thus, the maximum score of women empowerment that one can obtain is 174 and the minimum score is 0. The score was categorized roughly into Low (having score of 0-58), Medium (having score of 59-116) and High (having score of 117-174).

Table-5.5.20.1: Women Empowerment (index) and Microcredit Status

Level of Women Empowerment	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Low (0-58)	28	14.0	62	31.0	90	22.5
Medium (59-116)	172	86.0	138	69.0	310	77.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 16.573 Df: 1 Sig.: .000						

Findings (Table-5.5.20.1) reveal that 86 percent of the participants in microcredit program, compared to nearly 70 percent of the non-participants, were medium

empowered. However, 14 percent of the participants, against 31 percent of the non-participants, were low empowered. Since participants in microcredit program had greater controlling power over household resources, mobility, participation in income generating activities, interaction with outside world, participation in household decisions and consciousness regarding women's rights and violence against women, compared to the non-participants, these might be the cause of their greater empowerment. Thus, Pearson's Chi-square value indicates a significant difference between the participants and non-participants with regard to the extent of women empowerment. So, microcredit programs have definitely a positive impact on all indicators of women empowerment.

Chapter 6

Sexuality of Women in Rural Bangladesh

Women's involvement in income generating activities has the potential to increase gender consciousness and trigger change in their views regarding sex and sexuality. Hadi (2001) argued that involvement of women in productive activities has the potential to reduce gender gap and modify their views significantly regarding sexuality and sexual relationship with their spouses. Following findings uphold various observations on sexuality of both groups of women in rural Bangladesh.

6.1 Awareness of Sex Education

Sex education is the instruction on issues relating to human sexuality, including human sexual anatomy, sexual reproduction, sexual intercourse, reproductive health, emotional relations, reproductive rights and responsibilities, abstinence, birth control, and other aspects of human sexual behavior (Wikipedia 2012b). To understand the degree of awareness of sex education of the respondents, the aforementioned indicators were explained to them. Their positive response(s) to any of these indicators considered to be having awareness of sex education.

Table-6.6.1.1: Respondents' Awareness of Sex Education and Microcredit Status

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	181	90.5	183	91.5	364	91.0
No	19	9.5	17	8.5	36	9.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .122 Df: 1. Sig.: .727						

Findings (Table-6.6.1.1) reveal that overwhelming majority of both participants in microcredit program (90.5%) and non-participants (91.5%) had awareness of sex education, which indicates their enjoyment of healthy and safe sex with their husbands.

Pearson's Chi-Square test, however, finds no significant difference between the participants and non-participants with regard to their awareness of sex education.

6.2 Sexual Intercourse

In Bangladesh, population growth is higher in rural than urban areas. It is claimed that lack of entertainment opportunities in rural areas and the nature of food intake contribute to high growth of population in rural Bangladesh. For rural men, wives are the only source of entertainment; hence, they are more likely to have sex on a higher frequency.

Table-6.6.2.1: Sexual Intercourse during the Week Preceding the Survey

Sexual Intercourse	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	179	89.5	184	92.0	363	90.8
No	21	10.5	16	8.0	37	9.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .745 Df: 1 Sig.: .388						

Findings (Table-6.6.2.1) reveal that 89.5 percent of the participants in microcredit program, compared to 92 percent of the non-participants, had sexual intercourses during the week preceding the survey. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants regarding their involvement in sexual intercourse during the week preceding the survey.

6.3 Reasons for Not Taking Part in Sexual Intercourse during Survey

Women in rural Bangladesh, generally, do not participate in sexual intercourse due to onset of menstruation, child birth and illness. Findings (Table-6.6.3.1) reveal that 17 participants (N=21), compared to 10 non-participants (N=16), did not take part in sexual intercourse due to the onset of their menstruation. 2 participants, against 1 non-participant, did not involve in sexual intercourse due to delivering baby. 1 participant and 4 non-participants did not take part in sex act due to the absence of their husbands.

Table- 6.6.3.1: Reasons for Not Taking Part in Sexual Intercourse during Survey

Reasons	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Due to Onset of Menstruation	17	81.0	10	62.4	27	73.0
Husband was Absent at Home	1	4.8	4	25.0	5	13.5
Due to Child Birth	2	9.5	1	6.3	3	8.1
Did Not Feel the Sex Urge	1	4.8	1	6.3	2	5.4
Total	21	100.0	16	100.0	37	100.0
Pearson's Chi-Square: 3.333 DF: 3 Sig.: .343						

6.4 Coital Frequency

Coital frequency is an important variable of intercourse which influences the fertility (Davis and Blake 1956). Findings reveal that the highest coital frequency of the respondents was 6 times in a week and the lowest number was 0 (Table-10.2).

Table-6.6.4.1: Coital Frequency during the Week Preceding the Survey

Coital Frequency	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
1-2	93	52.0	83	45.1	176	48.5
3-4	82	45.8	96	52.2	178	49.0
5-6	4	2.2	5	2.7	9	2.5
Total	179	100.0	184	100.0	363	100.0
Mean	2.19		2.36		2.27	
Std. Deviation	1.21		1.19		1.20	
Pearson's Chi-Square: 1.712 DF: 2 Sig.: .425						

Table-6.6.4.1 shows that 52 percent of the participants in microcredit program (N=179), compared to 45.1 percent of the non-participants (N=184), took part in sexual intercourse for 1-2 times during the week preceding the survey. 45.8 percent of the participants, against 52.2 percent of the non-participants, did so for 3-4 times. On the average, the participants had slightly lower coital frequency (2.19) than the non-participants (2.36). Since participants had to be engaged more in income generating activities, compared to non-participants, it might be the cause of their low rate of copulation. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants regarding their coital frequency during the week preceding the survey.

6.5 Initiation of Sex Activities

Sexual intercourse is a process, which should ideally be decided upon through mutual consents between husband and wife. But, majority of the women in Bangladesh do not play the decisive role in sex activities. In a very few cases, they themselves initiate the process.

Table-6.6.5.1: Initiation of Sex Activities and Microcredit Status

Initiators of Sex Act	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Husband	59	29.5	71	35.5	130	32.5
Self	1	0.5	4	2.0	5	1.3
Both	140	70.0	125	62.5	265	66.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 3.757 Df: 1 Sig.: .153						

Findings (Table-6.6.5.1) reveal that 70 percent of the participants, compared to 62.5 percent of the non-participants, reported to have initiated the sexual intercourse through mutual consents. About 30 percent of the participants, against 35.5 percent of the non-participants, reported that their husbands usually initiate the sex act. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their involvement in initiating the sexual intercourse.

6.6 Enjoyment of Healthy and Safe Sex

Healthy and safe sex are essential for sound reproductive health and behavior of the women. Findings (Table-6.6.6.1) reveal that overwhelming majority of both participants (90%) and non-participants (89.5%) enjoyed healthy and safe sex. Pearson's Chi-Square test, thus, finds no significant difference between the participants and non-participants regarding their enjoyment of healthy and safe sex.

Table-6.6.6.1: Enjoyment of Healthy and Safe Sex and Microcredit Status

Healthy and Safe Sex	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	180	90.0	179	89.5	359	89.8
No	20	10.0	21	10.5	41	10.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .027 Df: 1 Sig.: .869						

6.7 Sex during Menstruation

Although the natural tendency of human being is to express their sexual passion, having sex during menstruation hampers the sound reproductive health of both male and female (Tanfer and Aral 1996). Findings (Table-6.6.7.1) reveal that 14 percent of the participants in microcredit program, compared to 27 percent of the non-participants, took part in sexual intercourse during menstruation. Perhaps, the participants have acquired more power and independence to refuse sex during menstruation. Moreover, their exposure to information regarding the unhygienic nature of sexual union during menstruation might enforce the denial of such act. On the contrary, having lesser power and freedom, non-participants could not refuse their partners. Pearson's Chi-Square value, therefore, indicates a significant difference between the participants and non-participants with regard to sexual intercourse during menstruation.

Table-6.6.7.1: Sexual Intercourse during Menstruation and Microcredit Status

Responses	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	28	14	54	27.0	82	20.5
No	172	86.0	146	73.0	318	79.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 10.37 Df: 1 Sig.: .001						

6.8 Menstruation Management

During menstruation, women in rural Bangladesh mostly use, due to poor socio-economic conditions, traditional method (unhygienic old cloths and rags), instead of sanitary

napkins. Findings (Table-6.6.8.1) reveal that majority of both participants (73.5%) and non-participants (84%) used traditional method during their menstruation. In contrast, 26.5 percent of the participants, compared to 16 percent of the non-participants, used sanitary napkins during their menstruation. Since, participants' household income and awareness on health issues were higher, than the non-participants, these might be the cause of using more hygienic methods for menstruation management by the participants. Pearson's Chi-square test, thus, finds a significant difference between the participants and non-participants with regard to their menstruation management.

Table-6.6.8.1: Menstruation Management by the Respondents

Menstruation Management	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Traditional Method	147	73.5	168	84.0	315	78.8
Sanitary Napkin	53	26.5	32	16.0	85	21.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 6.588 Df: 1 Sig.: .010						

6.9 Forced Sex by Husbands

Forced sex by the husbands is a common phenomenon in the context of Bangladesh.

Table-6.6.9.1: Forced Sex by Husbands and Microcredit Status

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Forced	155	77.5	140	70.0	295	73.8
Did Not Force	45	22.5	60	30.0	105	26.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 2.906 Df: 1 Sig.: .088						

Findings (Table-6.6.9.1) reveal that 77.5 percent of the participants in microcredit program, compared to 70 percent of the non-participants, were forced by their husbands for sex. Since participants, compared to the non-participants, had to spend much more time for income generating activities, instead of love making, this might have produced a sense of deprivation among their husbands. Consequentially, husbands of the participants might force their wives for sexual intercourse. Pearson's Chi-Square test, however, finds

no significant difference between the participants and non-participants with regard to their experience of forced sex by husbands.

6.10 Forced Sex by Husbands during Illness

During illness, in most of the cases, women in Bangladesh are not forced for sex by their husbands. Findings (Table-6.6.10.1) reveal that overwhelming majority of both participants (94.5%) and non-participants (98%) were not forced for sex by their husbands during their illness.

Table-6.6.10.1: Forced Sex by Husbands during Illness and Microcredit Status

Forced Sex by Husband	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	11	5.5	4	2.0	15	3.8
No	189	94.5	196	98.0	385	96.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 3.394 Df: 1 Sig.: .065						

6.11 Sexual Intercourse without Consent

Sexuality is a two-way traffic. When it occurs without the consent of the partner, it is ungratifying.

Table-6.6.11.1: Feelings during Sexual Intercourse without Consent

Feelings	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Felt Annoyed	123	61.5	91	45.5	214	53.5
Felt Pain	2	1.0	1	0.5	3	0.8
Felt Fear	5	2.5	6	3.0	11	2.8
Felt Disgusted	47	23.5	76	38.0	123	30.8
Felt Nothing	23	11.5	26	13.0	49	12.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 12.230 Df: 4 Sig.: .016						

Findings (Table-6.6.11.1) reveal that 61.5 percent of the participants in microcredit program, compared to 45.5 percent of the non-participants felt annoyed, when they were forced to sexual intercourse by their husbands without their consent. 23.5 percent of the participants, against 38 percent of the non-participants, felt disgusted. Participants' growing self-esteem and autonomy through involvement in microcredit program, their participation in weekly group-meetings and increased familiarity to women's legal rights and violence against them, might have significantly affected their thoughts and opinions regarding sexuality. Pearson's Chi-Square value, thus, indicates a significant difference between the participants and non-participants with regard to the feelings of sexual intercourse without their consent.

6.12 Satisfaction through Sex Act with Husbands

The satisfaction of sex act depends on the sexual role of both husband and wife during copulation. In traditional societies, such as, Bangladesh, majority of the woman behave like a passive partner during sexual activity. All sex activities are carried out by the man. In such a situation, a woman may not get full sexual satisfaction.

Table-6.6.12.1: Satisfaction to Sex Act with Husbands

Satisfaction to Sex Act	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	192	96.0	190	95.0	382	95.5
No	8	4.0	10	5.0	18	4.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .233 Df: 1. Sig.: .630						

Findings (Table-6.6.12.1) reveal that 96 percent of the participants, compared to 95 percent of the non-participants were satisfied with their sex partners (husbands). An overwhelming majority reporting satisfaction may have two lacunae: (a) they felt embarrassed to say they are not satisfied, (b) they might not know what does sex satisfaction really mean as they have hardly any chance to involve in sexual intercourse with person other than their husbands. But still 4.5 percent of the respondents felt bold enough to admit their dissatisfaction. Pearson's Chi-Square value, however, indicates no

significant difference between the participants and non-participants regarding their satisfaction to sex act with husbands.

6.13 Awareness Regarding Sexual Diseases

Though the government and non-government agencies, through mass media (advertisements and organizing awareness campaigns), are working on to spread the knowledge about sexual diseases, like HIV/AIDS, STDs, RTIs, only around two-fifth of the total respondents (39.5%) were familiar with the sexual diseases (Table-6.6.13.1).

Table-6.6.13.1: Awareness Regarding Sexual Diseases and Microcredit Status

Having Knowledge	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	99	49.5	59	29.5	158	39.5
No	101	50.5	141	70.5	242	60.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 16.738 Df: 1 Sig.: .000						

Findings (Table-6.6.13.1) reveal that about half of the participants (49.5%), compared to 29.5 percent of the non-participants, had the knowledge regarding sexual diseases. Participants' exposure to different world views regarding women's rights and vulnerabilities, awareness of sex education and interaction with outside world might contribute to their growing awareness on sexual diseases. But on the whole, a higher percentage (60.5%) of the respondents did not possess any awareness with regard to sexual diseases. Pearson's Chi-square value, however, indicates a significant difference between the participants and non-participants regarding their knowledge on sexual diseases.

6.14 Sharing Sexual Experiences

Sharing sexual experiences can influence the reproductive behaviour of the women in Bangladesh. But, majority of the women in Bangladesh do not share their sexual experiences with others (women).

Table-6.6.14.1: Sharing Sexual Experiences with Others

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Shared	20	10.0	41	20.5	61	15.2
Did not share	180	90.0	159	79.5	339	84.8
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 8.530 Df: 1 Sig.: .003						

Findings (Table-6.6.14.1) reveal that only 10 percent of the participants, against 20.5 percent of the non-participants, shared their sexual experiences with other members in the community. Since religious orthodoxy and social norms discourage women for free and open discussion on sexuality, these might be the cause of lower rate of sharing sexual experiences with others, especially, by the participants in microcredit program. Pearson's Chi-square test, thus, finds a significant difference between the participants and non-participants with regard to their sharing sexual experiences with others.

6.15 Sexual Intercourse on the Meeting Day

Participants in microcredit program admitted to have sex on the day of attending the weekly/monthly meetings. Findings (Table-6.6.15.1) indicate that 58 percent of the participants in microcredit program admitted to have sex on the day of attending the meeting, organized by the Microcredit Organizations.

Table-6.6.15.1: Sexual Intercourse on the Meeting Day

Responses	Number of the Respondents	Percent
Yes	116	58.0
No	84	42.0
Total	200	100.0

6.16 Resumption of Sexual Intercourse after First Child Birth

Doctors and midwives, generally, recommend delaying the sexual intercourse for, at least, four to six weeks after the birth of the baby. During this period, the mother is generally still bleeding and is at risk of haemorrhage or uterine infection. The uterus and cervix undergo significant changes during childbirth, and they need time to heal up. During this healing phase, the lining of the uterus, especially, the site, where the placenta is attached, is susceptible to infection. Intercourse, tampon, and anything placed in the vaginal canal may introduce bacteria and cause an infection.

Table-6.6.16.1: Resumption of Sexual Intercourse after First Child Birth

Resumption of Intercourse (In Days)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Below 40	8	4.0	9	4.5	17	4.3
41-60	76	38.0	85	42.5	161	40.3
61-80	71	35.5	63	31.5	134	33.5
81-100	45	22.5	43	21.5	88	22.0
Total	200	100.0	200	100.0	400	100.0
Mean	64.97		60.06		64.02	
Std. Deviation	17.95		17.61		17.79	
Pearson's Chi-Square: 1.085 DF: 3 Sig.: .781						

Findings (Table-6.6.16.1) reveal that 38 percent of the participants, compared to 42.5 percent of the non-participants, resumed their sexual intercourse within 41-60 days after their first child birth. 22.5 percent of the participants, against 21.5 percent of the non-participants, resumed their sexual intercourse within 81-100 days after their first child birth. On the average, participants delayed more (64.97 days) for resuming their sexual intercourse after their first child birth, compared to the non-participants (60.06 days). Pearson's Chi-Square test, however, finds no significant difference between the participants and non-participants regarding their resumption of sexual intercourse after first child birth.

6.17 Resumption of Sexual Intercourse after Last Child Birth

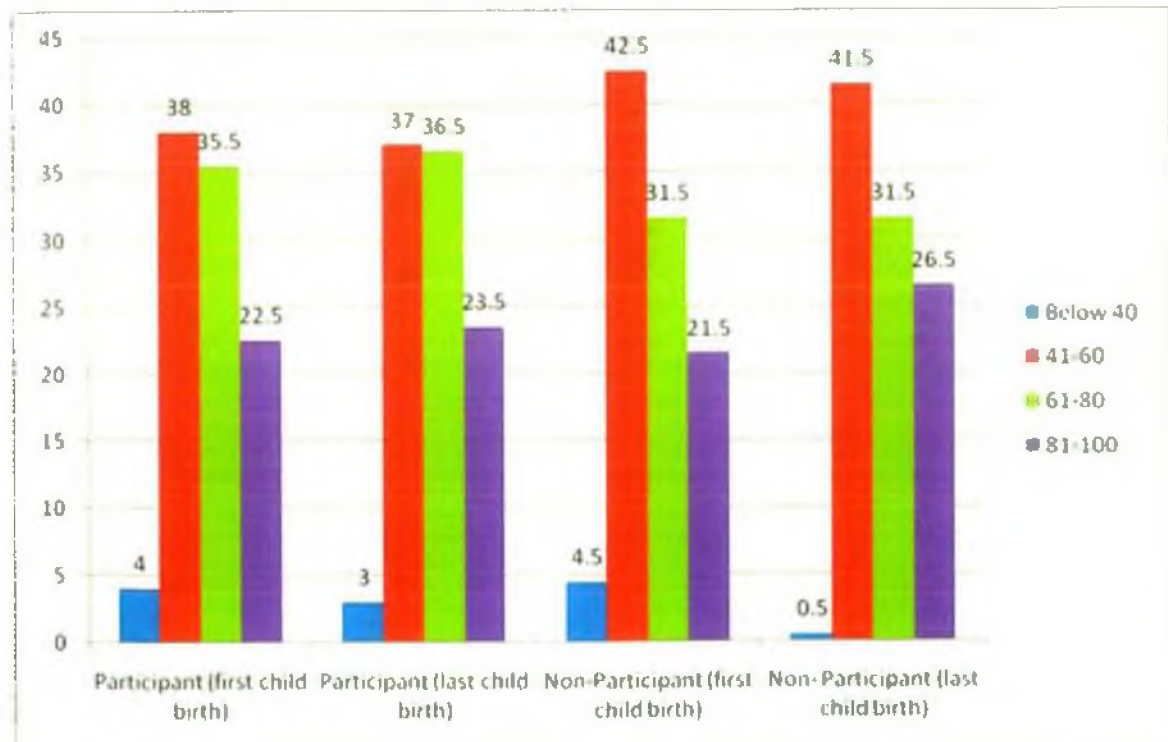
Findings (Table-6.6.17.1) reveal that 37 percent of the participants in microcredit program, compared to 41.5 percent of the non-participants, resumed their sexual

intercourse within 41 to 60 days after their last child birth. 23.5 percent of the participants, against 26.5 percent of the non-participants, resumed their sexual intercourse within 81 to 100 days after their last child birth. On the average, participants delayed more (66.39 days) for resuming their sexual intercourse after their last child birth than the non-participants (65.94 days). Pearson's Chi-Square test, however, finds no significant difference between the participants and non-participants regarding their resumption of sexual intercourse after their last child birth.

Table-6.6.17.1: Resumption of Sexual Intercourse after the Last Child Birth

Resumption of Intercourse (In Days)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Below 40	6	3.0	1	0.5	7	1.8
41-60	74	37.0	83	41.5	157	39.3
61-80	73	36.5	63	31.5	136	34.0
81-100	47	23.5	53	26.5	100	25.0
Total	200	100.0	200	100.0	400	100.0
Mean	66.39		65.94		66.16	
Std. Deviation	17.63		17.62		17.61	
Pearson's Chi-Square: 5.183 Df: 3 Sig.: .159						

Chart-6.6.17.1: Resumption of Sexual Intercourse after First and Last Child Birth



6.18 Wives' Sexual Relation with Persons Other than Their Husbands

Extra-marital or pre-marital sex for both man and woman is totally prohibited in Bangladesh. Nevertheless, a few women are in this relation. But, it is almost impossible to pursue over respondents to admit such relation.

Table-6.6.18.1: Wives' Sexual Relation with Persons Other than Their Husbands

Having Sexual Relation	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	3	1.5	6	3.0	9	2.3
No	197	98.5	194	97.0	391	97.8
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.023 Df: 1 Sig.: .312						

Findings (Table-6.6.18.1) disclose that overwhelming majority of both participants (98.5%) and non-participants (97%) had no sexual relation with persons other than their husbands. Pearson's Chi-Square test, thus, finds no significant difference between the participants and non-participants with regard to their sexual relations with persons other than husbands.

6.19 Husbands' Sexual Relation with Persons Other than Their Wives

In rural Bangladesh, a very few women are inclined to think that their husbands maintain pre-marital or extra-marital sex relation with other women. Findings (Table-6.6.19.1) expose that 90 percent of the participants in microcredit program, compared to 94 percent of the non-participants, believed that their husbands had no sexual relation with persons other than their wives. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants regarding their husbands' sexual relation with persons other than their wives.

Table-6.6.19.1: Husbands' Sexual Relation with Persons Other than Their Wives

Having Sexual Relation	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	20	10.0	12	6.0	32	8.0
No	180	90.0	188	94.0	368	92.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 2.174 Df: 1 Sig.: .140						

6.20 Facing Health Hazards Due to Sexual Intercourse

Women in rural Bangladesh sometimes face some health problems due to sexual intercourse. Findings (Table-6.6.20.1) indicate that 8.5 percent of the participants in microcredit program, compared to 6 percent of the non-participants, faced health hazards due to sexual intercourse after the last child birth. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants regarding their health hazards due to sexual intercourse after the last child birth.

Table-6.6.20.1: Facing Health Hazards Due to Sexual Intercourse

Health Hazards	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	17	8.5	12	6.0	29	7.3
No	183	91.5	188	94.0	371	92.8
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .929 Df: 1 Sig.: .335						

6.21 Types of Health Hazards

Uterus infection and abdominal pain, due to sexual intercourse, are the common health hazards of the women in rural Bangladesh. Findings (Table-6.6.21.1) reveal that 11 participants, compared to 8 non-participants, had uterus infection due to sexual intercourse after last child birth. On the contrary, 6 participants, against 4 non-participants, faced abdominal pain due to sexual intercourse after last child birth.

Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants regarding those health hazards.

Table-6.6.21.1: Type of Health Hazards Faced by the Respondents

Type of Health Hazards	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Uterus Infection	11	64.7	8	66.7	19	65.5
Abdominal Pain	6	35.3	4	33.3	10	34.5
Total	17	100.0	12	100.0	29	100.0
Pearson's Chi-Square: .012 Df: 1 Sig.: .913						

6.22 Magnitude of Sexuality

Sexuality has been measured on the basis of 8 sex related questions to the women (Appendix-3, Section-D, Marked *). To avoid too many answer, each question involved a statement, which had two answers of 'Yes' and 'No'. The weights, assigned to these response categories, were 1 (for yes) and 0 (for no) respectively. Thus, the maximum score of sexuality was 8 and the minimum was 0. The score of each respondent was cumulated and categorized roughly into Low (having score of 0-2), Medium (having score of 3-5) and High (having score of 6>).

Table-6.6.22.1: Magnitude of Sexuality and Microcredit Status

Sexuality	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Low (0-2)	2	1.0	1	0.5	3	0.8
Medium (3-5)	126	63.0	130	65.0	256	64.0
High (6>)	72	36.0	69	34.5	141	35.2
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 0.460 Df: 2 Sig.: .795						

Findings (Table-6.6.22.1) reveal that 63 percent of the participants, compared to 65 percent of the non-participants, had medium level of sexuality. 36 percent of the participants, against 34.5 percent of the non-participants scored into high sexuality. Though women's involvement in microcredit program, especially, in rural Bangladesh, contributed to growing empowerment of women, it perhaps has not significantly changed women's conventional ideas about sexuality. Thus, Pearson's Chi-square test finds no

significant difference between the participants and non-participants regarding their magnitude of sexuality.

Chapter 7

Pregnancy Management of the Women in Rural Bangladesh

Pregnancy management is closely related with overall behaviour of the woman seeking health care. It is an integral part of a woman's status in her family and community. It also indicates the extent of her freedom in managing the fertility activities. It is a result of an evolving mix of her personal, familial, social, religious and economic factors (Rahman 2000). The decline in direct obstetric deaths is most likely the consequence of better care seeking practices and improved access to and use of higher-level referral care. Proper prenatal and postnatal cares of the women can reduce maternal and infant mortality and morbidity rates. It can also ensure their sound reproductive health. For these reasons, doctors generally suggest that during pregnancy, women at least, should undergo routine physical check-ups, receive vaccines, consume supplementary vitamins and iron, and deliver the child aided by trained birth attendant. This chapter has examined the various aspects of pregnancy management of both participants in microcredit program and non-participants in rural Bangladesh.

7.1 Age at First Conception

Age at first conception is highly associated with the age at first marriage of the women. Majority of the women in Bangladesh conceive their first children at the very early stage of their reproductive lives which is the major cause of population explosion and high maternal and infant mortality and morbidity rates in Bangladesh.

Table-7.7.1.1: Respondents' Age at First Conception and Microcredit Status

Age (in Years)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
12-15	33	16.5	35	17.5	68	17.0
16-19	110	55.0	124	62.0	234	58.5
20-23	50	25.0	38	19.0	88	22.0
24 and Above	7	3.5	3	1.5	10	2.5
Total	200	100.0	200	100.0	400	100.0
Mean	17.99		17.54		17.76	
Std. Deviation	2.77		2.45		2.62	
Pearson's Chi-Square: 4.133 Df: 2 Sig.: .247						

Findings (Table-7.7.1.1) reveal that 55 percent of the participants, compared to 62 percent of the non-participants, conceived their first children at an age cohort of 16-19 years. A quarter percent of the participants, against 19 percent of the non-participants, conceived their first children at an age cohort of 20-23 years. On average, participants' age at first conception was slightly higher (17.99 years) than the non-participants (17.54 years). Since both participants and non-participants were generally married off at early age (before 18 years), that subsequently resulted in early conception. Thus, Pearson's Chi-Square test finds no significant difference between the participants and non-participants with regard to their age at first conception.

7.2 Physical Check-ups during First Gestation

During gestational period(s), routine physical check-ups by health care providers (Doctors, Paramedics, and so on) are essential for safe-motherhood. Prenatal medical visits, for example, give the pregnant mothers a chance to talk to health care providers about any questions or concerns related to pregnancy, birth and safe-motherhood. Besides, frequent visits to the health care providers allow the expectant mothers to assess the state of development of the fetus. But, majority of the women in rural Bangladesh are not aware of this and they think they do not need any special care during their gestational period(s).

