

Impact Assessment of Adolescent Development Programme in the Selective Border Regions of Bangladesh

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Abstract

Border ADP (Adolescent Development Programme) was implemented in the border areas of Bangladesh. Main objective of this programme was to make the adolescents, their parents and the communities aware about the social and legal issues like HIV/AIDS, gender equality, marriage and dowry. The objective of this study was to assess the impact of the Border ADP. We used two rounds of survey data on the same adolescents collected in 2008 (Baseline) and 2010 (Follow-up). In analyzing the data, we used difference-in-difference technique. We found positive impact of the programme on overall awareness among the adolescents and their parents as well as capacity development of the adolescents through life skill training. On the other hand, on many issues like legal age of marriage and subsequent marriage the level of awareness of the adolescents and their parents still remains low. We suggested that ADP should arrange a fixed place where the adolescents can spend their time on playing and reading, and hang there different awareness creating posters and leaflets/brochures. Programme can also provide more leaflets/brochures or posters to the adolescents to display those in their houses and other places for enhancing awareness among all walks of people in general.

Introduction

Adolescents are the greatest asset for the present and future development of any country. One-fifth of the total population of Bangladesh is adolescents (11-19 years)¹ (BBS 2008). Livelihood and skill development, and awareness building on their rights, social and political issues may pursue better livelihood through human capital build up, further shaping contribution towards country's overall development. However, this broader segment of the population in Bangladesh vastly remains under-developed due to a lack of proper mainstreaming. According to Barkat and Majid (2003), gender-based violence that results in or is likely to result in physical, sexual, or psychological harm or suffering to women, are pervasive in almost all sphere of life in Bangladesh.

Many countries in South Asia including Bangladesh still can not afford to render sufficient opportunities for young people to build their human capital through access to high quality learning or through smooth entry into job market where they can develop skills (World Development Report 2007). In Bangladesh, BRAC, the largest development organization in the world, has come forward to awareness development and capacity building among the adolescents, especially in rural areas by designing a programme called Adolescent Development Programme (ADP). The ADP provides life skills and livelihood training to BRAC school graduates, including both boys and girls, to make them empowered on various social and legal issues and self-confidence². Notably, BRAC has been continually making efforts to provide education, particularly to the rural poor girls since 1990. Currently BRAC is running about 64,600 schools (38,250 primary schools and 26,350 pre-primary schools) across the country (BRAC 2009).

Border ADP launched in 2008 was a new initiative which was a component of BRAC Education Programme (BEP). It was operated in those border areas of Bangladesh where there were no NGO activities. The programme had chosen some villages from the six border districts close to India that are known to be risky for HIV/AIDS transmission. So, to make these border people, including adolescents, their parents and the community aware about HIV/AIDS-related issues coupled with other components of ADP such as awareness on marriage-related laws, gender equality, sex and dowry. To what extent the programme succeeded to meet its objectives was hence the key research question.

This study was undertaken to assess the impact of ADP implemented in the border areas. Specifically, this study analyzed the impacts of the programme in terms of

¹ BRAC defines adolescents those aged between 11-19 years for its Adolescent Development Programme.

² Shahnaz and Karim (2008) showed that life skill and livelihood training, and social space can increase the awareness among the participants and empower them to delay their marriage, and social engagement can also reduce the impression of 'doing nothing'.

adolescents' awareness about social and legal issues, their mobility and economic empowerment as well as parents' attitude towards gender.

An overview of the Border ADP

BRAC started working with the adolescents in 1990 through its Education Programme (BEP). The adolescent development interventions culminated to Adolescent Development Programme (ADP) as a key component of BEP in 1993 with the establishment of local Reading Center (recently renamed as '*Kishori Clubs*' or Adolescent Clubs). These centers are safe nucleus for socializing, networking and retaining literacy skills for adolescents. ADP established clubs for girls and boys, for both BRAC school graduates and others aged between 11 to 19 years. These clubs aimed to make them confident, independent, empower and educate for a healthy life where the members can meet twice a week for two hours in the afternoon. The early objective of the club was to create a space for the girls who have completed primary education from BRAC schools, and to retain their literacy, numeric and life skills. These clubs not only contained reading materials, but they also became a safe place where the girls could socialize, play indoor games, sing, dance and exchange views and experiences. Over the years, BRAC felt that it is crucial to empower these adolescents socially and economically to become agents of social change. It is also necessary to develop their leadership quality to participate in decision-making that affects their life. This insight urged ADP to initiate new interventions. APON (Adolescent Peer Organized Network) course, APON boys' programme, community participation, cultural and sports competition, interactive popular theater, livelihood and basic economic life skill training have been developed to create a supporting environment for the adolescents to achieve the goal of ADP.

Border ADP was slightly different from the existing ADP. Usually ADP works where BEP exists and uses the BRAC school rooms for establishing adolescent clubs. Based on adolescent clubs, ADP runs all its activities but in the border areas where this intervention was carried out, no BRAC education programme existed and ADP also did not work in these areas before. As the working areas were fresh, so were some of the activities under this intervention. In this project, ADP mixed the activities as appropriate. It initiated new activities and continued some of the regular activities from the existing programme to best fit the demand for this specific project. Peer education among adolescents is an effective method to discuss sensitive issues like HIV/AIDS, reproductive health, early marriage, women's rights, sexual harassment, etc. ADP also offers life skill training to participants for enhancing the status and self-esteem of adolescents by increasing their earning potential and financial management skills. Therefore, Life Skill Based Education sessions were organized for adolescent girls and boys in different venues, such as secondary school, *madrasa*, youth club, court yard etc. To involve the community, different forums (meeting with mothers, fathers, and community leaders) and events (theatre show, video show, and observing different days) were organized. Developing master trainers was a new activity under this intervention. Audio-visual materials on HIV/AIDS, gender equality, and girls' education also had been developed for the first time.

Main differences between ADP and Border ADP are as follows:

1. Usually ADP works where BEP exists and uses the BRAC school rooms for establishing adolescent clubs. ADP runs all its activities based on adolescent clubs, but in the border areas where this intervention was carried out, no education programme of BRAC existed and ADP also did not work in these areas before.
2. Under conventional ADP, livelihood training is provided to the adolescents but in the Border ADP, only life skill training was provided.
3. Border ADP chose the most remote villages near the border where there was no participation of any NGOs including BRAC.
4. Developing master trainers was a new activity under the intervention of Border ADP. Audio-visual materials on HIV/AIDS, gender equality, and girls' education were developed for the first time. These are not practiced in the conventional ADP.

This new intervention was implemented in six districts (Jessore, Jamalpur, Chapainawabganj, Sylhet, Cox's Bazar and Dinajpur). The intervention took place during 2008-2010.

Method

The data

Research and Evaluation Division carried out a baseline survey during January-February 2008 as a part of its evaluation plan for the programme. From each district, we selected two branch offices where one was selected as programme intervention branch, and the remaining branch was designated as comparison/control branch. From each village, eight adolescents (four girls and four boys) aged between 11-19 years were surveyed randomly. The sample size for the baseline survey was 1534 adolescents (767 girls and 767 boys). Of them, 616 were in the intervention group and 918 were in the comparison/non-intervention group. A pre-tested questionnaire was administered in the survey, and a part of the questionnaire addressed the attitude of the adolescents' parents about different issues affecting adolescent development. Respondent adolescents and parents were from the same household.

The follow-up survey was conducted during January-February 2010. Among the 1534 adolescents surveyed in 2008, 797 were successfully revisited in 2010 of whom 352 were from intervention group and 445 were from comparison group. The attrition rate was 42%. The major reasons for high attrition rate were temporary absence of the adolescents in the households (42%) during the survey, changing residence of the adolescents after marriage (39%), and permanent migration for non-marriage purposes (16%). How would the high attrition rate affect the impact assessment? This would depend on whether the attrition was random or not, i.e. whether the baseline characteristics of the attrition and non-attrition adolescents were similar or not.

Annex A1 provides few socioeconomic characteristics and their awareness about social issues among the attrition and non-attrition adolescents in the baseline. We found that for most of the indicators, the differences between intervention and comparison were statistically insignificant. So, the high attrition was likely to have occurred almost randomly, and thus it is unlikely to affect the impact assessment.

