

Shaking Embedded Gender Roles and Relations: An Impact Assessment of Gender Quality Action Learning Programme

Md. Abdul Alim

December 2011

Working Paper No. 28

Copyright © 2011 BRAC

December 2011

Published by:

BRAC
75 Mohakhali
Dhaka 1212
Bangladesh

Telephone: (88-02) 9881265-72, 8824180-7 (PABX)

Fax: (88-02) 8823542

Website: www.brac.net/research

Printing and Publication
Altamas Pasha

Cover design
Md. Abdur Razzaque

Design and layout
Md. Akram Hossain

BRAC/RED publishes research reports, scientific papers, monographs, working papers, research compendium in Bangla (*Nirjash*), proceedings, manuals, and other publications on subjects relating to poverty, social development and human rights, health and nutrition, education, gender, environment, and governance.

Printed by BRAC Printers at Tongi, Gazipur, Bangladesh.

Acknowledgements

The author is grateful to Sheepa Hafiza, Director, Gender Justice and Diversity and Advocacy for her kind cooperation in conducting the study. Other colleagues especially Hasneara Dalia, Senior Manager, GJD, Md. Rafiqul Islam, Md. Mojibur Rahman Patwary, Tahmina Yasmin, Manager from the same programme provided active support during preparation of the instruments and documents such as list of the households during designing and implementing the study. The author is thankful to Semeen Mahmud, Senior Research Fellow, BIDS for her valuable feedback on the instruments. The author is also indebted to Dr. Mohammad Rafi, Head of Research, Social Development and Human Rights, who as a Coordinator of the unit constantly gave his comments, suggestions and edited carefully to improve the quality of the report. Author is also gratified to Romana Ali, Research Associate, RED, for her careful review of the report. Data management team of RED also deserves special thanks for their exhausting job. Sincere thanks to Hasan Shareef Ahmed for editing on the manuscript. Finally, Altamas Pasha, Manager of Knowledge Management Unit also deserves special thanks for his taking care of rest of the work of this working paper.

RED is supported by BRAC's core fund and funds from donor agencies, organizations and governments worldwide. Current donors of BRAC and RED include Aga Khan Foundation Canada, AusAID, Australian High Commission, Bill and Melinda Gates Foundation, NIKE Foundation, Campaign for Popular Education, Canadian International Development Agency, Charities Aid Foundation-America, Columbia University (USA), Department for International Development (DFID) of UK, European Commission, Fidelis France, The Global Fund, GTZ (GTZ is now GIZ) (Germany), Government of Bangladesh, The Hospital for Sick Children, ICDDR,B Centre for Health and Population Research, Institute of Development Studies (Sussex, UK), Inter-cooperation Bangladesh, International Committee of the Red Cross, International Research and Exchange Board, Manusher Jonno Foundation, Micro-Nutrient Initiative, NOVIB, OXFAM America, Plan Bangladesh, Embassy of the Kingdom of the Netherlands, Royal Norwegian Embassy, SIDA, Stanford University, Swiss Development Cooperation, UNICEF, University of Leeds, World Bank, World Food Programme, Winrock International USA, Save the Children USA, Save the Children UK, Safer World, The Rotary Foundation, Rockefeller Foundation, BRAC UK, BRAC USA, Oxford University, Karolinska University, International Union for Conservation of Nature and Natural Resources (IUCN), Emory University, Agricultural Innovation in Dryland Africa Project (AIDA), AED ARTS, United Nations Development Programme, United Nations Democracy Fund, Family Health International, The Global Alliance for Improved Nutrition (GAIN), The Islamic Development Bank, Sight Saver (UK), Engender Health (USA) and International Food Policy Research Institute (IFPRI).

Abstract

The Gender Quality Action Learning programme initiated a village level intervention in 2007 in 10 districts to increase knowledge, change perception, attitudes, and practice/behaviour of the villagers on discrimination and violence against women. A benchmark survey was conducted before the intervention was initiated. To measure the changes that have taken place due to intervention a midline survey was conducted in 2009-10. The comparison between the surveys show that knowledge, perception and attitudes of the respondents on selected gender issues changed remarkably after the intervention. Results also show that along with increase in knowledge and changes in perception and attitudes of the respondents on gender roles and relations positively changes in the likelihood of male's participation in household activity would increase and the incidence of domestic violence against women would decrease.

Introduction

The word 'gender' refers to the roles and responsibilities of women and men that are socially determined (WHO 1998). Like race and ethnicity, gender is a social construct which defines and differentiates the roles, rights, responsibilities, and obligations of women and men. The innate biological differences between the sexes form the basis of social norms that define appropriate behaviour for them and determine the differences in social, economic, and political power between them. Although the specific nature and degree of these norms vary across societies and over time, at the beginning of the twenty-first century men and boys are still typically favoured and receiving more resources and opportunities than do women and girls – factors important for the enjoyment of social, economic and political power, and well-being (Alim 2009).

In most underdeveloped countries men exercise control over women's labour, their sexuality, their choice of spouse, their access to labour and other markets, and their income and assets through local decision-making and legal bodies (Baden *et al.* 1994). In other words, men mediate women's access to social, economic, political, and legal institutions. Women are dependent on men throughout their lives, from father through husband to son. State legislation and institutions underpin this gender subordination and dependence, in spite of constitutional affirmations of sex equality.

Socio-cultural environment of Bangladesh contains pervasive gender discrimination against girls and women regarding gender roles and relations. This discrimination begins from the time of a girl's birth. They are often considered to be financial burdens on their family, and they receive less investment in their health, care and education. At puberty, their mobility is often restricted, which limits their access to livelihood, learning, and recreational and social activities (UNICEF 2010).

The patriarchal deprivation of women socially, legally, politically and technologically aggravates their positions and they are subordinated as a production unit for bearing and rearing children (Ahmad 2001), although they constitute about half of the total population (BBS 2001). Their status has been ranked the lowest in the world in terms of health, education, and employment (NCBP 2000). In terms of employment, 65% of women aged 15-49 were found unemployed in the demographic survey 2007 (NIPORT 2009). Women have ascribed this lower status as men who have the sovereign power to control households and society as a whole (Balk 1997). Women at home have limited role in decision-making process. They have limited access and control over household resources (physical and financial assets), low level of individual assets, heavy domestic workload, restricted mobility and inadequate knowledge and skills that leading to women's vulnerability (Sebstad and Cohen 2002). With regard to taking decision about health, UNICEF (2010) mentioned in its findings that a little less than half of Bangladeshi women (48%) stated that their

husbands alone made decisions about their health, while 35% said that their husbands alone made decisions regarding visits to family and friends.

Gender discrimination is also associated with violence against women which is considered another major impediment to bring gender equality. Jahan (1988) relates that 'gender discrimination leading to gender violence is deeply embedded in Bangladeshi social structure; all Bangladeshi social institutions permit, even encourage the demonstration of unequal power relations between the sexes. In other words, violence against women in Bangladesh is culturally accepted, tolerated and 'in certain prescribed forms and given contexts' it is legitimized (Marcus 1993). Lack of women's autonomy in their household as well as in the community is also associated with domestic violence (Koenig *et al.* 2003).

Overcoming such tremendous gender imbalance and violence against women will require a range of interventions to bring gender equality. Awareness through education is essential to reduce discrimination and violence against women. In other words, gender equality is achievable when there is increased awareness, a transformation in perception, attitude, and removal of discriminatory practices that are often deeply rooted in societies (CIDA 2003). An increase in gender awareness means increased sensitization, and the recognition of a need to incorporate women into the development process as active participants. Gender awareness positively contributes to changes in the attitude and the behaviour of individual people, and of groups (*ibid*). Gender awareness is increasingly being recognized as of paramount importance in the development process of Bangladesh. An external force like non-government organizations (NGO) may work as catalyst in affecting the patriarchal norms and ideologies prevailing in the society, thus improving the relationship between men and women, and enhancing the status of women in the different spheres through awareness building (Mahmud 1994).

Objective and intervention tools of Gender Quality Action Learning Programme

BRAC, as an NGO, is involved in promoting poverty alleviation practices and women's empowerment. Since women are adversely affected by poverty more, BRAC puts emphasis on gender equality in its development programmes. In the process of implementing these programmes, the need was felt to develop a positive attitude in the society about improving gender relations and enhancing gender equity and equality. Thus, in 1994, BRAC initiated the Gender Quality Action Learning (GQAL) Programme for its staff to improve gender relations. This training programme was expanded to include the members of its Village Organizations (VO)¹ on a pilot basis in 2001. Though the goals were similar, it focused more on fostering gender equality and equity among the villagers. The main purpose of this programme was to

¹ A village organization comprising of 35-55 members is formed with the females from the same village. It has three committees – management committee, social action committee and law implementation committee. The management committee, the most important of these three, includes a chairman, a secretary, a cashier and 2-4 small group leaders.

create a positive attitude in rural areas for women's empowerment and for improving gender relations in the family, society, and organization at village level.

After successful completion of the VO-based GQAL programme in four rural areas in Kurigram district, BRAC decided to expand it in two more districts on a pilot basis in 2005 and 2006 and ultimately, in 11 more districts in 2007. The tools and implementing methods was same throughout the period. The aim of this programme currently is to build a platform to identify the gender-based discrimination and to facilitate a community movement to end violence against women and children, especially in terms of domestic violence. A total of 3,000 men and women were given GQAL training who were selected from the specially targeted ultra poor² (STUP), *Palli Shamaj* (PS)³ (combination of two or more VOs), VOs, *Gram Daridra Bimochon* Committee (GDBC)⁴ (members of the village elites), *union parishad* (UP) (The lowest administrative unit of the government) members, and *Shasthaya Shebikas* (SS) (community health volunteers). These trainees worked as educators and conducted 18,000 *Uthan baithaks* (courtyard meetings) for educating community members. People living in the vicinity of these educators participated in the courtyard meetings. Besides *Uthan baithak*, additional learning tools such as videos on gender-based violence and discrimination, and popular theatres on gender equity were organized to deliver message to the community members.