Table-7.7.2.1: Physical Check-ups during First Gestation

Physical Check-up	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	80	40.0	100	50.0	180	45.0
No	120	60.0	100	50.0	220	55.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 4.040 Df: 1 Sig.: .044						

Findings (Table-7.7.2.1) reveal that 40 percent of the participants in microcredit program, compared to 50 percent of the non-participants, sought physical check-ups during their first gestations. Since the non-participants, compared to the participants, possessed better household assets *vis-a-vis* living standard, it might be an important cause of higher involvement of the non-participants in routine physical check-ups during their first gestations. Pearson's Chi-square test, thus, finds a significant difference between the participants and non-participants with regard to their physical check-ups during first gestations.

7.3 Reasons for Not Seeking the Physical Check-ups

During pregnancy, every woman should undergo thorough physical check-ups to bear a healthy child. But, the socio-economic status sometimes creates hindrances to this. Poverty, ignorance and the existing social system act as the main obstacles for not undergoing the check-ups during pregnancy of the women.

Table-7.7.3.1: Reasons for Not Checking-ups during First Gestation

Reasons	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Poverty	19	15.8	26	26.0	45	20.5
Did Not Know	21	17.5	24	24.0	45	20.5
Did Not Feel the Necessity	80	66.7	50	50.0	130	59.1
Total	120	100.0	100	100.0	220	100.0
Pearson's Chi-Square: 6.447 Df: 2 Sig.: .040						

Findings (Table-7.7.3.1) reveal that 66.7 percent of the participants (N=120), compared to 50 percent of the non-participants (N=100), did not feel the necessity of physical check-ups during first gestations. Since more than fifty percent of the participants were not

involved in microcredit program during their first gestations, they hardly had any information regarding the necessity of physical check-ups. 19 participants, against 26 non-participants, did not seek the routine physical check-ups during their first gestations due to prevailing poverty in their households. Pearson's Chi-square test, thus, finds a significant difference between the participants and non-participants with regard to the reasons for not checking-ups their physical condition during first gestations.

7.4 Place of First Child Delivery

In Bangladesh, women generally prefer their parental and in-laws' house, rather than hospitals and clinics, to deliver their children, where such deliveries are conducted by the traditional untrained birth attendants (UTBAs) or *Dais*.

Table-7.7.4.1: Place of First Child Delivery and Microcredit Status

Place of First Delivery	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Parents' House	183	91.5	163	81.5	346	86.5
In-Laws' House	15	7.5	33	16.5	48	12.0
Hospitals/Clinics	2	1.0	4	2.0	6	1.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 8.57 Df: 2 Sig.: .014						

Findings (Table-7.7.4.1) reveal that majority of the respondents (86.5%) of both participants (91.5%) and non-participants (81.5%) delivered their first children at their parents' houses. 7.5 percent of the participants, compared to 16.5 percent of the non-participants, delivered their first children at their in-laws' houses. Since non-participants had better household assets *vis-a-vis* living standard than the participants, it might be an important cause of delivering their first children at in-laws' house rather than parents' house. Pearson's Chi-Square test, thus, finds a significant difference between the participants and non-participants with regard to the place of first child delivery.

7.5 Birth Attendant for the First Child Delivery

Delivery of a child is an important phase of the reproductive cycle of a woman. Traditional practice of child delivery at home, conducted by the mothers, relatives or the neighbours, has been going on for a long time in rural Bangladesh. Quite often the *Dai* or the Untrained Traditional Birth Attendant (UTBA) is the first priority for the villagers for conducting the delivery procedures.

Table-7.7.5.1: Birth Attendant for the First Child Delivery

Birth Attendant	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Trained TBAs	14	7.0	32	16.0	46	11.5
Untrained TBAs	184	92.0	164	82.0	348	87.0
Nurses of the Hospital/Clinic	2	1.0	4	2.0	6	1.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 8.860		Df: 2		Sig.: .012		

Findings (Table-7.7.5.1) expose that 92 percent of the participants in microcredit program, compared to 82 percent of the non-participants, delivered their first children aided by the UTBAs. In contrast, 16 percent of the non-participants, against 7 percent of the participants, delivered their children aided by the trained traditional birth attendants (UTBAs). Since non-participants had better household assets *vis-a-vis* living standard, compared to participants, they might prefer trained TBAs rather than untrained TBAs. Thus, Pearson's Chi-Square test finds a significant difference between the participants and non-participants with regard to their birth attendants for the first delivery.

7.6 Physical Check-ups during Last Gestation

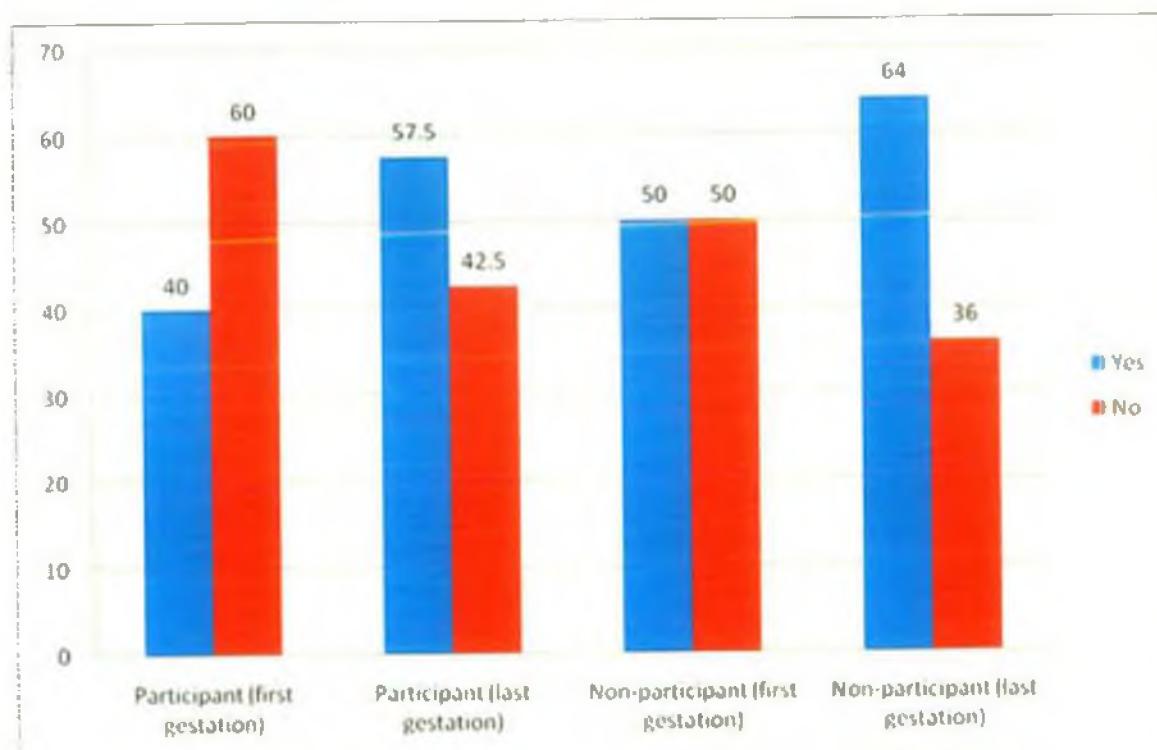
Physical check-ups during the last gestational period is more important, because at that time the health of the mother could become more vulnerable, if she bears more than two children.

Table-7.7.6.1: Physical Check-ups during Last Gestation

Physical Check-ups	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	115	57.5	128	64.0	243	60.8
No	85	42.5	72	36.0	157	39.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.772 Df: 1 Sig.: .183						

Findings (Table-7.7.6.1) reveal that 57.5 percent of the participants, compared to 64 percent of the non-participants, sought physical check-ups during their last gestations. Since participants were exposed to health information through microcredit programs, and non-participants had better household assets *vis-a-vis* living standard, these might be the cause of higher rate of physical check-up during last gestation by both participants and non-participants. Therefore, Pearson's Chi-Square value indicates no significant difference between the participants and non-participants regarding their routine physical check-ups during last gestation.

Chart-7.7.6.1: Physical Check-ups during First and Last Gestations



7.7 Receiving Vaccines during Last Pregnancy

Socio-demographic and economic factors, such as, age at marriage, maternal age, education and occupation of mother, place of residence, household income, household assets, living standard, and so on, are the most important factors that influence women's receiving vaccines during pregnancy in rural Bangladesh.

Table-7.7.7.1: Receiving Vaccines during Last Pregnancy

Receiving Vaccines	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	160	80.0	156	78.0	316	79.0
No	40	20.0	44	22.0	84	21.0
Total	200	100.0	200	100.0	400	100.0

Pearson's Chi-Square: .241 Df: 1 Sig.: .623

Findings (Table-7.7.7.1) reveal that 80 percent of the participants in microcredit program, compared to 78 percent of the non-participants, received vaccines during their last pregnancies. Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants with regard to their receiving vaccines during last pregnancy.

7.8 Consumption of Supplementary Vitamins and Iron

Consumption of supplementary vitamins and iron tablets by the women during pregnancy is again the function of the interplay between various socio-economic variables, such as, residential locus, income, level of education of both wives and their husbands, working status of women and living standard.

Table-7.7.8.1: Consumption of Supplementary Vitamins and Iron

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Consumed	110	55.0	142	71.0	252	63.0
Did Not Consume	90	45.0	58	29.0	148	37.0
Total	200	100.0	200	100.0	400	100.0

Pearson's Chi-Square: 10.982 Df: 1 Sig.: .001

Findings (Table-7.7.8.1) reveal that 55 percent of the participants in microcredit program, compared to 71 percent of the non-participants, consumed supplementary vitamins and iron during their last pregnancy. Since, participants possessed greater family size and higher fertility, compared to the non-participants, and they had to expend a lot for household consumption, these might be the reasons for low consumption of supplementary vitamins and iron by the participants during last pregnancy. Thus, Pearson's Chi-square test finds a significant difference between the participants and non-participants regarding their consumption of supplementary vitamins and iron during last pregnancy.

7.9 Birth Attendant for the Last Child Delivery

Delivery of the child at home is a very common practice in rural Bangladesh, which is carried out by untrained traditional birth attendants, leading to numerous complications and often death of the pregnant women.

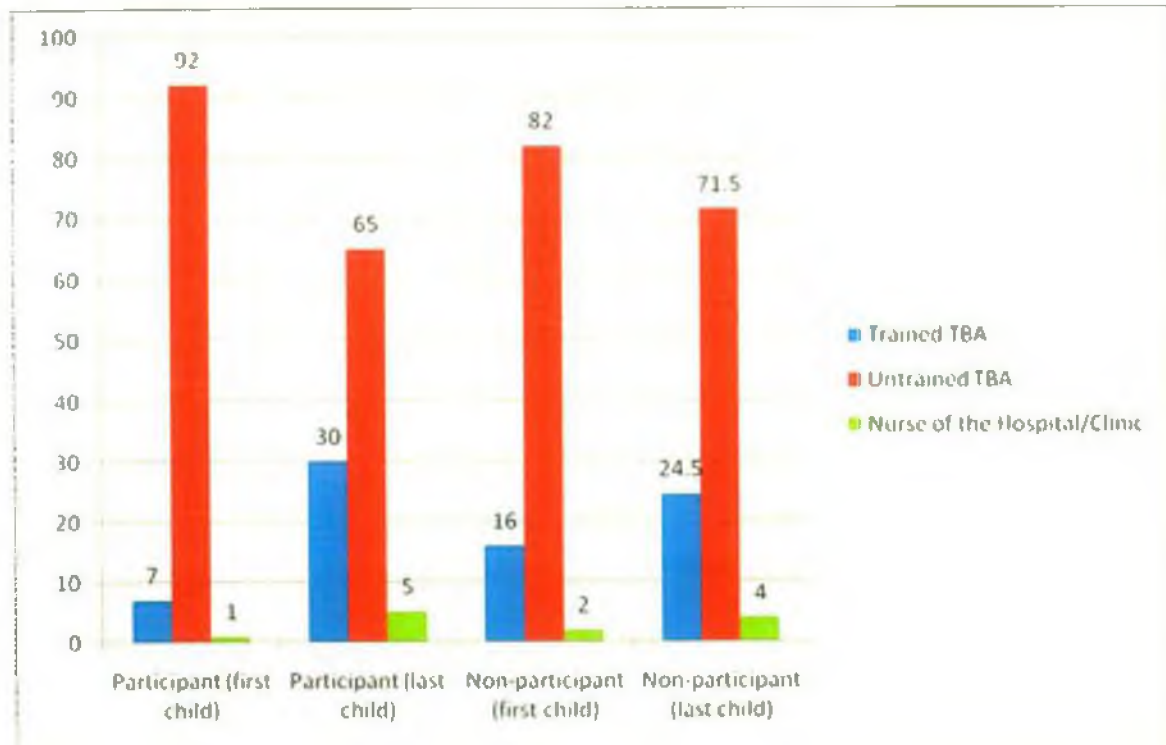
Table-7.7.9.1: Birth Attendant for the Last Child Delivery and Microcredit Status

Birth Attendant	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Trained TBA	60	30.0	49	24.5	109	27.3
Untrained TBA	130	65.0	143	71.5	273	68.2
Nurse of the Hospital/Clinic	10	5.0	8	4.0	18	4.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.951		Df: 2		Sig.: .377		

Findings (Table-7.7.9.1) reveal that 65 percent of the participants, compared to 71.5 percent of the non-participants, had their last deliveries carried out by the untrained traditional birth attendants. 30 percent of the participants, against 24.5 percent of the non-participants, delivered their last children aided by the trained traditional birth attendants. An improvement is observed among both participants and non-participants to get aided by the trained birth attendants during last child deliveries, which might be attributed to participants' involvement in microcredit program as well as the better household assets *vis-a-vis* living standard of the non-participants. Pearson's Chi-Square test, thus, finds no

significant difference between the participants and non-participants with regard to their birth attendants for the last child delivery.

Chart-7.7.9.1: Birth Attendant for the First and Last Child Delivery



7.10 Place of Last Child Delivery

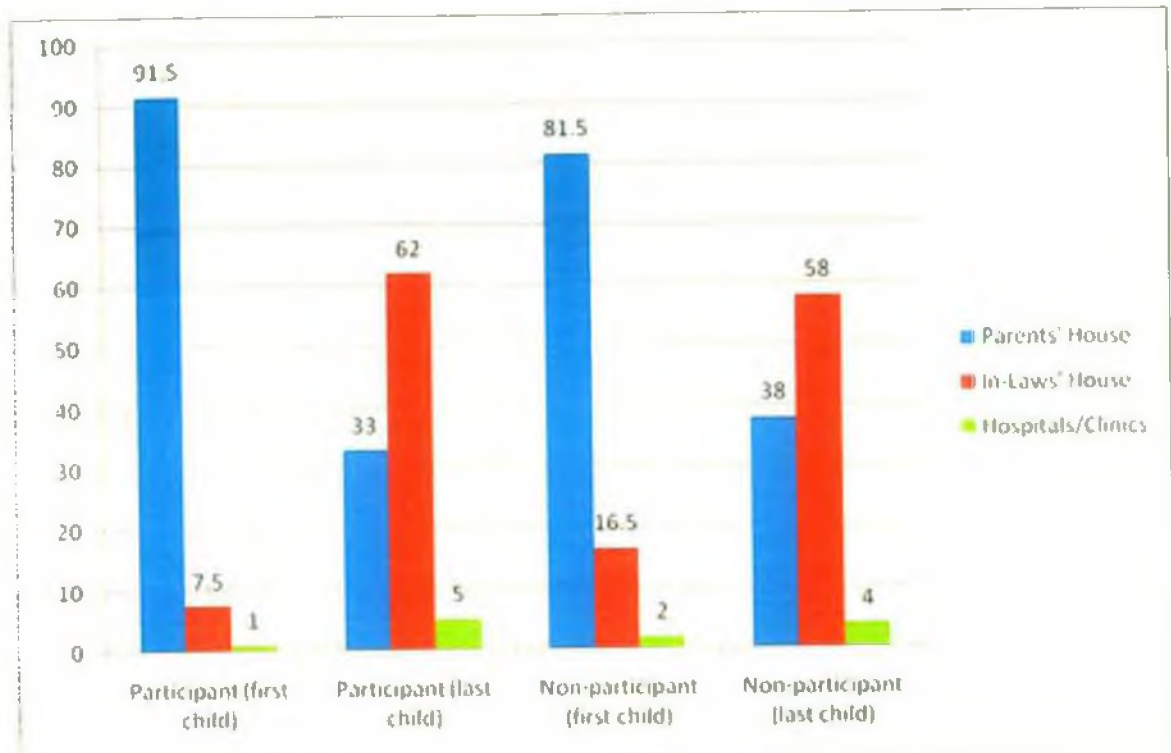
According to Bangladesh Maternal Mortality and Health Care Survey 2010, women are increasingly resorting to professional medical facilities (mainly, due to the spread of private medical practitioners). The proportion of women giving birth in institutional medical facilities has more than doubled (from 9 percent in 2001 to 23 percent) in last year – a trend that is likely to continue as fertility rates go down, incomes rise and education levels improve (NIPORT 2011a).

Table-7.7.10.1: Place of Last Child Delivery and Microcredit Status

Place of Last Child Delivery	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Parents' House	66	33.0	76	38.0	142	35.5
In-Laws' House	124	62.0	116	58.0	240	60.0
Hospitals/Clinics	10	5.0	8	4.0	18	4.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.19		Df: 2		Sig.: .551		

Findings (Table-7.7.10.1) disclose that majority of both participants (62%) and non-participants (58%) delivered their last children in their in-laws' houses. 33 percent of the participants, compared to 38 percent of the non-participants, delivered their last children at their parents' houses. Pearson's Chi-Square value, however, indicates no significant difference between the participants and non-participants with regard to their places of last child delivery.

Chart-7.7.10.1: Place of the First and Last Child Delivery



7.11 Savings for Safe-motherhood during Last Gestation

Mothers or the family members should save money for prenatal and postnatal cares as well as ensuring the safe-motherhood. But, the poor socio-economic conditions of the people of Bangladesh hardly permit them any kind of savings for the future, let alone, for safe-motherhood. After the delivery of the child, mothers very often suffer from different types of complications and they need advance care which is very expensive. For these reasons, savings for safe-motherhood during gestation is a must to face the probable health hazards.

Table-7.7.11.1: Savings for Safe-motherhood during Last Gestation

Savings for Safe-motherhood	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	7	3.5	12	6.0	19	4.8
No	193	96.5	188	94.0	381	95.3
Total	200	100.0	200	100.0	400	100.0
		Pearson's Chi-Square: 1.381		Df: 1	Sig.: .240	

Findings (Table-7.7.11.1) reveal that only 3.5 percent of the participants, compared to 6 percent of the non-participants, had such a saving for the safe-motherhood. In fact, the economic vulnerability of the rural people in Bangladesh hardly allows them a minimum savings during the gestation. Pearson's Chi-square test, thus, finds no significant difference between the participants and non-participants with regard to their savings for safe-motherhood during last gestation.

7.12 Visits by the FWAs/FWVs during Last Pregnancy

Government of Bangladesh appointed thousands of Family Welfare Assistants (FWAs) and Family Welfare Visitors (FWVs) to disburse information regarding health care and services among the rural people to take an effective measure to improve their health, especially, maternal and child health.

Table-7.7.12.1: Visits by the FWAs/FWVs during the Last Gestation

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Visited	118	59.0	79	39.5	197	49.0
Did Not Visit	82	41.0	121	60.5	203	51.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 15.21 df: 1 Sig.: .000						

Findings (Table-7.7.12.1) reveal that 59 percent of the participants, compared to 39.5 percent of the non-participants, were visited by the FWAs/FWVs during their last gestations. Since participants were socio-economically more empowered, compared to the non-participants, this might contribute to their higher exposure to FWAs/FWVs. Pearson's Chi-square test, thus, finds a significant difference between the participants and non-participants regarding the visits by the FWAs/FWVs during their last gestations.

7.13 Frequency of Visits by the FWAs/FWVs

Findings (Table-7.7.13.1) reveal that during the last gestation, 80.5 percent of the participants (N=118), compared to 60.8 percent of the non-participants (N=79), were visited for 1-2 times by the FWAs/FWVs. In contrast, 31 non-participants, against 23 participants, were visited more than twice during their last gestations by the FWAs/FWVs. Since the participants had more exposure to outside world, their interaction with FWAs/FWVs was greater than the non-participants. Pearson's Chi-square test, thus, finds a significant difference between the participants and non-participants regarding the frequency of visits by the FWAs/FWVs during their last gestations.

Table-7.7.13.1: Frequency of Visits by the FWAs/FWVs

Frequency of Visits	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
1-2 Times	95	80.5	48	60.8	143	72.6
3-4 Times	23	19.7	31	39.2	54	27.4
Total	118	100.0	79	100.0	197	100.0
Pearson's Chi-Square: 9.28			Df: 1		Sig.: .002	

7.14 Providing Prenatal and Postnatal Guidance by MCOs

Microcredit Organizations (MCOs) in Bangladesh often try to provide health guidance, especially, prenatal and postnatal guidance, to improve the health status of their female participants. Findings (Table-7.7.14.1), however, reveal that only 32 percent of the participants in microcredit program got prenatal and postnatal guidance during last pregnancy from the Microcredit Organizations.

Table-7.7.14.1: Prenatal and Postnatal Guidance Provided by MCOs

Responses	Number of the Respondents	Percent
Yes	64	32.0
No	136	68.0
Total	200	100.0

7.15 Advice on Savings during Pregnancy Provided by MCOs

Microcredit Organizations in Bangladesh encourage their participants to save money for emergencies, especially, to ensure better prenatal and postnatal cares as well as safe-motherhood. For this reason, majority (55.5%) of the participants (Table-7.7.15.1) acknowledged that Microcredit Organizations advocated their participants with regard to savings during pregnancies, for better prenatal and postnatal cares as well as safe-motherhood.

Table-7.7.15.1: Advice on Savings during Last Pregnancy Provided by MCOs

Responses	Number of the Respondents	Percent
Yes	111	55.5
No	89	44.5
Total	200	100.0

7.16 Presence in the Meetings during Pregnancy

During pregnancy, women are generally advised to be careful and are not allowed to move outside without the consent of the family guardians. But, the participants in microcredit program have to present in the weekly group-meetings, arranged by Microcredit Organizations. In addition, they need to pay the installments in due time. Consequently, they had to move out to attend the weekly group-meetings.

Table-7.7.16.1: Presence in the Meetings during Gestation

Response	Number of the Respondents	Percent
Yes	56	28.0
No	63	31.5
Not Applicable	81	40.5
Total	200	100.0

Findings (Table-7.7.16.1) reveal that 28 percent of the participants attended the weekly meetings during their pregnancies, whereas 31.5 percent did not attend the meetings. 40.5 percent of the respondents acknowledged that after receiving microcredit, they did not conceive.

7.17 Payment of Installments during Pregnancy

Generally, participants in microcredit program need to pay the installments regularly, even during their pregnancies. Sometimes, the participant may fall sick, but still she has to pay her installments without fail. Then, there is a question about who is carrying the weekly installments to the Microcredit Organizations during pregnancy?

Table- 7.7.17.1: Payer of the Installments of Credit during Pregnancy

Person	Number of the Respondents	Percent
Self	47	39.5
Husband	56	47.1
Collectors	16	13.4
Total	119	100.0

Findings (Table-7.7.17.1) reveal that a large proportion (47.1%) of the participants' husbands (N=119) paid the installments on wives' behalf. 39.5 percent of the participants paid the installments personally during pregnancy. Besides, 13.4 percent of the participants reported that the credit providing organizations sent their personnel to collect the installments.

7.18 Household Chores during Gestation

Household chores can be an effective way of getting some exercise during pregnancy. However, a woman needs also to be careful about how she goes about her routine household works. While some activities might make muscles' flexible, others may do more harm than good. So, pregnant women need not to give up all the household chores, but just need to avoid some and be careful at all times. For example, they should avoid lifting heavy load, like water pitchers or remain standing for long at a stretch, and so on.

Table-7.7.18.1: Household Chores during the Last Gestation

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Performed	198	99.0	199	99.5	397	99.3
Did Not Perform	2	1.0	1	0.5	3	0.8
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .336 Df: 1 Sig.: .562						

Findings (Table-7.7.18.1) indicate that overwhelming majority of both participants (99%) and non-participants (99.5%) had to perform household chores during their last gestations. It indicates that rural women are, in general, required to do their household chores, even, during their gestations. Thus, Pearson's Chi-square value reveals no significant difference between the participants and non-participants with regard to performing household chores during their last gestations.

7.19 Health Hazards Performing Household Chores during Gestation

Majority of the women in Bangladesh bear the greater share of household chores. In rural Bangladesh, the situation is turning bad to worse. Due to agricultural economy, women are requested to work in the fields, in addition to performing the Household Chores (HCs). Such massive work burden on women results in health complications.

Table-7.7.19.1: Health Hazards Performing HCs during Last Gestation

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Faced	20	10.0	19	9.5	39	9.8
Did Not Face	180	90.0	181	90.5	361	90.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .336 Df: 1 Sig.: .562						

Findings (Table-7.7.19.1) reveal that 10 percent of the participants, compared to 9.5 percent of the non-participants, faced health hazards for carrying out household chores during last gestations. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to facing health hazards for performing household chores during last gestations.

7.20 Facing Postpartum Complications

Postpartum period is the time immediately after a woman delivers her child lasting up to 42 days (WHO 2006). It is the time when the mother's body changes back to the pre-pregnant rhythm. Feeling overwhelmed with the responsibility of caring for an infant is a normal postpartum symptom. The new mother may feel tired, experience hot flashes and sweating, and may feel constipated. A woman may also have a reduced sex urge for up to 6 months after childbirth. All these symptoms are normal, temporary reaction to childbirth.

Table-7.7.20.1: Facing Postpartum Complications after Last Child Birth

Facing Postpartum Complication	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	89	44.5	69	34.5	158	39.5
No	111	55.5	131	65.5	242	60.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 4.185 Df: 1 Sig.: .041						

Findings (Table-7.7.20.1) reveal that 44.5 percent of the participants, compared to 34.5 percent of the non-participants, faced postpartum complications after last child birth. Since participants had to be involved in income generating activities, along with household chores, even during gestation, it might be an important cause of the participants' more vulnerability to postpartum complications. Pearson's Chi-square test, thus, finds a significant difference between the participants and non-participants with regard to facing postpartum complications after the last child birth.

7.21 Types of Postpartum Complications

Symptoms of postpartum complications, evident in the World, are many. Most common symptoms are: uterus infections, anaemia, fever more than 3 days, abdominal pain, breast abscess, white scrub, convulsion, and so on.

Table-7.7.21.1: Types of Postpartum Complications and Microcredit Status

Types of Complications	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Uterus Infections	1	1.1	7	10.1	8	5.1
Anaemia	17	19.1	9	13.0	26	16.5
Fever More than 3 Days	15	16.9	13	18.8	28	17.7
Abdominal Pain	36	40.4	25	36.3	61	38.6
Breast Abscess	1	1.1	0	0.0	1	0.6
White Scrub	11	12.4	13	18.8	24	15.2
Convulsion	8	9.0	2	2.9	10	6.3
Total	89	100.0	69	100.0	158	100.0
Pearson's Chi-Square: 11.507 Df: 6 Sig.: .074						

Findings (Table-7.7.21.1) reveal that abdominal pain was more common among both participants (40.4%, N=89) and non-participants (36.3%, N=69) than other postpartum complications. Only 16.9 percent of the participants, compared to 18.8 percent of the non-participants, suffered from fever for more than 3 days. Anaemia was more common among the participants (19.1%) than the non-participants (13%), while the non-participants (18.8%) suffered white scrub than the participants (12.4%).

7.22 Care Seeking Behavior of the Postpartum Complications

Treatment for the postpartum complications depends on the nature and types of the problems. But, the care seeking behavior of the women depends on their socio-economic conditions, cultural practices, places of delivery and availability of treatment.