Analytical technique

For the impact evaluation of the programme we used two rounds of survey data. Both the participants and non-participants were surveyed. For analyzing programme impacts based on baseline and follow-up surveys representing both participant and non-participants, the most popular method is the double-difference technique, which is based on the following equation:

$$Y_{it} = a_0 + a_1 \text{INTERVENTION}_i + a_2 \text{Year2010}_t + a_3 \text{Year2010}_t * \text{INTERVENTION}_i + e_{it} \dots \dots \dots (i)$$

Here,
INTERVENTION = 1 if intervention group, 0 otherwise
Year 2010 = 1 if follow-up (i.e. 2010), 0 otherwise

The constant term (a_0) shows the value of the outcome variable of the comparison group at baseline; a_1 is the difference in outcome variable between intervention and comparison at the baseline, a_2 is the change of the outcome variable for comparison group during 2008-2010, and a_3 , the key parameter of interest, is the difference-in-difference (DiD) in 2010 over 2008 (i.e. programme impact).

However, in order to see the sensitivity of impact assessment, we estimated DiD after controlling for baseline characteristics. Equation (i) thus becomes as follows:

$$Y_{it} = a_0 + a_1 \text{INTERVENTION}_i + a_2 \text{Year2010}_t + a_3 \text{Year2010}_t * \text{INTERVENTION}_i + a_4 X_{2008,i} + e_{it} \dots \dots \dots (ii)$$

Where, $X_{2008,i}$ = the baseline characteristics

Furthermore, we used the propensity score matching (PSM) to see the sensitivity of the impact assessment. The PSM method of programme evaluation constructed a comparison group by ‘matching’ intervention group to comparison group based on observable characteristics. The impact of the programme was then estimated as the average difference in the outcomes for each intervention respondent from a weighted average of outcomes in each similar comparison group of respondent from the matched sample.

For using PSM we followed the following procedure. Firstly we estimated the propensity score for the participation in the programme using a probit model. Secondly, we tested the ‘balancing properties’ of the data by testing that intervention and comparison observations had the same distribution (mean) of propensity scores and of control variables within groupings of the propensity score. A common support region was constructed by following the ‘min/max’ approach (Ahmed *et al.* 2009).

For analyzing the impact on social and legal awareness among the adolescents, an index was constructed using 14 indicators which were related to issues like appropriate age of marriage both for boys and girls, divorce-related issues, dowry, child and women trafficking, and HIV/AIDS. For constructing the index, we assigned a value of ‘1’ for correct answer and ‘0’ for wrong answer and then the values were summed up and divided by total number of indicators used; that is the index was normalized to one. Following similar method, indices were constructed for mobility of the adolescents, their awareness on how a person can have/never have AIDS, and overall awareness among the parents. To construct mobility index we used seven indicators, while for constructing indices on how a person can have HIV/AIDS and how a person can never have AIDS, four and seven indicators were used respectively. For constructing parents’ awareness index seven indicators were used. The indicators are detailed in the results and discussion section.

Results and Discussion

Socio-demographic characteristics of the adolescents

Table 1 shows the socio-demographic characteristics of the adolescents in the baseline. It shows that both intervention and comparison groups represented almost equal proportion of boys and girls. There was no significant difference in the proportions of males and females between intervention and comparison.

Although the programme targeted the adolescents aged 11-19 years, we found that under this age group 91% and 89% of the male respondents were in the intervention group and comparison group respectively. In the above mentioned age group, about 95% of the female respondents were in the intervention group and 92% were among the comparison group. This might be because many rural parents do not keep record of birth of their children. Therefore, the age recording by the surveyors as well as the programme people was associated with some errors. In terms of race, we found that almost all the respondents were Bengali. The proportions of unmarried males were 94% and 98% among the intervention and comparison groups, respectively. The difference was found to be statistically significant at 5% level. However, the unmarried rate was found to be low among the females compared to the males, particularly because both groups were targeted from the same age range and girls usually are married off at a lower age compared to the males. Therefore, we did not find any significant difference between the intervention and comparison group regarding the marital status of the females.

Table 1. Socio-demographic profiles of the adolescents in the baseline (2008)

Characteristics	Intervention (1)	Comparison (2)	Difference (3=1-2)
Sex			
Male (%)	54	53	1
Female (%)	46	47	-1
Aged (11-19 years)			
Male (%)	91	89	2
Female (%)	95	92	3
Race			
Tribal (%)	0.57	3.6	-3.03***
Bengali (%)	99	96	3
Marital status (Unmarried)			
Male (%)	94	98	-4**
Female (%)	86	89	-3
No of observations	352	445	

Note: *** and ** denote significant at 1% and 5% level, respectively.

Impact on educational status of the adolescents

Table 2 shows the educational status of the adolescents in the baseline and follow-up surveys. The proportion of intervened adolescents who never enrolled in 2008 decreased to 4.8% in the follow-up survey from 5.1% in the baseline but it remained unchanged among the comparison group. The difference-in-difference was insignificant. The completion rate of primary level of education increased to some extent among the intervention group (baseline 12.5% vs. follow-up 13.3%), whereas it declined among the comparison group; but the difference-in-difference was insignificant. Similarly, all other difference-in-differences were found to be statistically insignificant. But it should be noted here that a fall in currently enrolled adolescents in the follow-up for both groups is because of increasing their age since same adolescents were surveyed in the follow-up. Overall, the findings on educational status of the adolescents suggested that programme had no significant impact on schooling. Since the programme had no direct component of education, it is probably unlikely that ADP will directly have an impact on education in the short-run.

Table 2. Educational status

	2008			2010			Impact (DiD)
	Inter- vention	Com- parison	Difference	Inter- vention	Com- parison	Difference	
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	
Never enrolled in school (%)	5.1	3.6	1.5	4.8	3.6	1.2	-0.3
Completed primary level (%)	12.5	14.6	-2.1	13.3	13.2	0.1	2.2
Not completed primary level (%)	13.1	9.7	3.4	11.1	9	2.1	-1.3
Completed secondary level (%)	4.8	7.2	-2.4	12.2	17.1	-4.9*	-2.5
Not completed secondary level (%)	62.5	61.6	0.9	55.4	50.6	4.8	3.9
Completed higher secondary (%)	1.1	3.1	-2*	2.8	6.5	-3.7**	-1.7
Madrassa education (%)	0.8	0.2	0.6	0.2	0	0.2	-0.4
Currently enrolled (2010) (%)	53.4	52.8	.6	43.5	46.3	-2.8	-3.4
Had private tutor (%)	44.9	61.4	-16.5***	62.2	67.6	-5.4	11.1

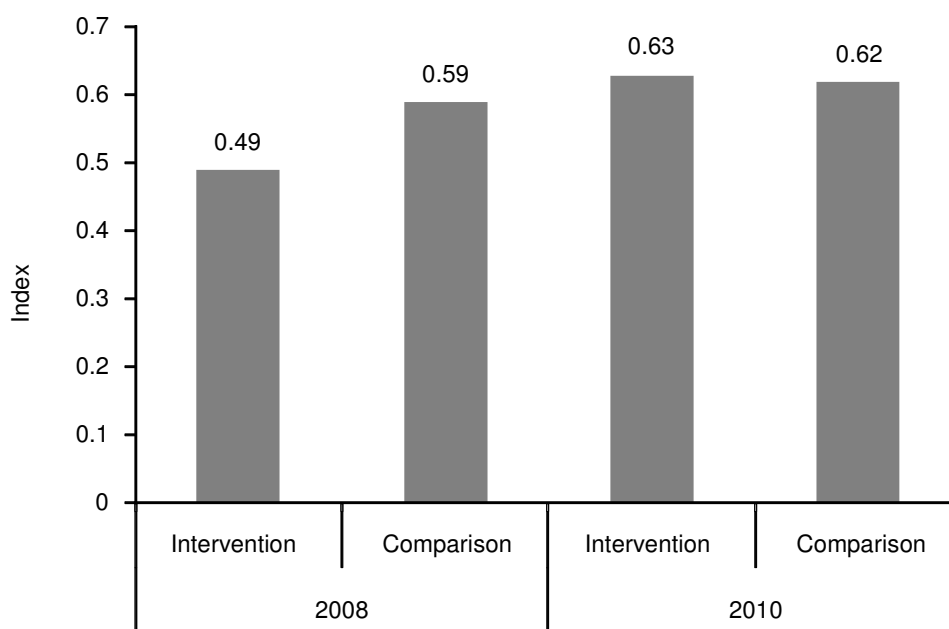
Note: ***, ** and * denote significant at 1%, 5% and 10% level, respectively.