To measure the impact of this intervention pertaining to gender discrimination and violence against women a midline survey was conducted. The specific objective of this survey was to assess the changes in (1) knowledge, (2) perception, (3) attitudes and (4) practices/behaviour after the intervention.

² The ultra-poor is the poorest section among the population with a few or no asset base, highly vulnerable to any shocks and mainly depending on wage labour.

³ *Palli shamaj* is a ward level organization consists of representatives from several village organization (VO) and external poor. The main objective of the *palli shamaj* is to give a political voice to poor, and therefore ensure their interest. It also mobilizes government services such as vulnerable group development (VGD), vulnerable group feeding (VGF), old age pension cards, roads and embankments, etc.

⁴ To create an enabling environment for the ultra poor, a forum of the local elites called *Gram Daridro Bimochon* Committee-GDBC (Village Poverty Alleviation Committee) was formed in every intervention village. The main roles of these village committees were to support the ultra poor members in emergencies and to provide them guidance. This effort can also be viewed as a counteraction to the possibility that STUP support crowded out informal insurance for the ultra poor.

Materials and methods

The study used quantitative method to measure the changes in knowledge, perception, attitude, and practices of the respondents on four themes and various issues after the intervention (Matrix 1). GQAL programme has selected the issues, as those often take place in the family as well as in society in rural Bangladesh. To bring gender equality the programme intervened to increase knowledge, and to change perception, attitudes and practices/behaviour of the people related to those themes.

Matrix 1. Themes and issues considered

Themes	Issues
Division of labour	Social difference in man and woman, household and income generating activity
Discrimination	Inequity in education, food intake, and rights
Empowerment	Division of property, decision-making power on household items and assets, and women mobility
Violence against women	Dowry, domestic violence, marriage related violence

Study area and sample size

The benchmark survey was conducted in the catchment of 50 area offices in 10 districts where GQAL programme was initiated in 2007. The programme in essence intended to focus ultra poor people to raise their voices against gender discrimination and violence against women and thus bring gender equality. Along with ultra poor the other classes of the society would also be addressed in this process. Study areas were selected with a consideration of the ultra poor region.

The GQAL programme selected four spots⁵ in each branch office maintaining similar socio-demographic characteristics. Two out of four spots from each area were selected randomly as intervention spots and the rest as control spots. The programme made a list of households from each spot, which consisted of around three hundred households.

The number of respondents from selected households of each cluster was determined by cluster randomized control trial (Raudenbush and Spybrook, Liu,

⁵ Among other steps for targeting ultra poor selecting village is bit final stage of this process. Once the villages are selected, several participatory wealth-ranking exercises are conducted to cover all possible locations of a village where extreme poor live. These sub-village level locations are known as spots, which typically constitute 100–150 households. But GQAL programme extended the number of households consisting of near about 300 households for extensive intervention in which the intervention would continue for five years.

Congdon (2005). It was found that 30 respondents selected randomly from each spot was representative. Thus, the total number of respondents was 5,999 in which 3,008 were in intervention areas and the rest were in control areas during baseline. A midline survey was conducted in November 2009 with similar sample size and areas to the baseline but with different respondents in the study areas. The number of respondents selected from each spot was similar to the baseline. In other words, it was a repeated cross-sectional design.

After selecting the households, the household heads and their wives were selected randomly from those households. Both men and women respondents were selected randomly from different households.

Definition of the concepts

Four main concepts - knowledge, perception, attitudes, and behaviour - were used in this study. Knowledge means the information, understanding, skills people gain through education or experience; or the state of knowing about a particular fact or situation. Gender knowledge does not mean what someone knows about gender in a factual way, thus knowledge is not understood as being something objective. It refers to the social construction of meaning and to explicit and implicit negotiations in society. The analysis of gender knowledge can be embedded in a broader post-structuralist perspective in which the generation of knowledge and the relations between knowledge, power, policies and gender are in the centre.

Perception is the way people notice things, especially with the senses, for example our perception of reality/colour is visual perception. In other words, an idea or belief people have as a result of how they see or understand something for example gender. Attitude is that the way people think and feel about somebody or something; the way people behave towards something or somebody that shows how people feel and think is attitude. Ashmore *et al.* (1995) have conceptualized gender attitude as thoughts and feelings about sex, gender, and relationships between men and women. On the other hand, the reflection of knowledge, perception, and attitudes is behaviour. The behaviour of people about gender relations is expressed in their action and practices. The concepts mentioned are all inter-related and one may or may not induce to make other happen.

Data collection techniques, tools and data analysis

Data were collected through survey. Socio-demographic and other attributes of the respondents included in the survey were considered as important factor influencing the knowledge, perception, attitudes and practices related to gender roles and relations.

GQAL programme strived to change knowledge of the community people regarding the issues under different themes as mentioned. Issues related to the themes that are deliberately and sometimes involuntarily practiced in the household or in the community were selected by the programme to measure the changes in

respondents' knowledge level. The respondent answering the issues correctly scored 1 and 0 for wrong. The cumulative scores reveal the status of knowledge of the respondents.

The perception of the respondents was measured by what should and should not be done by men and women, both within the family and outside. There are embedded norms, customs and values regarding gender roles and relations in the community of Bangladesh. To change those traditional norms, values and customs GQAL programme intervened and the extent of changes in respondents' perception after the intervention were measured in this study.

To measure the attitude of the respondent four statements for each of the themes were selected on which the respondents expressed their attitudes. The statements reflected situations with which the respondents were asked to agree or disagree. Respondents' attitude on each of the statements were captured in four point Likert scale –completely agreed, partially agreed, partially disagreed, and completely disagreed. Both positive and negative statements were considered for getting balanced attitudes of the respondents. Each of the statements was given numerical weight – four to one – starting with four for completely agreeing with the statements and one for completely disagreeing. This in fact reflected respondents' attitudes towards gender equality. This variation emerges depending on the nature of the statements. Higher score from a statement related to themes meant more favourable attitude and the opposite meant less favourable attitude toward gender roles and relations.

Total score for each respondent was computed by summing the responses against each statement. Cumulative scores of the different themes represented respondents' attitude towards the theme. In the case of attitude towards gender roles and relations possible scores for a respondent ranged from 4 to 16 of each theme.

The practice/behaviour related to the issues as mentioned was measured by looking at the actions of the respondents in family and community. Change in the practices of respondents was expressed by the proportion of the respondents who after the intervention changed their actions.

Difference-in-difference or 'impact' difference or double difference (in brief, Diff in diff) (Slaughter 2001, Ahmed 2006) method was used to analyze the findings in most cases. This is also called a simple model in which there are participant and non-participant groups, and year of intervention. There is interaction term which derives by multiplying with participants and the midline year. Then the significance of the impact is derived from the coefficient of ordinary least square (OLS) regression. For more detailed description of this model is in Slaughter (2001).

Findings

Knowledge on gender roles and relation

Change in knowledge of the respondents about selected issues mentioned in the Matrix 2 was measured in this section. There is a traditional view of the people towards the importance of man and woman's work in the family and society. Most of the rural women are engaged in household activities. People consider these women's work as less important as it does not generate income while men's work is considered valuable as they earn and run the family. With regard to this, the respondents were asked about whose work is important. The answer was considered as correct if the respondent mentioned that both men and women's work is important. In the baseline, 15% of them had correct knowledge while after the intervention an additional 77% of the respondents had been able to answer correctly (Appendix 1).

On the other hand, change in the knowledge of respondents about the requirement of nutrition both for man and woman was observed lower after the intervention, as 56% of them already had knowledge on the issue before the intervention. The difference in changing knowledge level of the respondents about each issue was statistically significant between baseline and midline.

Matrix 2. Issues related to knowledge considered

-
- | | |
|---|--|
| <ul style="list-style-type: none">• Social view on differences (except biological) between man and woman• The importance of man and woman's work• Persons' view on the ability to perform work by man and woman• Compulsory education for boy and girl | <ul style="list-style-type: none">• Distinction between man and woman made by family and society in receiving treatment, nutrition intake, getting educated, in work, enjoying leisure time etc.• Requirement of nutrition for man and woman• Division of property |
| <ul style="list-style-type: none">• Rights to have access to treatment• Rights to have access to leisure• Demerits of discrimination in nutrition intake• Control over purchase and sale household assets• Legal age of marriage for girl | <ul style="list-style-type: none">• Ownership of household assets• Rules of divorce• Rules of multiple marriage• Legal age of marriage for boy |
-

Moreover, significant difference was observed in changes of the respondents' average knowledge level after the intervention. The respondents who scored on average 3.89 in the baseline obtained 13.49 in the midline.

Knowledge scores of the respondents were grouped into four: 0, 1-5, 6-12 and 13-16 for further analysis. Zero score meant that there was no knowledge about any issues, while 1 indicated that respondents had knowledge about an issue. It was observed that there was none who scored 0 after the intervention but the respondents being scored 13 to 16 increased by 70% after the intervention (Table 1).

Table 1. Changes in respondents' knowledge (%)

Score	Baseline			Midline			Diff in diff
	Treatment	Control	Diff	Treatment	Control	Diff	
0	9	12	-3	0	9	-9	-6***
1-5	67	71	-4	2	70	-68	-64***
6-12	23	16	7	25	21	4	-3**
13-16	2	1	1	72	1	71	70***
n	3008	2991		3273	2348		

Diff=Difference; ***, ** denotes significant at 1% and 5% level respectively

Statistically significant difference was also observed between baseline and midline in changing knowledge level of the respondents in each of the themes (Appendix 2). The maximum scores for each of the themes were 4 and 0 for no scores. More than half of the respondents (54%) obtained highest scores about division of labour, and 57% about empowerment in the midline against 2% and 4% respectively in the baseline. On the other hand, the number of respondents scoring 4 increased by 59% after the intervention about discrimination and violence against women.

Change in knowledge of the respondents on each issue varied significantly between baseline and the midline among the districts (Appendix 3). Around 90% of the respondents in Madaripur district became knowledgeable after the intervention against around 22% in the baseline. In terms of changes in knowledge the number of the respondents were slightly higher in Gopalganj, Rajbari, Netrakona, Kishoreganj than the northern districts - Rangpur, Lalmonirhat, Nilphamari, and Gaibandha.