Table-7.7.22.1: Care Seeking Behavior for the Postpartum Complications

Care Seeking Behavior	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Indigenous Doctor	55	61.8	43	62.3	98	62.0
Government Hospital	15	16.9	11	15.9	26	16.5
Community Hospital	10	11.2	8	11.6	18	11.4
Homeopath	8	9.0	6	8.7	14	8.9
<i>Kabiraj</i>	1	1.1	1	1.4	2	1.3
Total	89	100.0	69	100.0	158	100.0
Pearson's Chi-Square: .062 Df: 4 Sig.: 1.00						

Majority of both participants (61.8%; N=89) and non-participants (62.3%; N=69) sought the indigenous doctors for the treatment of the postpartum complications (Table-7.7.22.1). 28.1 percent of the participants, compared to 27.5 percent of the non-participants, sought medical assistance from government and community hospitals. Due to poor economic condition and socio-cultural barriers, both participants and non-participants in rural Bangladesh depend on indigenous doctors, instead of MBBS doctors, for the treatment of the postpartum complications. Thus, Pearson's Chi-square test finds no significant difference between the participants and non-participants with regard to their care seeking behavior of the postpartum complications.

7.23 Health Care Seeking Behavior

In rural Bangladesh, it is a common fact that people often seek traditional healers, homeopaths, untrained allopathic doctors rather than trained medical practitioners or government health service providers. Factors, such as, socio-economic status, living standard, household resources, level of education, cost of care, type and severity of illness, distance and physical access, interpersonal process, and so on, have an effect on the general health care seeking behavior of the women in rural Bangladesh. Generally, indigenous doctors play an important role to cure of some common diseases of the women in rural Bangladesh.

Table-7.7.23.1: Respondents' Health Care Seeking Behavior

Health Care Seeking Behavior	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Indigenous Doctor	106	53.0	114	57.0	220	55.0
Govt. Hospital	78	39.0	73	36.5	151	37.8
Community Hospital	9	4.5	9	4.5	18	4.5
Homeopath	4	2.0	0	0.0	4	1.0
<i>Kabiraj</i>	3	1.5	4	2.0	7	1.8
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 4.599		DF: 4		Sig.: .331		

Findings (Table-7.7.23.1) reveal that more than half of both participants (53%) and non-participants (57%) sought indigenous doctors for curing their common diseases. 43.5 percent of the participants, compared to 41 percent of the non-participants, sought

medical support from the government and community hospitals. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their general health care seeking behavior.

7.24 Taking Care during Illness

Majority of the participants (77.5%) reported that their husbands and other family members took good care of them during their illness (Table-7.7.24.1). 22.5 percent, however, believed there was no such change in the attitudes of the family members, especially, of the husbands, even for being conduits of microcredit.

Table-7.7.24.1: Taking Care during Illness

Response	Number of Women	Percent
Yes	155	77.5
No	45	22.5
Total	200	100.0

7.25 Pregnancy Management Behavior (index)

Pregnancy management is intended to improve patient outcomes and local management of patients who are pregnant. Attempt has been made to measure it on the basis of 7 pregnancy related questions (Appendix-3, Section-E, Marked *). To avoid too many answer, each question involved a statement which had two answers of 'Yes' and 'No'. For 'Yes', score is 1 and for 'No' score is 0. Thus, the maximum score of pregnancy management that one can obtain is 7 and the minimum is 0. The score of each respondent was cumulated and categorized roughly into Low (having score of 0-2), Medium (having score of 3-5) and High (having score of 6>).

Table-7.7.25.1: Pregnancy Management Behavior (index) and Microcredit Status

Pregnancy Management	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Low (0-2)	81	40.5	74	37.0	155	38.8
Medium (3-5)	110	55.0	120	60.0	230	57.5
High (6>)	9	4.5	6	3.0	15	3.8
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.351 DF: 2 Sig.: .509						

Findings (Table-7.7.25.1) reveal that more than half of the participants (55%), compared to 60 percent of the non-participants, scored into medium on the pregnancy management behavior. However, 40.5 percent of the participants, compared to 37 percent of the non-participants, scored into low on pregnancy management behavior. Since participants and non-participants possessed more or less same age composition, age at marriage, size of family, education, occupation and religious affiliation, involvement of women in microcredit program did not bring about significant change in the pregnancy management behavior of the participants. Thus, Pearson's Chi-square test finds no significant difference between the participants and non-participants with regard to their pregnancy management behaviour.

Chapter 8

Breastfeeding Behavior of the Women in Rural Bangladesh

Breastfeeding means feeding an infant breast milk directly from mothers' breasts rather than by a feeder bottles or other containers. On an average, breastfed children double their birth weight in 5–6 months. By one year, a typical breastfed child will weight about 2½ times its birth weight. At one year, breastfed children tend to be leaner than formula fed children, which is healthier, especially, in the long-run. Breastfeeding newborn has many advantages. Most important of them is that breast milk is the perfect food for the digestive system of the human child. It contains the vitamins and minerals that a newborn requires, and all of its components - lactose, protein and fat, are easily digested by a newborn's immature system. In addition, breast milk contains antibodies that help to protect infants against a wide variety of infectious diseases, including diarrhoea, asthma and allergies. This chapter has examined the different aspects of breastfeeding behavior of the women of both participants in microcredit program and non-participants in rural Bangladesh.

8.1 Breastfeeding for the First Child

Breastfeeding phase is the most crucial period for both mother and infant. During breastfeeding, the chance of conception is reduced to considerable extent. Moreover, doctors believe that the breastfed children grow healthier and stronger than do the formula fed children. Breastfeeding is considered the first biological process of immunization of the infants. For these reasons, there is a massive social campaign to encourage mothers to breastfeed their children regularly.

Table-8.8.1.1: Breastfeeding for the First Child and Microcredit Status

Responses	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	199	99.5	200	100.0	399	99.8
No	1	0.5	0	0.0	1	0.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.003 Df: 1 Sig.: .317						

Findings (Table-8.8.1.1) reveal that overwhelming majority of both participants (99.5%) and non-participants (100%) fed breast milk to their children. Since both participants and non-participants possessed low socio-economic status, they had no or little capability to buy formula foods for their children. For these reasons, they very often preferred to breastfeeding, instead of formula feedings for their children. Pearson's Chi-square test, thus, finds no significant difference between the participants and non-participants with regard to their breastfeeding for the first children.

8.2 Length of Initiating the Breastfeeding after First Child Birth

Breastfeeding should ideally start soon after the delivery. In the first half hour of its birth, the child's suckling reflex is the strongest and the child is more alert. So, it is the ideal time to start breastfeeding. Breastfeeding within the first hour or soon after birth is important, because the child starts to receive the immunological effects of colostrums (the first breast milk, which provides protection against infections and diseases) and the psychological bond between mother and the child is cemented.

Table-8.8.2.1: Length of Initiating the Breastfeeding after First Child Birth

Length of Initiating the Breastfeeding (in Hours)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
1-3	101	51.0	87	43.5	188	47.3
4-6	82	41.0	95	47.5	177	44.3
7-9	6	3.0	3	1.5	9	2.3
10 and Above	10	5.0	15	7.5	25	6.3
Total	199	100.0	200	100.0	399	100.0
Mean	4.59		5.32		4.96	
Std. Deviation	3.375		4.963		4.26	
Pearson's Chi-Square: 4.145 Df: 3 Sig.: .246						

Findings (Table-8.8.2.1) reveal that 51 percent of the participants (N=199), compared to 43.5 percent of the non-participants (N=200), started breastfeeding their first children within 3 hours after birth. On an average, the participants in microcredit program initiated breastfeeding their first children within 4.59 hours after birth and the non-participants did so within 5.32 hours. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their length of initiating the breastfeeding after first child birth.

8.3 Length of Breastfeeding for the First Child

For newborn, the length of breastfeeding is important to grow normally without physical and mental complications. Medical experts suggest to breastfeed children from birth to about two and half years. Because, long-term breastfeeding is necessary in order to gain health benefits for both mothers and infants.

Table-8.8.3.1: Length of Breastfeeding for the First Child

Length of Breastfeeding (in Months)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Below 12	3	1.5	3	1.5	6	1.5
13-18	14	7.0	5	2.5	19	4.8
19-24	36	18.1	52	26.0	88	22.1
25-30	68	34.2	68	34.0	136	34.1
31-36	74	37.4	67	33.5	141	35.3
37-42	4	2.0	5	2.5	9	2.3
Total	199	100.0	200	100.0	399	100.0
Mean	29.24		29.14		29.20	
Std. Deviation	6.25		5.65		5.95	
Pearson's Chi-Square: 7.628 Df: 5 Sig.: .178						

Findings (Table-8.8.3.1) reveal that 34.2 percent of the participants (N=199), compared to 34 percent of the non-participants (N=200), breastfed their first children from birth to two and half years. 37.4 percent of the participants, against 33.5 percent of the non-participants, breastfed their first children from birth to three years. On the average, the length of breastfeeding of the participants for the first child was slightly greater (29.24 months) than the non-participants (29.14 months). Pearson's Chi-square test, however,

finds no significant difference between the participants and non-participants with regard to their length of breastfeeding for the first child.

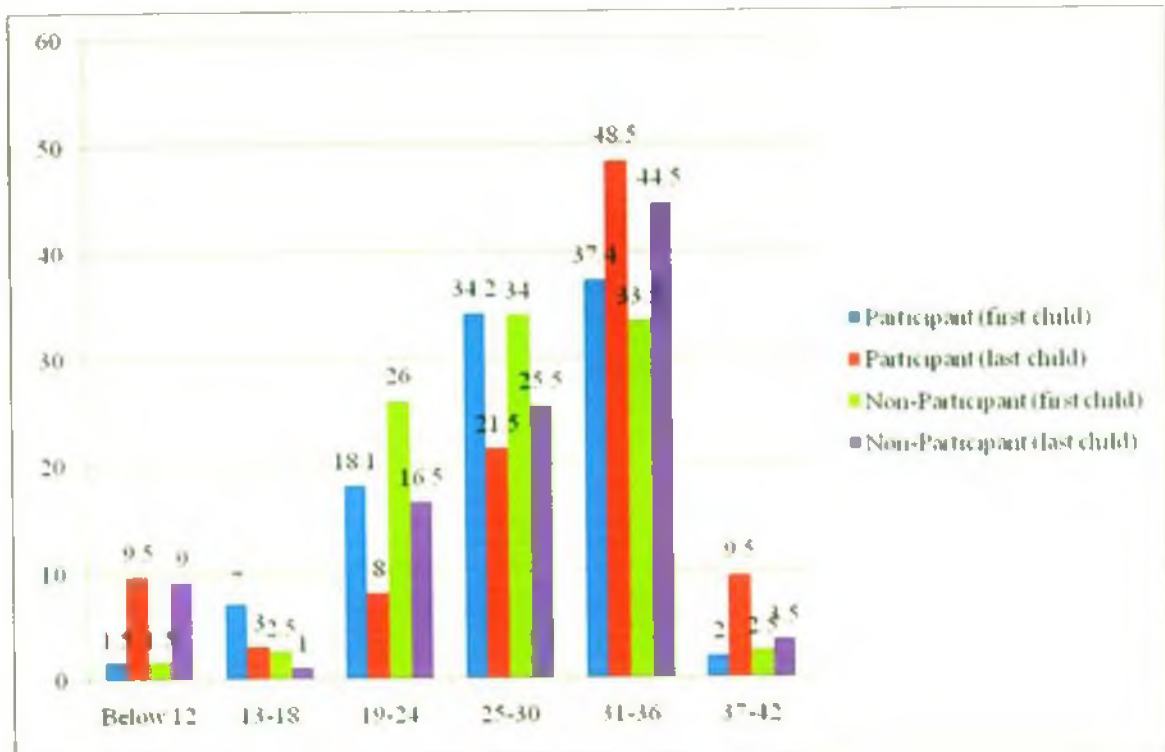
8.4 Length of Breastfeeding for the Last Child

Findings (Table-8.8.4.1) reveal that majority of the participants (48.5%), compared to 44.5 percent of the non-participants, breastfed their last children from birth to three and half years. 21.5 percent of the participants, against 25.5 percent of the non-participants, breastfed their last children from birth to two and half years. On the average, the length of breastfeeding of the participants for the last children was slightly greater (30.41 months) than the non-participants (29.48 months). Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their length of breastfeeding for the last child.

Table-8.8.4.1: Length of Breastfeeding for the Last Child

Length of Breastfeeding (in Months)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Below 12	19	9.5	18	9.0	37	9.3
13-18	6	3.0	2	1.0	8	2.0
19-24	16	8.0	33	16.5	49	12.3
25-30	43	21.5	51	25.5	94	23.5
31-36	97	48.5	89	44.5	186	46.5
37-42	19	9.5	7	3.5	26	6.5
Total	200	100.0	200	100.0	400	100.0
Mean	30.41		29.48		29.94	
Std. Deviation	7.99		7.81		7.90	
Pearson's Chi-Square: 7.774 Df: 5 Sig.: .169						

Chart-8.8.4.1: Length of Breastfeeding for the First and Last Child



8.5 Status of Breastfeeding during Survey

Findings (Table-8.8.5.1) reveal that majority of both participants (83.5%) and non-participants (84%) had no breastfed children during survey. Only 16.5 percent of the participants, compared to 16 percent of the non-participants, were breastfeeding their children during survey. Pearson’s Chi-square value, thus, indicates no significant difference between the participants and non-participants with regard to their status of breastfeeding during survey.

Table-8.8.5.1: Status of Breastfeeding during Survey and Microcredit Status

Current Status of Breastfeeding	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	33	16.5	32	16.0	65	16.3
No	167	83.5	168	84.0	335	83.8
Total	200	100.0	200	100.0	400	100.0

Pearson’s Chi-Square: .018 Df: 1 Sig.: .892

8.6 Attitudes towards the Effect of Breastfeeding on Mothers' Health

Findings (Table-8.8.6.1) reveal that overwhelming majority of both participants (86%) and non-participants (85.5%) opined that breastfeeding did not affect their health. In contrast, 14 percent of the participants, compared to 14.5 percent of the non-participants, believed that breastfeeding created some health hazards, which they faced. Pearson's Chi-square value, therefore, shows no significant difference between the participants and non-participants with regard to their attitudes towards breastfeeding related to their health hazards.

Table-8.8.6.1: Attitudes towards the Effect of Breastfeeding on Mothers' Health

Attitudes towards Breastfeeding	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Affects the Health	28	14.0	29	14.5	57	14.3
Does Not Affect the Health	172	86.0	171	85.5	343	85.8
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .020 Df: 1 Sig.: .886						

8.7 Types of Health Hazards Due to Breastfeeding

Findings (Table-8.8.7.1) reveal that 11 of the participants in microcredit program (N=28), compared to 15 of the non-participants (N=29), believed that breastfeeding was responsible for the deterioration of their health. 17 of the participants, against 13 of the non-participants, believed that breastfeeding caused loss of their physical energy. Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants with regard to the type of health hazards due to breastfeeding.

Table-8.8.7.1: Type of Health Hazards Due to Breastfeeding

Type of Health Hazards	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Deteriorated Mother's Health	11	39.3	15	51.7	26	45.6
Loss of Physical Energy	17	60.7	13	44.8	30	52.6
Malnutrition	0	0.0	1	3.4	1	1.8
Total	28	100.0	29	100.0	57	100.0
Pearson's Chi-Square: 2.132		Df: 2		Sig.: .344		

8.8 Perception Regarding the Physical Beauty

Today's women are very alert and conscious of their physical beauty, even when they are mothers, living in rural Bangladesh. Findings (Table-8.8.8.1) reveal that a good number of respondents (16.5% of the participants, compared to 14.5% of the non-participants) believed that breastfeeding was responsible for damaging their figures. But, majority of both participants (83.5%) and non-participants (85.5%) did not subscribe to this opinion. Thus, Pearson's Chi-square test finds no significant difference between the participants and non-participants with regard to their attitude towards the beauty of breast due to breastfeeding.

Table-8.8.8.1: Perception Regarding the Physical Beauty Due to Breastfeeding

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Yes	33	16.5	29	14.5	62	15.5
No	167	83.5	171	85.5	338	84.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .305		Df: 1		Sig.: .581		

8.9 Breastfeeding while Attending the Meeting

Though breastfeeding is important for both children and mothers, it sometimes creates problem for the female participants during the weekly group-meetings, organized by the Microcredit Organizations. In these meetings, in most of the cases, males are present

there. In such situation, mothers, especially, the new mothers, usually feel a little embarrassed to breastfeed their children in front of them.

Table-8.8.9.1: Breastfeeding while Attending the Meeting

Breastfeeding during Meeting	Number of the Respondents	Percent
Taking Child Along with	61	30.5
Feeding Cow-Milk	22	11.0
Not Applicable	117	58.5
Total	200	100.0

Findings (Table-8.8.9.1) reveal that 30.5 percent of the participants took their children along with them while attending the weekly group-meetings, organized by the Microcredit Organizations and breastfed their children, going outside from the meeting-room. 11 percent of the participants left their children at home, feeding cow-milk. 58.5 percent reported that they had no breastfed children at the time of being conduits of microcredit.

Chapter 9

Fertility and Family Planning Behavior of the Women in Rural Bangladesh

Bangladesh has experienced a tremendous population growth since her independence. Different measures and strategies have been adopted by the governments in 5 Five-Year Plans (FYPs), and other population and health projects. In spite of that, Bangladesh could not effectively control her rapid population growth. Microcredit program may have a very good buffer effect on fertility, because it increases women's income and employment opportunities that in turn, brings about a greater degree of decision making power for women and finally, enables them to take active and judicious decisions about fertility. This chapter has examined various aspects of fertility and family planning behaviour of the women (both participants and non-participants in microcredit program) in rural Bangladesh.

9.1 Age at First Marriage

To prohibit child marriage, the government of Bangladesh passed an act in 1984, titled 'Prohibition of Child Marriage Act-1984'. This act mandates that the standard marital age for female is 18 years. We, however, very often observe that girls are getting married off before 18 years of age to older men, especially, in rural Bangladesh, where the family honor is prioritized over the lives of the daughters.

Table-9.9.1.1: Respondents' Age at First Marriage and Microcredit Status

Age at First Marriage (In Years)	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Below 18	175	87.5	178	89.0	353	88.3
18 and Above Years	25	12.5	22	11.0	47	11.8
Total	200	100.0	200	100.0	400	100.0
Mean	16.12		16.11		16.12	
Std. Deviation	2.18		2.07		2.12	
Pearson's Chi-Square: .217, Df: 1, Sig.: .641						

Findings (Table-9.9.1.1) illustrate that 87.5 percent of the participants in microcredit program, compared to 89 percent of the non-participants, were married off before 18 years of age. On the contrary, only 12.5 percent of the participants, against 11 percent of the non-participants, were married off at the legal age at marriage (18 and above years). On average, participants were married off for the first time at 16.12 years of age whereas, the non-participants were married off at 16.11 years. Thus, Pearson's Chi-square test finds no significant difference between the participants and non-participants with regard to their age at first marriage.

9.2 Age at First Child Birth

As an immediate result of early marriage, young women are compelled to conceive early. In most of the cases, the family planning methods or contraceptives are neither familiar nor popular among the newlyweds. As a result, women in rural Bangladesh tend to deliver their first child at a very early age.

Table-9.9.2.1: Respondents' Age at First Child Birth and Microcredit Status

Age at First Child Birth (in Years)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
13-16	33	16.5	35	17.5	68	17.0
17-20	110	55.0	124	62.0	234	58.5
21-24	50	25.0	38	19.0	88	22.0
25 and Above	7	3.5	3	1.5	10	2.5
Total	200	100.0	200	100.0	400	100.0
Mean	18.99		18.54		18.77	
Std. Deviation	2.77		2.45		2.62	
Pearson's Chi-Square: 4.133 Df: 3 Sig.: .247						

Findings (Table-9.9.2.1) reveal that majority of both participants (55%) and non-participants (62%) delivered their first children within 17-20 years of age. However, a significant percent of the participants (16.5%) and non-participants (17.5%) delivered their first children within 13-16 years of age. On an average, participants delivered their first child at the age of 18.99 years, whereas the non-participants did so at the age of 18.54 years. Pearson's Chi-square test, thus, finds no significant difference between the participants and non-participants with regard to their age, when their first child was born.

9.3 Age at Last Child Birth

Majority of the child bearing women in rural Bangladesh appears to complete their reproductive cycle by the age of 35 years. Thus, findings (Table-9.9.3.1) reveal that the percentage of women, becoming pregnant after the age of 35 years, is only 2.8.

Table-9.9.3.1: Respondents' Age at Last Child Birth and Microcredit Status

Age (in Years)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Below 19	7	3.5	20	10.0	27	6.8
20-24	93	46.5	93	46.5	186	46.5
25-29	74	37.0	60	30.0	134	33.5
30-34	20	10.0	22	11.0	42	10.5
35 and Above	6	3.0	5	2.5	11	2.8
Total	200	100.0	200	100.0	400	100.0
Mean	25.24		24.34		24.78	
Std. Deviation	4.00		4.25		4.14	
Pearson's Chi-Square: 7.908 Df: 4 Sig.: .095						

Findings (Table-9.9.3.1) also reveal that 46.5 percent of both participants and non-participants bore their last child in the age cohort of 20-24 years. 37 percent of the participants, compared to 30 percent of the non-participants, bore their last child in the age cohort of 25-29 years. On the average, participants delivered their last child at the age of 25.24 years and non-participants did so at the age of 24.34 years. Pearson's Chi-Square test, however, finds no significant difference between the participants and non-participants with regard to their age at last child birth.

9.4 Fertility

Fertility means the actual reproductive performance of a woman or group of women (Weeks 1978). It is closely associated with the socio-economic status of the people. Fertility also varies according to the age of the women. Findings reveal that the highest fertility of the present study was 8 and the lowest was 1 (Table-10.1). Pitt, Khandker and Cartwright (2003) observed that participation of women in microcredit program significantly increases their fertility and parenting latent factor. It also creates the

opportunity for a woman to discuss about birth control methods and number of children with her husband.

Table-9.9.4.1: Fertility of the Respondents and Microcredit Status

Fertility	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
1-2	110	55.0	123	61.5	233	58.3
3-4	73	36.5	68	34.0	141	35.3
5-6	14	7.0	7	3.5	21	5.3
7-8	3	1.5	2	1.0	5	1.3
Total	200	100.0	200	100.0	400	100.0
Mean	2.60		2.37		2.49	
Std. Deviation	1.29		1.16		1.23	
Pearson's Chi-Square: 3.436			Df: 3		Sig.: .329	

Findings (Table-9.9.4.1) reveal that 55 percent of the participants, compared to 61.5 percent of the non-participants, had the fertility ranged from 1 to 2. About 37 percent of the participants, against 34 percent of the non-participants, had the fertility ranged from 3 to 4. On the average, the participants had greater fertility rate (2.6 per woman) than the non-participants (2.4 per woman). Since participants had lower household assets *vis-a-vis* living standard, but higher nutritional status and better income opportunities, compared to the non-participants, these might result in higher fertility among the participants. Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants with regard to their fertility.

9.5 Birth Spacing

Birth spacing of children is an important aspect of sound reproductive health of the women. It also signifies the free decision making power of women. In rural Bangladesh, family guardians very often exert pressure on the married women for more children, especially, for male children, narrowing the space between 2 births. The fertility in rural areas, therefore, is higher (2.5 per women) than that of the urban areas (2.0 per women) of Bangladesh (NIPORT 2011b). Short birth intervals are associated with an increased risk of death for both mother and child. It also indicates women's powerlessness in reproduction. Studies have shown that children, born less than 24 months after a previous

sibling, risk poorer health. Short birth intervals also threaten maternal health (NIPORT 2009). However, majority of the women in Bangladesh are not aware of the ideal birth spacing.

Table-9.9.5.1: Birth Spacing between First and Second Children of the Respondents

Time (in Months)	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Below- 24	33	19.9	32	20.5	65	20.2
25-36	53	31.9	36	23.1	89	27.6
37-48	31	18.7	30	19.2	61	18.9
49-60	18	10.8	17	10.9	35	10.9
61 And Above	31	18.7	41	26.3	72	22.4
Total	166	100.0	156	100.0	322	100.0
Mean	46.99		51.58		49.21	
Std. Deviation	21.59		24.54		23.15	
Pearson's Chi-Square: 4.390 df: 4 Sig.: .356						

Findings (Table-9.9.5.1) reveal that 19.9 percent of the participants (N=166), compared to 20.5 percent of the non-participants (N=156), had 24 or less months of space between their first and second children. 31.9 percent of the participants, against 23.1 percent of the non-participants, had 25-36 months of space between their first and second children. On average, participants had less (46.99 months) spacing between their first and second children compared to the non-participants (51.58 months). Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants regarding their birth spacing between first and second children.

9.6 Number of Conceptions

Mathematically a woman can reproduce, at least, 40 children during her reproductive span if the birth is single (Bongaarts, 1975). But, this number (fertility) is influenced by some intermediate variables (Davis and Blake 1956). Findings of the present study reveal that the highest number of conceptions of the respondents was 8 and the lowest was 1 (Table-2, Appendix-2).

Table-9.9.6.1: Respondents' Number of Conceptions and Microcredit Status

Number of Conception	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
1-2	106	53.0	119	59.5	225	56.3
3-4	77	38.5	69	34.5	146	36.5
5-6	14	7.0	9	4.5	23	5.8
7-8	3	1.5	3	1.5	6	1.5
Total	200	100.0	200	100.0	400	100.0
Mean	2.65		2.46		2.56	
Std. Deviation	1.33		1.26		1.30	
Pearson's Chi-Square: 2.276			Df: 3		Sig.: .517	

Data in Table-9.9.6.1 reveal that majority of both participants (53%) and non-participants (59.5%) had 1-2 conceptions. 3 or more conceptions were experienced by 47 percent of the participants, compared to 40.5 percent of the non-participants. On an average, the participants had slightly higher (2.7 per woman) conceptions than the non-participants (2.5 per woman). Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their number of conceptions.

9.7 Post-microcredit Conceptions

Findings (Table-9.9.7.1) reveal that 47 percent (94 participants out of 200) of the participants conceived after receiving microcredit. Among them, 71 participants had one conception, 21 had two conceptions and only 2 participants had 3 conceptions.

Table-9.9.7.1: Number of Conceptions after Receiving Microcredit

Number	Number of Respondents	Percent
1	71	75.5
2	21	22.3
3	2	2.1
Total	94	100.0
Mean = 1.27		Std. Deviation = 0.49

9.8 Number of Living Children

Findings of the present study reveal that the highest number of living children of the respondents was 7 and the lowest was 1 (Table-1, Appendix-2).

Table-9.9.8.1: Number of Living Children of the Respondents

Number of Living Children	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
1-2	125	62.5	134	67.0	259	64.8
3-4	67	33.5	60	30.0	127	31.8
5-6	8	4.0	5	2.5	13	3.3
7-8	0	0.0	1	0.5	1	0.3
Total	200	100.0	200	100.0	400	100.0
Mean	2.37		2.21		2.29	
Std. Deviation	1.10		1.05		1.08	
Pearson's Chi-Square: 2.391		Df: 3		Sig.: .495		

Table-9.9.8.1 shows that 62.5 percent of the participants, compared to 67 percent of the non-participants, had 1-2 living children. 33.5 percent of the participants, against 30 percent of the non-participants, had 3-4 living children. On the average, the participants had slightly larger number of living children (2.37) than the non-participants (2.21). Pearson's Chi-square test, thus, finds no significant difference between the participants and non-participants with regard to their number of living children.

9.9 Number of Deceased Children

Findings (Table-9.9.9.1) reveal that 17.5 percent of the participants had experienced the death of their children, while 12.5 percent of the non-participants had the similar experience. Pearson's Chi-square value, however, indicates no significant difference between the participants and non-participants with regard to their number of deceased children.