Impact on adolescents' awareness on social and legal issues

Knowledge on legal rights in Bangladesh is disseminated through different media, both electronic and print, government advocacy programmes and NGO activities. However, the currently available information and services are not specific to the needs of the adolescents, and the quality of such information and services is often

poor or inappropriate for this age group (Barkat and Majid 2003). Border ADP's main component was the awareness building training to the participant adolescents for raising their awareness on social and legal issues. As mentioned earlier, for analyzing the effects on social and legal awareness of the adolescents, an index was constructed. It was found that during 2008-2010, awareness index mean for the intervened adolescents increased significantly (from 0.49 to 0.63), while that of the comparison adolescents remained almost the same; the difference-in-difference was significant at 1% level indicating that the programme had positive impacts on building awareness of the adolescents (Fig. 1 and Table 3). Although this increase in legal awareness is an encouraging result, there is still room for more work as the overall level of awareness is still low. The awareness index analysis also shows that in the baseline, awareness of the comparison group was higher compared to the intervention group, which indicates that the programme chose the villages with low level of awareness among the adolescents.

Figure 1. Mean awareness index of the adolescents



Indicator-specific analysis shows that the programme brought positive impacts for the participant adolescents in almost all the studied indicators (Table 3). The intervention adolescents were less aware about *giving and taking dowry are equally punishable* than the comparison adolescents in the baseline, but in the follow-up, both the groups were almost at similar level of awareness. The impact or double difference was significant at 1% level. Likewise, we found positive impacts on the awareness of the adolescents on land and divorce-related issues.

In Bangladesh, the legal age of marriage for a female is 18 years, lower than that for a male (21 years) which is also common in other developing countries of South Asia. Another common trend in these countries is that the proportion of females married before attaining the legal age is higher among the rural community than the urban community; for example, in India 36.8% of the rural girls are married off before the age of 18 compared to 28.9% of the urban girls (Sivaram *et al.* 1995). Furthermore, those females who are married before attaining 18 years of age had low education, earning capacity, and social mobility (Haberland *et al.* 2005). So, to eradicate early marriage, ADP, through its awareness building activities, provided awareness creating message among the adolescents. During 2008-2010, knowledge on the legal age of marriage for males increased more among the intervention group than comparison group, but the difference-in-difference was insignificant. Respondents' knowledge on the legal age of marriage for female also increased more among the intervention group than comparison, but the difference-in-difference was insignificant. However, proportion of adolescents who knew the legal age of marriage, was found to be significantly high among both the groups. In qualitative exploration we conducted a few case studies. In one of our case studies (Annex B1), Fahima Akter mentioned why boys and girls should not be married off early. She mentioned that, if females got married before the age of 18, it would hamper their education; eventually making it impossible for them to continue education, and it would also be risky to give birth as it would damage their health. For males, she mentioned that, if they got married before the age of 21, it would create problems within the family, because at this age he might not be financially solvent enough to take up the burden of a family. According to her, both dowry receiver and giver were eligible for punishment. Fahima is unmarried, and she said that she would not allow her parents to give dowry for her marriage.

As the participant adolescents met twice a week, they were encouraged to discuss about important social and legal issues such as HIV, rape, acid throwing, human rights, women and child trafficking, etc. to make them aware about these. Respondents' knowledge regarding the punishment for rapist increased more among the intervention group than in the comparison group. The difference-in-difference was highly significant, indicating a positive impact of the programme intervention. Similarly we found positive effect of intervention on knowledge regarding punishment for acid throwing, child and women trafficking, and opportunity to take legal action if necessary. In our case study (Annex B1), the respondent mentioned, "Now we know a lot of things which we didn't know earlier. Child and women trafficking and HIV-related issues were unknown to me but after joining this programme I have learnt a lot of things".

Young people are prone to acquiring diseases such as HIV/AIDS owing to the lack of preparation for sexual initiation and experimentation (World Development Report 2007). Thus, realizing its necessity, ADP provided awareness creating message to the adolescents. During 2008-2010, respondents' knowledge about HIV/AIDS increased from 80% to 91% among intervention group while the corresponding proportions among the comparison group were 85% and 88%. The difference-in-difference was significant at 5% level which showed positive impact of the programme.

Table 3. Impact of adolescents' awareness on selective social and legal issues

Indicators	2008			2010			Impact (DiD)
	Inter- vention (1)	Com- parison (2)	Difference (3=1-2)	Inter- vention (4)	Com- parison (5)	Difference (6=4-5)	
Know the appropriate age (21 years) of marriage for boys (%)	36.7	43.0	-6.3*	44.9	48.8	-3.9	2.4
Know the appropriate age (18 years) of marriage for girls (%)	73.9	83.0	-9.1***	82.9	85.9	-2.9	6.2
Know that dowry giver & taker are eligible for punishment (%)	78.4	91.5	-13.1***	92.0	91.0	1.0	14.1***
Know the legal procedure for divorce (%)	6.5	10.8	-4.3**	9.60	8.93	.67***	4.9*
Know after how many days of notice, divorce is effective (%)	26.1	60.4	-34.3***	69.7	70.3	-0.6	33.8**
Know that wife is entitled to <i>denmohor</i> (%)	52	61.1	-9.1***	73.0	67.6	5.3	14.5***
Know the conditions have to be fulfilled if one wants to re-marry a divorced spouse (%)	7.7	18.9	-11.2***	11.0	9.4	1.6	12.8***
Know the necessity of land tax receipt (%)	33.9	50.1	-16.3***	58.8	54.2	4.6	20.9***
Know from where the owner can register his/her land ownership (%)	36.6	45.0	-8.3**	54.3	51.5	2.8	11.1**
Know the punishment for rapist (%)	30.4	44.5	-14.1***	54.0	54.4	-0.4	13.7***
Know the punishment for acid throwing (%)	41.2	52.4	-11.2***	62.5	64.3	-1.8	9.4*
Know about child and women trafficking (%)	82.1	88.5	-6.4***	92.3	94.2	-1.8	4.6
Know that you can take legal action if necessary (%)	77.3	91.2	-14.0***	95.5	94.7	0.84	14.8***
Know about HIV/AIDS (%)	80.1	84.7	-4.6*	91.2	88.3	2.9	7.40**
Awareness index (mean)	0.49	0.59	-0.1***	0.63	0.62	0.01	0.106***

Note: ***, ** and * denote significant at 1%, 5% and 10% level, respectively.

Adolescents' knowledge on physical and mental changes during adolescence

Table 4 shows the adolescents' perception and awareness regarding physical and mental changes. The respondents were asked to report regarding the physical changes that occurred during their physical growth. More than 95% of both the groups had experience physical changes in the baseline. However, as they grew up over the years, the proportion increased to almost 100% in 2010 (Table 4). Natural physical changes like having period/nocturnal pollution also increased among both groups over the years. As these changes are natural, we do not need to analyze the effect of the programme on these issues. But these issues were asked in the survey for some other follow-up questions (for which the programme might have an impact) based on those.

Respondents' awareness regarding any problem faced during period/nocturnal pollution also increased among both groups which was more pronounced (from 38% to 46%) among the intervention group. In response to the question whether they discussed with anyone about this problem, a higher proportion of the respondents showed positive response in the follow-up survey than baseline. The difference-in-difference was found to be positive but not significant. Respondents' awareness regarding *mental and emotional change occurs at this stage* increased among the intervention group but decreased among the comparison group. The difference-in-difference was highly significant at 1% level, an indication of the programme's positive impact. ADP provided awareness among the adolescents regarding periods/nocturnal pollution. The respondents who were informed about first menstruation also increased among the groups and the difference-in-difference was significant at 10% level. In one of our case studies, Sheuly Akter (Annex B2) mentioned that through the sessions they heard about menstruation which was helpful for them because most of the time adolescent girls got worried at the time of their first menstruation.

The proportion of the adolescent girls being restricted for any activities during menstruation decreased from 47% to 41% among the intervention group which decreased only 1% (from 38% to 37%) among the comparison group. So, in our study we found positive impact of programme in reducing restriction among women during menstruation. Earlier women were restricted from activities during menstruation, but now through mass media people have become more aware which have encouraged free movement of women during menstruation.