Knowledge scores of the respondents were also regressed on the selected independent variables (Table 2). The regression indicates that the age of the respondents and their years of schooling were associated with the changes of knowledge after the intervention. In other words, changes in respondents' knowledge level were likely to be higher with one unit changes of their age after the intervention. This regression model was effective in explaining 56% of the causes leading to the change in knowledge level.

Table 2. Linear regression on the respondents' knowledge level

Independent variables	Coefficient	t	P>t
Age in years	.0697	3.09	.002
age ²	-.0005	-1.86	.063
Sex: male=1, female=0	.1685	1.67	.095
Education in years	.3075	33.43	.000
Marital status: married=1, else=0	.1894	0.87	.383
Religion: Muslim=1, else=0	.9891	9.59	.000
NGO membership: yes=1	.5606	5.64	.000
Involved with IGA: yes=1	.4163	4.72	.000
Economic status: TUP=1, Else=0	.3500	2.86	.004
Region: North=1, else=0	-.5915	-8.61	.000
Intervention period: Midline=1, baseline=0	4.7509	66.65	.000
Type of groups: treatment=1, control=0	4.9128	72.68	.000
Constant	-2.773	-5.66	.000
Number of observations: 10570			
R ²	.56		

Perception on gender roles and relations

The changing status of the respondents' perception was described on the selected issues (Matrix 3). Men and women perform different types of roles in the family and the society. By and large there is a conventional perception that women should take care of household activities such as cooking, managing household belongings, and caring for family members; while men should deal with productive activities (i.e., activities that economists can count) outside home, shopping, etc. The intervention tried to change this perception to create gender equality.

Matrix 3. Issues related to the respondents' perception

- Activities within and outside home
- Food intake, boy and girl's education, access to treatment and rest
- Buying and selling household assets
- Spatial mobility of women
- Opinion in marriage for boy and girl
- Perception on violence against women and punishment of the perpetrator

Findings show that a little change took place in respondents' perceptions of earning (remunerated work), shopping and marketing (Table 3). But there was no effect in changing the perceptions of the respondents on the subject of cooking: both continued to believe that this was job for women only even after the intervention. Similar perception was shown on what kind of activity in the family male should do as well (Appendix 4).

Table 3. Changes in respondents' perception on activities that female should do (%)

Activity	Baseline			Midline			Diff in diff	Sig.
	Treatment	Control	Diff	Treatment	Control	Diff		
Earning	9.6	11.6	-2	38.2	11.1	27.1	29.1	.000
Cooking	96.5	98.2	-1.7	98.4	99	-0.6	1.1	.03
Educating children at home	18.9	18.5	0.4	44.3	23.9	20.4	20	.000
Managing household belongings	73.1	72	1.1	95.1	93.4	1.7	0.6	ns
Shopping and marketing	2.5	1.8	0.7	12.4	2.9	9.5	8.8	.000
Taking care of children	62.3	68.9	-6.6	90.2	83.1	7.1	13.7	.000
n	3008	2991		3273	2347			

Respondents' perception on food requirement for man and woman changed after the intervention. An extra 72% of the respondents in the midline compared to the baseline stated that women have the same nutritional needs as men (Table 4). With regard to necessity of education for boys and girls 96% of the respondents in the midline mentioned that both boy and girl should be given priority in education uniformly, against the 46% in the baseline. Besides, statistically significant changes from baseline to midline were also made in the perception of treatment and rest.

Table 4. Changes in perception on selected issues (%)

Issue	Baseline			Midline			Diff in diff
	Treatment	Control	Diff	Treatment	Control	Diff	
Food	22	22	0	94	36	58	58***
Education	46	51	-5	96	58	38	43***
Treatment	33	31	2	91	43	48	46***
Rest	20	22	-2	89	28	61	63***
n	2707	2692		2895	2348		

*** Significant at the 1% level

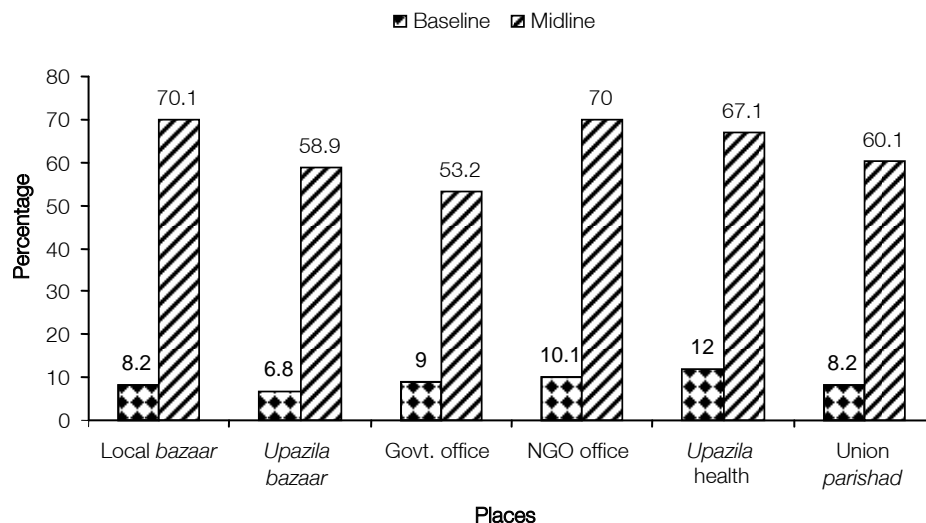
Table 5. Changes in respondents' perception on buying, selling assets and things, and using sale proceeds (%)

Asset and things		Baseline			Midline			Diff in diff	Sig.
		Treatment	Control	Diff	Treatment	Control	Diff		
Land	Buy	35.8	35.8	0.1	91.9	40.4	51.5	51.4	.000
	Sell	37.5	38.0	-0.5	91.6	39.9	51.7	52.2	.000
	Use money	39.2	42.1	-2.9	85.2	34.4	50.8	53.7	.000
Livestock	Buy	37.4	38.7	-1.3	91.6	40.6	51.0	52.3	.000
	Sell	38.6	39.9	-1.3	91.4	40.4	51.0	52.3	.000
	Use money	41.2	44	-2.8	85.7	34.6	51.1	53.9	.000
Poultry	Buy	26.2	28.5	-2.3	70.6	25.5	45.1	47.4	.000
	Sell	31.1	36.3	-5.2	73.3	27.7	45.6	50.8	.000
	Use money	39.0	43.6	-4.6	78.5	33.4	45.1	49.7	.000
Utensils	Buy	16.5	18	-1.5	65.7	23.8	41.9	43.4	.000
	Sell	0.0	0.0	0.0	68.8	25	43.8	43.8	.000
	Use money	0.0	0.0	0.0	74.8	30.5	44.3	44.3	.000
Trees	Buy	33.5	35.7	-2.2	89.3	39.7	49.6	51.8	.000
	Sell	35.0	37.5	-2.5	89.6	38.8	50.8	53.3	.000
	Use money	48.0	44.6	3.4	84.1	34.5	49.6	46.2	.000
Ornament	Buy	34.9	38.9	-4.0	91.4	50.6	40.8	44.8	.000
	Sell	40.1	43.4	-3.3	92.4	50	42.4	45.7	.000
	Use money	45.1	47.9	-2.8	86.1	40.2	45.9	48.7	.000
n		2707	2692		2895	2348			

Within the districts there was much variation in the changes of respondents' perception after the intervention (Appendix 5). In the Northern region there was an increase of 72% among the respondents who after the intervention emphasized that both men and women should have equal amount of food. The increasing rate of the respondents in this regard was far more (75%) in the eastern part of Bangladesh.

Household members own different types of assets and things, and the belief persist that men should have exclusive control over them. This perception of the respondents changed after the intervention. Around 35% of the respondents in the baseline perceived that both husband and wife together should take decision to buy land, livestock, trees and ornaments, while in the midline around 90% of them believed the same, meaning that a positive change took place due to the intervention (Table 5). Similar changes were also observed in respondents' perception in selling the household assets and using money derived from sale.

Figure 1. Changes in respondents' perception on women's mobility (%)



People believe that women should stay at home, and if they want to or need to go outside home they should not go alone, and should take permission from husband or in-laws. This belief of the respondents, especially whether women should go alone changed due to intervention (Fig. 1). Before the intervention 10% of the respondents believed that women should go alone to NGO office, 70% had changed their view on this issue after intervention. Similar percentage of the respondents (70.1%) also changed their view regarding going to local bazaar alone by women. The difference between baseline and midline was statistically significant. On the other hand, there was little difference (but statistically significant) between the percentages of respondents who said that women should take permission to go the places mentioned in Fig. 1 in the baseline and in the midline (Appendix 6).

The perception about what constitutes violence against women was explored in relation to common types of violence mentioned in Table 6. Perceptions of the respondents on most of these issues changed a little after the intervention. Similarly changes in their perception that perpetrators should be punished were also observed (Appendix 7).

There is a kind of violence related to marriage, whereby a girl or boy is married without being consulted: in other words, the parents decide, and their daughter's opinion is not thought to matter. The intervention brought about changes in relation to the need to respect the girl's own decision. Seventy percent of the respondents also changed their views on the perception that both boy and girl should take decisions for their marriage.