Table-9.9.1: Number of Deceased Children Experienced by the Respondents

Number of Deceased Children	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Nil	165	82.5	175	87.5	340	85.0
1-2	33	16.5	23	11.5	56	14.0
3-4	2	1.0	2	1.0	4	1.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 2.080		Df: 2		Sig.: .353		

9.10 Abortion

An abortion can occur spontaneously due to complications during pregnancy or can be induced, in humans and other species.

Table-9.9.10.1: Respondents' Experience of Abortion and Microcredit Status

Number of Abortion	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Nil	192	96.0	187	93.5	379	94.8
1	7	3.5	7	3.5	14	3.5
2	1	0.5	6	3.0	7	1.8
Total	200	100.0	200	100.0	400	100.0
Mean	0.05		0.10		0.07	
Std. Deviation	0.23		0.36		0.32	
Pearson's Chi-Square: 3.637		df: 2		Sig.: .162		

Findings (Table-9.9.10.1) reveal that only 4 percent of the participants, compared to 6.5 percent of the non-participants, had experienced either natural or induced abortion. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their experience of abortion.

9.11 Desire for More Children

Usually, women in rural Bangladesh desire higher number of offspring. Majority of them desire son, instead of daughter. Reasons are: security for old age as well as heirs, and so on. For these reasons, the population is growing at an alarming rate in rural Bangladesh.

Table- 9.9.11.1: Respondents' Desire for More Children and Microcredit Status

Responses	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Desired	38	19.0	60	30.0	98	24.5
Did Not Desire	162	81.0	140	70.0	302	75.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 6.541 Df: 1				Asymp. Sig.: .011		

Findings (Table-9.9.11.1) reveal that 19 percent of the participants, compared to 30 percent of the non-participants, desired more children. Since the non-participants had lower fertility rate than the participants, it might be an important cause of desiring more children for the non-participants. In contrast, there were a few participants with a child; therefore, they might expect a few more children in future. Pearson's Chi-square test, however, finds a significant difference between the participants and non-participants regarding their desire for more children.

Family Planning Behavior of the Women

Family planning is the effort by the spouses to control the number of births and spacing between children. It advocates the modern methods or contraceptives, such as, oral pills, vasectomy, injections, prophylactics, and so on. Family planning program was introduced during 1950s by the then Pakistan government. After the independence of Bangladesh, it has gained immense popularity, especially, in urban areas. Along with the government of Bangladesh, Microcredit Organizations are now trying to make family planning methods popular among the rural people through credit programs and advocate their members to minimize the family size. Following findings reveal the various dimensions of family planning behavior of the women of both participants in microcredit program and non-participants in rural Bangladesh.

9.12 Receiving Family Planning Information Soon after Marriage

Family planning program in Bangladesh was launched between 1976 and 1980, when 13,500 female Family Welfare Assistants (FWAs) were hired and trained (Larson and Mitra 1992). The central strategy of this program is to deliver the family planning information and materials to women at their doorsteps.

Table-9.9.12.1: Family Planning Information Provided by FWAs/FWVs

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Informed	72	36.0	63	31.5	135	33.8
Did Not Inform	128	64.0	137	68.5	265	66.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .906 df: 1 Sig.: .341						

Findings (Table-9.9.12.1) reveal that only 36 percent of the participants, compared to 31.5 percent of the non-participants, got the information about family planning from FWAs/FWVs soon after marriage. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to

receiving family planning information provided by the FWAs/FWVs, soon after their marriage.

9.13 If Ever Used Contraceptives?

Findings (Table-9.9.13.1) reveal that overwhelming majority of both participants (96%) and non-participants (99.5%) used contraceptives, at least, once during their marital life. Since non-participants possessed better household assets *vis-à-vis* living standard, compared to the participants, their contraceptive prevalence rate might be higher than that of the participants. Consequently, their fertility rate was lower than the participants. Pearson's Chi-square test, therefore, indicates a significant difference between the participants and non-participants regarding the use of contraceptives during their marital life.

Table-9.9.13.1: If Ever Used Contraceptives?

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Used	192	96.0	199	99.5	391	97.8
Did Not Use	8	4.0	1	0.5	9	2.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 5.57 Df: 1 Asymp. Sig.: .018						

9.14 Familial Obstacles to Contraceptive Use

Contraceptive Prevalence Rate (CPR) in rural Bangladesh is not very satisfactory (54%) for various reasons (NIPORT 2009). Familial obstacles are one of them. For example, husbands neither prefer using contraceptives themselves, nor encourage their wives to do so. Sometimes the mother-in-laws also rebuke daughter-in-laws for using contraceptives.

Table-9.9.14.1: Familial Obstacles to Contraceptive Use

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Faced	34	17.0	25	12.5	59	14.8
Did Not Face	166	83.0	175	87.5	341	85.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 1.61 df: 1 Asymp. Sig.: .204						

Findings (Table-9.9.14.1) indicate that 17 percent of the participants, compared to 12.5 percent of the non-participants, faced familial obstacles for using contraceptives. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants regarding their experience of familial obstacles to contraceptive use.

9.15 Use of Contraceptives during Survey

Contraceptive is an umbrella term for several techniques and methods used to prevent fertilization or to interrupt pregnancy at various stages of reproductive span.

Table-9.9.15.1: Use of Contraceptives during the Survey

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Used	172	86.0	170	85.0	342	85.5
Did Not Use	28	14.0	30	15.0	58	14.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .081 df: 1 Sig.: .776						

Findings (Table-9.9.15.1) reveal that majority of both participants (86%) and non-participants (85%) reported using contraceptives during this survey. Thus, Pearson's Chi-square test finds no significant difference between the participants and non-participants regarding the use of contraceptives during the survey.

8.16 Reasons for Not Using Contraceptives

There were reportedly some reasons for not using the contraceptives by the respondents during the study period. For example, some respondents were willing to have another child, and some of them reached their menopause phase.

Table-9.9.16.1: Reasons for Not Using the Contraceptives and Microcredit Status

Reasons	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Willing to Have Another Child	20	71.4	28	93.3	48	82.8
On Going PPA	3	10.7	1	3.3	4	6.9
Menopause	5	17.9	1	3.3	6	10.3
Total	28	100.0	30	100.0	58	100.0
Pearson's Chi-Square: 4.937 df: 2 Sig.: .085						

Findings (Table-9.9.16.1) reveal that 20 participants, compared to 28 non-participants, were willing to have another child. 3 participants, against 1 non-participant, faced postpartum amenorrhea (PPA). 5 participants and only 1 non-participant reached their menopause phase.

9.17 Type of Contraceptives Used

Contraception is a term used for the prevention of pregnancy, and it is often referred to as birth control method. There are several methods of contraception, some of which are designed for women and others for men. Some methods are considered permanent, while others are reversible. The majority of birth control methods fall into one of two categories: barrier or hormonal. There are also four other methods: sterilization (surgery), withdrawal, natural family planning and abstinence.

Table-9.9.17.1: Type of Contraceptives Used by the Respondents

Type of Contraceptives	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Oral Pill	85	49.4	78	45.9	163	47.7
Condom	19	11.0	27	15.9	46	13.5
Injection	47	27.3	48	29.2	95	27.8
Norplant	8	4.7	8	4.7	16	4.7
Sterilization	9	5.2	9	5.3	18	5.3
Withdrawal	4	2.3	0	0.0	4	1.2
Total	172	100.0	170	100.0	342	100.0
Pearson's Chi-Square: 5.691 df: 5 Sig.: .337						

Findings (Table-9.9.17.1) reveal that majority (49.4%) of the participants (N=172), compared to 45.9 percent of the non-participants (N=170), used oral pills as contraceptive. 27.3 percent of the participants, against 28.2 percent of the non-participants, used injections as contraceptive. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants regarding the type of contraceptives, they were using.

9.18 Consent Regarding the Use of Contraceptives

Like every sphere of life, the opinions of females about contraceptive use are often ignored in rural Bangladesh, even if it be a female contraceptive.

Table-9.9.18.1: Respondents' Consent Regarding the Use of Contraceptives

Responses	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	52	30.2	49	28.8	101	29.5
No	120	69.8	121	71.2	241	70.5
Total	172	100.0	170	100.0	342	100.0
Pearson's Chi-Square: .082 df: 1 Sig.: .775						

About 30 percent of the participants (N=172), compared to 28.8 percent of the non-participants (N=170), opined that they used the contraceptive with their own free will (Table-9.9.18.1). Since participants were more empowered than the non-participants, it might be a cause of their comparatively higher participation in decisions regarding the use of contraceptives. Pearson's Chi-square test, however, indicates no significant difference

between the participants and non-participants regarding their consent of using the contraceptives.

9.19 Satisfaction to Sexual Intercourse Using Contraceptives

Some women do not feel comfortable using artificial contraceptive, especially, condom, during sex acts. Using such contraceptive, sometimes, makes them embarrassed. Under such circumstances, they may not enjoy sexual intercourse.

Table-9.9.19.1: Satisfaction to Sexual Intercourse Using Contraceptives

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Satisfied	142	82.6	162	95.3	304	88.9
Not Satisfied	30	17.4	8	4.7	38	11.1
Total	172	100.0	170	100.0	342	100.0
		Pearson's Chi-Square: 14.041		df: 1	Sig.: .000	

Findings (Table-9.9.19.1) reveal that 82.6 percent of the participants (N=172), against 95.3 percent of the non-participants (N=170), were satisfied to their sex acts even with contraceptives. Since participants, compared to non-participants, carried out growing workloads for generating income, it might be an important cause of their dissatisfaction to sexual intercourse, instead of using contraceptives. Pearson's Chi-square test, therefore, finds a significant difference between the participants and non-participants regarding their satisfaction to sexual intercourse, while using contraceptives.

9.20 Consultation for the Use of Contraceptives

Being a patriarchal society, men in Bangladesh, generally, prioritize their decisions over their wives and the use of contraceptives is no exception. However, the situation is changing gradually through improvement in socio-economic status and empowerment of women.

Table- 9.9.20.1: Husbands' Consultation with Wives for the Use of Contraceptives

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Consulted	182	91.0	181	90.5	363	90.8
Did Not Consult	18	9.0	19	9.5	37	9.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .030 df: 1 Sig.: .863						

Findings (Table-9.9.20.1) reveal that overwhelming majority of both participants' husbands (91%) and non participants' husbands (90.5%) consulted with their wives about the use of contraceptives, either male or female. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants regarding husbands' consultation with their wives for the use of contraceptives.

9.21 Forced by the Husbands to Contraceptive Use

It is a common phenomenon in Bangladesh that husbands often compel their wives to use contraceptives, if they are not willing to use them themselves.

Table-9.9.21.1: Forced by the Husbands to Contraceptives Use

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Forced	89	44.5	97	48.5	186	46.5
Did Not Force	111	55.5	103	51.5	214	53.5
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .643 df: 1 Sig.: .423						

Findings reveal that 44.5 percent of the participants, compared to 48.5 percent of the non-participants, reported that their husbands forced them to use the contraceptives (Table-9.9.21.1). Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants in this regard.

9.22 Use of Contraceptives during Breastfeeding for the Last Child

During breastfeeding, most of the women in Bangladesh use contraceptives to control unwanted pregnancy, if they do not desire further conceptions.

Table-9.9.22.1: Use of Contraceptives during Breastfeeding for the Last Child

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Used	188	94.0	195	97.5	383	95.8
Did Not Use	12	6.0	5	2.5	17	4.3
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 3.01 DF: 1 Asymp. Sig.: .083						

Findings (Table-9.9.22.1) reveal that overwhelming majority of both participants (94%) and non-participants (97.5%) used contraceptives to control child births during breastfeeding their last child. Pearson's Chi-square test, therefore, finds a significant difference between participants and non-participants regarding the use of contraceptives during breastfeeding for the last child.

9.23 Type of Contraceptives Used during Breastfeeding

Women in Bangladesh generally use family planning methods advised by their husbands, irrespective of education and place of living.

Table-9.9.23.1: Type of Contraceptives Used during Breastfeeding

Type of Contraceptives	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Oral Pills	107	56.9	125	64.1	232	60.6
Condom	80	42.6	66	33.8	146	38.8
Injection	1	0.5	3	1.5	4	1.0
Sterilization	0	0.0	1	0.5	1	0.3
Total	188	100.0	195	100.0	383	100.0
Pearson's Chi-Square: 4.613 Df:3 Sig.: .202						

Findings (Table-9.9.23.1) reveal that 56.9 percent of the participants (N=188), compared to 64.1 percent of the non-participants (N=195), used oral pills during breastfeeding their

last child, 42.6 percent of the participants' husbands, against 33.8 percent of the non-participants, used condoms. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants regarding the type of contraceptives used during breastfeeding their last child.

9.24 Providing Advice about Family Planning FWAs/FWVs

FWAs and FWVs were appointed to visit every household to encourage the woman to adopt family planning measures. They were also supposed to advice on family planning methods and supply contraceptives.

Table-9.9.24.1: Receiving Advice Provided by FWAs/FWVs during Survey

Responses	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
Received	131	65.5	65	32.5	196	49.0
Did not Receive	69	34.5	135	67.5	204	51.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 43.577 df: 1 Sig.: .000						

Findings (Table-9.9.24.1) reveal that majority of the participants (65.5%), against 32.5 percent of the non-participants, got advice from FWAs/FWVs about family planning during survey. Since the participants had more fertility, compared to the non-participants, it might be an important cause for increasing rate of receiving advice by the participants during survey about family planning from FWAs/FWVs. Thus, Pearson's Chi-square test finds a significant difference between the participants and non-participants with regard to receiving advice provided by the FWAs/FWVs.

9.25 Providing Information Regarding Family Planning by the MCOs

Microcredit Organizations, such as, BRDB, BRAC, ASA, Grameen Bank etc. have programs to provide information to their clients, along with microcredit, regarding family planning. But, majority of the participants did not receive any family planning

information from those organizations after receiving the first microcredit. Findings (Table-9.9.25.1) reveal that about one-fourth (24%) of the participants received family planning information soon after receiving the first credit from their respective Microcredit Organizations.

Table-9.9.25.1: Information on Family Planning Provided by MCOs

Responses	Number of the Respondents	Percent
Provided	48	24.0
Did Not Provide	152	76.0
Total	200	100.0

9.26 Information on Family Planning during Survey Provided by MCOs

As a part of social awareness programs, Microcredit Organizations motivate their participants providing them with family planning information. Findings (Table-9.9.26.1) reveal that 54.5 percent of the participants received family planning information during survey from their credit providing organizations.

Table-9.9.26.1: Information on Family Planning during Survey Provided by MCOs

Responses	Number of the Respondents	Percent of the Respondents
Received	109	54.5
Did Not Receive	91	45.5
Total	200	100.0

9.27 Family Planning Behavior (index)

Family planning behavior has been measured in the present survey on the basis of 6 family planning related questions to the women (See Appendix-3, Section-H, Marked *). To avoid too many answers, each question involved a statement, which had two answers of 'Yes' and 'No'. For 'Yes', score is 1 and for 'No' score is 0. Thus, the maximum score one can obtain on family planning behavior is 6 and the minimum is 0. The score of each respondent was cumulated and categorized roughly into Low (having score of 0-2), Medium (having score of 3-4) and High (having score of 5-6).

Table-9.9.27.1: Family Planning Behavior and Microcredit Status

Family Planning Behavior	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Low (0-2)	3	1.5	4	2.0	7	1.8
Medium (3-4)	69	34.5	111	55.5	180	45.0
High (5-6)	128	64.0	85	42.5	213	53.2
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: 18.624 df: 2 Sig.: .000						

Findings (Table-9.9.27.1) reveal that majority of the participants (64%), against 42.5 percent of the non-participants, scored into high family planning behavior. On the other hand, 34.5 percent of the participants, compared to 55.5 percent of the non-participants, scored into medium family planning behavior. Since participants were socio-economically more empowered and possessed high fertility than the non-participants, these might be the cause of their higher involvement in family planning behaviour. Pearson's Chi-square test, therefore, finds a significant difference between the participants and non-participants regarding their family planning behaviour.

9.28 Opinion of the Respondents on the Role of GOs and NGOs on Population Control and Reproductive Health of Women

Government alone is not sufficient enough to reduce the fertility rate and Reproductive Health (RH) hazards of the women in Bangladesh. Collaboration of GOs and NGOs can control population growth and ensure a better reproductive health system and health services to the women in Bangladesh.

Table-9.9.28.1: Role of GOs and NGOs on Population Control and RH of Women

Responses	Microcredit Status				Total	
	Participant		Non-Participant			
	Number	Percent	Number	Percent	Number	Percent
Yes	193	96.5	191	95.5	384	96.0
No	7	3.5	9	4.5	16	4.0
Total	200	100.0	200	100.0	400	100.0
Pearson's Chi-Square: .260 df: 1 Sig.: .610						

Findings (Table-9.9.28.1) reveal that overwhelming majority of both participants (96.5%) and non-participants (95.5%) opined that both GOs and NGOs should come forward and take more initiatives to control the population growth and minimize the reproductive health hazards of the women in rural Bangladesh.

9.29 Suggestions to the GOs and NGOs

Various suggestions put forward by the respondents (N=384) on the actions that should be taken by the GOs and NGOs to control the population growth and improve the reproductive health status as well as behavior of the women in rural Bangladesh.

Table-9.9.29.1: Types of Actions the GOs and NGOs Should Take*

Type of Actions	Microcredit Status				Total	
	Participant		Non-Participant		Number of Responses	Percent
	Number of Responses	Percent	Number of Responses	Percent		
Supply of Contraceptives Free of Cost	157	81.4	152	79.6	309	80.5
Stop Early Marriages	139	72.2	134	70.2	273	70.1
Supply of Medicines Free of Cost	118	61.1	126	65.8	244	63.5
Provide Health Care by FWAs/ FWVs/ HAs and Staffs of MCOs	113	58.6	103	53.9	216	56.3
Provide Reproductive Health Education	82	42.5	74	38.8	156	40.6
Establish Health Care Centers	79	40.9	68	35.2	147	38.3
Total	193	-	191	-	384	-

*Multiple Responses

Findings (Table-9.9.29.1) reveal that 81.4 percent of the participants (N=193), against 79.6 percent of the non-participants (N=191), opined that both GOs and NGOs should supply the contraceptives free of cost to the women in rural Bangladesh. 72.2 percent of the participants, compared to 70.2 percent of the non-participants, emphasized on stopping early marriages aided by GOs and NGOs to control population growth and reproductive health hazards of women in rural Bangladesh. 61.1 percent of the participants, against 65.8 percent of the non-participants, opined that GOs and NGOs should supply medicines free of cost to the women. 58.6 percent of the participants, compared to 53.9 percent of the non-participants, emphasized on providing health care to

them by FWAs/FWVs/HAs and staffs of Microcredit Organizations (MCOs). 42.5 percent of the participants and 38.8 percent of the non-participants asked for providing reproductive health education for the women in rural Bangladesh. 40.9 percent of the participants, compared to 35.2 percent of the non-participants, opined that GOs and NGOs should establish more health care centers in rural Bangladesh.

Chapter 10

Factors Affecting Exposure to Reproductive Behavior of the Women in Rural Bangladesh

In this study, I carried out multivariate regression analyses to examine the impact of participation of women in microcredit program over the outcome of a number of selected variables, such as, women empowerment, sexuality, coital frequency, pregnancy management, length of breastfeeding, fertility of the women and family planning. In a multivariate regression analysis, respondents' background variables are taken into accounts, in order to avoid confounding effects. For this reason, various background factors, carefully selected based on the review of existing literature on this area, have been included in the models as control variables. The control variables, include respondents' age, age at first marriage, age at last child birth, religious affiliation, nutritional status, education, income, size of family, household income, landed property, assets, length of receiving credit, amount of credit received for the last time, and their husbands' age, education, and occupation. Inclusion of these explanatory variables in the regression models would have, to a large extent, increase the validity and reliability of this research. Description and summary statistics of the explanatory and dependent variables are shown in Table-10.1 and Table-10.2 in details.

Table-10.1: Description and Summary Statistics of the Explanatory Variables

Symbols	Name of the Variables	Mean	Standard Deviation	Minimum	Maximum
X ₁	Respondents' Status (Participants=1 and Non-Participants=0)	-	-	-	-
X ₂	Religious Affiliation (Muslims=1 and Non-Muslims=0)	-	-	-	-
X ₃	Nutritional Status (in BMI)	20.95	2.12	16.85	28.69
X ₄	Respondents' Age (in Years)	32.90	5.69	25	44
X ₅	Respondents' Length of Schooling (in Years)	3.70	3.29	0	12
X ₆	Respondents' Monthly Income (in BDT)	294	454.18	0	4500
X ₇	Age of Respondents' Husbands (in Years)	38.49	6.71	27	57
X ₈	Husbands' Length of Schooling (in Years)	2.99	3.55	0	15
X ₉	Husbands' Occupation (Petty-business, Cultivator and Artisan=1 and Unemployed, Van-puller and Day Labor=0)	-	-	-	-
X ₁₀	Size of Family	4.48	1.11	3	10
X ₁₁	Household Income (in BDT)	4419.43	2840.81	550	32000
X ₁₂	Household Landed Property (in Decimal)	15.69	16.42	0	49
X ₁₃	Household Assets (in BDT)	158585.11	178342.72	950	807800
X ₁₄	Length of Receiving Credit (in Years)	10.71	2.86	5	15
X ₁₅	Amount of Credit Received for the Last Time (in BDT)	8982.50	4281.07	2000	20000
X ₁₆	Women Empowerment (Index)	67.04	10.36	39	95
X ₁₇	Age at First Marriage (in Years)	16.12	2.12	11	24
X ₁₈	Age at Last Child Birth (in Years)	24.78	4.14	16	36
X ₁₉	Fertility	2.49	1.23	1	8

Source: Researcher's Compilation Based on Field Survey (2010).

Table-10.2: Description and Summary Statistics of the Dependent Variables

Symbols	Name of the Variables	Mean	Standard Deviation	Minimum	Maximum
Y ₁	Women Empowerment (index)	67.04	10.36	39	95
Y ₂	Sexuality (index)	5.10	1.11	2	8
Y ₃	Coital Frequency	2.27	1.20	0	6
Y ₄	Pregnancy Management Behavior (index)	2.93	1.50	0	6
Y ₅	Length of Breastfeeding for the Last Child (in Month)	29.92	7.99	0	38
Y ₆	Fertility	2.49	1.23	1	8
Y ₇	Family Planning Behavior (index)	4.53	0.87	2	6

Source: Researcher's Compilation Based on Field Survey (2010).

10.1 Factors Affecting Exposure to Women Empowerment

Model-1: $Y_1 = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15}, X_{17}, X_{18}, X_{19})$.

Model-1 shows the relationship between socio-economic and demographic status (Explanatory Variables) of the respondents and women empowerment (index). Table-10.10.1.1 shows the corresponding regression results. The estimated R^2 of the equation shows that 26.88 percent of the total variation of women empowerment is explained by the selected socio-economic and demographic variables in the model. Some of the variables indicating women empowerment in the model are significant, while some others are not significant, though showing expected signs.

Table-10.10.1.1: Multiple Regression Analysis of Explanatory Variables and Women Empowerment

Explanatory Variables	Coefficient	Standard Error	t-Value	p-Value
X_1	8.140211	3.399537	2.39	0.017
X_2	-7.51384	1.441142	-5.21	0.000
X_3	-.2556759	.2183973	-1.17	0.242
X_4	-.1745741	.2814409	-0.62	0.535
X_5	-.1968031	.2103779	-0.94	0.350
X_6	.0081662	.0010631	7.68	0.000
X_7	.1389509	.2243487	0.62	0.536
X_8	-.0304192	.1566906	-0.19	0.846
X_9	.8301879	1.035208	0.80	0.423
X_{10}	1.398958	.6479467	2.16	0.031
X_{11}	.0002023	.0001739	1.16	0.245
X_{12}	-.0569469	.0557096	-1.02	0.307
X_{13}	1.96e-06	5.18e-06	0.38	0.705
X_{14}	-.1963132	.2848694	-0.69	0.491
X_{15}	-.0001542	.0001541	-1.00	0.318
X_{17}	.4525531	.2900547	1.56	0.120
X_{18}	-.1291903	.1714168	-0.75	0.452
X_{19}	-.6951315	.7851895	-0.89	0.377
const	66.16029	7.449011	8.88	0.000

Number of Observation = 400 $F(18, 381) = 7.78$ $R\text{-squared} = 0.2688$ $\text{Adjusted } R\text{-squared} = 0.2342$.

Source: Researcher's Compilation Based on Field Survey (2010).

The positive sign of respondents' status (X_1) indicates that (Table-10.10.1.1) for participants in microcredit program, women empowerment is significantly increased by

8.14 units ($p < .017$). Women empowerment is positively related to respondents' monthly income, husbands' age, husbands' occupation, age at first marriage, size of family, household income and household assets (Table-10.10.1.1). Among them, only respondents' monthly income and size of the family are statistically significant. If respondents' monthly income is increased by BDT 1, the women empowerment is significantly increased by 0.008 units ($p < .000$). If the family size is increased by one additional member, women empowerment is significantly increased by 1.399 units ($p < .031$). Model outcomes (Table-10.10.1.1) also show that respondents' religious affiliation, nutritional status, age, length of schooling, husbands' length of schooling, household landed property, length of receiving credit, amount of credit received for the last time, age at last child birth and fertility, are negatively related to women empowerment. If the participant in microcredit program is Muslim, the women empowerment is significantly decreased by 7.51 units ($p < .000$).

10.2 Factors Affecting Exposure to Sexuality

Model-2: $Y_2 = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15}, X_{16}, X_{17}, X_{18}, X_{19})$.

Model-2 explains the causal mechanisms between respondents' socio-economic and demographic status (explanatory variables) and sexuality (index). The corresponding regression results are shown in Table-10.10.2.1. The selected explanatory variables in the model explained 17.93 percent ($R^2 = 0.1793$) of the total variation in sexuality. Table-10.10.2.1 shows that respondents' religious affiliation, income, length of receiving credit, women empowerment, age at last child birth and fertility of the women had significant impact on their sexuality. Although the remaining explanatory variables are not significant, they indicate expected signs. Table-10.10.2.1 also shows that participation in microcredit program and sexuality are inversely related. More specifically, those who received microcredit (X_1) were more likely to expose lower sexuality controlling for the relevant socio-economic and demographic covariates.

Table-10.10.2.1: Multiple Regression Analysis of Explanatory Variables and Sexuality (index)

Explanatory Variables	Coefficient	Standard Error	t-Value	p-Value
X ₁	-.8652117	.3899754	-2.22	0.027
X ₂	.408915	.1698424	2.41	0.017
X ₃	-.0319185	.0249116	-1.28	0.201
X ₄	-.0292978	.0320612	-0.91	0.361
X ₅	-.0136716	.0239813	-0.57	0.569
X ₆	-.0002535	.0001301	-1.95	0.052
X ₇	-.0167763	.0255574	-0.66	0.512
X ₈	.0257783	.0178418	1.44	0.149
X ₉	-.0771127	.1179689	-0.65	0.514
X ₁₀	-.0359211	.0742256	-0.48	0.629
X ₁₁	.0000137	.0000198	0.69	0.491
X ₁₂	-.0098994	.0063518	-1.56	0.120
X ₁₃	6.85e-07	5.90e-07	1.16	0.246
X ₁₄	.0855784	.0324556	2.64	0.009
X ₁₅	-.0000169	.0000176	-0.96	0.335
X ₁₆	.0344543	.0058333	5.91	0.000
X ₁₇	-.00839	.0331312	-0.25	0.800
X ₁₈	.033362	.0195322	1.71	0.088
X ₁₉	-.1689912	.0894941	-1.89	0.060
cons	4.713086	.9318262	5.06	0.000

Number of Observation = 400 F (19, 380) = 4.37 R² = 0.1793 Adjusted R² = 0.1383

Source: Researcher's Compilation Based on Field Survey (2010).