Table 4. Physical and mental changes of the adolescents

	2008			2010			Impact (DiD) (7=6-3)
	Inter- vention	Com- parison	Difference	Inter- vention	Com- parison	Difference	
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	
Experienced some changes whenever growing up (%)	98.00	96.61	1.39	100.00	99.77	0.23	N/A
Have periods/ nocturnal pollution (%)	83.52	91.46	-7.94***	98.01	97.53	0.48	N/A
Informed about the effect of periods/ nocturnal pollution (%)	38.44	36.61	1.83	46.38	48.62	-2.24	-4.07
Discussed with anyone about the problem (%)	56.10	70.83	-14.74	79.69	84.91	-5.22	9.52
Know that a mental and emotional change occur at this age (%)	61.65	78.88	-17.23***	63.07	60.22	2.84	20.07***
Informed about your first menstruation (%)	38.65	28.10	10.56**	62.80	65.26	-2.45	-13.01*
Restricted for any activities during menstruation (%)	47.24	38.10	9.14*	41.46	37.09	4.37	-4.77

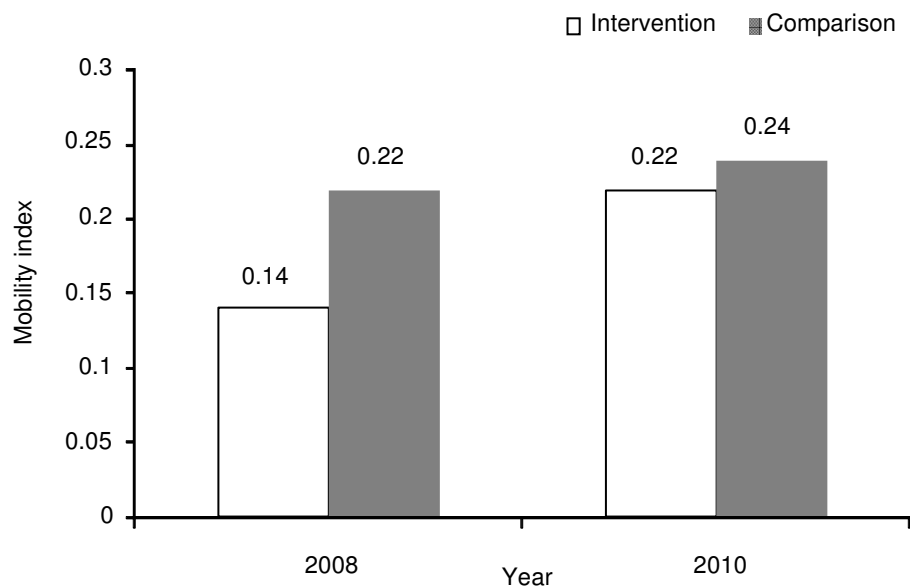
N/A denotes not applicable. These are physical changes of the adolescents, not affected by programme.

Note: ***, ** and * denote significant at 1%, 5% and 10% level, respectively.

Adolescents' mobility

The respondents were asked whether they had visited seven specific places in the last month, such as, school/college, club, health care centre, play ground, friends' house, cinema hall, and NGO offices. An index was constructed for analyzing the effect on enhancing mobility of the adolescents (Fig. 2). We also conducted indicator specific analysis (Table 5). It was found that during 2008-2010, mobility index for the comparison adolescents remained almost the same, while that of the intervention increased significantly during the same period (from 0.14 to 0.22). The difference-in-difference was significant at 1% level, indicating that the programme had a positive impact on the mobility of the adolescents (Fig. 2 and Table 5). It is often argued that the adolescent girls have limited freedom to move and little opportunity to take decisions. The low value of the index in the baseline provides further evidence of the limited mobility of the adolescents in general. According to Keller (1997) in Bangladesh, girls typically are not allowed to leave their homes, go to the marketplace alone or ride a bicycle, especially in rural areas after puberty begins, and most often leave school at age 13 or 14 to get married.

Figure 2. Adolescents' mobility index



Indicator-specific analysis shows that the respondents' mobility to healthcare centre and club increased among both the groups during 2008-2010, but the impact was found to be insignificant. During 2008-2010, the proportion of respondents who visited the play ground and friend's house increased more among the intervention group than the comparison group. This gave positive signs of difference-in-differences, and these are statistically significant indicating positive impact of the programme intervention.

Table 5. Mobility of the adolescents

Places	2008			2010			Impact (DiD)
	Inter-vention	Comp- arison	Difference	Inter- vention	Comp- arison	Difference	
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	
School/ College (%)	38.9	45.6	-6.7*	40	44.4	-4.4	2.3
Club (%)	1.4	2.9	-1.5	4.2	3.5	0.7	2.2
Health centre (%)	8.5	13.9	-5.4**	16.1	18.2	-2.1	3.3
Play ground (%)	25.8	36.4	-10.6***	36.6	37.7	-1.1	9.5**
Friends house (%)	22.7	47.4	-24.7***	53.9	58.2	-4.3	20.4***
Cinema hall (%)	3.4	5.6	-2.2	4.5	6.7	-2.2	0
NGO office (%)	0	0.67	-0.67	1.7	2.2	-0.5	0.17
Mobility index (mean)	0.14	0.22	-0.07***	0.22	0.24	-0.02	0.05***

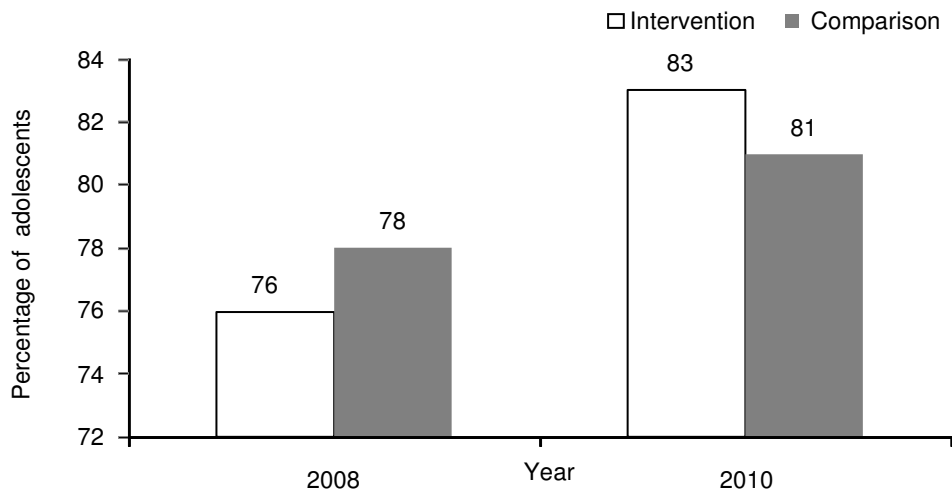
Note: ***, ** and * denote significant at 1%, 5% and 10% level, respectively.

Adolescents' knowledge regarding gender equality

Gender equality means that males and females have equal opportunities to realize their human rights and contribute to and benefit from economic, social, cultural, and political development (USAID 2008). The respondents were asked a number of questions regarding gender equality. The findings reveal that in the baseline, compared to the comparison group, a smaller proportion of intervention respondents reported that boys and girls should get equal priority in the family (Fig. 3). However, the scenario reversed in 2010 indicating that due to programme participation gender equality attitude of the adolescents improved.

The promotion of gender equality and the empowerment of the women are essential for the development of sound population and sustainable development (Khan *et al.* 2004). This study also stated that gender inequality is acknowledged in Bangladesh as one of the root causes of women's and girls' poor health status directly affecting the overall development of the nation. The Constitution of Bangladesh guarantees equal rights for men and women disregarding of caste, creeds, and color. All citizens are entitled to equal respect under the law. Once, parents treated boys as assets for the family, especially in the rural areas. But their attitude has been changing over time and they feel that girls are also assets if we properly take care of them. In India, the Better Life Options programme which operated in peri-urban and rural areas had some achievements in getting young women (aged 12-20) more involved in key life decisions through a combination of life skills training, vocational training and recreational events that built self-confidence and self esteem (World Development Report 2007).

Figure 3. Percentage of adolescents mentioned that boys and girls should get equal priority in family



Due to ADP intervention, the adolescents' attitude towards the notion that *'everyone in a family should abide by the husband'* decreased to some extent, which was significant at 10% level (Table 6). However, this notion was still highly persistent among the adolescents; thus there is scope to work on building awareness of the adolescents on this issue. In the baseline, about 97% of intervened respondents mentioned that husband must be endorsed before selling any land against 99% for the comparison group. These proportions decreased to 95% for both intervention and comparison group, but the difference-in-difference was insignificant.

The socio-cultural environment of pervasive gender discrimination treats girls differently from birth, resulting inequalities in nutrition, health, education and financial status (UNCEF 2007). Girls in Bangladesh marry early, generally are not allowed to participate in the labour market and men marry at a much later age than women (BRAC 2006). Women's mobility drastically falls after marriage, especially in the rural areas and most of the time they are not allowed to engage in income and employment-related activities. Gender-based violence also impedes socioeconomic development due to its effect on women's participation in development activities. For avoiding violence, adolescent girls learn to restrict their behaviour to a level that may be acceptable to their parents, and husbands (Barkat and Majid 2003). Analyzing knowledge level on the issue of women's involvement in earning activity, we found some impact of the programme. In the follow-up a lower proportion of intervention group responded that it was usually not possible to engage in income generating activities after marriage. The proportion of comparison group still believing that it is really not possible to engage in earning increased from 37% to 47% during 2008-2010. The difference-in-difference was significant at 5% level. Over the years, the intervention group was highly aware that women can engage in earning-related activities after marriage or even having child compared to the comparison group.