Table 6. Perceived changes on violence against women (%)

Type of violence	Baseline			Midline			Diff in diff
	Treatment	Control	Diff	Treatment	Control	Diff	
Beating	86.1	90.5	-4.4	99.4	97.1	2.3	6.7***
Verbal abuse	71.1	80.7	-9.6	95.9	84.3	11.6	21.2***
Disgrace	69.7	79.5	-9.8	92.4	77.1	15.3	25.1***
Mental torture	71.9	81.6	-9.7	93.7	82	11.7	21.4***
Food deprivation	83.7	90.7	-7	97.1	92.3	4.8	11.8***
Prevent from going father's home	68.8	75.2	-6.4	90.1	76.3	13.8	20.2***
Giving no chance to take rest	70.0	74.0	-4	90.7	75.6	15.1	19.1***
No help in household activity	55.1	62.2	-7.1	81.4	64.8	16.6	23.7***
Bad remarks passed for becoming ill	73.3	80.3	-7	93.7	81.2	12.5	19.5***
Force to get married off	89.5	93.4	-3.9	99.6	97.1	2.5	6.4***
Force to leave home	90.9	94.7	-3.8	99.8	98.2	1.6	5.4***
Bearing no expenses for wife and children	92.6	95.9	-3.3	99.9	98.8	1.1	4.4***
n	2707	2692		3273	2348		

*** denotes significant difference at the 1% level

Attitudes towards gender roles and relation

Changes in attitudes of the respondents towards selected issues mentioned in Matrix 4 were assessed. Findings show that there was an increase of 55% of the respondents who, after the intervention, changed their attitudes towards man and woman who have equal responsibility to bring up the children and to run the family by earning through economic activity (Appendix 8). Additional 51% of among the respondents changed their attitudes positively towards the issue of there is no difference between man and woman in terms of wisdom and intelligence. A small increase of among the respondents from 77% to 92% who after the intervention changed their attitudes towards the wage discrimination between man and woman was observed.

Statistically significant difference between baseline and midline in different districts were also observed in changing respondents' attitudes towards different issues as mentioned. Changes in the proportion of respondents showing the positive attitudes towards each of the issues after the intervention were almost similar in various districts (Appendix 9).

Matrix 4. Issues related to attitudes of the respondents

- Division of labour in family
- Perceived difference about the wisdom and intelligence of man and woman
- Prestige of men's participation in washing clothes, cleaning dishes etc.
- Priority to boy's education over girls
- Social recognition in wage difference between man and woman
- Importance of equal amount of food to be consumed by man and woman
- Priority to husband's decision over wife in running family
- Importance of husband's decision in selling household assets
- Restriction in women mobility
- Norms of beating wife
- Force wife to bring more dowry
- Stick to husband's opinion

Cumulative scores obtained by the respondents against the issues represented the attitudes of the respondents. The score of a respondent ranged from 12 to 48. Higher scores indicate positive attitude and lower score less positive attitudes towards the issues. Median scores were used to divide the scores into three: less favourable, neutral and more favourable attitudes, meaning that respondents who scored less than median scores treated less favourable and the scores more than median considered more favourable attitudes. Findings show that less favourable attitudes declined significantly from 50 to 2% in the midline and there was corresponding increase in the proportion of respondents from 47 to 97% who after the intervention showed more favourable attitudes towards gender roles and relations (Table 7). The difference in changing respondents' attitudes towards the gender roles and relations after the intervention was also statistically significant (Appendix 10). Percentage of respondents declined from 50 to 4% who after the intervention showed less favourable attitudes towards division of labour, while the proportion of respondents increased from 24 to 91% who showed more favourable attitudes towards the same. Similar attitudinal changes towards violence against women were also observed, and significant difference in the changes of the respondents' attitudes towards gender discrimination and empowerment of women was also observed after the intervention.

Table 7. Changes in respondents' attitude (%)

Level of attitude	Baseline			Midline			Diff in diff
	Treatment	Control	diff	Treatment	Control	diff	
	1	2	3=1-2	4	5	6=4-5	7=6-3
Less favourable	66	63	3	5	60	-55	-58***
Neither less nor more favourable	7	6	0	2	10	-9	-9***
More favourable	28	31	-3	93	29	64	67***
n	2707	2692		3273	2348		

*** denotes significant difference at the 1% level

Average attitude scores of the respondents on the themes – division of labour, discrimination, empowerment and violence against women - increased from baseline to midline and the difference was statistically significant. On division of labour the respondents obtained on average 5.5 scores in the baseline and 10.47 after the intervention. Similarly their average attitude scores increased from 5.65 to 9.36 on violence against women after the intervention. Significant changes in average scores regarding empowerment and discrimination against women were also observed after the intervention.

Table 8. Linear regression on the respondents' attitude

Independent variables	Coefficient	t	P>t
Age in years	.0484	1.24	.216
age ²	-.0004	-0.84	.399
Sex: male=1, female=0	-.1386	-0.79	.428
Education in years	.2168	12.94	.000
Marital status: married=1, else=0	-.2496	-0.66	.507
Religion: Muslim=1, else=0	-1.141	-6.37	.000
NGO membership: yes=1	.5012	2.90	.004
Involved with IGA: yes=1	.2009	1.31	.189
Economic status: TUP=1, Else=0	-.0157	-0.07	.941
Region: North=1, else=0	-1.597	-13.37	.000
Intervention period: Midline=1, baseline=0	.3727	2.53	.011
Type of groups: treatment=1, control=0	-1.026	-7.16	.000
Knowledge level (scores)	1.422	84.39	.000
Constant	22.673	26.67	.000
Number of observations: 10570			
R ²	.62		

Attitude scores were regressed on the independent variables listed in the Table 8. It shows that one-year change in years of schooling of the respondents changes in attitudes towards gender roles and relations were likely to be more favourable after the intervention. The respondents having NGO membership were likely to have changed attitudes more positively than those who were not. This regression model was effective in explaining 62% of the variance in respondents' attitudinal level by independent variables.

Gender related practice/behaviour

This section investigates the changes in respondents' gender-related practice/behaviour on the issues under themes mentioned in the Matrix 5 after the intervention.

Matrix 5. Issues on gender related practice/behaviour

- Participation of husband in taking care of children, cooking etc.
- Disparity in son's and daughter's mobility
- Practice in access to treatment
- Inequity in nutrition intake
- Prejudice in educating children
- Difference between husband and wife in decision-making in buying and selling household assets
- Status of women mobility
- Opinion in marriage
- Incidence of different types of violence and protesting violence

Findings show that a significant increase of the respondents who took part in household activity was observed after the intervention (Table 9). The participation of husband in child care increased after the intervention. An additional 42% of the respondents reported that husband participated in managing household belongings.

Table 9. Changes in husband participation in household activity (%)

Activity	Baseline			Midline			Diff-in-diff
	Treatment	Control	diff	Treatment	Control	diff	
	1	2	3=1-2	4	5	6=4-5	7=6-3
Child care	47 (1836)	37 (1652)	10	68 (1561)	44 (1122)	24	14***
Wash cloths	27 (1982)	25 (1797)	2	57 (2229)	18 (1641)	39	37***
Managing household belongings	23 (1982)	22 (1797)	1	58 (2229)	15 (1641)	43	42***
Cooking	15 (1982)	13 (1797)	2	24 (2229)	06 (1641)	18	16***

*** denotes statistically significant at the 1% level, In the parenthesis indicates number

Statistically significant difference in husband's participation in the household activities among the districts was observed after the intervention. A significant increase, i.e. 27% of the husbands participated in cooking in the southern region after the intervention (Appendix 11).

Table 10. Logistic regression predicting husband's participation in household activity

Independent variable	Odds Ratio	P>z	95% Confidence interval	
Knowledge score	1.17	.000	1.10	1.24
Attitude score	1.24	.000	1.20	1.27
Perception toward female (score)	1.14	.001	1.06	1.24
Age in years	0.98	.000	0.97	0.99
Years of schooling	1.01	.292	0.99	1.03
NGO membership: Yes=1, No=0	0.48	.000	0.41	0.55
Economic status: Poor=1, else=0	0.86	.026	0.76	0.98
Regions				
North=1, else=0	1.27	.003	1.08	1.48
South=1, else=0	1.64	.000	1.39	1.93
Number of observation	4958			
LR chi ² (9)	823.23			
Prob > chi ²	0.0000			
Pseudo R ²	0.1199			
Log likelihood	-3022.2983			

A logistic regression was run on the husband's participation in any of the household activities mentioned in Table 9 (Table 10). The regression was done to see whether increased knowledge on gender role and changed perception and attitudes positively towards female work had an association with increased husband's participation in household activity. Results show that all independent variables except years of schooling were statistically associated with the dependent variable i.e. husband's participation in household activity. In other words, one unit change of knowledge, perception and attitude of husband towards female in the midline the likelihood of changes of husband's participation in household activity would be 1.17, 1.24 and 1.14 times higher respectively.

Table 11 shows the extent of changes in gender-related discrimination against women in seeking treatment and in amount of money spent after the intervention. The proportion of both man and woman increased after the intervention in seeking treatment from clinic and decreased from pharmacy. The proportion of male and female who ate 1 to 2 eggs per week increased after the intervention although the difference between male and female was insignificant (Table 12).