Thus, the negative sign of respondents' status (X₁) indicates that (Table-10.10.2.1) for participants in microcredit program, the sexuality is significantly decreased by 0.87 units ($p < .027$). Respondents' age, nutritional status, length of schooling, income, husbands' age and occupation, size of family, household landed property, amount of credit received for the last time, age at first marriage, and fertility are negatively related to sexuality (Table-10.10.2.1). If respondents' nutritional status is increased by 1 unit, the sexuality is decreased by 0.032 units and vice versa ($p > .201$). If respondents' monthly income is increased by BDT 1, the sexuality is significantly decreased by 0.0003 units ($p < .052$). Again, if fertility of the women is increased by 1 unit, the sexuality is significantly decreased by 0.169 units ($p < .060$). Sexuality of the respondents is positively related to their religious affiliation, husbands' length of schooling, household income, household assets, length of receiving credit, women empowerment and age at last child birth. If length of receiving credit is increased by 1 year, the sexuality is increased significantly by 0.086 units ($p < .009$). Women empowerment and sexuality suggest that 1 unit increase in

women empowerment would significantly lead to 0.034 units increase in respondents' sexuality ($p<.000$). In addition, if age at last child birth is increased by 1 year, the sexuality is significantly increased by 0.033 units ($p<.088$).

10.3 Factors Affecting Exposure to Coital Frequency

Model-3: $Y_3 = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15}, X_{16}, X_{17}, X_{18}, X_{19})$.

Model-3 shows the relationship between socio-economic and demographic status (Explanatory Variables) of the respondents and their coital frequency. Table-10.10.3.1 shows the corresponding regression results. The estimated R^2 of the equation shows that 17.65 percent of the total variation in coital frequency is explained by the socio-economic and demographic variables, included in the model. Some of the variables influencing coital frequency, included in the model, are significant, while some other variables are not, although showing expected signs. The negative sign of respondents' status (X_1) indicates that for participants in microcredit program, the coital frequency is significantly decreased by 0.869 units ($p<.040$). Coital frequency is negatively related to respondents' religious affiliation, nutritional status, length of schooling and monthly income, husbands' age and occupation, size of family, household landed property, household assets, amount of credit received for the last time, age at first marriage and fertility of the women. If nutritional status is increased by 1 unit, coital frequency is significantly decreased by 0.053 units and vice versa ($p<.051$). If respondents' monthly income is increased by BDT 1, coital frequency is significantly decreased by 0.0003 units ($p<.059$). If the family size is increased by 1 additional member, the coital frequency is significantly decreased by 0.23 units ($p<.004$). Coital frequency is positively related to respondents' age, husbands' length of schooling, household income, length of receiving credit, women empowerment and age at last child birth. Women empowerment and coital frequency (Table-10.10.3.1) suggest that if women empowerment is increased by 1 unit, the coital frequency is significantly increased by 0.03 units ($p<.000$).

Table-10.10.3.1: Multiple Regression Analysis of Explanatory Variables and Coital Frequency

Explanatory Variables	Coefficient	Standard Error	t -Value	p -Value
X ₁	-.8688244	.421912	-2.06	0.040
X ₂	-.0642266	.1837515	-0.35	0.727
X ₃	-.052725	.0269517	-1.96	0.051
X ₄	.002427	.0346869	0.07	0.944
X ₅	-.02573	.0259452	-0.99	0.322
X ₆	-.0002671	.0001407	-1.90	0.059
X ₇	-.0414488	.0276504	-1.50	0.135
X ₈	.0253745	.0193029	1.31	0.189
X ₉	-.0086316	.1276299	-0.07	0.946
X ₁₀	-.2307963	.0803043	-2.87	0.004
X ₁₁	.0000188	.0000215	0.88	0.382
X ₁₂	-.0041171	.006872	-0.60	0.549
X ₁₃	-5.34e-07	6.38e-07	-0.84	0.403
X ₁₄	.0577853	.0351136	1.65	0.101
X ₁₅	-2.56e-06	.000019	-0.13	0.893
X ₁₆	.030713	.006311	4.87	0.000
X ₁₇	-.0231705	.0358444	-0.65	0.518
X ₁₈	.0334419	.0211317	1.58	0.114
X ₁₉	-.0092441	.0968232	-0.10	0.924
cons	3.79488	1.008137	3.76	0.000

Number of Observation = 400 F (19, 380) = 4.29 R-squared = 0.1765 Adjusted R-squared = 0.1353

Source: Researcher's Compilation Based on Field Survey (2010).

10.4 Factors Affecting Exposure to Pregnancy Management Behavior

Model-4: $Y_4 = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15}, X_{16}, X_{17}, X_{18}, X_{19})$.

Model-4 shows the relationship between socio-economic and demographic status (Explanatory Variables) of the respondents and their pregnancy management behavior (index). Table-10.10.4.1 shows the corresponding regression results. The estimated R^2 of the equation shows that 28.65 percent of the total variation in pregnancy management behavior is explained by the socio-economic and demographic variables, included in the model. Some of the variables influencing the pregnancy management behavior, included in the model, are statistically significant, while some other variables are not significant, although showing expected signs.

Table-10.10.4.1: Multiple Regression Analysis of Explanatory Variables and Pregnancy Management Behavior (index)

Explanatory Variables	Coefficient	Standard Error	t -Value	p -Value
X ₁	-1.325637	.4909957	-2.70	0.007
X ₂	.162063	.2138389	0.76	0.449
X ₃	-.0305786	.0313647	-0.97	0.330
X ₄	-.0832004	.0403665	-2.06	0.040
X ₅	.064591	.0301935	2.14	0.033
X ₆	.0003416	.0001638	2.09	0.038
X ₇	-.0527393	.0321778	-1.64	0.102
X ₈	-.0138989	.0224636	-0.62	0.536
X ₉	-.0058399	.1485279	-0.04	0.969
X ₁₀	-.0007205	.0934532	-0.01	0.994
X ₁₁	-.0000114	.000025	-0.46	0.649
X ₁₂	.0023529	.0079972	0.29	0.769
X ₁₃	8.60e-07	7.43e-07	1.16	0.248
X ₁₄	.1036304	.040863	2.54	0.012
X ₁₅	.0000417	.0000221	1.89	0.060
X ₁₆	-.0096432	.0073443	-1.31	0.190
X ₁₇	-.1078547	.0417136	-2.59	0.010
X ₁₈	.1177248	.0245918	4.79	0.000
X ₁₉	-.2100128	.112677	-1.86	0.063
cons	7.692169	1.173209	6.56	0.000

Number of Observation = 400 F (19, 380) = 7.99 R-squared = 0.2856 Adjusted R-squared = 0.2498

Source: Researcher's Compilation Based on Field Survey (2010).

The negative sign of respondents' status (X₁) indicates that (Table-10.10.4.1) for participants in microcredit program, the pregnancy management behavior is significantly decreased by 1.326 units ($p < .007$). Pregnancy management behavior is negatively related to respondents' age, nutritional status, husbands' age, length of schooling and occupation, size of family, household income, women empowerment, age at first marriage and fertility of the women. If respondents' age is increased by 1 year, the pregnancy management behavior is significantly decreased by 0.083 units ($p < .040$). If age at first marriage is increased by 1 year, the pregnancy management behavior is significantly decreased by 0.108 units ($p < .010$). If fertility of the women is increased by 1 unit, the pregnancy management behavior is significantly decreased by 0.21 units ($p < .063$). Factors, such as, respondents' religious affiliation, length of schooling, income, household landed property, household assets, length of receiving credit, amount of credit received for the last time and age at last child birth are positively related to pregnancy

management behavior. If respondents' length of schooling is increased by 1 year, the pregnancy management behavior is significantly increased by 0.065 units ($p < .033$). If respondents' monthly income is increased by BDT 1, the pregnancy management behavior is significantly increased by 0.0003 units ($p < .038$). If length of receiving credit is increased by 1 year, the pregnancy management behavior is significantly increased by 0.104 units ($p < .012$). If amount of credit received for the last time is increased by BDT 1, the pregnancy management behavior is significantly increased by 0.00004 units ($p < .060$). Again, if age at last child birth is increased by 1 year, the pregnancy management behavior is significantly increased by 0.118 units ($p < .000$).

10.5 Factors Affecting Exposure to Length of Breastfeeding

Model-5: $Y_5 = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15}, X_{16}, X_{17}, X_{18}, X_{19})$.

Equation-5 shows the relationship between socio-economic and demographic status (Explanatory Variables) of the respondents and length of breastfeeding for the last child. Table-10.10.5.1 depicts the corresponding regression results. The estimated R^2 of the equation shows that 18.86 percent of the total variation in the length of breastfeeding is explained by the selected explanatory variables in the model. Some of the variables indicating the length of breastfeeding for the last child, included in the model, are significant, while some other variables are not significant, although showing expected signs.

Table-10.10.5.1: Multiple Regression Analysis of Explanatory Variables and Length of Breastfeeding

Explanatory Variables	Coefficient	Standard Error	t -Value	p -Value
X ₁	-3.638755	2.787405	-1.31	0.193
X ₂	-.3137794	1.213973	-0.26	0.796
X ₃	.1969296	.1780589	1.11	0.269
X ₄	.2125042	.2291623	0.93	0.354
X ₅	-.1892639	.1714096	-1.10	0.270
X ₆	-.0005405	.0009298	-0.58	0.561
X ₇	.1195578	.1826749	0.65	0.513
X ₈	.0452979	.1275267	0.36	0.723
X ₉	.1246095	.8431998	0.15	0.883
X ₁₀	.2986713	.5305382	0.56	0.574
X ₁₁	-.0001555	.0001417	-1.10	0.273
X ₁₂	-.0732802	.0454006	-1.61	0.107
X ₁₃	8.19e-06	4.22e-06	1.94	0.053
X ₁₄	.3212623	.2319813	1.38	0.167
X ₁₅	.0001403	.0001256	1.12	0.265
X ₁₆	.0215685	.0416941	0.52	0.605
X ₁₇	-.532539	.2368098	-2.25	0.025
X ₁₈	-.5198932	.139609	-3.72	0.000
X ₁₉	-.5159312	.6396722	-0.81	0.420
cons	35.12662	6.660361	5.27	0.000

Number of Observation = 400 F (19, 380) = 4.65 R-squared = 0.1886 Adjusted R-squared = 0.1481

Source: Researcher's Compilation Based on Field Survey (2010).

The negative sign of respondents' status (X₁) indicates that (Table-10.10.5.1) for participants in microcredit program, the length of breastfeeding is decreased by 3.639 months ($p > .193$). Length of breastfeeding is positively correlated to respondents' nutritional status and age, husbands' age, length of schooling and occupation, size of family, household assets, length of receiving credit, amount of credit received for the last time and women empowerment. If nutritional status is increased by 1 unit, the length of breastfeeding is increased by 0.197 months ($p > .269$). If husband's occupation is entrepreneur, the length of breastfeeding of the women is increased by 0.125 months ($p > .883$). If the household assets is increased by BDT 1, the length of breastfeeding is significantly increased by 8.19e-06 months ($p < .053$). If women empowerment is increased by 1 unit, the length of breastfeeding is increased by 0.022 months ($p > .605$). Length of breastfeeding is negatively related to respondents' religious affiliation, length of schooling and income, household income, household landed property, age at first

marriage, age at first child birth and fertility of the women. If age at last child birth is increased by 1 year, the length of breastfeeding is significantly decreased by 0.52 months ($p < .000$). If age at first marriage is increased by 1 year, the length of breastfeeding is significantly decreased by 0.53 months ($p < .025$). If fertility of the women is increased by 1 unit, the length of breastfeeding is decreased by 0.52 months ($p > .420$).

10.6 Factors Affecting Exposure to Fertility of the Women

Model-6: $Y_6 = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15}, X_{16}, X_{17}, X_{18})$.

Model-6 shows the relationship between socio-economic and demographic status (Explanatory Variables) of the respondents and their fertility. Table-10.10.6.1 shows the corresponding regression results. The estimated R^2 of the equation shows that 77.91 percent of the total variation in the fertility is explained by the selected explanatory variables in the model. Some of the variables influencing fertility of the women, included in the model, are significant, while some other variables are not significant, although showing expected signs. The positive sign of respondents' status (X_1) indicates that for participants in microcredit program, the fertility of the women is increased by 0.067 units, but the result is not statistically significant ($p > .765$). Fertility of the women is positively related to respondents' religious affiliation, nutritional status and income, husbands' age, length of schooling and occupation, size of family, household income, household assets, length of receiving credit and age at last child birth. If household assets is increased by BDT 1, the fertility of the women is significantly increased by $9.04e-07$ units ($p < .007$). If the family size is increased by 1 additional member, fertility of the women is significantly increased by 0.43 units ($p < .000$). Another significant variable, in this model, is the age at last child birth, which indicates that if age at last child birth is increased by 1 year, the fertility of the women is significantly increased by 0.12 units ($p < .000$). Respondents' age, length of schooling, household landed property, amount of credit received for the last time, women empowerment and age at first marriage are negatively related to fertility of the women. If respondents' length of schooling is increased by 1 year, the fertility of the women is decreased significantly by 0.036 units ($p < .009$). If household landed property is

increased by 1 decimal, the fertility of the women is significantly decreased by 0.01 units ($p < .005$).

Table-10.10.6.1: Multiple Regression Analysis of Explanatory Variables and Fertility

Explanatory Variables	Coefficient	Standard Error	t-Value	p-Value
X ₁	.066854	.2232179	0.30	0.765
X ₂	.1481769	.0969307	1.53	0.127
X ₃	.0106666	.0142503	0.75	0.455
X ₄	-.0042792	.0183524	-0.23	0.816
X ₅	-.0358671	.0136047	-2.64	0.009
X ₆	.0000384	.0000744	0.52	0.606
X ₇	.0158878	.0146078	1.09	0.277
X ₈	.0113898	.010197	1.12	0.265
X ₉	.0213211	.0675233	0.32	0.752
X ₁₀	.4257494	.0364654	11.68	0.000
X ₁₁	4.53e-06	.0000113	0.40	0.690
X ₁₂	-.0101914	.0035985	-2.83	0.005
X ₁₃	9.04e-07	3.34e-07	2.70	0.007
X ₁₄	.0054929	.0185773	0.30	0.768
X ₁₅	-5.78e-06	.0000101	-0.57	0.566
X ₁₆	-.0029533	.0033359	-0.89	0.377
X ₁₇	-.1645247	.0169903	-9.68	0.000
X ₁₈	.1172271	.0094315	12.43	0.000
cons	-.2580034	.5332667	-0.48	0.629

Number of Observation = 400 F (18, 381) = 74.64 R-squared = 0.7791 Adjusted R-squared = 0.7686

Source: Researcher's Compilation Based on Field Survey (2010).

10.7 Factors Affecting Exposure to Family Planning Behavior

Model-7: $Y_7 = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15}, X_{16}, X_{17}, X_{18}, X_{19})$.

Model-7 shows the relationship between socio-economic and demographic status (Explanatory Variables) of the respondents and their family planning behavior (index). Table-10.10.7.1 shows the corresponding regression results. Model 7 explains 6.71 percent of the total variation ($R^2 = 0.0671$) in family planning behavior. Though family planning behavior influencing variables, included in the model, are not statistically significant, they show expected signs. The positive sign of the respondents' status (X_1)

indicates that for the participants in microcredit program, the family planning behavior is increased by 0.41 units ($p > .207$). Family planning behavior is positively related to respondents' religious affiliation, nutritional status, length of schooling and income, husbands' age, size of family, household assets, amount of credit received for the last time and age at last child birth. If respondents' monthly income is increased by BDT 1, the family planning behavior is increased by 0.000041 units ($p > .711$). If household assets is increased by BDT 1, the family planning behavior is increased by $6.00e-07$ units ($p > .226$). If age at last child birth is increased by 1 year, the family planning behavior is increased by 0.024 units ($p > .141$). Again, if the family size is increased by 1 additional member, the family planning behavior is increased by 0.07 units ($p > .257$). Family planning behavior is conversely related to the respondents' age, husbands' length of schooling and occupation, household income, household landed property, length of receiving credit, women empowerment, age at first marriage and fertility of the women. If respondents' age is increased by 1 year, the family planning behavior is decreased by 0.019 units ($p > .476$). If husband's occupation is entrepreneur, the family planning behavior is decreased by 0.71 units and vice versa ($p > .473$). If household income is increased by BDT 1, the family planning behavior is decreased by $6.55e-06$ units ($p > .694$).

Table-10.10.7.1: Multiple Regression Analysis of Explanatory Variables and Family Planning Behavior (index)

Explanatory Variables	Coefficient	Standard Error	t-Value	p-Value
X ₁	.4141605	.3273424	1.27	0.207
X ₂	.0251634	.1425644	0.18	0.860
X ₃	.0012394	.0209106	0.06	0.953
X ₄	-.0192146	.026912	-0.71	0.476
X ₅	.002337	.0201297	0.12	0.908
X ₆	.0000405	.0001092	0.37	0.711
X ₇	.0129332	.0214527	0.60	0.547
X ₈	-.0126946	.0149763	-0.85	0.397
X ₉	-.0710808	.0990222	-0.72	0.473
X ₁₀	.0707233	.0623044	1.14	0.257
X ₁₁	-6.55e-06	.0000166	-0.39	0.694
X ₁₂	-.0038256	.0053317	-0.72	0.473
X ₁₃	6.00e-07	4.95e-07	1.21	0.226
X ₁₄	-.0095703	.027243	-0.35	0.726
X ₁₅	8.74e-06	.0000147	0.59	0.554
X ₁₆	-.0034985	.0048964	-0.71	0.475
X ₁₇	-.040623	.0278101	-1.46	0.145
X ₁₈	.0241931	.0163952	1.48	0.141
X ₁₉	-.0931171	.0751207	-1.24	0.216
cons	4.658396	.7821679	5.96	0.000

Number of Observation = 400 F (19, 380) = 1.44 R-squared = 0.0671 Adjusted R-squared = 0.0205

Source: Researcher's Compilation Based on Field Survey (2010).

Findings of multiple regressions reveal that participation of women in microcredit program significantly influences women's empowerment, mainly by creating income generating opportunities that consequently shapes their reproductive behavior, especially, sexuality, coital frequency, fertility, and family planning. Women's growing involvement in income generating activities, following the work burden, substantially reduces their sexuality, coital frequency as well as length of breastfeeding. Though coital frequency of the participants decreases, their fertility, to some extent, increases. Early marriage, minimal length of schooling, desire for son (as helping hand in income generating activities), religious affiliation, household income and assets may be attributed to the increased fertility of the participants. Family planning behavior, however, signifies a positive change among the participants compared to the non-participants. High fertility rate, large family size and growing work burden may influence participants' family planning behavior. Against that, pregnancy management among the participants in

microcredit program significantly decreases. Low living standard, minimal length of schooling, non-entrepreneurial occupations of the husbands, low income and socio-cultural barriers may result in meager pregnancy management among the participants.

Chapter 11

Summary and Conclusion

11.1 Summary

Microcredit program has been used extensively to reduce poverty in developing countries, like, Bangladesh, as it, almost always, focuses on the low-income poor, especially, rural women, with an intention to utilize the income generating potentials of the women and to empower them socially and economically (Hashemi, Schuler and Riley 1996; Afrin *et al.* 2008; Khandker, Hussain and Zahid 1998; Snow and Buss 2001; Woller and Woodworth 2001; Harty 2007; Anderson *et al.* 2002). Moreover, it reduces economic vulnerability of the women, as it strengthens the crisis-coping mechanisms, diversifies income generating sources, builds assets and improves the status of women through creating employment opportunities (Montgomery, Bhattacharya and Hulme 1996; Morduch 1998; Morduch and Haley 2001; Sultana *et al.* 2010). Beyond poverty reduction, it is likely that microcredit program brings about changes in the reproductive health and reproductive behavior of the female participants in Bangladesh. Some works have evidently proved the efficiency of microcredit program to change reproductive health as well as reproductive behavior of the women (Buttenheim 2006; Amin, Li and Ahmed 1996; Schuler, Hashemi and Riley 1997; Hadi 2001; Harty 2007; Strobach and Zaumseil 2007; UNFPA 2006; Sukontamarn 2007; Rahman 2010a; Pitt *et al.* 2003), while others argued that it has minimal impact on health, especially, on reproductive health and reproductive behavior of the women, that requires long-run to be effective (Steele *et al.* 1998). Though there still have been some controversies with regard to the effectiveness of microcredit program on the reproductive behavior of the women, it has significant positive impacts in the lives of the women in Bangladesh.

In the present study, an attempt has been made to explore the impact of women's participation in microcredit program on their reproductive behavior in rural Bangladesh. Quasi-experimental and survey research designs were used to carry out the study. A sample of 400 women was selected from two groups of women, *i.e.* the experiment group

(consisted of 200 participants in microcredit program) and the control group (consisted of 200 non-participants), living in three Villages at Kalaroa Upazila in Satkhira District of Bangladesh, using the technique of random sampling from the sampling frame, prepared through household census. Data were collected from the sample respondents by using an interview schedule, containing both open-ended and close-ended items. In addition, 10 case studies were conducted upon the participants in microcredit program for an in-depth knowledge regarding the concerned issue. The fieldwork was carried out during July to December, 2010. Statistical software packages, such as, SPSS 16.0 and STATA 12.0 were used for data processing and analysis.

11.1.1 Socio-demographic and Economic Status of the Women

Age of the women has a great influence on their reproductive behavior and ability to partake in economic activities and, of course, chance of benefiting from the on-going micro-enterprises. Findings reveal that highest proportion of both participants in microcredit program (36.5%) and non-participants (37.5%) belonged to the age group of 25-29 years. On average, the participants in microcredit program were 33.48 years old, and the non-participants, on the other hand, were 32.32 years old, however, the difference is not statistically significant ($p > .125$). 27 percent of the participants' husbands, compared to 27.5 percent of the non-participants, belonged to the age group of 30-34 years. On average, the age of participants' husbands was slightly greater (38.91 years) than that of non-participants (38.08 years), however, the difference is not statistically significant ($p > .570$). The age difference between husbands and wives was comparatively less among the participants (averaging 5.44 years) than the non-participants (averaging 5.76 years), however, the difference is again not statistically significant ($p > .706$). As there is no significant difference visible between participants and non-participants in terms of age, their reproductive behavior is likely to be similar. If any difference is found, that could have been caused by participation in microcredit program.

Findings reveal that overwhelming majority of both participants in microcredit program (90.5%) and non-participants (92%) were married off by the choice of their family members ($p > .596$). More than half of both participants (59.5%) and non-participants

(53.5%) belonged to nuclear families ($p>.226$). The participants, on an average, had larger family size (4.53) than the non-participants (4.43), though the difference is not statistically significant ($p>.567$). Majority of both participants (67.5%) and non-participants (66%) were literate. Participants had, on an average, 3.76 years of schooling, compared to 3.64 years of the non-participants, the difference, however, is not statistically significant ($p>.957$). 53 percent of the participants' husbands, compared to 48.5 percent of the non-participants, were literate. On an average, the participants' husbands had slightly higher length of schooling (3.01 years) than the non-participants (2.96 years), however, the difference is not statistically significant ($p>.627$). Data of the present study also reveal that 89 percent of the participants, compared to 84 percent of the non-participants, were Muslims ($p<.015$).

Women, in rural Bangladesh, are not socially expected to get involved in income generating activities. Findings disclose that overwhelming majority of both participants (97%) and non-participants (98.5%) were housewives. Only 3 percent of the participants, compared to 1.5 percent of the non-participants, were directly involved in income generating activities. 36 percent of the participants' husbands, compared to 31 percent of the non-participants, were involved in entrepreneurial occupations (petty-business, artisan and cultivator). The occupational status of both respondents and their husbands exposes that they were involved mostly in low-income and non-productive informal economic activities. As a result, their monthly income was expectedly low. On the average, the participants in microcredit program had greater monthly income (BDT 341.60) than the non-participants (BDT 246.40), however, the difference is not statistically significant ($p>.227$). Similar trend was found in the case of monthly household income of both participants (average BDT 4734.70) and non-participants (average BDT 4104.15), and the difference is not again statistically significant ($p>.311$).

On the contrary, the non-participants, on an average, had more household landed property (16.53 decimals) than the participants (14.85 decimals), the difference, however, is not statistically significant ($p>.255$). On the average, the market price of the non-participants' household assets was greater (BDT 164342.81) than that of participants (BDT 152827.41), however, the difference is not statistically significant ($p>.883$). For this reason, a significant number of both participants (82%) and non-participants (76.5%) had low living standard, and the difference is not statistically significant ($p>.399$), 86.5

percent of the participants, compared to 83.5 percent of the non-participants, had normal BMI. 8 percent of the participants, against 11.5 percent of the non-participants, belonged to malnutrition. Findings also reveal that the participants had, on average, relatively higher BMI (21.14) compared to the non-participants (20.75), however, the difference is not statistically significant ($p>.552$). 100 percent of the participants, compared to 98.5 percent of the non-participants, admitted to have political affiliation. They, however, did not actually participate in direct political activities, except casting vote for political parties in rural Bangladesh.

11.1.2 Microcredit and Process of Involvement in MC Program

Grameen Bank, the pioneer Microcredit Organization in Bangladesh, considers microcredit as starting at just US\$ 12 and averaging about US\$ 310 (Grameen Bank, 2007). For the present study, a loan up to BDT 20,000/= was considered to be microcredit made to the poor women by the Microcredit Organizations (both GOs and NGOs). Findings reveal that about 97 percent of the participants received the credit by becoming a direct member of the Microcredit Organizations. The participants received their first microcredit mostly to invest in economically productive activities like buying livestock (33%), van (8.5%) and land (8%) or to invest in petty-business (30.5%), agriculture (6%) and fish farm (3.5%). Only 10.5 percent of the participants intended to use the credited money for meeting household consumption needs. Interestingly, about a quarter of them spent their credit money to defray household consumption needs. 25 percent invested the credit in petty-businesses, 16.5 percent in agriculture and only 3 percent invested in fish farm. More than 30 percent of the respondents used the credit to buy livestock (12.5%), land (10%) and van (8%). For the last time (during the survey), the participants received the credit mainly to buy livestock (26.5%) and van (10.5%) or to invest in petty-businesses (23%) and agriculture (7%) or to meet household consumption needs (14%). It is significant that 9.5 percent of the participants received the credit to repay the previous loan.

Although women are the main target of Microcredit Organizations, they (women) hardly have actual control over the credited money. More than 90 percent of the participants in

microcredit program admitted that they did not have any control per se over the credit and could not even decide where to invest it or when and how to repay it. One explanation for such condition is that the loanees, generally, rely on their husbands or sons' income (92.5%) to repay the weekly installments of the credit. On an average, the participants in microcredit program received a credit of BDT 6967.75 for the first time and it was BDT 8982.50 for the last time.

Despite the growing volume of microcredit, women have a very little actual control over the heads of investment. Due to maladjustment between the targets and the heads of investment, the loanees often changed microcredit providing organizations. 39 percent of the participants received their first credit from ASA, 24 percent from BRAC, 11.5 percent from Grameen Bank and 9 percent from Ad-Din. On the other hand, for the last time, 30 percent of the participants in microcredit program received their credit from ASA, 27.5 percent from BRAC, 10.5 percent from Grameen Bank and 11.5 percent from Ad-Din. Findings reveal that more than half (57.5%) of the participants were associated with microcredit programs for 9-12 years. On an average, the participants were involved in microcredit programs for about 10.71 years.

11.1.3 Women in Microcredit Program and Their Empowerment

Microcredit Organizations have been working to enhance women's control over household resources and participation in decision making process, by involving women in income generating activities, which is expected to affect their (women) mobility and social interaction with outside world. Findings of the present study reveal that 87 percent of the participants, compared to about 70 percent of the non-participants, admitted to have medium control over their household resources ($p < .000$). About 98 percent of the non-participants, compared to 84 percent of the participants, admitted to have low mobility outside the household. So, unlike the non-participants (2.5%), the participants (16%) enjoyed a significantly greater freedom of movement outside their households ($p < .000$).