Proportion of the respondents in the comparison group who reported that it would really not be possible for a woman to engage in income earning activities after having a child increased from 41% to 48% within 2008- 2010. The corresponding proportions among the intervention group were 52% and 43%, which indicates the programme intervention increased positive attitude towards women.

It is usually believed that societies are male dominated in rural Bangladesh. Regarding female engagement in earning activities, the family members, particularly the husband's positive attitude is crucial. More equal sharing of household and family responsibilities would contribute to reducing the labour market inequalities between men and women (ILO 2004). ADP intervention created awareness about these gender discriminatory issues among the adolescents. The respondents among comparison group showed more positive responses in 2010 compared to 2008, that it was really not possible for a woman to maintain a marital relationship with husband if she is engaged in income-related activities whereas, it decreased among the intervention group during the same period. The difference-in-difference was highly significant, showing the positive impact of the programme.

Table 6. Impact on gender equality

Indicators	2008			2010			Impact (DiD) (7=6-3)
	Inter- vention	Com- parison	Difference (3=1-2)	Inter- vention	Com- parison	Difference (6=4-5)	
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	
There should be difference between son and daughter in enjoying facilities at home (%)	24.1	22.4	1.7	16.8	18.9	-2.1	-3.8
Everyone in a family should abide by the husband (%)	96.3	93.5	2.8*	93.5	94.6	-1.1	-3.96*
Husband must be endorsed before selling land (%)	97.2	98.7	-1.5	95.5	94.6	0.8	2.3
It is not usually possible for a woman to involve in earning after marriage (%)	45.5	37.8	7.7**	42.0	47.2	-5.1	-12.8**
It is not usually possible for a woman to involve in earning if she has a child (%)	51.9	41.3	10.6***	42.9	48.1	-5.2	-15.8***
If a woman gets involved in earning it becomes difficult to maintain marital relationship with husband (%)	49.1	39.8	9.4***	45.2	49.7	-4.6	-13.9***

Note: ***, ** and * denote significant at 1%, 5% and 10% level, respectively.

Involvement in income generating activities

Border ADP provided various life skills training to the participants so that they can engage in income generating activities (IGA). It is thus expected that the programme would have an impact on adolescents' engagement in IGA. We found that ultimately employment status of the participants increased through the intervention of ADP (Fig. 4). In the baseline the respondents who were engaged in IGA were 16% and 20% among the intervention and comparison groups, respectively. But in the follow-up, the corresponding proportions increased to 43% and 37% which is indicating that the programme participants were more involved in IGA after receiving life skills training. Unemployed people are generally more prone to engage in social crime and addiction. So, it is essential to involve them in IGA to keep them free from any unexpected situation. The positive impact on engagement in earning activities was thus expected not only to contribute towards household income of the adolescents, but also to decrease unrest in the society.

Figure 4. Proportion (%) of adolescents involved in income generating activity

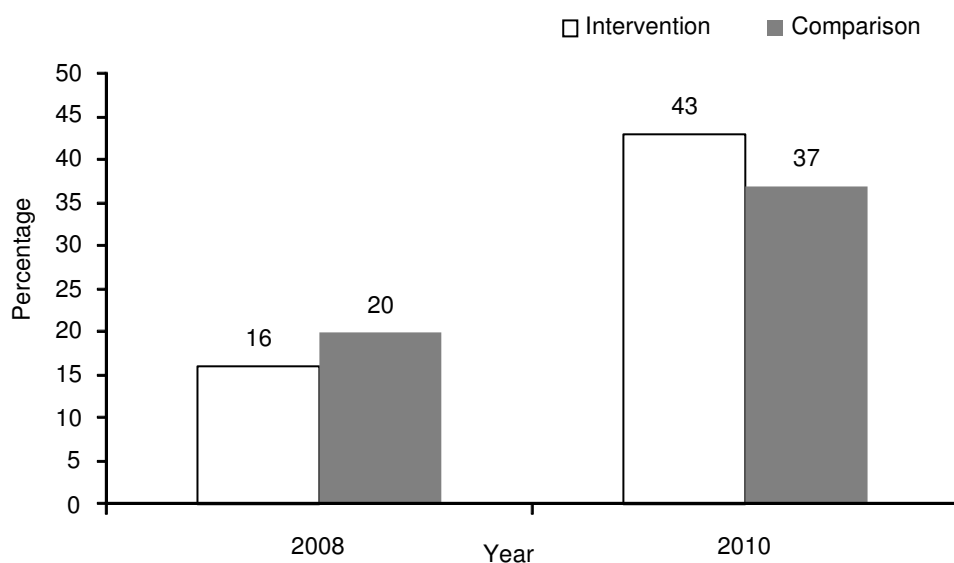


Table 7 shows IGA (primary occupation) of the adolescents. Respondents' primary occupation in agriculture increased greatly during 2008-2010, especially among the intervention group (from 7% to 31%). But the difference-in-difference was found to be insignificant. The proportion of the respondents whose primary occupation was day labourers or businessmen decreased greatly for both groups although the impact was not significant. Respondents whose primary occupation was that of transport worker decreased in the intervention group and increased in the comparison group. The difference-in-difference was significant at 10% level. The respondents were asked to report whether they could spend their earning easily or not, which could be considered as an indicator of empowerment of the adolescents. However, analyzing those, we did not find any significant impact.

Table 7. Earning activities of the adolescents (primary occupation)

Occupation	2008			2010			Impact (DiD) (7=6-3)
	Inter- vention	Com- parison	Difference	Inter- vention	Com- parison	Difference	
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	
Agriculture (%)	7.1	16.7	-9.6*	31.1	29.4	1.7	11.3
Day labourer (%)	28.6	21.1	7.5	11.9	14.1	-2.2	-9.7
Service (%)	8.9	4.4	4.5	7.9	9.8	-1.9	-6.4
Business (%)	16.1	8.9	7.2	10.6	7.4	3.2	-4
Transport worker (%)	12.5	1.1	11.4***	6.6	2.4	4.2*	-7.2*
Non-farm self employed (%)	25	45.5	-20.5**	15.9	24.5	-8.6*	11.9
Poultry and fisheries (%)	1.8	2.2	-0.4	15.9	12.3	3.6	4
Can spend earned money easily (%)	44.6	43.3	1.3	50.3	51.5	-1.2	-2.5

Note: ***, ** and * denote significant at 1%, 5% and 10% level, respectively.

Impact on adolescents awareness on HIV/AIDS

Many adolescents in Bangladesh are afraid, embarrassed or reluctant to take the precautions against sexually transmitted diseases (STD) or to prevent an unintended pregnancy (Keller1997). One of the main components of ADP was to make the adolescents aware about HIV/AIDS, its harmful effect, and way to keep free from this disease.

Analyzing the index constructed on how a person can have HIV/AIDS, we found that the mean index increased from 0.75 to 0.88 among the intervention, while for the comparison it increased from 0.77 to 0.85 (Fig. 5). However, the difference was found to be insignificant. Indicator-specific analysis also shows similar results (Table 8); for all indicators the difference-in-difference was statistically insignificant. However, overall level of awareness was high for both intervention and comparison groups. Our case study (Annex B1) shows that a person can have AIDS through unprotected sexual relationship, using infected needle or by taking blood from HIV patients. In addition Sheuly Akter (Annex B2) also added that a child can be affected from an HIV-positive mother.