Table 11. Changes in gender discrimination in sources of treatment and nature of expenditure for that (%)

		Baseline			Midline				
Treatment source		Treatment	Control	Diff	Treatment	Control	Diff	Diff in diff	Sig
MBBS	Male	30.4	31.2	-0.8	25.7	23.9	1.8	2.6	ns
	Female	33.1	31.1	2.0	25.6	24.5	1.1	-0.9	ns
<i>Kabiraj</i>	Male	1.3	1.0	0.3	1.8	1.1	0.6	0.3	ns
	Female	1.7	1.6	0.2	2.0	0.4	1.5	1.4	.03
Homeopath	Male	3.2	6.3	-3.2	2.8	4.1	-1.2	1.9	.07
	Female	3.5	7.5	-3.9	3.5	4.2	-0.7	3.3	.003
Pharmacy	Male	43.5	31.5	12.0	68.3	69.6	-1.3	-13.3	.000
	Female	41.7	32.5	9.2	68.0	69.3	-1.3	-10.5	.000
No treat	Male	1.7	2.5	-0.8	0.8	1.0	-0.1	0.6	ns
	Female	3.4	3.8	-0.4	0.5	1.1	-0.7	-0.3	ns
Clinic	Male	19.9	27.5	-7.6	0.5	0.3	0.2	7.8	.000
	Female	16.5	23.6	-7.1	0.4	0.4	0.0	7.1	.000
Money spent for treatment (Tk.)									
Not spent	Male	3.4	3.5	-0.2	1.1	1.0	0.1	0.3	ns
	Female	5.0	4.0	1.0	0.9	1.4	-0.5	-1.5	.08
2 to 100	Male	29.5	31.9	-2.4	33.0	33.3	-0.3	2.2	ns
	Female	29.9	32.7	-2.9	34.1	32.7	1.4	4.2	.09
101-1000	Male	54.3	51.1	3.3	53.6	54.4	-0.8	-4.1	ns
	Female	51.8	49.8	2.0	52.8	55.4	-2.6	-4.6	.08
1001 plus	Male	12.8	13.5	-0.7	12.3	11.3	0.9	1.6	ns
	Female	13.4	13.5	-0.1	12.2	10.5	1.8	1.9	ns

Table 12. Changes in gender discrimination in nutrition intake (%)

		Baseline			Midline				
Egg eaten	Sex	Treatment	Control	Diff	Treatment	Control	Diff	Diff in diff	Sig
No egg eaten	Male	59.9	56.8	3.1	37.9	43.4	-5.5	-8.6	.000
	Female	61.5	58.3	3.2	39.3	44.8	-5.5	-8.7	.000
1 to 3	Male	33.7	35.1	-1.5	53.2	48.1	5.1	6.6	.000
	Female	33.4	35.9	-2.5	53.2	48.0	5.2	7.7	.060
4 to 7	Male	6.0	7.6	-1.6	8.8	8.4	0.4	2.0	.002
	Female	4.6	5.5	-0.8	7.4	7.1	0.3	1.2	.000
8 plus	Male	0.4	0.4	0.0	0.2	0.1	0.0	0.0	ns
	Female	0.4	0.3	0.1	0.1	0.1	0.0	-0.1	ns

Table 13 shows the changes in wife's participation in decision-making process in selling household assets, and using sale proceeds after the intervention. Changes were observed in the proportion of wives who after the intervention were consulted to sell household assets and used the money derived from selling those. A little difference was observed about whether husband discussed with wife to sell assets after the intervention (Appendix 12).

Table 13. Changes in consultation with wife to sell household assets and uses of sale proceeds (%)

Asset	Baseline			Midline			diff in diff	Sig
	Treatment	Control	diff	Treatment	Control	diff		
Duck-chick	93.1	91.6	1.5	99.0	91.3	7.7	6.2	0.000
Cow-goat	92.6	91.4	1.2	99.4	95.2	4.3	3.1	ns
Land	90.7	93.9	-3.2	98.5	100.0	-1.5	1.7	ns
Ornaments	85.7	92.3	-6.6	100.0	95.0	5.0	11.6	ns
n	2707	2692		2895	2348			

Uses of sale proceeds

Asset	Baseline			Midline			diff in diff	Sig
	Treatment	Control	diff	Treatment	Control	diff		
Duck-chick	30.8	29.8	1.1	62.4	36.3	26.0	25.0	.000
Cow-goat	34.0	32.2	1.9	62.9	30.4	32.5	30.6	.000
Land	38.4	30.6	7.8	47.8	29.6	18.1	10.4	ns
Ornaments	57.1	61.5	-4.4	53.3	20.0	33.3	37.7	ns
n	808	642		1097	826	271		

Figure 2. Changes in boys and girls' mobility (%)



An overwhelming number of female respondents (around 90%) mentioned that during selling assets their husbands discussed with them both in baseline and midline (Table 12). Almost similar findings were observed in buying assets (Appendix 13). On the other hand, there was a significant increase from 31 to 62% in respondents who after the intervention reported that both husband and wife used the sale proceeds (Table 12).

Girls are not appreciated to go outside home in rural Bangladesh and thus discriminatory practice/behaviour was observed with regard to girls' mobility. A little change was observed in this practice after the intervention (Fig. 2). In the baseline 55% of the girls were not sent to any of the places as mentioned but after the intervention this proportion slightly decreased. Moreover, changes in whether women went alone to some selected places and whether they took permission from their husbands or from in-laws was also investigated. Findings show that there was an increase in proportion of women who after the intervention went alone to local *bazaar* (Table 14). On the other hand, proportion of women who sought permission to go alone in the baseline to the places as mentioned declined after the intervention.

Table 14. Changes in women mobility in selected places (%)

Place	Baseline			Midline			diff in diff	sig
	Treatment	Control	diff	Treatment	Control	diff		
Father's home	31.2	21.1	10.1	28.9	20.4	8.5	-1.6	ns
Local <i>bazaar</i>	37.3	34.6	2.7	51.7	34.6	17.1	14.4	.000
<i>Upazila bazaar</i>	26.2	20.2	6.0	30.3	20.9	9.4	3.4	ns
Govt office	47.9	41.7	6.1	56.3	35.6	20.7	14.6	ns
NGO office	24.4	18.6	5.8	21.4	13.6	7.8	2.0	ns
Health complex	24.8	17.5	7.3	23.4	11.6	11.8	4.5	ns

Changes in taking permission

Father's home	63.1	51.8	11.3	51.6	49.0	2.6	-8.7	.000
Local <i>bazaar</i>	60.9	46.7	14.1	41.5	47.4	-5.9	-20.0	.000
<i>Upazila bazaar</i>	51.5	37.8	13.7	36.6	35.7	0.9	-12.8	.000
Govt office	60.0	48.5	11.5	48.0	50.7	-2.6	-14.1	ns
NGO office	52.0	42.0	9.9	27.3	27.8	-0.5	-10.4	ns
Health complex	61.8	46.3	15.6	45.9	43.9	2.0	-13.5	.000

Different study shows that discrimination against daughter begins when parents send them to school in their childhood (Alim 2009). Similar findings were also found in this study which shows that parents had different ambition to educate their son and daughter (Appendix 14). Changes in discrimination between boy and girl for their education were also observed. Findings show that discrimination against girls in providing private tutor and school bag continued even after the intervention (Table 15).

Changes in the practice of giving opinion by boys and girls during their marriage were observed in this study. A significant increase, from 7.3 to 31.5%, of boys and girls who after the intervention had been able to give opinion in their marriage, was observed.

Table 15. Changing status of the selected issues of boys' and girls' education (%)

Issue	Sex	Baseline			Midline			diff in diff	Sig.
		Treatment	Control	Diff	Treatment	Control	Diff		
Go to school	Boy	65.7	70.2	-4.5	79.7	78.9	0.8	5.4	.002
	Girl	74.9	79.6	-4.7	85.3	85.1	0.2	4.9	.006
Given private tutor	Boy	41.4	37.1	4.3	49.4	47.1	2.3	-2	ns
	Girl	35.9	33	2.9	38.1	34.4	3.7	0.8	ns
Have school bag	Boy	29.2	25.8	3.4	42.1	35.6	6.5	3.1	ns
	Girl	27.5	25.9	1.6	32.7	27	5.7	4.1	.07

A significant change was also observed after the intervention that no dowry was received and given during their marriage that took place in the last two years of data collection (Table 16). Percentage of giving and receiving money as dowry decreased due to intervention but the negative changes were observed for giving and receiving things (e.g. furniture, electronic goods etc.) and ornaments as dowry.

Table 16. Changes in practices of dowry (%)

Type of dowry	Baseline			Midline			Diff in diff	Sig.
	Treatment	Control	Diff	Treatment	Control	Diff		
No dowry transacted	31.4	42.3	-10.9	0.0	0.0	0.0	0.0	
Things/ornaments	1.1	0.4	0.7	37.8	28.8	9.0	8.3	.03
All expenses	0.5	0.0	0.5	15.4	11.3	4.1	3.5	ns
Taka								
1000-12000	20.3	11.8	8.4	6.6	6.6	0.0	-8.4	.03
13000-20000	18.1	17.2	0.9	8.4	9.0	-0.6	-1.5	ns
21000-40000	18.6	17.2	1.4	11.9	21.7	-9.8	-11.3	.01
41000 and above	10.0	11.1	-1.1	19.9	22.6	-2.7	-1.6	ns
n	370	279		286	212			

A significant reduction of violence against women especially regarding 'prevent from going father's home, outside, and doing job' was observed after the intervention (Table 17). But the use of slang language and rebuking was not declined after the intervention.

Table 17. Changes in the incidence of violence against women within household (%)

Type of violence	Baseline			Midline			diff in diff	Sig.
	Treatment	Control	Diff	Treatment	Control	Diff		
Take away income	9.7	7.3	2.4	12	15.6	-3.6	-6	.000
Sell household asset	3.1	1.7	1.4	0.6	1.1	-0.5	-1.9	.000
Prevent from going father's home	7	5.2	1.8	3.2	7.4	-4.2	-6	.000
Prevent from going outside	13.6	8.7	4.9	2.6	6.5	-3.9	-8.8	.000
Prevent from doing job	12.2	4.5	7.7	0.7	1.3	-0.6	-8.3	.000
Medical support is not given during pregnancy	17.6	13.7	3.9	1.5	2.4	-0.9	-4.8	ns
Give threat to divorce	7.4	6.2	1.2	0.5	1.7	-1.2	-2.4	.001
Stop verbal communication	21.1	23.5	-2.4	20.1	32.6	-12.5	-10.1	.000
Use slang language	63	82	-19	81.9	88.6	-6.7	12.3	.000
Rebuke	8.1	4.2	3.9	0.3	0.7	-0.4	-4.3	ns
n	2632	2624		2890	2339			

Significant difference was observed among the regions regarding the changes in the incidence of violence. The incidence of violence such as 'Take away income' increased in the northern region but decreased in the southern and eastern region after the intervention (Appendix 13). The threat to divorce significantly decreased in all of the regions after the intervention.

Wives reported that verbal abuse was the most common behaviour against them when the husbands got angry. Beating was reported as second highest violence against them. Due to proper intervention the incidence of verbal abuse decreased by 14% and beating by 25% after the intervention. There was a significant variation in the reduction of beating and verbal abuse in different regions (Appendix 16). The incidence of wife-beating was decreased by 30% in northern region and verbal abuse by 19% in southern region.