As an immediate consequence of greater mobility, the participants significantly enjoyed greater interaction with outside world, compared to the non-participants ($p < .000$). Data

reveal that 58 percent of the participants, compared to 31 percent of the non-participants, had medium interaction with outside world. On the contrary, 11.5 percent of the participants, against 12.5 percent of the non-participants, had greater access to information regarding women's rights and violence against women, thus, the difference is not statistically significant ($p>.399$). More than half of the participants in microcredit program (56.5%) and 63 percent of the non-participants had low participation in income generating activities. 43.5 percent of the participants, compared to 37 percent of the non-participants, had medium participation in income generating activities, however, the difference between them is not statistically significant ($p>.185$).

Findings reveal that 87 percent of the participants, compared to 83.5 percent of the non-participants, had medium participation in household decisions. 9.5 percent of the participants, against 11 percent of the non-participants, had high participation in household decisions, however, the difference is not statistically significant ($p>.535$).

Women's control over household resources, their extent of mobility, interaction with outside world, participation in income generating activities, in social and political events, and in household decisions, as well as awareness of women's rights and violence against women, etc. reflect their overall status of empowerment. Findings reveal that the participants in microcredit program showed an improvement in terms of empowerment. 86 percent of the participants, compared to 69 percent of the non-participants, confirmed significantly to be empowered ($p<.000$), especially, through participating in microcredit programs.

Multiple regression equation-I examined the relations between socio-economic and demographic status of the respondents and women empowerment (index) which implicates 26.88 percent variation in the empowerment of women. The positive sign of respondents' status (X_1) indicates that for participants in microcredit program, women empowerment is significantly increased by 8.14 units ($p<.017$). Women empowerment is positively related to respondents' monthly income, husbands' age, age at first marriage, size of family, household income, household assets and husbands' occupation. If respondents' monthly income is increased by BDT 1, the women empowerment is significantly increased by 0.008 units ($p<.000$). If the family size is increased by one additional member, women empowerment is significantly increased by 1.399 units

($p < .031$). Model outcomes also reveal that respondents' religious affiliation, nutritional status, age, length of schooling, husbands' length of schooling, household landed property, length of receiving credit, amount of credit received for the last time, age at last child birth and fertility, are negatively related to women empowerment. If the participant in microcredit program is Muslim, the women empowerment is significantly decreased by 7.51 units ($p < .000$).

11.1.4 Women in Microcredit Program and Their Sexuality

Women's involvement in income generating activities has the potential to increase gender consciousness and trigger change in their views regarding sex and sexuality. Findings reveal that 90.5 percent of the participants, compared to 91.5 percent of the non-participants, had awareness of sex education ($p > .727$). Mutual consents, with regard to initiating sexual intercourse among the spouses, eventually bring about satisfaction in sex act as well as happy sex life. Majority of the participants in microcredit program (70%) and non-participants (62.5%) involved in sexual intercourse with their husbands through mutual consents, although the husbands of both participants (29.5%) and non-participants (35.5%), in some cases, made the decision all by themselves. Pearson's Chi-square test, however, finds no significant difference between the participations and non-participants with regard to their involvement in initiating sexual intercourse ($p > .153$). Of the respondents, 90 percent of the participants, compared to 89.5 percent of the non-participants, believed that they had healthy and secured sex life. Because, they (98.5% among the participants and 97% among the non-participants) admitted to have sex with none other than their husbands and they (90% among the participants and 94% among the non-participants) believed that their husbands also had no sex relation with persons other than their wives.

Findings reveal that 89.5 percent of the participants in microcredit program, compared to 92 percent of the non-participants, admitted to have sexual intercourse during the week preceding the survey ($p > .388$). 52 percent of the participants (N=179), against 45.1 percent of the non-participants (N=184), involved in sexual intercourse with their husbands for 1-2 times during the week preceding the survey. 45.8 percent of the

participants, compared to 52.2 percent of the non-participants, involved in sexual intercourse with their husbands for 3-4 times a week. Findings also reveal that the coital frequency of the non-participants was slightly higher (average 2.36) than the participants (average 2.19), thus, the difference is not statistically significant ($p>.425$). 9.3 percent of the total respondents had no sex at all during the week preceding the survey, either because of continuing their menstruation cycle or the absence of their husbands.

Overwhelming majority of both participants in microcredit program (96%) and non-participants (95%) were satisfied to have sex with their spouses ($p>.630$). 27 percent of the non-participants, two folds higher than the participants (14%), admitted to have sex during menstruation to satisfy the sex needs of their husbands, and the difference between the two groups of women is statistically significant ($p<.001$). 77.5 percent of the participants, compared to 70 percent of the non-participants, reported to have been forced for sex by their husbands ($p<.088$). 61.5 percent of the participants, compared to 45.5 percent of the non-participants, felt annoyed, when they were forced to sexual intercourse by their husbands without their consent. 23.5 percent of the participants, against 38 percent of the non-participants, felt disgusted, and the difference is statistically significant ($p<.016$). 10 percent of the participants, compared to 20.5 percent of the non-participants, shared their sexual experiences with other members in their community, and the difference is again statistically significant ($p<.003$).

Doctors, generally, recommend a delayed intercourse after child delivery for at least four to six weeks. Findings reveal that 38 percent of the participants, compared to 42.5 percent of the non-participants, resumed their sexual intercourse within 41 to 60 days after delivering their first child. Findings also reveal that on an average, participants delayed more (64.97 days) for resuming their sexual intercourse after their first child birth than the non-participants (60.06 days), however, the difference is not statistically significant ($p>.781$). In the case of last child birth, it remained almost the same. 37 percent of the participants, compared to 41.5 percent of the non-participants, resumed their sexual intercourse within 41 to 60 days after delivering their last child. Findings also reveal that on an average, participants delayed more (66.39 days) for resuming their sexual intercourse after their last child birth than the non-participants (65.94 days), but again the difference is not statistically significant ($p>.159$).

Although GOs and NGOs, aided by mass media, are working together to spread knowledge about sexual diseases like HIV/AIDS, STDs, RTIs, and so on, through advertisement and awareness campaigns, about 50 percent of the participants, compared to about 30 percent of the non-participants, acknowledged to be familiar with the sexual diseases, and the difference is statistically significant ($p < .000$). In spite of the familiarity with sexual diseases, majority of both participants (73.5%) and non-participants (84%) seem to have used traditional methods (old cloths and rags) during their menstruation ($p < .010$), mainly because of poor socio-economic conditions.

Multiple regression equation-2 examined the relations between socio-economic and demographic status of the respondents and sexuality (index), which implicates 17.93 percent variation in the sexuality of the respondents. The negative sign of respondents' status (X_1) indicates that for participants in microcredit program, the sexuality is significantly decreased by 0.87 units ($p < .027$). Respondents' age, nutritional status, length of schooling, income, husbands' age and occupation, size of family, household landed property, amount of credit received for the last time, age at first marriage, and fertility were negatively related to sexuality. If respondents' nutritional status is increased by 1 unit, the sexuality is decreased by 0.032 units and vice versa ($p > .201$). If respondents' monthly income is increased by BDT 1, the sexuality is significantly decreased by 0.0003 units ($p < .052$). Again, if fertility of the women is increased by 1 unit, the sexuality is significantly decreased by 0.169 units ($p < .060$). Sexuality of the respondents is positively related to their religious affiliation, husbands' length of schooling, household income, household assets, length of receiving credit, women empowerment and age at last child birth. If length of receiving credit is increased by 1 year, the sexuality is significantly increased by 0.086 units ($p < .009$). Women empowerment and sexuality suggest that 1 unit increase in women empowerment would significantly lead to 0.034 units increase in respondents' sexuality ($p < .000$). In addition, if age at last child birth is increased by 1 year, the sexuality is significantly increased by 0.033 units ($p < .088$).

Multiple regression equation-3 examined the relations between socio-economic and demographic status of the respondents and coital frequency, which implicates 17.65 percent variation in the coital frequency of the respondents. The negative sign of respondents' status (X_1) indicates that for participants in microcredit program, the coital

frequency is significantly decreased by 0.869 units ($p < .040$). Coital frequency is negatively related to respondents' religious affiliation, nutritional status, length of schooling and monthly income, husbands' age and occupation, size of family, household landed property, household assets, amount of credit received for the last time, age at first marriage and fertility. If nutritional status is increased by 1 unit, coital frequency is significantly decreased by 0.053 units and vice versa ($p < .051$). If respondents' monthly income is increased by BDT 1, coital frequency is significantly decreased by 0.0003 units ($p < .059$). If the family size is increased by 1 additional member, the coital frequency is significantly decreased by 0.23 units ($p < .004$). Coital frequency is positively related to respondents' age, husbands' length of schooling, household income, length of receiving credit, women empowerment and age at last child birth. Women empowerment and coital frequency suggest that if women empowerment is increased by 1 unit, the coital frequency is significantly increased by 0.03 units ($p < .000$).

11.1.5 Women in MC Program and Their Pregnancy Management

Pregnancy management is one of the key elements to understand women's reproductive health needs and behavior, and their seeking health care in rural Bangladesh. Findings reveal that 80 percent of the participants in microcredit program, compared to 78 percent of the non-participant, received vaccines during their last pregnancy ($p > .623$). However, participants (40%) were less likely to seek routine physical check-ups during their first gestations than the non-participants (50%), and it is statistically significant ($p < .044$). During last gestation, 57.5 percent of the participants, against 64 percent of the non-participants, sought routine physical check-ups, however, the difference is not statistically significant ($p > .183$). Moreover, the non-participants (71%) were more likely to consume supplementary vitamins and iron during their last pregnancy than the participants (55%), and the difference is statistically significant ($p < .001$).

Findings reveal that 92 percent of the participants, compared to 82 percent of the non-participants, delivered their first children aided by untrained TBAs, and the difference is statistically significant ($p < .012$). In case of the last child birth, 65 percent of the participants, against 71.5 percent of the non-participants, delivered their last child aided

by untrained TBAs ($p>.377$). One explanation for such change is that 59 percent of the participants admitted to be visited by FWAs or FWVs, compared to 39.5 percent of the non-participants, and the difference is statistically significant ($p<.000$).

Majority of both participants (91.5%) and non-participants (81.5%) preferred their parents' houses to deliver their first children, and the difference is statistically significant ($p<.014$). In case of the last child birth, 62 percent of the participants, compared to 58 percent of the non-participants, preferred their in-laws' houses to deliver their last children ($p>.551$). Findings reveal that overwhelming majority of both participants (99%) and non-participants (99.5%) were obliged to finish their daily household chores during pregnancy. 96.5 percent of the participants, compared to 94 percent of the non-participants, admitted to have no emergency fund during their last gestations for safe-motherhood.

After child delivery, woman remains physically more vulnerable to infection or bleeding-related complications up to 42 days. This is the most important and crucial period to take care of a new mother, as she experiences a transition back from pregnant to non-pregnant status. Findings reveal that 44.5 percent of the participants, compared to 34.5 percent of the non-participants, faced postpartum complications after the last child birth, of which 61.8 percent of the participants (N=89), against 62.3 percent of the non-participants (N=69), sought indigenous doctors for treatment. More than half of both participants (53%) and non-participants (57%) sought indigenous doctors for general health care, while 39 percent of the participants, against 36.5 percent of the non-participants, reportedly visited government hospitals ($p>.331$). 68 percent of the participants denied having any prenatal or postnatal guidance provided by the Microcredit Organizations. Pearson's Chi-square test, however, finds no significant difference between the participants and non-participants with regard to their pregnancy management behavior (index).

Multiple regression equation-4 examined the relations between socio-economic and demographic status of the respondents and pregnancy management behavior (index), which implicates 28.65 percent variation in the pregnancy management behavior of the respondents. The negative sign of respondents' status (X_1) indicates that for participants in microcredit program, the pregnancy management behavior is significantly decreased

by 1.326 units ($p<.007$). Pregnancy management behavior is negatively related to respondents' age, nutritional status, husbands' age, length of schooling and occupation, size of family, household income, women empowerment, age at first marriage and fertility. If respondents' age is increased by 1 year, the pregnancy management behavior is significantly decreased by 0.083 units ($p<.040$). If age at first marriage is increased by 1 year, the pregnancy management behavior is significantly decreased by 0.108 units ($p<.010$). If fertility of the women is increased by 1 unit, the pregnancy management behavior is significantly decreased by 0.21 units ($p<.063$). Factors, such as, respondents' religious affiliation, length of schooling, income, household landed property, household assets, length of receiving credit, amount of credit received for the last time and age at last child birth are positively related to pregnancy management behavior. If respondents' length of schooling is increased by 1 year, the pregnancy management behavior is significantly increased by 0.065 units ($p<.033$). If respondents' monthly income is increased by BDT 1, the pregnancy management behavior is significantly increased by 0.0003 units ($p<.038$). If length of receiving credit is increased by 1 year, the pregnancy management behavior is significantly increased by 0.104 units ($p<.012$). If amount of credit received for the last time is increased by BDT 1, the pregnancy management behavior is significantly increased by 0.00004 units ($p<.060$). Again, if age at last child birth is increased by 1 year, the pregnancy management behavior is significantly increased by 0.118 units ($p<.000$).

11.1.6 Women in MC Program and Their Breastfeeding Behavior

Initiation of breastfeeding after child birth is the most crucial event for both mother and infant. During breastfeeding, the chance of conception is reduced to considerable extent. Moreover, it increases the immune system within the infants that effectively protects them against infectious and life-threatening diseases. Findings reveal that overwhelming majority of both participants (92%) and non-participants (91%) breastfed their first children within 6 hours after birth. On an average, the participants initiated breastfeeding their first children soon after their (babies) birth (4.59 hours), compared to the non-participants (5.32 hours), the difference, however, is not statistically significant ($p>.246$). 37.4 percent of the participants, against 33.5 percent of the non-participants, breastfed

their first children from birth to three years. 48.5 percent of the participants, against 44.5 percent of the non-participants, breastfed their last children from birth to three years. On the average, the length of breastfeeding of the participants for the last children was slightly greater (30.41 months) than the non-participants (29.48 months). Pearson's Chi-square test, however, finds no significant difference between participants and non-participants in this regard ($p>.169$). Majority of participants (86%) and the non-participants (85.5%) thought that breastfeeding have neither negatively affected their general health nor damaged their physical beauty (83.5% among the participants and 85.5% among the non-participants). During breastfeeding, overwhelming majority of both participants (94%) and non-participants (97.5) used contraceptives to prevent further pregnancy ($p<.083$).

Multiple regression equation-5 examined the relations between socio-economic and demographic status of the respondents and length of breastfeeding for the last child. It implicates 18.86 percent variation in the length of breastfeeding of the respondents. The negative sign of respondents' status (X_1) indicates that for participants in microcredit program, the length of breastfeeding is decreased by 3.639 months ($p>.193$). Length of breastfeeding is positively correlated to respondents' nutritional status and age, husbands' age, length of schooling and occupation, size of family, household assets, length of receiving credit, amount of credit received for the last time and women empowerment. If nutritional status is increased by 1 unit, the length of breastfeeding is increased by 0.197 months ($p>.269$). If husband's occupation is entrepreneur, the length of breastfeeding of the women is increased by 0.125 months ($p>.883$). If the household assets is increased by BDT 1, the length of breastfeeding is significantly increased by $8.19e-06$ months ($p<.053$). If women empowerment is increased by 1 unit, the length of breastfeeding is increased by 0.022 months ($p>.605$). Length of breastfeeding is negatively related to respondents' religious affiliation, length of schooling and income, household income, household landed property, age at first marriage, age at first child birth and fertility of the women. If age at last child birth is increased by 1 year, the length of breastfeeding is significantly decreased by 0.52 months ($p<.000$). If age at first marriage is increased by 1 year, the length of breastfeeding is significantly decreased by 0.53 months ($p<.025$). If fertility of the women is increased by 1 unit, the length of breastfeeding is decreased by 0.52 months ($p>.420$).

11.1.7 Women in Microcredit Program and Their Fertility

Fertility of the women in Bangladesh is important to understand the population growth as well as the dependency ratio of the people, which, in fact, affect the economic growth and development of the country like Bangladesh. The fertility of a woman, however, depends on such factors as, her socio-economic status, age at marriage and the opportunities available to repress the birth. Microcredit Organizations, together with the government of Bangladesh, are encouraging people to control the population growth, especially, in rural Bangladesh. Findings reveal that 87.5 percent of the participants, compared to 89 percent of the non-participants, reported that they were married off before turning into eighteen. On an average, the participants were married off at the age of 16.12 years, whereas the non-participants were married off at the age of 16.11 years, and the difference is not statistically significant ($p>.641$). Due to early marriage, majority of both participants (71.5%) and non-participants (79.5%) experienced early child birth. Nearly a quarter (24.5%) of the respondents delivered their first children at the age of 21 and onwards. On average, the participants delivered their first children at the age of 18.99 years, compared to 18.54 years of the non-participants, however, the difference is not statistically significant ($p>.247$). Likewise, the average age of the participants, for the last child birth, was slightly higher (25.24 years) than the non-participants (24.34 years), and the difference is statistically significant at 0.095.

Findings of the present study also reveal that on the average, the participants in microcredit program had higher fertility (2.6), compared to the non-participants (2.4), the difference, however, is not statistically significant ($p>.329$). Birth spacing of children is an important issue for sound reproductive health of the women. Findings reveal that 19.9 percent of the participants (N=166), against 20.5 percent of the non-participants (N=156), maintained about two years of birth spacing between their first and second children. The participants, on an average, maintained about 46.99 months of birth spacing between their first and second children, which is lower than the non-participants (51.58 months), however, the difference is not statistically significant ($p>.356$). The participants had more living children (2.37) than the non-participants (2.21), however, the difference is not statistically significant ($p>.495$). 17.5 percent of the participants, compared to 12.5 percent of the non-participants, admitted to have at least one deceased child ($p>.353$). 19

percent of the participants, against 30 percent of the non-participants, would desire for more children, and the difference is statistically significant ($p < .011$).

Multiple regression equation-6 examined the relations between socio-economic and demographic status of the respondents and fertility. It implicates 77.91 percent variation in the fertility of the respondents. The positive sign of respondents' status (X_1) indicates that for participants in microcredit program, the fertility is increased by 0.067 units, but the result is not statistically significant ($p > .765$). Fertility of the women is positively related to respondents' religious affiliation, nutritional status and income, husbands' age, length of schooling and occupation, size of family, household income, household assets, length of receiving credit and age at last child birth. If household assets is increased by BDT 1, the fertility of the women is significantly increased by $9.04e-07$ units ($p < .007$). If the family size is increased by 1 additional member, fertility of the women is significantly increased by 0.43 units ($p < .000$). Again, if age at last child birth is increased by 1 year, the fertility of the women is significantly increased by 0.12 units ($p < .000$). Respondents' age, length of schooling, household landed property, amount of credit received for the last time, women empowerment and age at first marriage are negatively related to fertility of the women. If respondents' length of schooling is increased by 1 year, the fertility of the women is significantly decreased by 0.036 units ($p < .009$). If household landed property is increased by 1 decimal, the fertility of the women is significantly decreased by 0.01 units ($p < .005$).

11.1.8 Women in MC Program and Their Family Planning Behavior

Both government and non-government organizations in Bangladesh systematically promote family planning measures as part of their overall programs, especially, in rural areas, to arrest rapid growth of population. Findings reveal that an overwhelming majority of both participants (96%) and non-participants (99.5%) admitted to have used the contraceptives at least once during their conjugal life, and the difference is statistically significant ($p < .018$). However, 17 percent of the participants, compared to 12.5 percent of the non-participants, faced familial obstacle to use the contraceptives ($p > .204$). During survey, 86 percent of the participants, against 85 percent of the non-participants, were

found to have been using contraceptives ($p>.776$). However, 82.6 percent of the participants (N=172), compared to 95.3 percent of the non-participants (N=170), expressed their sexual satisfaction while using prophylactics during copulation, and the difference is statistically significant ($p<.000$).

Though a large proportion of the respondents, under the present study, was habituated to use contraceptives, during survey, 65.5 percent of the participants, compared to 32.5 percent of the non-participants, received some advice with regard to family planning from FWAs/FWVs, and the difference is statistically significant ($p<.000$). Soon after marriage, 64 percent of the participants, against 68.5 percent of the non-participants, did not get any family planning information from FWAs/FWVs ($p>.341$). Soon after receiving the first microcredit, 24 percent of the participants got family planning information, provided by the Microcredit Organizations. However, during survey, 54.5 percent of the participants received information regarding family planning from their credit providing organizations.

Realizing the population pressure over the country as well as growing burden on their own resources, both participants in microcredit program (96.5%) and non-participants (95.5%) insisted that GOs, together with the NGOs, must work on population control and reproductive health measures of the women in rural Bangladesh. 80.5 percent of the respondents (N=384) opined that GOs and NGOs should supply contraceptives free of cost to the women in rural Bangladesh. 70.1 percent of all the respondents emphasized on stopping early marriages, aided by GOs and NGOs, to control population growth and to prevent reproductive health hazards of the women in rural Bangladesh. 63.5 percent of the respondents opined that GOs and NGOs should supply medicines free of cost to the women. 56.3 percent of the respondents emphasized on providing health care to rural women by FWAs/FWVs/HAs and staffs of MCOs. 40.6 percent of the respondents asked for providing reproductive health education for the women in rural Bangladesh. 38.3 percent of the respondents opined that GOs and NGOs should establish more health care centers in rural Bangladesh.

Multiple regression equation-7 examined the relations between socio-economic and demographic status of the respondents and family planning behavior (index). It implicates 6.71 percent variation in the family planning behavior of the respondents. The positive sign of the respondents' status (X_1) indicates that for the participants in microcredit

program, the family planning behavior is increased by 0.41 units ($p>.207$). Family planning behavior is positively related to respondents' religious affiliation, nutritional status, length of schooling and income, husbands' age, size of family, household assets, amount of credit received for the last time and age at last child birth. If respondents' monthly income is increased by BDT 1, the family planning behavior is increased by 0.000041 units ($p>.711$). If household assets is increased by BDT 1, the family planning behavior is increased by 6.00e-07 units ($p>.226$). If age at last child birth is increased by 1 year, the family planning behavior is increased by 0.024 units ($p>.141$). Again, if the family size is increased by 1 additional member, the family planning behavior is increased by 0.07 units ($p>.257$). Family planning behavior is conversely related to the respondents' age, husbands' length of schooling and occupation, household income, household landed property, length of receiving credit, women empowerment, age at first marriage and fertility of the women.

11.2 Policy Implications

Microcredit program, operated by both GOs and NGOs, evidently, has significant impact on the lives and livelihood of the low-income people in rural Bangladesh, especially, the women. It creates independent employment opportunities for women, motivates them for entrepreneurial risk taking behavior and enlightens their minds with new concepts and ideas that eventually reduce the omen of feminized poverty. Thus, microcredit program has long been hailed by both GOs and NGOs, for reducing chronic poverty, promoting women empowerment and strengthening their reproductive health status and reproductive behavior in rural Bangladesh. Therefore, to maximize the efficiency of microcredit program for alleviating poverty and to bring about positive changes in the reproductive behavior of its beneficiaries through women empowerment, the following steps should be adopted -

1. Microcredit Organizations must provide guidelines to the participants in microcredit program and ensure its implementation with regard to the effective use of the credit in economically productive activities for promoting their socio-economic status.

2. Microcredit Organizations, along with GOs, should work for women empowerment. They should provide the messages to their clients that women should have the right of control over their own bodies as well as the right to decide when they should have children and how many.
3. Microcredit Organizations should build up awareness among their clients, especially, in rural Bangladesh, regarding their reproductive health and behavior through campaigns.
4. Life-skill development training must be provided by the Microcredit Organizations in order to ensure sound reproductive health of the participants. Untrained TBAs have to be trained up by the Microcredit Organizations along with GOs for the safe delivery.
5. Staffs of the Microcredit Organizations must be well-trained to work as change agents of the reproductive behavior of women rather than mere employees to seek profits from the loans.
6. Microcredit Organizations should go beyond their financial services and adopt more humane and social visions (*i.e.* nutrition, sanitation, and immunization, awareness programs on family planning, STDs, and so on) for the greater benefit of the country, like Bangladesh.
7. Reproductive health education of both men and women must be incorporated by the Microcredit Organizations, along with the regular issues of weekly group-meetings. Intimate partners of the participants must be incorporated into the weekly group-meetings for understanding reproductive health needs and issues of both males and females.
8. Participants should be encouraged, by the Microcredit Organizations (both GOs and NGOs), to discuss reproductive health relevant issues with other members in society for spreading out the knowledge regarding their reproductive health and behavior.
9. A well-structured monitoring system, under skilled supervisors (both GOs and NGOs), must watch over the participants in microcredit program, for a specific period of time, for promoting socio-economic status, enhancing women empowerment and bringing about effective behavioral change in reproductive health status of the women in rural Bangladesh.

10. Both GOs and NGOs should provide contraceptives and medicines to the women in rural Bangladesh free of cost and ensure the care taking of women by FWAs/FWVs/HAs and staffs of MCOs. In addition to that both GOs and NGOs should establish more health care centers in rural Bangladesh.
11. Microcredit Organizations should collaborate with the local as well as the national government of Bangladesh for logistic and technological supports to moderate and implement population, health and women policies of Bangladesh.

11.3 Concluding Remarks

Microcredit program has multifaceted effects on the socio-economic status and women empowerment as well as reproductive health and reproductive behavior of the women in rural Bangladesh. Findings of the present study reveal that participants in microcredit program have greater access to engage themselves in income generating activities and they have greater household income than the non-participants. It reduces the poverty of the rural women in Bangladesh as participants have more nourishment than the non-participants. Participants have more control over their household resources and they enjoy greater mobility, compared to the non-participants. Microcredit programs allow greater exposure for their participants to outside world and to new social relations that subsequently increase their social and political affiliation. It also increases the awareness among the participants on women's rights and violence against women. Though all the participants in microcredit program are not involved directly in income generating activities, they have been significantly participating in household decisions. For these reasons, participants are significantly more empowered through their involvement in microcredit programs over the years, compared to the non-participants.

Microcredit program brings about some prolific changes in the sexuality of the participants. Multiple regression equation suggests that participants in microcredit program significantly reduce their sexuality ($p < .027$). For instance, the participants in microcredit program have significantly reduced their coital frequency, compared to the non-participants ($p < .040$). Majority of the participants involve in sexual intercourse with their husbands through mutual consents and an overwhelming majority of them are

satisfied to have sex with their spouses. Participants in microcredit program, unlike the non-participants, avoid sexual intercourse during their menstruation. The participants in microcredit program are more likely to wait longer for resuming their sex activities after child birth to allow biological healing, which undergoes significant changes during childbirth, compared to the non-participants. Moreover, prolonged exposure to outside world of the participants in microcredit program increases their knowledge and access to information with regard to sex and sexually transmitted diseases.

With regard to the pregnancy management, majority of both participants and non-participants have received vaccines, required for the safety of the mother and unborn, though participants are mostly irregular and unwilling, compared to non-participants, to follow the routine physical check-ups during their pregnancy. In addition, non-participants are more likely to have supplementary vitamins and iron during their last pregnancies, compared to the participants. An overwhelming majority of the participants and non-participants prefer their parental as well as in-laws' houses over the hospitals or clinics to deliver their children aided by untrained TBAs, who are generally not acquainted with birth related complexities. For these reasons, thousands of women and children die every year in rural Bangladesh. Due to poor socio-economic status and living standard, the participants in microcredit program actually have not brought about significant improvement in their pregnancy management behavior. Multiple regression equation suggests that for the participants, the pregnancy management behavior is significantly decreased ($p < .007$).