Figure 5. Index of awareness about how a person can have HIV/AIDS

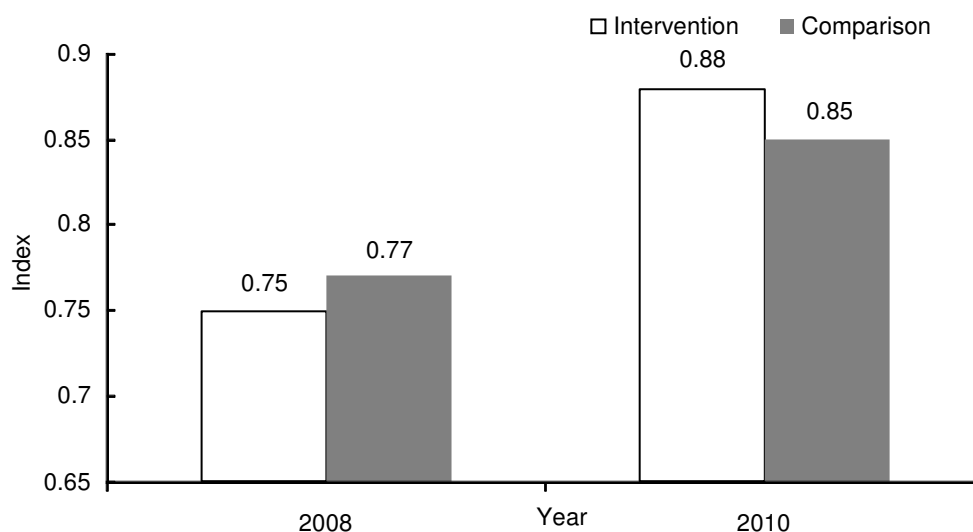


Table 8. The way a person can have AIDS

	2008			2010			Impact (DiD)
	Inter-vention	Com-parison	Difference	Inter-vention	Com-parison	Difference	
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7=6-3)
Through sex (%)	99.6	97.4	2.2**	99	98.2	0.8	-1.4
If use AIDS patient's needle (%)	98.9	97.7	1.2	99.4	99.2	0.2	-1
By taking blood of an AIDS patient's (%)	97.8	99.1	-1.3	99.4	99.5	-0.1	1.2
Child can be affected from HIV positive mother (%)	96.6	96.8	-0.2	99.3	97.7	1.6*	1.8
Awareness index (Mean)	0.75	0.77	-1.3	0.88	0.85	0.7	.04

Note: ** and * denote significant at 5% and 10% level, respectively.

There is a misconception among people that a person can have AIDS through mosquito bite, touching, sneezing or even if they take shower in the same bathroom/pond with the effected person. BRAC's ADP provided awareness on these issues. Table 9 shows awareness on how a person can never have AIDS. Analysis was conducted on indicator-specific and taking all indicators, an index was constructed. The mean index for the indicators under consideration increased at a high rate for intervention than comparison group during 2008-2010. Therefore, the difference-in-difference bears positive sign, and it was significant at 10 % level. Indicator-specific analysis shows that the proportion of respondents' awareness regarding how a person can never have HIV/AIDS through mosquito bite or touching/hugging or even taking shower in the communal water-bodies increased

highly among the intervention group. Our case studies reveal that both Fahima (Annex B1) and Sheuly (Annex B2) mentioned that HIV does not spread by eating together or hugging or taking shower in the same pond/bathroom or through cough.

Table 9. How a person can never have AIDS

	2008			2010			Impact (DiD)
	Inter- vention	Com- parison	Difference	Inter- vention	Com- parison	Difference	
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	
Go along/eat (%)	74.6	76.3	-1.7	77.7	77.6	0.1	1.8
Sleep (%)	75.1	76.1	-1	78.6	77.8	0.8	1.8
Through sneezing (%)	73.6	74.2	-0.6	77.2	77.4	-0.2	0.4
Use cloth (%)	75.5	76.5	-1	77.9	77.9	0	1
Touch or hug (%)	70.3	76.5	-6.2*	77.1	77.5	-0.4	5.8
Shower in the same pond/bathroom (%)	68.9	78.8	-9.9***	76.1	76.9	-0.8	9.1*
Through mosquito bite (%)	61.3	60.2	1.1	76.8	76.7	0.1	-1
Awareness index (Mean)	0.53	0.58	-0.05	0.68	0.65	0.03	0.08*

Note: *** and * denote significant at 1% and 10% level, respectively.

On HIV-related issues, the programme provided awareness on the way to keep oneself free from AIDS, the diseases that transmit through sexual relationships, consequences of HIV/AIDS, and the possibility to notice easily or not if someone has got HIV. Table 10 shows the adolescents' awareness on these issues. It was found that the respondents' awareness regarding the way to keep oneself free from AIDS increased remarkably in the intervention group compared to the comparison group. Percentage of cases which reported that the way to keep oneself free from HIV through protected sex increased from 45% to 51%, hygienic injection from 58% to 61%, and free from sex workers from 14% to 23%, during 2008-2010. For comparison group the corresponding proportion remained almost same or to some extent decreased during the same period. The respondents' awareness regarding the consequences of HIV/AIDS like unexpected death increased among both groups over the years.

Table 10. Knowledge about HIV/AIDS (% of cases)

	2008		2010	
	Inter-vention	Com-parison	Inter-vention	Com-parison
Way to keep oneself free from AIDS				
protected sexual relation	45.0	46.6	51.0	49.1
Use condom	35.8	26.7	36.1	37.6
Hygienic injection	58.1	66.3	60.7	63.6
Free from sex worker	14.1	18.0	22.7	19.8
Take safe blood	0	0	1.5	2.8
Others	0.35	0.53	36.1	38.9
Don't know	13.1	14.0	9.0	5.6
Know the diseases that spread through sexual relations				
AIDS/HIV	98.7	98.9	87.3	88.1
Syphilis	9.8	11.0	12.6	11.4
Gonorrhoea	3.7	10.6	5.7	2.87
Sexual organ infection	1.2	2.57	2.3	1.23
Herpes	0	0.37	0.57	0.41
Itching	0.62	0	9.77	7.7
Consequences of HIV/AIDS				
Unexpected death	84.4	87	92.8	95.6
Others	4.61	4.51	1.8	0.76
Don't know	10.9	8.49	5.3	3.56
If someone has got HIV, possible to notice or not				
Impossible or difficult to notice	57.4	70.5	48.8	47.9
easily noticeable	20.3	19.4	30.4	25
Don't know	22.2	9.93	20.6	27.0

Note: Multiple responses allowed

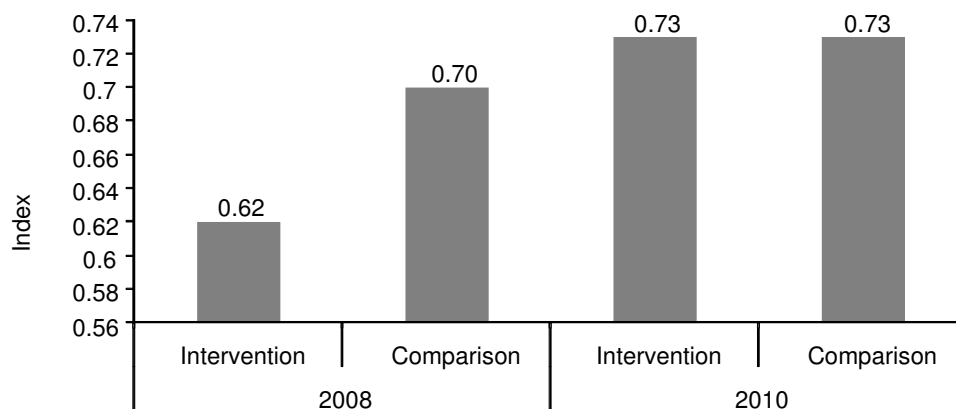
Parents' attitude towards gender

In certain regions of Bangladesh, Ethiopia, India, and Nigeria, at least 40% of the women were married before reaching the age of 15 years and if that pattern continues during the next decade, more than 100 million girls will be married before the age of 18 (Haberland *et al.* 2001). Nearly two in three Bangladeshi young women are married before attaining the legal age of 18 years (UNICEF 2007). The median age of marriage for girls is 15 years in urban areas and even lower in rural areas in Bangladesh (Amin *et al.* 2006). Early marriage is higher among the poor. According to Malik and Mohanty (2010) the mean age at marriage of chronic poor and poor is lagging approximately by 10 years compared to the non-poor and the reasons for early marriage among them may be due to their social and economic backwardness. To stop early marriage, it is thus important to aware the parents. In the border ADP, adolescents' parents were invited to come to meeting (mothers meet every two months and fathers meet every three months) and they were provided training on basic awareness on related issues.

An index was constructed for parents' awareness on various social issues. We also conducted indicator-specific analysis (Table 11). It was found that during

2008-2010, mean index for comparison group increased slightly by 0.03, while that of the intervention increased significantly (from 0.62 to 0.73) during the same period (Fig. 6). The difference-in-difference was found to be significant at 1% level, indicating that the programme had positive impact on the awareness among the parents (Table 11).

Figure 6. Parents' awareness index



Indicator-specific analysis shows that in the baseline, a higher proportion of the parents of comparison group correctly mentioned the legal age of marriage for boys and the difference was significant at 5% level. In the follow-up survey the proportion increased for both groups, but it remained lower for the intervention group. The difference-in-difference (impact) was found to be insignificant. Similarly, the difference-in-difference for knowledge on correct age of the girl's marriage was insignificant. However, on the issue of *family members will take the marital decision for both boys and girls* the difference-in-difference was significant at 1% level. This indicates that the belief that parents will take the marriage decision of their children increased due to programme intervention. In one of our case studies (Annex B3), Fatema Begum (one of the parents of the surveyed adolescents who was interviewed in the case study) mentioned, "Parents will take the marriage decision both for boys and girls with the consent of their children". Parents' knowledge on the issue of *boys would get more assets from family than girls* increased in the intervention group during 2008-2010, whereas it decreased in the comparison group. Under the inheritance law of Bangladesh, boys get more assets compared to girls.