Table 18. Changes in incidence of violence in the community (%)

Type of violence	Baseline			Midline			diff in diff	Sig.
	Treatment	Control	diff	Treatment	Control	diff		
Multiple marriage	16	11	5	20	32	-12	-17	.000
Illegal divorce	8	4	4	3	5	-2	-6	.000
Child marriage	15	9	6	29	55	-26	-32	.000
Injustice in <i>shalish</i>	12	6	6	16	27	-11	-17	.000
Acid throwing	1	0.4	1	0.1	0.2	0	-1	.030
Rape	2	1	1	0.5	2	-2	-3	.000
n	2707	2692		2726	2188			

Table 18 shows that all kinds of violence against women decreased after the intervention. There was an increase in respondents who after the intervention were motivated by the programme to protest themselves or take part with the villagers in protesting the injustice in *shalish*, and acid throwing including rape (Table 19). After the intervention more respondents protested the incidence violence listed in the Table 18.

Another logistic regression was also run on the incidence of any type of domestic violence committed by husband in the family (Table 20). Result shows that there was significant association between knowledge level and the violence against women. Likewise, attitude of husband towards violence against women was also associated with the dependent variable. More clearly, with increase in knowledge level as well as showing positive attitude of the husband towards violence against women after the intervention the probability of changes in committing violence by husband would decrease.

Table 19. Percentage of the respondents who protested violence in the community (%)

Type of violence	Baseline			Midline			diff in diff	Sig
	Treatment	Control	diff	Treatment	Control	diff		
Multiple marriage	29	23	6	16	3	13	7	0.02
Illegal divorce	26	22	4	12	5	7	3	ns
Child marriage	24	17	7	10	3	7	0	ns
Injustice in <i>shalish</i>	25	25	0	29	4	25	25	0.000
Acid throwing	18	55	-37	50	25	25	62	ns
Rape	32	54	-22	54	11	43	65	0.000

Table 20. Logistic regression analysis predicting the incidence of violence against women committed by husband

Independent variable	Odds ratio	P>z	95% Confidence interval	
Knowledge score	0.940	0.000	0.914	0.966
Attitude score	0.974	0.000	0.961	0.986
Age in years	0.980	0.000	0.970	0.991
Years of schooling	0.978	0.042	0.958	0.999
NGO membership: Yes=1, No=0	1.603	0.010	1.118	2.300
Economic status: Poor=1, else=0	1.187	0.050	1.000	1.409
Regions				
North=1, else=0	0.666	0.001	0.526	0.843
South=1, else=0	0.503	0.000	0.397	0.639
Involved with IGA: Yes=1, No=0	0.305	0.000	0.210	0.441
Number of observation	4948			
LR $\chi^2(9)$ =	353.32			
Prob > χ^2 =	0.0000			
Pseudo R^2 =	0.0834			
Log likelihood =	-1942.1129			

Discussion and conclusion

Ideas about gender are shaped by people's norms, values, beliefs, and also by the socio-economic and political situation (Alim 2009). The desirable outcome of the GQAL intervention at the community level is to ensure gender equality by changing those ideas. The programme invested a lot of effort in this regard and brought success in changing knowledge, perception, attitudes, and practices related to gender roles and relations.

Changes in knowledge level were found unlike after the intervention. Changes in men's knowledge level were higher than women. The level of change in knowledge among the Muslim respondents was also higher compared to Hindu, Christian and Buddhist. Moreover, significant difference was observed in changing knowledge level after the intervention between the respondents who were involved with NGO and who were not. The rate of changing knowledge level was also observed dissimilar among the people with different economic status. There was also variation among the regions in changing knowledge after the intervention. Changes in respondents' knowledge level in northern region were low compared to southern and eastern regions. Moreover, there were significant differences in changing knowledge level of the respondents on different themes between baseline and midline. It means that changes in respondents' knowledge level were much higher in midline than in baseline.

The perception on gender roles in family persisted despite rigorous intervention. The discrimination in food intake by man and woman, education for boys and girls, treatment for husband and wife when they were sick, including the priority on husband in taking rest at home was observed in the baseline, but after the intervention a significant positive change in their perception took place. Respondents changed their perception saying that both husband and wife should be given equal importance in taking rest at home. Besides, they also expressed positive perception towards food intake and education for boys and girls. Similar type of changes was also observed in their perception on the livestock/poultry, utensils, trees and ornaments.

Statistically significant difference was observed in changes of respondents' perception on decision-making in buying, selling and using sale proceeds after the intervention. The respondents changed their perception on buying and selling land and uses of sale proceeds of land after the intervention. On the other hand, a significant change in respondents' perception on women mobility was observed after the intervention.

Due to intervention a lot of changes in respondents' perception towards violence against women took place, meaning that the respondents in the baseline did not

consider 'mental torture' 'disgrace' 'giving no chance to take rest' as violence but after the intervention they changed their perception regarding those violence. However, around 10% of the respondents still did not consider as violence which mentioned above.

Changes in the attitude of the respondents were observed different across socio-demographic variables. The respondents who were Muslims showed more positive attitudes than Hindu, Christian and Buddhist after the intervention. Statistically significant difference in changing attitudes between married and unmarried or widow/divorced/separated was observed after the intervention. In other words, changes in showing positive attitudes of the married respondents were found higher compared to other categories. Similarly changes in showing positive attitudes towards gender roles and relations were observed higher in NGO member than non-NGO member after the intervention. There was also variation in changing positive attitudes of the respondents among the regions. The changes in respondents' positive attitudes were lower in northern region compared to southern and eastern. Changes in positive attitudes were associated with increased knowledge level, meaning that along with increase in knowledge the rate of changes in respondents attitudes were observed higher. Significant changes in attitudes were also observed higher in the respondents who were from experimental areas compared to control areas.

The positive changes also took place in the respondents' attitudes towards the importance of girls' education after the intervention. In the baseline respondents believed that girls should be given priority for their education like boys but after the intervention additional 35% of them changed their attitudes positively in this regard. An extra 46% of the respondents who after the intervention reported to have believed that men should do household activities that included washing clothes and cleaning dishes, which normally women do in Bangladesh. Noteworthy changes were reported after the intervention in the respondents' attitudes with regard to that. Besides, attitudes of the respondents towards wife-beating changed remarkably due to intervention.

Knowledge, perception, attitudes and practice/behaviour constitute a triad of interactive factors characterized by dynamism and unique interdependence. Emphasis is laid, for each component of the triad, on the value of ethical conduct in raising the application of the component in real life to a peak. Special treatment is given to several important factors that can influence or control the course of practice in gender roles and relations (Badran 1995). However, better knowledge, positive perception and attitudes of the respondents towards gender roles and relations are likely to have produced gender sensitive behaviour but in many cases, the causal relation might not happen concomitantly.

Several studies have suggested evidence for causal influence of gender role, perception and attitudes on practice/behaviour and relations within family (Amato and Booth 1995), fertility decisions (Kaufman 2000), traditional division of household labour, in occupation decisions (Lobodzinska 1996, Mennino and Brayfield 2002).

The idea of generational replacement approach affecting the gender sensitive behaviour shows that attitudes adopted during childhood tend to persist over the life course (Alwin and Krosnik 1991, Inglehart 1989). Brooks and Bolzendal (2003) mentions 'ideological learning', adoption of particular attitudes does not occur in isolation from the adoption of other attitudes within the same issue. Instead, individuals adopt those positions that are consistent with other beliefs. On the other hand, among structural factors that predict gender-role attitudes, religiosity and place of residence seems important for some scholars as well. Inglehart and Norris (2003) anticipated similarly as others (Thornton 1989, Thornton *et al.* 1983, Thornton and Freedman, 1979) that religion may have strong impact on values; gender-role equality may be more supported by less religious than by more religious individuals.

So, different factors as mentioned are found associated with the changes of the gender-related practice/behaviour. More clearly, depending on the several factors the practice/behaviour of the respondents can either be changed or not changed. Results of the study show that most of the respondents reported to have increased knowledge and changed their perception and attitudes but few of them changed their behaviour. Despite the changes in knowledge, perception and attitude of the respondents regarding traditional division of household labour after the intervention the behaviour did not change as much. For example participation of male (husband) in cooking food at home was observed little after the intervention. On the other hand, the concepts – knowledge, perception and attitudes towards discrimination changed considerably after the intervention but discrimination still continued among the respondents. For example respondents perceived and changed their attitudes after the intervention on both boys and girls should be educated but in practice boys were still privileged with private tutors and school bags compared to girls. Moreover, discriminatory ambition of the parents in educating their daughters was observed after the intervention.

Regarding the decision on using sale proceeds of household assets and items by wives respondents' knowledge, perception and attitudes changed positively, meaning that both husband and wife should use money derived from selling assets, but even after the intervention wife's decision was ignored in this regard. Besides, concerning women's mobility the respondents had still conventional beliefs, so there was little change.

Although knowledge, perception and attitudes of the respondents on violence against women changed significantly but wife-beating, and practicing dowry was continuing. An earlier study also confirms that 55% of the married women aged 15-49 reported that they had experienced some form of physical and/or sexual violence from their husbands, and a quarter (25%) had experienced it in the past year (NIPORT 2009).

In conclusion, although measuring changes as a result of intervention within two years was too early but what GQAL programme did to bring gender equality was incredible. The practices which are practicing for ages by people regarding gender discrimination and violence against women is very difficult to change, although it is

sometimes being treated detrimental. In spite of this, the programme at least had been able to change some practices of the respondents within this period. To overcome the obstacles the intervention should be continued or develop a mechanism through which people themselves could plan to change their gender-related behaviour. To confiscate discrimination in some areas of gender issues and eliminate gender-based violence the programme should emphasize equally upon both men and women including with an equal consideration of the geographical areas during their intervention. Programme also should identify the issues which were not addressed during the intervention.