Breastfeeding behavior of the participants in microcredit program is found almost similar to that of the non-participants. However, such unchanged attitudes have been still attributed positively as they are not reluctant to breastfeed their children during infancy. Instead, they continue to breastfeed them as long as they required to. Both participants and non-participants have emphasized on the well-being of their children rather than their own physical attributes, realizing the fact that regular breastfeeding brings about a secured and strong lives for their children. Multiple regression equation suggests that for participants in microcredit program, the length of breastfeeding for the last child is decreased ($p > .193$).

Fertility depends on the socio-economic and reproductive health status of the women in rural Bangladesh. Findings reveal that a large proportion of the women are married off at a very early age of their life, which immediately results in early child birth and high fertility among both participants in microcredit program and non-participants. Multiple regression equation indicates that for participants, the fertility is increased ($p > .765$). Non-participants, however, maintain more birth spacing between their first and second children compared to the participants. Although both participants and non-participants significantly use contraceptives to prevent unwanted pregnancy, multiple regression equation suggests that the family planning behavior of the participants is increased ($p > .207$).

Over all, participation of women in microcredit program significantly contributes to bring about a positive change in the socio-economic status, women empowerment as well as reproductive health and reproductive behavior of the women in rural Bangladesh. But, to be more effective, Microcredit Organizations require focusing, not only on their participants, but also on the entire population, living in Bangladesh. For these reasons, Microcredit Organizations need to collaborate with the local and national government as well as donor agencies of Bangladesh, for logistic and technological supports, to promote socio-economic and reproductive health status of the women through empowering them and to achieve desired change in the reproduction and reproductive behavior of the women in Bangladesh. Finally, it is essential to enjoin the women in the mainstream of development and need to incorporate all these important factors in the national population, health and women policies of Bangladesh.

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Appendices

Appendix-1

Case Studies

Case-1: Vasanti Biswas

Vasanti Biswas (42) lived with her husband and four children in a hut at Parikhupi Village in Satkhira District of Bangladesh. Among her children, two elder daughters were married off before completing high schools. The youngest daughter was studying in a college and the only son was a student of class VII. Ganesh Chandra Biswas (46), her husband, was a petty-businessman, who inherited only four decimals of homestead land. The market price of their household assets, including livestock, bi-cycle, ornaments, and the land, stood for a meager BDT 76,350/= only. Although Vasanti was involved in income generating activities (mostly home-based and informal), the monthly household income, on an average, was BDT 7,500/= only. Her Body Mass Index (BMI) was 23.4.

Vasanti, believing microcredit would change her miserable economic condition, received microcredit from BRAC at first, becoming a member of the *Samity*. She handed over the credited money to her husband, therefore, lost entire control over the credit and its consequential benefits. Ganesh, on the other hand, took the responsibility of paying the installments. The credited money proved insufficient to create employment opportunities for both Vasanti and Ganesh. Moreover, it was invested mostly in economically non-productive sectors, including house repair, daily expenditures, education of the children, and so on, thus, the couple could not be benefitted from the microcredit as they expected to be. As a result, the credited money began to decline from BDT 10,000/= only in 1996 to BDT 6,000/= only in 2010. The growing burden of interests for the loan also compelled the couple to borrow relatively a smaller amount of credit. She was associated with microcredit program for about 14 years.

As a conduit of microcredit, Vasanti enjoyed a relatively better decision making power with regard to her household income or expenditure. Vasanti and Ganesh made mutual decisions on children's education, their clothing, availing health facilities for the family

members as well as using birth control methods. She had, however, least control over household savings and could not influence her husband's decision over daughters' marriage. Likewise, she was not allowed to move out alone. She, however, allowed to visit hospital, office of Microcredit Organizations and relative's house with companions.

Although she was confined in the household, Vasanti had enjoyed remarkable autonomy, especially, to cast her vote for her favorite political party, Bangladesh *Awami* League, and to assist her neighbors in different festive occasions and crisis managements. Every week, she met the staffs of Microcredit Organization in group-meetings, along with her group members; shared her feelings and difficulties that eventually increased her understanding of existing gender disparity as well as the legal provisions for women in Bangladesh. Her habit to listening radio programs and rare chance to watch television also proved effective to this growing conscientization. Besides, the regular interaction with FWAs or FWVs exposed her to recognize the existing population problem in Bangladesh. Thus, it encouraged her to seek family planning information and family planning methods to avoid any more pregnancies. Despite the remarkable progress in the status of Vasanti within the family, achieved mainly through her participation in microcredit program, she reported, *'My husband tortures me, both physically and verbally, because of our incompetence to cope with growing household expenditures, especially for children's education, or unfinished household chores'*.

Vasanti, at the oddment of reproductive age, reported to have active sexual life and admitted that she enjoyed her sexual intercourse with her husband. She denied the possibility of forced sexual intercourse and acknowledged to avoid sexual activities during menstruation. During the week preceding the survey, she had sexual intercourse only once. She stated that she resumed the sexual intercourse about forty five days after her first child delivery, and for the last one, it was almost sixty days after the delivery. She admitted to use rags during her menstruation; she did not know that it is unhygienic. Vasanti believed that she had safe sexual relation with her husband, conforming mono-sexuality. She acknowledged not having any sexually transmitted infections (STIs) or diseases (STDs) and hardly any idea about what STIs or STDs really means.

Vasanti was married off at the age of 16, when Ganesh was 20 years old. A year later, she delivered her first child in her parents' house. Like the eldest, she reported, rest of her

children, including the youngest, were delivered aided by untrained TBAs without any medical precaution, started from the age of 17 and ended at the age of 30. She did not receive necessary vaccines and did not consume supplementary vitamins and iron during her last pregnancy. During her pregnancies, she was the only person responsible to conduct all the household chores, including the heavy ones, without any assistance from husband or any relative. Moreover, she did not have access to modern medical assistance during her pregnancies, except the indigenous doctor. *'My husband could not afford to take me to hospital or clinic for routine physical check-ups during pregnancies, because it was too expensive for us'*, she said. She added that, *'After delivering my son, I felt terrible pain in my lower abdomen, and I remember that because it was truly agonizing for me. Still, I could not seek the medical officers for treatment, but to the indigenous doctor'*. Despite her incapability to manage modern medical support during the pregnancies, mainly for poor socio-economic condition, she was an affectionate mother, breastfed all her children, as long as two and half years, on the average. During breastfeeding, she continued to use oral pills as contraceptive to avoid unwanted pregnancy.

Vasanti, regarding the use of contraceptives, disclosed that after marriage, she hardly had any information regarding the use of contraceptives. The situation further worsened since her husband was keen to have children. These factors together resulted in four children. Since her last child birth, she had been using contraceptive, the oral pills in particular, because her husband asked her to do so. She reported that staffs of Microcredit Organizations provided information to her regarding the efficacy of family planning. Vasanti believed that both GOs and NGOs should provide more information regarding health issues, including population control, women's reproductive health and child care, so that all people enjoy highest standard of health and living.

Case-2: Nasima Khatun

Nasima Khatun, aged 30, lived at Kushadanga Village in Satkhira District of Bangladesh. Before getting married to Abdul Gaffar, she studied up to class IV. Gaffar (36) was a farmer who inherited only 7 decimals of homestead land. Nasima, her BMI was 22.6, lived with her husband and two children. The eldest was a son (11), studying in class V and the younger one was daughter, a student of class I. Her husband could not earn enough to construct concrete house, so, they had been living in a semi-*pucca* house of their own. The market value of all their household assets, including livestock, poultry, television, radio, mobile-phone, bi-cycle, ornaments, furniture, utensils, trees and the land, and so on, stood around BDT 1,55,150/= only.

Nasima became a member of BRAC and received BDT 10,000/= only as credit for the first time. She borrowed BDT 6,000/= only from SUS in 2010 for the last time. Though she managed to borrow the credit, all her money was invested either buying livestock or land by her husband, who also repaid the weekly installments from the income of farming. She was associated with microcredit program for about 8 years. Nasima was very pleased with her husband as her household income was increasing gradually with the growing number of livestock, although she lost her control over the credited money. She, however, was joyful to disclose the fact that her husband became more persuasive to take good care of her, to avoid any physical harm, since she received the credit.

Nasima had no control over family credit, miscellaneous expenditures and savings and she literally depended on her husband's decision on buying or selling goods or deciding on expenditure of education and health expenses for their children. Her husband restricted her movements outside the house and even if she visited her relatives' house, she was accompanied by her husband. As her movement was restricted, she was involved only in informal non-farming home based activities, like poultry farming, livestock rearing, paddy husking and sometimes handicrafts. However, Nasima cast her vote for Bangladesh Nationalist Party (BNP) in the last parliament election, held in 2008. But she never participated directly in political activities or interacted with local political leaders. She was interested to take part in different cultural and religious festivals, and helped the neighbors during emergencies. She also listened to radio programs and watched television daily and with permission of her husband, she met the staffs of the Microcredit

Organizations in their weekly meetings. Nasima was more responsive to the gender equity and laws regarding domestic violence against women. She believed that women were harassed physically or verbally by the intimate partners or in-laws. She strongly opposed to give or take dowry as her parents did not give dowry to her husband.

Nasima and her husband were satisfied about their sexual relation, the decisions of sexual intercourse were made mutually and they never imposed their sex urge on each other. She never engaged in sexual intercourse during her menstruation. During the week, preceding the survey, she did not take part in sexual intercourse due to menstruation. Nasima used old cloths or rags for menstruation management. After her first delivery, she resumed sexual intercourse after forty nine days and it was sixty three days after in the case of last delivery. Nasima strongly believed that she had a safe and secured sexual relation with her husband. Both of them were honest to each other and she has not been infected by any Sexually Transmitted Disease (STD) or STI.

Nasima reported that she was married off at the age of 15, when her husband was 21 years old. After four years of marriage, she delivered her first child – a boy aided by an untrained TBA in her parents' house. The second one – a girl – was also delivered aided by an untrained TBA in her maternal grandfathers' house. Nasima could not afford the routine physical check-ups during her pregnancies and did not consult doctors, but she believed that consulting doctors would have been beneficial. She received necessary vaccines but could not consume supplementary vitamins and iron during her last pregnancy. She participated in weekly meetings organized by the credit providing organization and performed the regular household chores; she, however, did not face any pregnancy related health hazards. Nasima, like most of the participants in microcredit programs, visited indigenous doctor to have health assistance for herself and their children.

Nasima breastfed both her children for a long time, thirty six months for the first child and thirty two months for the second child. She believed that breastfeeding did not harm mothers' health or undermine the physical beauty of breasts. She used oral pills to prevent unwanted pregnancy during the breastfeeding.

Though she was married off at an early age, her husband was aware of using contraceptive, and after just one month of their marriage, Nasima began to use contraceptive, especially oral pills. Since then, she had been using oral pills without any problems. FWA or FWV and staffs of Microcredit Organizations often helped her to get both information and contraceptives, which helped her to maintain a small but happy family. Nasima suggested that both GOs and NGOs should provide information regarding health issues, including reproductive and child health, and must supply contraceptives and medicines free of cost to control population growth and ensure easy access to quality health facilities for all, particularly, women in rural Bangladesh.

Case-3: Rahima Khatun

Rahima Khatun, aged 35, resided at Shibananda Kati Village in Satkhira District of Bangladesh. She lived in a clay-built house with her husband (40) and only daughter, who was a student of class VIII. Since she could not complete her primary education, nor did her husband, they were engaged in agricultural activities with a monthly household income of about BDT 3,800/= only. The market price of her household assets, including 15 decimals of land (8 decimals were agricultural land), livestock, trees, mobile phones, and so on, stood around BDT 1,25,500/= only.

Rahima received microcredit for the first time from BRAC (BDT 10,000/= only) and later from ASA (BDT 7,000/= only) in 2010 by becoming the member of these organizations to buy land and to increase household income. She knew the interest rate of the credit and the weekly installments. She was associated with microcredit program for about 13 years. Rahima, together with her husband, was repaying the installments regularly. Unlike other female recipients, Rahima had full control over the credited money. But, she observed that borrowing credit, from BRAC and ASA, did not generate her household income, because it was too inadequate to invest in and to make a livelihood out of it. One interesting outcome of microcredit, as Rahima mentioned, is that it convinced her husband to take a good care of her, so that more credits could be channeled through her.

Rahima's control over credited money eventually increased her control over household resources, including savings, income, and so on. It also made an effect on her upward social mobility as she moved outside her house more frequently, from local *Bazar* to *Upazila* town all by herself. She was also involved in various income generating agro-based informal activities, like animal husbandry, homestead gardening, post-harvest activities, and so on. Her involvement in home-based income generating activities as well as upward mobility allowed her to engage in numerous social, cultural as well as political activities, including vote, and so on. She sometimes resolved conflict between neighbors or relatives, however, never participated directly in village *Shalish* or in public meetings. She also enjoyed absolute authority to make decisions regarding family expenditure, food preparation, and education and health expenses for child, and so on. She, together with her husband, decided to buy or sell livestock, or mortgaging land, and using family planning methods. Though she enjoyed much power over household resources and

decisions, she acknowledged that credit providing organizations never shed light on women's right, not even in weekly group-meetings. Thus, she hardly had any clue regarding the laws and legal provisions against violence against women in Bangladesh. It is important to note that Rahima's husband never tortured her and she did not face any conflict over dowry with her husband.

At mid thirty, Rahima was healthy, with a calculated BMI of 22.6, and sexually active woman. Her husband sometimes, however, forced her for sexual intercourse. But, Rahima was satisfied on the whole with her sexual life as she acknowledged that during her illness, especially, the menstruation period, her partner never pressured for sexual intercourse. Like many women in rural Bangladesh, she admitted to use rags, instead of sanitary napkins, during her menstruation. During the week prior to the survey, Rahima admitted that she had sex twice. After the birth of her daughter, they resumed sexual intercourse after two months of the delivery without any complexity. She believed that they had a safe and secured sexual life, due to their monogamous sexual nature. She was not infected by any STDs or RTIs, and did not possess any information about HIV/AIDS or STDs.

Rahima, disclosing facts about her pregnancy stated, *'I was 20 when I conceived my daughter and I could not afford regular medical check-ups, mainly because of poverty'*. She could not avail herself of the necessary vaccines and supplementary vitamins and iron, required for safe-motherhood. Her child was born in her parents' house aided by an untrained TBA without any medical precautions. During pregnancy, she carried out all the household chores, but did not face any health problem or complication. After two hours of the delivery, she began to breastfeed the child and continued till the child was 32 months old. During the breastfeeding Rahima used oral pills as contraceptive.

Two years after marriage, Rahima started using contraceptives for birth control without any familial obstacle. After delivering her daughter, she sterilized herself to prevent further pregnancies, with the consent of her husband. She acknowledged that FWA or FWV visited her following the marriage and she received information regarding family planning from Microcredit Organizations. She personally believed that the government of Bangladesh and NGOs should mobilize more resources, such as, establishing more community health clinics in rural Bangladesh and supply of contraceptives and medicines

to the rural women free of cost to control population growth and ensure better health output, especially, reproductive health of the women.

Case-4: Krishna Rani

Krishna Rani (39) lived in a semi-*pucca* house with her husband (45), daughters and only son at Parikhupi Village in Satkhira District of Bangladesh. Her household's monthly income was around BDT 6,300/= only, where Krishna, not directly involved in income generating activities, hardly made any contribution. The main source of the household income was the petty-business of her husband, as he could not make a livelihood out of the meager quantity of agricultural land (6 decimals), inherited from his ancestors. The market price of their household assets, including livestock and the land, stood for BDT 86,500/= only.

Krishna received her first credit (BDT 8,000/= only) from the BRAC to escape from the poor living standard and to create employment opportunity and for the last time she received it (BDT 7,000/= only) in 2010 from ASA by becoming a member of the cooperatives. She was associated with microcredit program for about 13 years. The weekly installments of the microcredit were paid regularly by her husband as the credited money was swiped away from the very moment she received it. Losing control over the credited money, Krishna was frustrated for not being able to bring about significant change in her life, instead created burdens of interest on their poor household income.

Although she did not contribute to household income or have any control over the credited money, Krishna was allowed to make decisions of her own in minor family issues, like preparing foods, buying or selling poultry, and so on. She, however, relied heavily on decisions of her husband to make any effect on savings, household expenditures, including education and medical expenses. Her poor control over household resources was confirmed by her confinement within the four-walls and was not allowed to go out, except to relatives' house or to the office of Microcredit Organizations. She added, *'My husband does not like me to go out without his permission'*. Her confinement left her engaged only in home-based informal works, such as, livestock rearing or sewing *Kanths* (quilts). It also secluded her from the contact with local leaders and to get familiar with the neighbors or to enjoy local festivals. She was allowed to cast her vote in the National Parliament Election in 2008. She enjoyed watching television or listening to radio programs regularly.

Domestic violence against women and the practice of dowry in the contemporary Bangladesh society was perceived as common phenomena by Krishna. She said, *'My husband tortures me, for not completing my responsibilities and for other reasons; including the prolonged poverty we are suffering. My husband is not a hot-headed person, but the situation blanked his thoughtful mind. Moreover, it is the virtue of men, vested by Ishwar, to rule over women'*. Her marriage was affected by the transaction of dowry; therefore, she strongly believed that dowry must be payable by the bride's parents. Krishna, thus, was ready to pay dowry for her daughters and keen to receive it from daughter-in-law as well.

Krishna was physically sound woman with a calculated BMI of 23.6 and was active sexually. Denying the possibilities of forced sex in her conjugal life, she acknowledged her satisfaction regarding the sexual life. During the week, prior to the survey, she did not take part in sexual intercourse due to onset of menstruation. Like many women in rural Bangladesh, she used rags and old cloths to manage menstruation, being unaware of its unhygienic nature. Krishna was confident to have a secured and safe sexual life. She, however, was barely aware of sexual diseases, *i.e.* HIV/AIDS or other STIs and STDs. She was not infected by any of these diseases.

Married off at the age of 14, Krishna conceived her first child two years after as per wish of her husband, and by the age of 39, she was mother of three healthy children. She received necessary vaccines during her pregnancy. Regular physical check-ups as well as the consumption of supplements during pregnancy kept her healthy and ensured smooth and uncomplicated child birth aided by trained TBAs. During her pregnancies, she continued the household chores and managed support, including suggestions, from the nearby community hospital for any pregnancy related complicity. Microcredit Organization, apart from credit, provided her information on health related issues, encouraged her for savings to prepare for health emergencies. It is important to point out that Krishna did not conceive after the participation in microcredit program.

Krishna disclosed that she started breastfeeding her children as soon as they were born and continued as long as two and half a year, on an average. She boldly stated, *'Breastfeeding does not harm mothers' health, instead ensures better health for the baby and reduces the possibilities of growing pain in the breast, and reduces the chances of*

conception'. Krishna was using oral contraceptives, pills, from the very beginning of her conjugal life. She said, *'My husband was not comfortable with using condoms, thus, requested me to take oral pills instead'*. Though Krishna used the contraceptive, she denied getting any assistance or information regarding family planning from FWA or FWV, however, acknowledged being assisted by the staffs of Microcredit Organizations. Krishna believed that both GOs and NGOs should provide contraceptives and medicines free of cost to the women in rural Bangladesh to control population growth and ensure sound reproductive health and rights of the Women in Bangladesh.

Case-5: Lili

Lili (31) lived at Kushadanga Village in Satkhira District of Bangladesh, with her husband, Abdul Majed (38), and two children. Her husband was a fish cultivator who owned only 8 decimals of land, mostly homestead. He earned around BDT 6,200/= only per month. Lili sometimes helped her husband in the fish production. She was a physically sound woman with a BMI of 23.3. The market price of her household assets, comprising land, livestock, fan, television, radio, ornaments, mobile phone, and so on, stood about BDT 1,52,900/= only.

Lili received BDT 10,000/= only for the first time as microcredit from Grameen Bank, becoming a member of the organization to buy livestock. Under the conditions of repaying the weekly installment, she lately borrowed BDT 8,000/= only from Ad-Din in 2010. She was associated with microcredit program for about 9 years. However, her husband took the charge of the credited money and managed the money for the installments. Lili thought microcredit had generated their household income as they invested the credit in fish production. She believed that being a conduit of microcredit; she was more revered than before as her husband became more careful to treat her, especially, during her illness.

Lili mentioned that microcredit allowed her to acquire greater influence on the household decisions, including household expenditure, income, health and education expenses of the children, buying or selling goods, and so on, although she had no control over savings and loan. She enjoyed greater mobility, compared to average rural women, and often involved in home-based income generating activities, like the fish production. She also participated in various social and cultural programs, like marriage ceremony, and helped the neighbors in emergencies. Listening to radio programs or watching television was regular past-time for Lili. She, however, strongly denied getting involved in political activities, like public assemblages to discuss contemporary issues, or interaction with local political leaders, because her husband did not approve it.

Lili strongly protested violence against women. She believed that men often abuse their wives, as per her own experience, for not completing household chores, or other silly matters and especially, for chronic poverty in rural Bangladesh. She said, *'Men and*

women are supposed to be equal and husbands should not ill-treat the wives in particular'. It is evident that the exposure to mass media and the membership in microcredit programs raised her awareness; therefore, facilitated her access to information regarding women's legal, social and political rights. She also demonstrated her strong disapproval of dowry practice in rural Bangladesh.

Lili actively participated in sexual intercourse and enjoyed her sexual life. Though sometimes they urged each other for sexual intercourse, her husband did not force her to mating during her illness, especially, the menstruation. During her menstruation, she used rags. Lily disclosed that during the week, prior to the survey, she involved in sexual intercourse for three times. After the delivery of first child, she resumed intercourse after 42 days and it was about 60 days after the last baby. She mentioned of having a safe and healthy sexual life, as, she was not infected by any sexually transmitted disease (STD) or infection (STI).

Lili conceived her first child at the age of 17 and the last child was delivered at the age of 28. During her first pregnancy, she could not afford routine physical check-ups because of financial insolvency and did not have any savings for maternal emergencies. For the last pregnancy, in contrast, she sought advice from the community health care provider as was suggested by the staffs of the Microcredit Organizations. She, however, delivered both her children aided by the untrained TBAs. She received the necessary vaccines during her last pregnancy, but did not consume supplementary vitamins and iron. It is worth mentioning that she had no helping hand for the household chores during her pregnancies. After deliveries, she did not face any postpartum complication. Soon after the childbirth, Lili started breastfeeding and continued as long as 30 months. She opined that maternal health and physical beauty were negatively affected by breastfeeding. During breastfeeding, she took oral contraceptive pills.

Though she conceived at a very early age, Lili began to use contraceptive just a month after her marriage, on own will. She said, *'After my marriage, family planning workers came to me and provided some suggestions about the utilities of using birth control methods'*. She enjoyed the sexual intercourse, in spite of using birth control methods. She also revealed that Microcredit Organizations provided information about the use of contraceptives, but did not suggest any particular method of family planning. Lili

expected that maternal health in Bangladesh, especially, in remote rural areas, can be improved if GOs and NGOs initiate bottom-up health interventions, emphasizing on maternal and infant health necessities. She suggested that both GOs and NGOs should provide contraceptives and medicines free of cost to control population growth and ensure better reproductive health of the women in rural Bangladesh. In addition, Lili emphasized on organizing awareness campaigns on reproductive health education for the women in rural Bangladesh.

Case-6: Aleya

Aleya, aged 37, lived at Shibanda Kati Village in Satkhira District of Bangladesh. She lived in a nuclear family with husband (43), a farmer, and two children. She was a housewife with a BMI of 21.8. Aleya sometimes participated in home-based informal income generating activities. Their monthly average household income was about BDT 6,000/= only. The market price of Aleya's household assets, comprising of 28 decimals of land, including 3 decimals of land of her own, livestock, house, and so on, was BDT 1,64,300/= only.

Aleya received microcredit for the first time from Grameen Bank (BDT 10,000/= only) and lastly from RRF (BDT 6,000/= only) in 2010 by becoming a member of the Microcredit Organizations. Aleya's husband took the responsibility to repay the installments, thus, the credit was controlled by him. Aleya believed that microcredit generated their household income as they invested this money to their agricultural activities. She was associated with microcredit program for about 13 years. Aleya believed that her husband was taking better care of her during her sickness than he used to do so before she received the credit.

Aleya had no control over savings or household expenditures and could not decide to buy or sell things, such as, livestock, poultry, crops, and so on, without the consent of her husband. She, however, enjoyed greater mobility as long as she moved to hospitals/clinics or visited relatives. But, her movement was restricted when dealing with market, office of the Microcredit Organizations, *Upazila* or *Zila* Head Quarters. She often participated in different social and cultural programs, except the political activities such as *Shalish*, and rarely involved in neighbor's conflict. Aleya said, *'I was more comfortable to engage in homestead gardening and livestock rearing than working outside my house to involve in crop production or something like that'*. She often cast her vote during the national and local elections, but barely met the local political leaders. She believed that men and women should have equal rights, but men in rural Bangladesh often exploit women. She also disclosed that her husband never tortured her physically, but sometimes scolded for not completing household chores in time.

Aleya actively participated in sexual intercourse and was satisfied sexually with her husband. She never experienced forced sex. Aleya said, *'We always involve in sexual intercourse through mutual consent'*. She took part in sexual intercourse with her husband two times during the week, prior to the survey. She opined that during her illness, her husband did not force her to intercourse. She used old clothes and rags during her menstruation and did not involve in any sexual intercourse at that time. Aleya resumed sexual intercourse about 49 days after her first child, and 63 days after the last baby. Aleya had no sexual relation with persons other than her husband and she believed that her husband also did not have any sexual relation with woman other than herself. She, thus, thought she had a healthy and safe sexual life and had not been infected by any STDs or RTIs.

Aleya, married off at the age of 17, conceived her first baby at 18. During her gestations, she did not seek regular physical check-ups and both her babies were born at her parents' house aided by untrained TBAs. Aleya informed that during her gestations, she had no saving for emergencies, but received the necessary vaccines. She was solely responsible to complete all the household chores. She experienced parturition complexity after the delivery of the last child and consulted the indigenous doctor for recovery. Aleya started breastfeeding her first child after an hour of the birth and continued for about 30 months. She thought breastfeeding is neither harmful to maternal health nor it deteriorates the beauty of the breasts.

After the marriage, Aleya and her husband decided together to use contraceptive and they did not face any familial or religious obstacle. Aleya voluntarily used injections as a method of contraceptives. In spite of using contraceptive, she felt comfortable during sexual intercourse and did not confront any health problems. Though she was not informed by the FWA or FWV or by the staffs of Microcredit Organizations regarding family planning and reproductive health issues, Aleya strongly believed that GOs and NGOs should provide birth control materials free of cost among the rural women to control the population growth in Bangladesh. In addition, Aleya emphasized on organizing awareness campaigns by GOs or NGOs on reproductive health education for the women in rural Bangladesh.

Case-7: Anita Rani

Anita Rani (40) lived in a nuclear family with husband, Ranna Prasad Dutta (aged 45 years) and only daughter (aged 17 years) in a semi-*pucca* house at Parikhupi Village in Satkhira District of Bangladesh. She was a housewife. Her husband, a petty-businessman, was the only bread earner of the household, managing around BDT 6,200/= only per month. The market price of their household assets, including livestock, trees, homestead land (5 decimals), bi-cycle, television, and so on, stands at around BDT 95,000/= only. Though she never had a chance to attend school, due to poverty and early marriage (at the age of 16), she was very enthusiastic about her daughter's education, who was studying in a local college.

Anita, to increase household income and to secure her daughter's future, received microcredit first time, from ASA, an amount of BDT 12,000/= only, and for the last time it was BDT 10,000/= only from SUS in 2010 by becoming its member. She was associated with microcredit program for about 14 years. She knew the rate of interest and the conditions of the credit, to pay the installments weekly, but she never had a chance to do so, because her husband took the charge of the credited money as well as the installments. Anita regretted that microcredit did not generate the household income nor change their fate; it, however, has, she believes, increased her husband's attention to her since receiving the credit.