Gender equality and economic development are mutually reinforcing. Female education is a good investment that raises national income, and higher income in turn leads to more gender equality in education and in other areas (Dollar and Gatti 1999). Furthermore, female education helps better educate the children compared to male education as the mothers are mainly responsible for taking care

of their children, particularly in Bangladesh. Our analysis shows that the proportion of parents who perceived that boys and girls should have equal rights for education and diet increased for both intervention and comparison groups. But the increase was more pronounced for the intervention group for these two issues and the double differences were found to be positive and significant at 5% and 1% level respectively, indicating that the programme had a role in enhancing awareness of the adolescents' parents. Our case studies also show similar findings.

According to Fatema Begum "both boys and girls are mine so why should I discriminate among them in education? We try to provide the same facilities at home to our child whether boy or girl." She also mentioned that using more visual aids to disseminate this information among the people would be more helpful for understanding better as well as they could be kept in mind easily and could be used in practical life. She also gave emphasis on arranging more discussion sessions with the parents.

Table 11. Parents' attitude towards gender

Indicators	2008			2010			Impact (DiD)
	Inter- vention	Com- parison	Difference	Inter- vention	Com- parison	Difference	
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	
Know the legal age of marriage for boys (21 years) (%)	6.25	10.3	-4.05**	11.9	18.4	-6.5**	-2.45
Know the legal age of marriage for girls (18 years) (%)	61.4	58.4	3	56.8	59.3	-2.5	-5.5
Know that parents will take marriage decision for boys (%)	83	92.6	-9.6***	97.7	96.4	1.3	10.9***
Know that parents will take marriage decision for girls (%)	85.5	95.3	-9.8***	98.3	97.7	0.6	10.4***
Know that boys will get more asset than girls from family (%)	61.6	76.6	-15***	71.9	70.8	1.1	16.1***
Know that boys and girls have equal diet needs (%)	70.2	77.5	-7.3**	91.2	87.5	3.7	11***
Know that boys and girls should get equal priority for education (%)	69.8	77.8	-8**	86.6	84.5	2.1	10.1**
Parents awareness index (Mean)	0.62	0.7	-0.08***	0.73	0.73	0	0.08***

Note: *** and ** denote significant at 1% and 5% level, respectively.

Sensitivity of impact estimates

Previously we used simple difference-in-difference method to estimate impact of the programme. However, we observed that the intervention and comparison groups were dissimilar in terms of awareness on various issues. So, in this section we investigate how/whether the impact results would change if alternative method of simple difference-in-difference was used to estimate the impact of the programme. We used propensity score matching (PSM) and difference-in-difference after controlling for baseline characteristics and then compared the results with those obtained based on simple DiD. For the sensitivity analysis we have seen impact on some key outcome variables related to awareness. Detail results of the DiD after controlling baseline characteristics are presented in Annex A2.

The probit regression for matching the intervention and comparison is presented in Table 12. The educational level was negatively associated with the participation, indicating that the programme targeted the areas which were backward in terms of education. Furthermore, the results showed that intervened adolescents were more likely to receive vocational training compared to the non-intervened adolescents. However, in terms of household level characteristics, the intervened households were found to be better-off than non-intervened households.

Table 12. Probit regression results of propensity score matching

Indicators	Coefficient	z-value
Age (years)	0.035	1.14
Marital status (Unmarried=1)	-0.242	-1.31
All children aged 6 to 17 years go to school (Yes=1)	0.017	0.14
Owns sanitary latrine(Yes=1)	0.225	2.21**
Have separate kitchen (Yes=1)	0.351	2.92***
Amount of cultivable land	0.042	0.39
No. of rooms in household	-0.035	-0.98
Adolescents mother is a BRAC member (Yes=1)	0.108	0.94
Years of education of the adolescents	-0.083	-3.41***
Adolescents currently enrolled in school (Yes=1)	0.241	1.49
Adolescents had private tutor in the last month (Yes=1)	-0.144	-1.12
Adolescents go to BRAC primary school (Yes=1)	-0.166	-1.34
Adolescents received vocational training (Yes=1)	-0.299	-1.73*
Adolescents engaged in IGA (Yes=1)	-0.188	-1.27
Household head sex (Male=1)	0.121	0.67
Household head age (years)	-0.003	-0.84
Household head education (years)	-0.020	-1.59
Household head occupation (Other than day laborer=1)	-0.243	-1.83*
Constant	-0.144	-0.24
No of observations	772	
Pseudo R-square	0.05	

Note: ***, ** and * denote significant at 1%, 5% and 10% level, respectively.

Table 13 presents impact estimates using three methods (simple DiD, DiD after controlling for baseline characteristics and propensity score matching). It was found that all the methods produced almost similar results. But level of significance improved to some extent in the case of PSM and DiD after controlling for baseline characteristics. Impact on overall awareness was found to be 0.106, 0.105 and 0.104 for simple DiD, DiD after controlling baseline characteristics, and PSM, but the t-ratios on these were found to be 5.67, 6.11 and 5.87, respectively. Similarly, for other variables we did not observe significant differences in impact estimates across different methods used. This indicates that the detailed impact assessments using simple difference-in-difference technique were likely to be robust.

Table 13. Sensitivity of impact estimates

Indicators	DiD after controlling baseline characteristics					
	Simple DiD		DiD after controlling baseline characteristics		PSM	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Adolescents overall awareness index	0.106	5.67***	0.105	6.11***	0.104	5.87***
Mobility index	0.054	3.08***	0.053	3.38***	0.059	3.93***
Awareness about how a person have AIDS index	0.04	1.08	0.039	1.14	0.031	0.87
HIV awareness index	0.078	1.76*	0.077	1.87*	0.069	1.75*

Note: *** and * denote significant at 1% and 10% level, respectively.

Conclusion

Border ADP was implemented in those border areas of Bangladesh where there were no NGO activities, including BRAC and its ADP. The objective of this study was to assess the impact of the Border ADP. We used two rounds of survey data on the same adolescents conducted in 2008 (baseline) and 2010 (follow-up). It was found that the programme had significant positive impact on the adolescents of border areas in terms of their awareness on social and legal issues. Their awareness regarding gender equality both in family and professional life improved due to programme participation. Their awareness regarding HIV/AIDS also increased. The adolescents translated the life skill training given by the programme into action by increasing involvement in IGA. Programme participation significantly helped increase mobility of the adolescents to health care centers, play grounds, friends' house etc. The parents' attitude towards gender equality improved significantly due to programme intervention. The case studies also reveal that their awareness on social issues increased, but they opined that the programme should be implemented beyond two years. Although we found positive impacts of the programme on overall awareness among the adolescents and their parents as well as capacity development of the adolescents through life skill training, on many issues (such as divorce and marriage related issues) level of awareness of the adolescents and their parents still remains low. We suggested that there can be a fixed place like the one used for general ADP, where the adolescents can spend their time on playing and reading, and hang awareness creating posters, leaflets/brochures permanently. The programme can provide more leaflets/brochures or posters to hang on the walls of their houses and other places for enhancing awareness among all people in general.

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Annexures

Annex A

Annex A1. Socio-economic characteristics of attrition and non-attrition adolescents (2008)

	Non attrition	Attrition	Difference	P value
Currently enrolled in school (%)	52	42	10***	0.0001
Engaged in IGA (%)	20	19	1	0.9569
Know that legal age of marriage for boys	40	36	4	0.1729
Know that legal age of marriage for girls	78	76	2	0.3297
Agreed that boys' and girls' should get different facilities at home (%)	23	28	-5**	0.0252
Agreed that boys' and girls' have different diet needs (%)	26	28	-2	0.3739
Agreed that boys' and girls' entitled for equal assets (%)	29	30	-1	0.6342
Agreed that Boys' and girls' should get equal priority for education (%)	75	69	6**	0.0171
Know about HIV/AIDS (%)	83	77	6***	0.0059
Know that women have the right to divorce (%)	74	73	1	0.5514

Note: *** and ** denote significant at 1% and 5% level, respectively.