Appendix

Appendix 1. Changes in knowledge level of the respondents on issues (%)

Issue	Baseline			Midline			Diff in Diff
	A	B	diff	A	B	diff	
Division of labour							
Social view regarding difference (except biological) between man and woman	11	5	6	81	7	74	68***
Various aspects of difference between man and woman	14	7	7	62	4	58	51***
Ability to perform work by man and woman	16	14	2	88	13	75	73***
The importance of man and woman's work	15	12	3	92	19	73	70***
Discrimination							
Compulsory education for boy and girl	20	19	1	89	29	60	59***
Requirement of nutrition for man and woman	15	9	6	73	5	68	62***
Access to treatment	31	24	7	96	32	64	57***
Access to enjoy leisure	17	13	4	89	16	73	69***
Empowerment							
Division of property	50	48	2	91	53	38	36***
Decisions to buy and sell household assets and items	11	6	5	87	10	77	72***
Ownership of household assets	13	8	5	79	7	72	67***
Demerits of discrimination in food intake	56	45	11	79	32	47	36***
Violence against women							
Illegal divorce	31	28	3	85	19	66	63***
Legal age of marriage for girl	61	65	-4	99	75	24	28***
Legal age of marriage for boy	18	16	2	85	29	56	54***
Rules of multiple marriage	7	3	4	74	11	63	59***
n	3008	2991		3273	2348		

*** Denotes significant at the 1% level, A=Treatment, B=Control

Appendix 2. Change in knowledge scores of the respondents by themes (n=11620)

Score	Division of labour		Discrimination		Empowerment		Violence against women		p value			
	A	B	A	B	A	B	A	B	1vs2	3vs4	5vs6	7vs8
	1	2	3	4	5	6	7	8				
0	66	3	52	1	24	1	30	1	.000	.000	.000	.000
1	20	4	25	2	37	3	35	2	.000	.000	.000	.000
2	8	14	13	8	27	11	26	11	.000	.000	.000	.000
3	4	25	8	27	8	28	8	25	.000	.000	.000	.000
4	2	54	3	62	4	57	2	61	.000	.000	.000	.000

A= Baseline, B=Midline,

Appendix 3. Changes in the respondents' knowledge level by districts (%) (n=11620)

Issue*	Districts																			
	Rangpur		Nil-phamari		Lal-monirhat		Gai-bandha		Rajbari		Madari-pur		Gopal-gonj		Barishal		Netro-kona		Kishore-gonj	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
1	7	87	6	44	4	56	5	79	25	90	21	93	16	99	58	99	10	93	2	76
2	5	64	7	25	4	42	9	64	16	65	26	77	26	88	73	92	15	78	2	43
3	10	94	9	57	7	79	19	95	13	95	25	97	29	99	90	97	13	93	4	79
4	11	95	15	69	9	86	15	95	13	91	20	96	25	99	35	100	21	96	5	92
5	14	95	12	63	9	77	19	93	31	95	17	95	28	99	48	100	23	96	19	83
6	9	84	12	35	13	69	18	79	15	74	11	82	18	88	17	67	24	83	6	60
7	32	96	26	87	28	90	30	98	29	97	33	97	44	99	55	97	30	98	17	95
8	16	92	14	63	14	73	17	93	16	94	21	94	25	99	45	100	15	94	9	85
9	56	98	47	73	45	90	64	97	55	88	36	85	56	99	63	100	47	94	38	93
10	7	91	10	68	8	77	11	91	9	86	13	95	18	97	32	92	12	93	5	85
11	10	80	13	49	9	69	17	83	11	88	8	81	17	98	37	89	16	82	6	71
12	47	74	45	58	58	69	64	86	42	78	57	91	74	92	95	89	75	84	27	70
13	22	94	29	59	31	73	36	93	52	86	28	87	31	98	42	95	38	93	8	73
14	53	100	52	92	62	98	69	99	75	99	59	99	68	100	73	100	60	100	54	99
15	15	87	11	64	12	81	20	84	19	93	20	90	26	98	35	93	18	88	13	82
16	3	82	4	36	8	66	16	81	5	77	4	81	10	95	00	90	7	79	1	66

A= Baseline, B=Midline, * Number (1-16) indicates the issue mentioned in the Matrix 2

Appendix 4. Changes in men's perception on the activity of male and female in the family (%)

Type of activities	Baseline			Midline			Diff in diff	sig
	Treatment	Control	Diff	Treatment	Control	Diff		
Earning	98.4	99	-0.6	99.8	99.7	0.1	0.7	0.02
Cooking	1.6	0.7	0.9	10.4	1.1	9.3	8.4	0.000
Educating children at home	8.7	10.1	-1.4	45.5	22.5	23	24.4	0.000
Managing household belongings	2.8	1.2	1.6	18.6	3.4	15.2	13.6	0.000
Shopping and marketing	60.3	68.4	-8.1	95.8	94.7	1.1	9.2	0.000
Taking care of children	15.3	13.5	1.8	58.2	29.9	28.3	26.5	0.000
n	3008	2991		3273	2347			

Appendix 5. Changes in respondents' perception on selected issues by regions (%)

Issue	Regions								
	Northern			Southern			Eastern		
	A	B	Diff	A	B	Diff	A	B	diff
	1	2	3=2-1	4	5	6=5-4	7	8	9=8-7
Food	19	91	72***	27	97	70***	20	95	75***
Education	40	94	54***	55	98	43***	45	98	53***
Treatment	30	88	58***	39	95	56***	30	91	61***
Rest	15	83	68***	29	96	67***	17	89	72***
n	1203	1193		901	983		603	719	

A=Baseline, B=Midline, *** Significant at the 1% level

**Appendix 6. Changes in respondents' perception towards women mobility (%)
(n=11620)**

Place	Women should take permission		
	Baseline	Midline	p
Local bazaar	97.0	86.0	.000
Upazila bazaar	97.4	94.2	.000
Government office	97.2	96.5	.000
NGO office	97.3	94.1	.000
Upazila health	97.1	88.0	.000
Union parishad	97.3	93.1	.000

Appendix 7. Changes in respondents' perception on selected type of violence (%)

Type of violence	Baseline			Midline			diff-in-diff	sig
	Treatment	Control	diff	Treatment	Control	diff		
Beating	93	94.6	-1.6	97.8	93.1	4.7	6.3	.000
Verbal abuse	89.3	90.5	-1.2	88.4	72.5	15.9	17.1	.000
Disgrace	90.6	91.4	-0.8	89.9	66.6	23.3	24.1	.000
Mental torture	92.2	92.6	-0.4	88.3	71.6	16.7	17.1	.000
Food deprivation	94.4	95.1	-0.7	94.6	86.5	8.1	8.8	.000
Prevent from going father's home	91.1	90.4	0.7	82.7	65.5	17.2	16.5	.000
Giving no chance to take rest	91.8	90.6	1.2	85.6	66	19.6	18.4	.000
No help in household activity	92.4	88.9	3.5	73.3	54.2	19.1	15.6	.000
Bad remarks passed for becoming ill	92.1	91.3	0.8	87.1	69.9	17.2	16.4	.000
Force to get married off	97.7	98.4	-0.7	99.4	96.2	3.2	3.9	.000
Force to leave home	96.9	97.8	-0.9	99.6	97.1	2.5	3.4	.000
Bearing no expenses for wife and children	97.5	97.1	0.4	99.8	98.1	1.7	1.3	.009
n	2330	2437		3273	2348			

Appendix 8. Changing status of the respondents' attitudes towards gender-related issues (%)

Issue	Baseline			Midline			Diff in diff
	T	C	diff	T	C	diff	
	1	2	3=1-2	4	5	6=4-5	7=6-3
Division of labour							
Bringing up children is for woman, and run family by earning is for man	10	13	-2	65	10	55	57***
Difference in wisdom and intelligence of man and woman	23	27	-4	75	21	54	58***
Men's participation in household activities (e.g. washing cloths, cleaning dishes etc.)	34	34	0	80	46	34	35***
Discrimination							
Giving priority to boy's education than girl	55	60	-5	90	52	38	43***
Wage difference between man and woman	67	78	-11	89	69	21	31***
Importance of equal amount of food intake by man and woman	79	85	-6	92	79	13	19***
Empowerment							
Giving priority to husband's decision in running family	21	21	0	67	12	55	55***
Importance of husband's decision in selling assets (ornaments)	25	29	-4	70	17	54	58***
Necessity of taking permission by wife and husband or from family members for her mobility	46	45	1	78	48	30	29***
Violence against women							
Beating wife	18	18	0	59	14	45	45***
Force to bring more dowry	48	57	-8	78	42	36	44***
Comply with husband's opinion	9	8	1	36	10	26	25***
n	2707	2692		3273	2348		

T=Treatment, C=Control, *** denotes significant at the 1% level

Appendix 9. Changes in respondents' attitudinal level towards gender related issues by districts (%) (n=11620)

Issue*	Districts																			
	Rangpur		Nil-phamari		Lal-monirhat		Gai-bandha		Rajbari		Madari-pur		Gopal-ganj		Barisal		Netra-kona		Kishore-ganj	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
1	4	70	5	30	12	43	10	61	14	87	10	73	17	99	22	100	13	60	7	50
2	13	80	18	45	17	64	18	71	33	94	32	82	30	99	35	99	24	65	21	67
3	29	79	28	70	29	67	29	72	37	96	21	71	49	99	30	100	42	79	38	80
4	45	92	55	86	48	81	47	87	64	98	67	92	69	100	77	100	58	86	43	84
5	53	88	68	83	61	84	59	83	71	99	81	92	84	100	88	100	69	87	58	84
6	68	86	75	98	70	97	76	83	86	99	77	90	90	98	95	100	83	85	80	92
7	11	67	20	40	20	53	32	64	25	90	11	69	25	98	17	99	35	57	12	57
8	16	70	26	58	24	64	31	60	27	94	19	62	32	98	22	99	35	47	14	69
9	50	71	35	61	24	64	47	70	60	93	38	93	35	97	32	100	56	67	68	78
10	8	61	14	37	12	42	16	51	18	86	17	52	24	96	42	99	29	36	16	54
11	43	76	52	64	42	67	47	72	38	91	64	77	59	97	52	100	55	72	35	76
12	6	33	8	27	7	33	11	31	5	49	11	27	8	68	20	78	15	8	8	39

A= Baseline, B=Midline, The number indicates the individual issue mentioned in the Matrix 4