Though Anita had very little control over the credit, she believed that it enhanced her degrees of empowerment, in terms of controlling power over household resources, especially, family expenditures and savings. It has also increased her freedom to move alone to market, office of Microcredit Organizations, kin's house and even *Upazila* town. Moreover, she could participate in every single festival in her neighborhood and supported the neighbors in their miseries. She watched and listened to her favorite programs on television and radio every day. She cast her vote freely in National Parliament Election, held in 2008, for Bangladesh *Awami* League. However, she was unwilling to involve directly in political activities or to interact with local political leaders, except the staffs of the Microcredit Organizations. Although Anita enjoyed greater mobility, she, for some cases, had to accept the decision of her husband to buy or

sell things, education and health expenses, and so on. Unconventionally, Anita was free to decide the use of contraceptive, perhaps, because she was the one to use it.

Apart from the aforementioned issues, Anita added that women and men are supposed to be equal by nature; however, men often exploit women, physically and mentally, either for unpaid dowry or for grinding poverty. She said, *'In my case, dowry was never a problem. But, the growing household expenditures, due to price hike of daily necessities, pushed my husband to his limit, thus, he sometimes bursts out on me'*. She acknowledged that Microcredit Organizations, implicitly, never provide any information on women's right; however, the weekly group-meetings helped her to know different stories regarding women's status and legal provisions in contemporary Bangladesh.

Anita was physically a fit and healthy woman, with a BMI of 23.7. At the age of 40, she was sexually active and enjoyed her sexual life with her life-partner, since it was decided mutually. She disclosed that during her menstruation or sickness, they avoided sexual intercourse. They could not have sex for the last seven days, prior to the survey, due to illness. She believed that they have safe and sound sexual relation as they both were honest to each other. After delivering her daughter, she engaged in sexual intercourse on fifty sixth day without any physical problem and she had never been infected by STDs or RTIs. Microcredit Organizations, she admitted, did not provide any kind of information regarding HIV/AIDS and STDs/RTIs.

Anita, married off at 16, conceived first time at the age of 22. She delivered her daughter at her parents' house with the aid of an untrained TBA (*Dai*). During her gestation, she had regular physical check-ups and received essential vaccines from the nearby community hospital. She also added that she took the suggested supplements, *i.e.* additional foods, fruits, vitamins, and so on, by the medical assistants; however, she performed the household chores all by herself without any physical disturbances. After three hours of the delivery, she started breastfeeding her child and continued until her daughter was 28 months old. She suggested that breastfeeding helps her child to be healthy that also resisted against common diseases. Anita disclosed that the conception was decided by her.

After marriage, she received suggestions from FWA or FWV regarding the family planning and family planning methods to avoid pregnancy. Soon after marriage, she began to use contraceptive, particularly the oral pills. Anita reported that the Microcredit Organizations did not provide any information regarding family planning, but encouraged her for savings for emergencies. She thought GOs and NGOs should play an important role to control population growth and solve the existing reproductive health related complications of the women in rural Bangladesh by setting up more health care centers at the local levels by incorporating local leaders and civil society.

Case-8: Amiran

Amiran (35) lived at Kushadanga Village in Satkhira District of Bangladesh with her husband, Shahor Ali (40), and two sons. Due to poverty, she could not attend school, nor could her husband, but let their children to be enrolled in primary education. However, her children could not complete their education and involved in informal income generating activities. The eldest followed the foot-step of father and became a van-puller and the youngest was a tailor. On an average, the monthly household income of this family was BDT 7,000/= only. The market price of the household assets, including poultry, trees, mobile phone and land (4 decimals only), stood around BDT 65,000/= only.

Amiran received her first credit from BRAC (BDT 8,000/= only) to buy a van, and from ASA for the last time (in 2010) to repay the previous loan. She was associated with microcredit program for about 11 years. She knew the rate of interest of the credit and was intended to repay the installments all by herself. However, she heavily relied on the income of her husband and sons. Moreover, the credited money was invested by her husband, therefore, she lost control over the credit entirely and the benefits as well. She, thus, regretted that the microcredit could not change her fate and did not generate the household income, as the interest became burden on the household. But, one interesting fact, as Amiran disclosed, was that her husband paid greater attention to her physical well-being as only she could borrow the credit from the Microcredit Organizations.

Amiran's little or no contribution in household income, by means of poultry rearing or homestead gardening, left her with low control over household income, expenditure, and so on. She barely made decisions in buying or selling goods, or raising health and household expenditures without consulting to her husband. But, her involvement in microcredit programs allowed her relatively greater mobility as she could move alone to the market, relative's house, hospital, office of the Microcredit Organizations and even go to the *Upazila* town. Likewise, she participated voluntarily in different social and cultural festivals in her locality and often resolved family disputes between neighbors. She cast her vote for Bangladesh *Awami* League in the National Parliament Election, held in 2008. She, however, kept herself isolated from direct involvement in various political issues, *i.e.* *Shalish*, and interaction with political leaders. Her exposure to television programs, and

the weekly meetings with group-members and the staffs of the Microcredit Organizations permitted Amiran to recognize that women were the victims to men's intentional repression, such as, dowry and violence by the intimate partners. She admitted to know the laws against women repression. Though she knew the legal provisions of violence against women, she never protested against the physical assaults by her husband, mostly for the repayment of loans.

Amiran was a healthy woman, with a Body Mass Index of 21.1. She was sexually active, enjoying sexual life with her life partner. She acknowledged that during the week, prior to the survey, she engaged in sexual intercourse 3 times. Though denying the possibility of coerced sex during her illness, she admitted to have occasional sexual intercourse during her menstruation. Like many women in rural Bangladesh, she used rags during the menstruation. She stated that the sexual intercourse, after the first child birth, resumed around forty two days, and it was fifty six days after the last child. Amiran admitted to have sex with a person other than her husband, but nobody knew it. She informed that she did not hear of any kind of sexual diseases, including STDs, RTIs and not even HIV/AIDS.

Married off at the age of 14, Amiran conceived first time, as per the desire of her husband, at the age of 16 years and for the last child she was 21 years old. Both the children were delivered aided by the untrained TBAs, without any complications. During her pregnancies, she never consulted with the medical officials and did not seek routine physical check-ups. She received vaccines, but did not consume supplementary vitamins and iron during her last pregnancy. She did not have any savings for birth related complexities during the pregnancies, and often performed all the household chores, including the heavy ones, without any help from her husband. She received some medical attention from the indigenous doctor. She did not conceive after the membership in Microcredit Organizations, and thus, she did not get any kind of advice on pregnancy related case or savings from the Microcredit Organizations. Amiran began to breastfeed her first child after an hour and half of the birth and continued up to 32 months. She used oral pills during breastfeeding and did not view breastfeeding harmful to her health.

Soon after her marriage, Amiran started to use birth control methods (oral pills) without any familial or religious impediment. After the delivery of the last child, she sterilized

herself to avoid further conception, as per the suggestions of the FWA or FWV, after discussing with husband. She enjoyed sexual intercourse with her husband and she did not face any problem by using such birth control method. She received family planning information from the staffs of Microcredit Organizations. Amiran believed that both GOs and NGOs could play an important role to control the population growth and solve the reproductive health related complications of the rural women by supplying contraceptives and medicines free of cost and providing reproductive health education to the women in rural Bangladesh.

Case-9: Anowara Khatun

Anowara Khatun (37) was a housewife, living at Kushadanga Village in Satkhira District of Bangladesh with husband and three sons. Her husband (42) was a van-puller. Though the couple never attended school, all their children enrolled in schools. The eldest was a student of undergraduate program and the others studied up to class V. The monthly household income of Anowara was around BDT 5,300/= only. The market price of the household assets, this couple owned, consisting of agricultural land (6 decimals), livestock, and trees, and so on, stood at around BDT 98,000/= only.

The complexities of government and commercial Banks for receiving a credit pushed Anowara to seek credit from the Microcredit Organizations. She said, *'It is quite impossible for me to take money from the government or commercial banks without showing written documents of land ownership. But, Microcredit Organizations somewhat relaxes this condition. So, I received the loan from Microcredit Organizations by becoming its member'*. She received the credit from different Microcredit Organizations to meet the demand of the family, either to buy livestock, or van. She received her first credit from BRAC, an amount of BDT 9000, and lastly from Jagoroni Chakka Foundation, BDT 8000 in 2010. As soon as she received the credit, her husband began to manage and control the credited money, because he was the one to repay the installments. He also became responsible to take good care of Anowara during her illness. It is important to note that Anowara was associated with microcredit program for about 13 years.

Anowara, similar to her control over the credited money, had little control over household matters, including income, savings, and family expenditures. Anowara exclaimed with disappointment and said, *'I am hardly invited for making decision in important familial matters. My husband, arbitrarily, in majority cases, takes the decisions'*. She was not permitted to move alone outside her house, except to the office of the Microcredit Organizations, and the weekly meetings in her village with group-members. She was confined to work within her household, especially, livestock rearing and handicrafts, and was not allowed to meet the local leaders. Her conservative husband did not allow her to watch television or to listen to radio programs. She, however, cast her vote to Bangladesh Nationalist Party in the National Election of Bangladesh, held in 2008. Sometimes, she

helped the neighbors in crises and participated in social and cultural programs, with permission of her husband.

Anowara thought men and women are equal in terms of right. She came to know about the existing laws for violence against women and women rights through Microcredit Organizations. She believed that women were victimized by their intimate partners, mostly for unpaid dowry, poverty and unfinished household chores. But she did not face such type of humiliation by her husband.

Anowara was physically fit, with a BMI of 19.4 and she was sexually active, enjoying every single mating with her life partner. She disclosed that, during her illness or menstruation, her husband never forced her for sexual intercourse. She acknowledged that during the week prior to the survey, they engaged twice in sexual intercourse. Like many women in rural Bangladesh, she used rags during her menstruation. She resumed sexual intercourse about forty nine days after the birth of her first child and it was forty two days after the last child birth. She stated, '*We have a healthy and hygienic sexual life, since we are monogamous*'. Thus, she was not concerned about any kind of sexual diseases like HIV/AIDS and STDs/RTIs.

Anowara conceived for the first time at the age of 17. She delivered her first child at her parents' house aided by an untrained TBA, because her husband did not permit her to visit or access the local hospital or clinic, either for poverty or for conservative ideas. Similarly, she delivered her last child, at the age of 25 years, at her in-laws' house aided by an untrained TBA. She received the necessary vaccines during her pregnancy, but did not consume supplementary vitamins and iron. During her pregnancy, she did not have any savings for emergencies. Moreover, she performed all the regular household chores during her pregnancy, without any help from her husband. But, she did not face any kind of health problems during pregnancies and after child deliveries. After the delivery of her first child, she started breastfeeding her baby within two hours and continued up to 33 months. She took oral pills as contraceptive during breastfeeding.

Anowara started taking oral contraceptive pills on her own will after a month of her marriage. Since then, she did not face any difficulty during sexual intercourse or any health problems while taking pills. She reported that staffs of Microcredit Organizations

provided information to her regarding the efficacy of family planning. She thought Government and NGOs should take necessary steps, such as, establishing health care centers and introducing mobile team of health workers at local level to address reproductive health problems of the women in rural Bangladesh. In addition, she emphasized on providing contraceptives and medicines to the women free of cost by the GOs and NGOs to control population growth and sound reproductive health of the women in rural Bangladesh.

Case-10: Shikha Rani

Shikha Rani (30) had been living with her three children and husband at Shibananda Kati Village in Satkhira District of Bangladesh. She was a housewife with a BMI of 23.6. Her husband, Gopal Bhashkar (36), was a petty-businessman with a monthly income of BDT 4,200/= only. Shikha hardly made any contribution to household income, since she was not actively involved in income generating activities. The market prices of their household assets, including livestock, poultry, and homestead land (6 decimals) and, so on, stood at around BDT 75,500/= only.

Shikha received microcredit (BDT 8,000/= only) for the first time from BRAC and for the last time it was (BDT 6,000/= only) from SUS in 2010. She knew the interest rate of the credit and the weekly installments. Her husband invested the credited money in his petty-business, rice processing, and paid the installments regularly. Therefore, Shikha lost her control over the credit entirely and got deprived from its benefits. She was associated with microcredit program for about 9 years.

Shikha enjoyed greater mobility as she could visit her relatives, went to the office of Microcredit Organizations and market frequently. However, she hardly made any decision within her household as she relied heavily on the decisions of her husband, who by the virtue of income, made all the crucial decisions. Her husband allowed her to involve in home-based informal activities, like homestead gardening, animal husbandry and so on, but did not permit to participate in social and cultural programs in the locality. Her voting behavior was, to some extent, influenced by her intimate. She cast her vote for the Bangladesh Awami League in the National Parliament Election of Bangladesh, held in 2008. She, regarding women's right, stated that men and women are supposed to be equal. But, domestic violence and the practice of dowry made women more vulnerable to men, she replied.

Shikha had a clear knowledge of sexuality and enjoyed the sexual intercourse with her husband. They never forced sexual intercourse on each other, and never engaged in sexual intercourse during illness, especially, during the menstruation. During the week preceding the survey, she took part in sexual intercourse 3 times. Shikha usually used rags during her menstruation. After the delivery of first child, Shikha resumed sexual

intercourse about 49 days after and 56 days after the last child birth. The couple was monogamous and had safe and healthy sexual relation, thus, they were not infected by any STD or RTI. Shikha mentioned extensive awareness about all the sexual diseases, like HIV/AIDS, STDs, and STIs, and so on.

Shikha conceived her first child at the age of 16 years and she was 28 at the time of last conception. During her pregnancies, she did not seek any physical check-up from the medical assistants. She received necessary vaccines, but did not consume supplementary vitamins and iron during her last pregnancy. She delivered her babies at her parents' house, aided by the trained TBA. Shikha informed that during the last gestation, she had to be present in the meetings organized by the Microcredit Organization. During her pregnancies, Shikha had no savings for safe-motherhood and she usually sought health supports from the indigenous doctor. Shikha started breastfeeding for her first child after two hours of birth. During the survey, she had a breastfed baby aged only a year. However, she reported that breastfeeding did not deteriorate the beauty of her breasts. She used oral pills as contraceptive during breastfeeding the children.

Shikha mentioned that after two years of her marriage she began to use the contraceptive (oral pills) as per her own decision. She said, *'Oral pills as contraceptive did not make about any negative impact on my health'*. Now-a-days, FWA or FWV were assisting her and staffs of Microcredit Organizations were providing information regarding the efficacy of family planning. She believed that both GOs and NGOs should appoint more experienced health care staffs who would visit every woman on a regular basis for sound reproductive health of the women. Moreover, she added that GOs and NGOs should supply medicines and contraceptives free of cost to the married women to control the population growth and improve the reproductive health status of the women in rural Bangladesh.

Appendix-2

Tables

Table-1: Respondents' Number of Living Children and Microcredit Status

Number of Living Children	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
1	41	20.5	51	25.5	92	23.0
2	84	42.0	83	41.5	167	41.8
3	45	22.5	48	24	93	23.3
4	22	11.0	12	6	34	8.5
5	5	2.5	5	2.5	10	2.5
6	3	1.5	0	0.0	3	0.8
7	0	0.0	1	0.5	1	0.3
Total	200	100.0	200	100.0	400	100.0
Mean	2.37		2.21		2.29	
Std. Deviation	1.10		1.05		1.08	

Table- 2: Respondents' Number of Conceptions and Microcredit Status

Number of Conception	Microcredit Status				Total	
	Participant		Non-Participant		Number	Percent
	Number	Percent	Number	Percent		
1	34	17.0	43	21.5	77	19.3
2	72	36.0	76	38.0	148	37.0
3	53	26.5	47	23.5	100	25.0
4	24	12.0	22	11.0	46	11.5
5	8	4.0	7	3.5	15	3.8
6	6	3.0	2	1.0	8	2.0
7	2	1.0	2	1.0	4	1.0
8	1	0.5	1	0.5	2	0.5
Total	200	100.0	200	100.0	400	100.0
Mean	2.65		2.46		2.56	
Std. Deviation	1.33		1.26		1.30	

Appendix-3

Serial No.....

Village:

An Interview Schedule

On

Participation of Women in Microcredit Program and Their Reproductive Behavior in Rural Bangladesh

Respondent's Name: Husband's Name:

Section-A: Background Information

- 1) What is your religion? 1. Islam 2. Hindu 3. Christian 4. Other (specify)...
- 2) What is the type of your family? 1. Nuclear 2. Extended
- 3) What was your mode of mate selection? 1) Members of the Family 2) Self
- 4) What sort of house you have? 1. Pucca 2. Semi-pucca 3. Thatched 4. Kutcha
- 5) BMI (calculation): 1. Weight.....Kg. 2. Height Inch.
- 6) **Family Information:**

Sl. No.	Relation with Family Head	Age (in years)	Sex	Length of Schooling	Current Occupation	Monthly Income (in BDT)
1	Respondent					
2	Family head					
3						
4						
5						
6						
7						
8						
9						

7) **Household Landed Property**

SL No.	Categories of Land	Quantity of Landed Property (in Decimal)
1	Homestead	
2	Cultivable Land	
3	Fallen Land	

8) How many decimals of landed property do you own?

9) Do you support any political party? 1) Yes 2) No

10) If yes, what is the name of that political party? (Specify)

11) **Information on Household Assets:**

Name of Assets	Amount	Ownership Pattern	Price at Purchasing	Current Price
Livestock				
Poultry				
Savings				
Television				
Radio				
CD Player				
Fan				
Mobile				
Bi-cycle				
Jewelry				
Furniture				
Utensils				
Kitchenware				
Trees				
Land				
Cash (in BDT)				
Others				

Section-B: Microcredit Data

12) Have you ever received microcredit? 1. Yes 2. No

13) If no, what is the reason? (Specify)

14) If yes, please fill-up the following details:

Sequences of Loan	Amount	Duration	Organization	Purpose	Sector of Investment
1 st					
2 nd					
3 rd					
4 th					

15) How long have you been receiving the microcredit?Years.

16) How did you receive the credit?

1. By becoming a member 2. Without a membership

17) Do you know the rate of interest for the last credit? 1. Yes 2. No

18) How do you repay the credit?

1. Weekly 2. Monthly 3. Other (Specify).....

19) Do you repay the installments in time?

1. Always 2. Sometimes 3. Rarely 4. Not at all

20) Who manages the money to repay the installments?

1. Husband 2. Self 3. Son 4. Other (Specify).....

21) What are the sources of income to repay the installment? (Specify)

.....

22) Who controls the credited money?

1. Self 2. Husband 3. Son 4. Other (Specify)

23) Do you think microcredit generates your household income? 1. Yes 2. No

Section-C: Women Empowerment

24) **Scope of Controlling Power over Household Resources:**

Sl. No.	Scope	Extent of Control			
		High	Medium	Low	Not at All
1	Spending Money for Different Purposes by Herself				
2	Household Income				
3	Control over Household Assets				
4	Selection of Family Expenditure				
5	Control over Credit				
6	Control over Savings				

25) Mobility of the Women outside the Household:

Sl. No.	Jurisdiction of Movement	Extent of Mobility			
		Per Week	Per Month	Per Six Month	Not at All
1	Market				
2	Relatives'/Parents' House (Outside Village)				
3	Hospital/Clinic				
4	Upazila/ Zila Sadar				
5	Office of the NGO				
6	Outside of Household for Working				

26) Participation in Income Generating Activities:

Sl. No.	Scope of Activities	Extent of Participation		
		Always	Occasionally	Not at All
1	Crop Producing			
2	Homestead Gardening			
3	Post-Harvest Activities			
4	Livestock Rearing			
5	Poultry Rearing			
6	Fish Cultivation			
7	Tailoring			
8	Handicrafts			
9	Petty-business			
10	Service			
11	Wage Labor			

27) Participation in Social and Political Activities:

Sl. No.	Scope of Social and Political Activities	Extent of Participation			
		Frequently	Occasionally	Seldom	Not at All
1	Participation in Social Events (Wedding, Birthday, <i>Chehlan</i>)				
2	Helping Neighbors in Emergency (Delivery, Death)				
3	Participation in Village <i>Salish</i> Program				
4	Cultural Program (<i>Jatra</i> , Folk Song, <i>Waz</i>)				
5	Voluntary Help to People during and after Natural Disaster and Social Hazards				
6	Arbitration in Quarrelling of Neighbors or Relatives				
7	Casting Vote				
8	Participation in Public Meeting				
9	Discussion on Contemporary National Issues with Others				

28) Participation in Household Decisions:

Sl. No.	Scope of Household Decisions	Extent of Participation			
		Entirely Own Decision	Main Role in Collective Decision	Decision Shared with Husband and Other Family Members	No Participation
1	Purchasing and Selling of Household Furniture				
2	Purchasing, Selling or Mortgaging of Land				
3	Selection and Buying of Livestock				
4	Homestead Gardening				
5	Determining Daily Household Expenditure				
6	Spending Money for Any Income Generating Activities				
7	Selection of Daily Food Menu				
8	Selection and Use of Contraceptives				
9	Health Care of the Family Members				
10	Child Education				
11	Immunization for Children				
12	Buying Cloths for Children, Own and Husband				
13	Daughter's Marriage				
14	Son's Marriage				

29) Interaction with Outside World :

SL. No.	Scope of Interaction	Extent of Interaction				
		Daily	Weekly	Monthly	Half- yearly	Not at All
1	Interaction with Local Leaders Including Religious					
2	Interaction with NGO Workers					
3	Interaction with Health Workers					
4	Interaction with Party Leaders					
5	Participation in Training Program					
6	Reading Newspapers					
7	Watching Television Programs					
8	Listening to Radio Programs					

30) **Consciousness Regarding Woman’s Rights and Violence against Women:**

Sl. No.	Scope of Consciousness	Extent of Response	
		Yes	No
1	Do you think man and woman have equal rights?		
2	Have you ever been consulted by credit providing organizations regarding women’s rights?		
3	Do you know the existing laws on violence against women?		
4	Did you/ your father pay any dowry to your husband/ father-in-law?		
5	Did/will you pay any dowry to your daughter’s husband/ father-in-law?		
6	Did/will you receive any dowry from your son’s father-in-law’s family?		
7	Do you think men exploit women?		
8	Have you ever been abused by your husband?		
9	Have you ever been abused by your family member?		

Section-D: Sexuality

- 31) Do you have any sex education?* 1. Yes 2. No
- 32) Did you take part in sexual intercourse during the last 7 days?* 1. Yes 2. No
- 33) If yes, what was the frequency of sex? (Specify)
- 34) If no, why? (Specify)
- 35) Do you initiate the sexual intercourse? * 1. Yes 2. No
- 36) Who usually initiates the sexual intercourses? 1. Husband 2. Self 3. Both
- 37) Are you enjoying safe and healthy sex?* 1. Yes 2. No
- 38) Do you take part in sexual intercourse during menstruation?* 1. Yes 2. No
- 39) What do you use for menstruation management? (Specify)
- 40) Do you have any knowledge about sexual diseases? * 1) Yes 2) No
- 41) If yes, what are those?
- 42) Do you share your sexual experiences with others?* 1. Yes 2.No
- 43) Are you sexually satisfied with your husband?* 1. Yes 2. No
- 44) Does your husband force you for sex? 1. Yes 2. No
- 45) Does your husband force you for sexual intercourse during illness? 1. Yes 2. No
- 46) How do you feel during sexual intercourses without your consent?
- 47) Do you usually involve in sexual intercourse at the day of attending the meeting?
1. Yes 2. No
- 48) What was the length between your first childbirth and resuming sex? Days

- 66) Where did you deliver your last child?
1. Parents' house 2. In-laws' house 3. Hospital/Clinic
- 67) Did any FWA or FWV visit you during your last pregnancy?* 1. Yes 2. No
- 68) If yes, how many times the assistant visited you? (Specify).....Times
- 69) Did you attend in any meeting organized by MCOs during your pregnancy?
1. Yes 2. No
- 70) Who repay the installments during your pregnancy?
1. Self 2. Husband 3. Collector 4. Other (Specify).....
- 71) Did you perform any household work during your pregnancy? 1. Yes 2. No
- 72) If yes, did you face any health hazard during pregnancy? 1. Yes 2. No
- 73) If yes, what are these? (Specify).....
- 74) Did you suffer from any kind of postpartum complication after last child birth?
1. Yes 2. No
- 75) If yes, what type of complications you faced? (Specify).....
- 76) If yes, where did you go for treatment? (Specify).....
- 77) Did any Microcredit Organization support you during your pregnancy?
1. Yes 2.No
- 78) If yes, what type of support did you get? (Specify).....
- 79) Did you get any prenatal and postnatal guidance from the MCOs during last pregnancy? 1. Yes 2.No
- 80) Did you get any kind of advice from MCOs during last pregnancy regarding savings for better prenatal and postnatal cares? 1.Yes 2.No

Section-F: Breastfeeding Behavior

- 81) Did you breastfeed your first child after birth? 1.Yes 2.No
- 82) If no, why? (Specify)
- 83) How many hours did you take to breastfeed your first child after birth?Hour(s)
- 84) How long have you been breastfeeding your first child? (Specify)..... Month(s)
- 85) How long have you been breastfeeding your last child? (Specify)..... Month(s)

- 86) Are you breastfeeding any child at present? 1. Yes 2.No
- 87) Do you think breastfeeding harms mother's health? 1. Yes 2.No
- 88) If yes, why? (Specify).....
- 89) Do you think breastfeeding deteriorates the beauty of the breasts?
1. Yes 2.No
- 90) How do you breastfeed your child when you are in meeting organized by MCOs?
(Specify).....
- 91) Did you use any contraceptive during the breastfeeding? 1. Yes 2.No
- 92) If yes, what type of contraceptive did you use most? (Specify).....

Section-G: Fertility Behavior

- 93) What was your age at first marriage? (Specify)Years
- 94) What was your age when you delivered your first child? (Specify)Years
- 95) Please specify the birth spacing between your first and second child?.....Months/Years.
- 96) What was your age when you delivered your last child? (Specify)Years
- 97) How many birth(s) have you delivered successfully? (Specify).....
- 98) How many living children do you have at present? (Specify)Total
- 99) How many child/children deceased after birth? (Specify)Total
- 100) How many abortions did you have? (Specify)
- 101) How many times in total did you conceive? (Specify)Times
- 102) Did you conceive after receiving microcredit? 1. Yes 2. No
- 103) If yes, what is the frequency of conception? (Specify)
- 104) Did your husband give more emphasize on your illness after receiving microcredit than before? 1. Yes 2. No

Section-H: Family Planning Behavior

- 105) Have you ever used contraceptive after your marriage?* 1. Yes 2. No

- 106) Did you face any problem from your family for using contraceptives after marriage?
1. Yes 2. No
- 107) Are you using any contraceptive at present?* 1. Yes 2. No
- 108) If no, why? (Specify).....
- 109) If yes, what type of contraceptives are you using? (Specify).....
- 110) Did you use the contraceptive by your own choice? 1. Yes 2. No
- 111) Are you satisfied in sexual intercourse using contraceptives?
1. Yes 2.No
- 112) Does your husband consult with you regarding the use of contraceptives?*
1. Yes 2. No
- 113) Does your husband force you to use this contraceptive? 1. Yes 2. No
- 114) Did any FWA or FWV come to you after marriage to inform you about family planning?*
1. Yes 2. No
- 115) Does any FWA or FWV come to you recently to advise about family planning?*
1. Yes 2. No
- 116) Did you get any kind of family planning information from the credit providing organization soon after receiving the first microcredit? 1. Yes 2. No
- 117) Do you get any kind of family planning information at present from the credit providing organization? 1.Yes 2.No
- 118) Do you think GOs and NGOs should come forward to taking more initiatives to control population growth and minimize the reproductive health hazards of the women?*
1. Yes 2. No
- 119) If yes, what is your suggestion(s) for controlling population growth and minimizing reproductive health hazards of the women in rural Bangladesh?
.....
.....

Thanks for Your Kind Cooperation.

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(Signature of the Interviewer)