Annex A2. DiD after controlling for baseline characteristics

Indicators	Adolescents awareness index		Adolescents mobility index		How a person can have AIDS		HIV awareness index		Parents awareness index	
	Co-efficient	t-value	Co-efficient	t-value	Co-efficient	t-value	Co-efficient	t-value	Co-efficient	t-value
Family members work for daily wage (yes=1)	-0.029	-2.82***	-0.030	-3.19***	-0.058	-2.83***	-0.061	-2.5**	-0.006	-0.63
6 to 17 aged all members go to school	0.024	2.34**	0.043	4.7***	0.075	3.72***	0.064	2.66***	-0.007	-0.78
Years of education	0.021	9.98***	0.010	5.14***	0.036	8.81***	0.040	8.11***	0.003	1.39
Had private tutor in the last month (yes=1)	0.038	3.37***	0.083	7.97***	0.040	1.77*	0.058	2.12**	0.002	0.17
Engage in IGA(Yes=1)	-0.003	-0.2	-0.018	-1.4	-0.005	-0.17	-0.019	-0.57	0.016	1.3
Received vocational training (Yes=1)	0.020	1.25	0.027	1.91*	0.093	2.97***	0.054	1.43	-0.007	-0.49
Age	0.007	2.7***	-0.002	-0.69	0.013	2.58**	0.012	1.89*	-0.001	-0.35
Matital status (unmarried = 1)	0.011	0.66	0.073	4.73***	0.031	0.92	0.030	0.75	-0.024	-1.6
Go to BRAC primary school (yes=1)	0.024	2.09**	-0.009	-0.9	0.001	0.06	-0.100	-3.69***	-0.015	-1.52
Mother is Member of BRAC programme (yes=1)	0.019	1.85*	-0.005	-0.53	0.040	1.89*	0.083	3.28***	0.008	0.79
Intervention dummy (interventio n = 1)	-0.085	-6.93***	-0.063	-5.66***	0.010	0.42	-0.032	-1.09	-0.073	-6.55***
Year10	0.038	3.3***	0.027	2.59**	0.083	3.64***	0.076	2.77***	0.038	3.67***
Year10* Intervention dummy	0.105	6.11***	0.053	3.38***	0.039	1.14	0.077	1.87*	0.072	4.63***
Constant	0.289	5.79***	0.077	1.69*	0.212	2.14**	0.042	0.35	0.720	16.04***

Note. ***, ** and * denotes significant at 1%, 5% and 10% level, respectively.

Annex B

Annex B1. Fahima Akter's awareness level increased through ADP participation

Fahima Akter (16) was a member of Border ADP in Radhanagar, Sylhet. She is the second of three children. Her elder sister Amina Akter got married when she was 18 years old and younger brother is now studying in class seven. She became detached from her study two years ago after passing class nine when her father got married for the second time. She is interested in continuing her education, but her family is not financially solvent enough. Now she is happy as she got the opportunity to know a lot of things through BRAC's ADP.

Border ADP arranged 19 discussion sessions where it disseminated awareness creating message among the adolescents. The meetings were held twice a week (Monday and Thursday) for two hours from 3-5 p.m. Fahima Akter was present in all the sessions. When asked why she was present in all sessions, she mentioned that it was very interesting and thought that it would help enhance her knowledge on issues like the legal age of marriage, dowry, child and women trafficking, and HIV/AIDS.

She knows the legal age of marriage for both boys and girls. From the sessions she has gathered knowledge about the bad effects of early marriage. She mentioned that if females got married before the age of 18, it would hamper their education and eventually make it impossible for them to continue their education, and also would be risky to give birth as it would damage their health ultimately. For males, she mentioned that if they got married before the age of 21 years it would create problems within the family because at this age he might not be financially solvent enough to bear such a responsibility. Also she knows that boys and girls should get equal priority in terms of diet and education. According to her, both dowry receiver and giver are liable for punishment. Now she is not interested to give dowry at the time of her marriage.

Fahima Akter knows that those who are engaged in child and women trafficking are liable for punishment. She became aware on a lot of issues regarding HIV/AIDS like what it is, its mode of transmission, and prevention from HIV as well as how HIV is not contagious. She mentioned that HIV/AIDS spreads mainly through unprotected sex, using infected needle, or by taking blood from an HIV patient. She also mentioned that HIV does not spread by eating together or hugging or taking shower in common ponds/bathrooms or through cough.

Fahima said,

"Now we know a lot of things which we did not know earlier. Child and women trafficking, and HIV were totally unknown to me, but after joining this programme I have learnt a lot of things."

She also said,

"Before joining this programme I hesitated to talk to others about anything, but now I feel free to talk to others."

Fahima's suggestions:

- It would be better if the programme provided posters (containing awareness creating messages), so that those could be hung on the walls which ultimately will aware other family members.
- It would be better if the programme provided need-based livelihood training, so that they could engage in income generating activities which would ultimately help them to become self-sufficient.

Annex B2. Sheuly Akter's awareness level increased after participating in ADP

Sheuly Akter (17) was a member of ADP at Radhanagare, Sylhet. She is studying in class ten. She has completed primary level of education from BRAC school. She is the third of the nine children. Her father is a small businessman (Hawker).

Sheuly was present in 14 of the 19 sessions that the programme had arranged. She could not attend all the sessions because of her school examinations as well as family-related problems. She informed that on average more than 30 adolescents were present in each session.

Sheuly has gained awareness from the sessions about the bad effect of early marriage. She mentioned that if females got married before the age of 18 years it would be risky for them to give birth as it would damage their health. Moreover, women aged below 18 are not capable to maintain their family properly. She also mentioned that if male got married before the age of 21 years it would create problems within the family because at this age he would not be financially solvent. She added that boys and girls should get equal priority in diet and education and boys would get more land than girls. Regarding physical characteristics she mentioned that through those sessions they could hear about menstruation earlier which was helpful for them because most of the time adolescent girls got worried at the time of their first menstruation. So if they get the opportunity to know earlier that would be better for them.

She also learnt a lot regarding HIV/AIDS, like what it is, how it spreads, and ways to stay safe from HIV as well as how HIV does not spread. She mentioned that a person can have AIDS if he/she uses the patient's needle or take blood from patients' or a child can be affected from an HIV-positive mother. She also mentioned that HIV does not spread by eating together or hugging or taking shower in common ponds/bathrooms or through cough. She learnt all of these from BRAC's primary school, her textbooks as well as from the ADP.

Sheuly's suggestions:

- It would be better if BRAC continued this programme for a long period.
- It would be better if the programme provided brochures, posters (containing awareness creating message) so that those could be hung on walls which ultimately would aware the family members.
- It would be better if there was a fixed place like a club for the participants where they could go any time and that would be more helpful for them to socialize.
- It would be better if ADP provided extensive training on tailoring so that they could engage in income generating activities.

Annex B3. Fatema Begum's awareness level enhanced after participating parents meeting arranged by ADP

Sheuly's mother Fatema Begum (40) participated in the parents' meeting arranged by ADP in the village of Radhanagar, Sylhet. She is a home maker and her husband is a hawker. She has three daughters and six sons. ADP arranged discussion sessions for the parents regularly (mothers meet every two months and fathers meet every three months). The meeting held for one hour (4-5 p.m.).

She has learnt a lot of issues from these meeting which she was unaware before participating in the programme. She mentioned the legal age of marriage for both boys (21 years) and girls (18 years). Moreover she knows the bad effects of early marriage. She mentioned that if a female got married before the age of 18 years it would not be possible for her to continue education; a lot of problems would arise at the time of pregnancy which would ultimately cause unexpected death. She also mentioned that if a male got married before the age of 21 years it would create problems within family because he would not be financially solvent and would spend more time in the family which would ultimately demolish his career.

According to her,

“Parents will take the marriage decision both for boys and girls with the consent of their children.”

She also mentioned that boys and girls should get equal priority in diet and education as well as both would get equal priority from family, and boys would get more asset/land than girls.

In sylhet, Sheuly’s mother told that,

“Both boys and girls are mine, so why should I discriminate among them in education? We try to provide the same facilities at home to our children whether boy or girl.”

She is now well aware that both the dowry receiver and giver are liable for punishment. At the same time she could realize that without dowry it would be difficult for her to arrange marriage for her daughter.

She told that,

“I have no capability to pay dowry, but I know that without dowry it is not possible for me to arrange marriage for my daughter. I want to arrange marriage for my daughter (sheuly) but the groom wants motorcycle from me. My daughter’s marriage has been delayed as I am not giving that.”

Fatema Begum learnt a lot regarding HIV/AIDS like what is it, how it spreads, prevention from HIV as well as how HIV does not spread. She mentioned that HIV can be spreaded through unprotected sex or if a HIV-positive mother gives birth to a baby.

Suggestions:

She mentioned that,

- It would be better if ADP used more visual aids to disseminate this information among the people. Then it will be possible for them to understand properly as well as keep in mind easily and can also use those in practical life.
- It would be better if ADP could arrange more discussion sessions with the parents regarding these issues.