Appendix 10. Changing status of respondents' attitudinal level towards the theme (%)

Theme	Less favourable attitude		More favourable attitude		p	
	Baseline	Midline	Baseline	Midline	1vs2	3vs4
	1	2	3	4		
Division of labour	49.7	4.0	24.1	90.7	.000	.000
Discrimination	60.1	20.9	39.8	79.0	.000	.000
Empowerment	66.3	7.6	30.2	90.6	.000	.000
Violence against women	44.9	5.1	25.7	85.2	.000	.000
n	3008	3273	3008	3273		

Appendix 11. Changes in the participation of husband in household activity by regions (%)

Activity	Regions								
	Northern			Southern			Eastern		
	A	B	p	A	B	p	A	B	p
Child care	49	59	.001	41	72	.000	56	73	.000
Wash cloths	25	55	.000	25	59	.000	39	57	.000
Managing household belongings	18	56	.000	25	65	.000	30	47	.000
Cooking	14	12	ns	15	42	.000	17	9	.000

A=Baseline, B=Midline

Appendix 12. Participation of wife in household decision making on selected issues

Issue	Baseline		Midline		p
	n	%	N	%	
Incidence of buying	16323	36	18300	45	.000
Incidence of selling	10917	14	18300	10	.000
Discussed with wife to buy	5859	90	8173	97	.000
Discussed with wife to sell	1577	92	1854	97	.000
Both gave money	5859	08	8173	32	.000
Both used money	1577	33	1854	61	.000

Appendix 13. Changes in consultation with wife during buying assets (n=11620)

Assets	Baseline			Midline			diff in diff	sig
	Treatment	Control	diff	Treatment	Control	diff		
duck-chick	89.3	88.3	0.9	99.1	92.6	6.6	5.6	0.000
cow-goat	93.8	94.3	-0.4	98.9	97.0	1.9	2.4	ns
land	97.2	98.2	-1.0	100.0	97.6	2.4	3.4	ns
Ornaments	94.1	94.7	-0.6	99.6	98.5	1.1	1.7	ns
Things								
Utensil	86.6	83.4	3.2	94.4	90.6	3.8	0.6	ns
Sharee	91.7	90.8	1.0	97.6	92.0	5.5	4.6	0.000

Appendix 14. Changes in parents' ambition in educating their children

Parents' ambition to educate son in future								
Class	Baseline			Midline			diff-in-diff	Sig
	Treatment	Control	diff	Treatment	Control	diff		
Class five	3.2	3.3	-0.1	3.2	1.4	1.8	1.9	0.02
SSC	41.1	43.5	-2.3	41.6	43.5	-2.0	0.4	ns
HSC and higher	49.3	42.5	6.8	42.9	43.8	-0.9	-7.6	0.003
MA	6.4	10.7	-4.3	12.4	11.3	1.1	5.5	0.000
n	1,486	1,475		2,303	1,555			
Parents' ambition to educate daughter in future								
Class five	7.2	7.7	-0.5	4.0	2.3	1.7	2.2	0.05
SSC	61.9	60.4	1.5	43.2	49.9	-6.7	-8.2	0.001
HSC and higher	28.8	26.6	2.2	41.3	39.6	1.7	-0.5	ns
MA	2.1	5.4	-3.2	11.5	8.3	3.3	6.5	0.000
n	1,546	1,565		1,796	1,188			

Appendix 15. Violence against women within household by regions (%)

Type of violence	Regions								
	Northern district			Southern district			Eastern district		
	A	B	p	A	B	p	A	B	p
	1	2	1 vs 2	4	5	4 vs 5	7	8	7 vs 8
Take away income	11	23	.000	6	1	.000	11	8	.02
Sell asset	4	1	.000	2	1	.02	4	00	.000
Prevent from going father's home	8	6	.02	5	2	.000	8	1	.000
Prevent from going outside	16	3	.000	10	3	.000	14	1	.000
Prevent from doing job	20	1	.000	10	1	.000	4	00	.000
Provide no medical support in pregnancy period	21	1	.000	18	3	.002	12	00	.02
Give threat to divorce	9	1	.000	5	0	.000	8	00	.000
Stop verbal communication	20	24	.06	22	9	.000	21	30	.000
Use slang language	31	34	.05	35	45	.000	32	33	ns
Rebuke	56	87	.000	69	66	ns	67	95	.000
n	1167	1188		871	983		593	718	

A=Baseline, B=Midline

Appendix 16. Type of violence experienced by wife by regions (%)

Type of violence	Regions								
	Northern district			Southern district			Eastern district		
	A	B	Diff	A	B	Diff	A	B	diff
	1	2	3=2-1	4	5	6=5-4	7	8	9=8-7
Beating	41.8	11.3	30.5	22.9	4.4	18.5	29.3	5.9	23.4
Verbal abuse	75.8	62.7	13.1	73.0	54.2	18.8	69.6	59.3	10.3
Force to leave home	3.8	12.2	-8.4	2.8	7.1	-4.3	4.8	8.3	-3.5
Others	7.1	4.1	3.0	5.7	2.9	2.8	5.6	1.5	4.1

A=Baseline, B=Midline, Multiple answers have been considered

References

- Ahmad F (2006). Gender division of labour: Bangladesh context. *Steps Towards Dev* 6(1):7-26.
- Alim MA (2009). Changes in villagers' knowledge, perception, and attitudes concerning gender roles and relations in Bangladesh. *Dev Practice* 19(3):300-10.
- Alwin D and Krosnik J (1991). Ageing, cohort and the stability of sociopolitical orientations over the life span. *Am J Sociol* 97:446-63.
- Amato P and Booth A (1995). Changes in gender role attitudes and perceived marital quality, *Sociological Rev* 60:58-66.
- Ashmore RD, Del Boca FK and Bilder SM (1995). Construction and validation of gender attitude inventory: a structured inventory to assess multiple dimensions of gender attitudes. *Sex Roles*, 32:753-785.
- Baden S, C Green, AM Goetz and M Guhthakurta (1994). Background report on gender issues in Bangladesh, Dhaka: unpublished report prepared for the British High Commission.
- Badran IG (1995). Knowledge, attitude and practice the three pillars of excellence and wisdom: a place in the medical profession; *Eastern Mediterranean Health Journal*, 1 (1):8-16.
- Balk D (1997). Change comes slowly for women in rural Bangladesh, *Asia-Pacific & Population Policy*, 41:1-4.
- BBS (2001). Women and Statistical Year Book of Bangladesh, Bangladesh Bureau of Statistics, Government of the People's Bangladesh,.
- Brooks C and Bolzendahl C (2003). The transformation of US gender role attitudes: Cohort Replacement, Social Structural change, and Ideological learning. *Social Science Research*, 33:106-33.
- CIDA (2003). Gender awareness training module: Canadian international development agency, <http://www.cngo.org.np/pdf/genderawareness.pdf>. (accessed on 9 May 2008).
- Inglehart R (1989). *Culture Shift in Advanced Industrial Society*. Princeton: Princeton University Press.
- Inglehart R and Norris P (2003). *Rising Tide: Gender equality and cultural change around the World*. Cambridge: Cambridge University Press.
- Inglehart R. Kultureller Umbruch and Carapus Verlag (2007). Frankfurt/NewYork. In: Istenic MC. Attitudes towards gender roles and gender behaviour among urban, rural and farm population in Slovenia, *Journal of comparative family study*, 38(3):477-496,
- Jahan R (1988). Hidden wounds, Visible Scars: Violence against Women in Bangladesh. In Bina Agarwal (ed). *Structures of patriarchy: State, community and household in modernising Asia*, New Delhi, India: Kali for Women, 1991.
- Kaufman G (2000). Do gender role attitudes matter? *Journal of Family Issue*, 21:128-134.

- Koenig MA, Ahmed S, Hossain MB and Mozumder ABMKA (2003). Women's status and domestic violence in rural Bangladesh: individual-and community-level effects, *Demography*, 40 (2):269-288.
- Lobodzinska B (1996). Women employment or return to 'family values' in central eastern Europe. *Journal of comparative studies*, 27:519-544.
- Mahmud S (1994). From women's status to empowerment: the shift in the population policy debate. *The Bangladesh Development Studies*; 22:4.
- Marcus R (1993). Violence against women in Bangladesh, Pakistan, Egypt, Sudan, Senegal and Yemen, Report prepared for Special Programme WID, Netherlands Ministry of Foreign Affairs (DGIS), (Unpublished).
- Mennino SF and Brayfield A (2002). Job-family trade-offs: The multidimensional effects of gender, *Work and Occupations*; 29:226-256.
- NCBP (2000). Gender Equality, Development and Peace for the twenty-first century, NGO Committee on Beijing Plus Five in Bangladesh, Dhaka: Women for women- A Research and Study Group.
- NIPORT (2009). Bangladesh Demographic Health Survey (BDHS) 2007, Dhaka: National Institute of Population Research and Training.
- Raudenbush SW, Spybrook J, Liu, Xiao-feng and Congdon R (2005). Optimal Design for Longitudinal and Multilevel Research: Documentation for the "Optimal Design" Software, University of Michigan, University of South Carolina, Harvard University, (Unpublished report).
- Sebstad J and Cohen M (2002). 'Microfinance, risk management, and poverty', AIMS paper, Management systems international, Washington, D.C.
- Slaughter MJ (2001). Trade liberalization and per capita income convergence: a difference-in-difference analysis. *J Int Econ*;55:203-28.
- Thornton A and Freedman D (1979). Changing in the sex-role attitudes of women, 1962-1977: evidence from panel study, *American Sociological Review*; 44:831-42.
- Thornton A, Duane FA and Camburn D (1983). Causes and consequences on sex-role attitudes and attitudes change, *American Sociological Review*; 48:211-27.
- Thornton A (1989). Changing attitudes towards family issue in the United States. *Journal of Marriage and the Family*; 51:873-93.
- UNICEF (2010). Women and girls in Bangladesh (unpublished).
- WHO (1998). Gender and Health: Technical paper, Geneva: WHO.