Providing Microfinance and Social Space to Empower Adolescent Girls: An Evaluation of BRAC's ELA Centres

Rizwana Shahnaz Raihana Karim



July 2008

Research and Evaluation Division, BRAC, 75 Mohakhali, Dhaka 1212, Bangladesh Telephone: (88-02) 9881265-72, 8824180-7 (PABX) Fax: (88-02) 8823542, 8823614 E-mail: research@brac.net, Website: www.brac.net/research

Working Paper No. 3

Copyright © 2008 BRAC

July 2008

Published by:

BRAC 75 Mohakhali Dhaka 1212 Bangladesh

E-mail: research@brac.net

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

Fax: (88-02) 8823542, 8823614 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, health, nutrition, education, gender, and environment.

Printed by BRAC Printers at Tongi, Gazipur, Bangladesh.

Acknowledgements

The authors are grateful to BRAC Employment and Livelihood for Adolescents (ELA) Programme for giving them the opportunity to carry out the research and be a part of it. Many thanks to Dr. Sajeda Amin, Dr. Imran Matin and Mr. Munshi Sulaiman for their support and constant guidance. Comments of reviewers from ICRW and Nike Foundation have been invaluable. The authors also would like to thank Dr. Mohammad Rafi and Mr. Kazi Faisal Bin Seraj for their time to go through the paper and providing feedbacks and suggestions. Thanks to Mr. Hasan Shareef Ahmed in helping to provide the structure of the report and making it look professional through his editing. In the end, thanks to all the people associated with this research for their support, information, suggestions and assistance from the beginning till the very end.

The Research and Evaluation Division (RED) is supported by BRAC's core funds and funds from donor agencies, organizations and governments worldwide. Current donors of BRAC and RED include Aga Khan Foundation Canada, AusAID, Australian High Commission, Brigham Young University, Bill and Melinda Gates Foundation, BRAC University, NIKE Foundation, Campaign for Popular Education, Canadian International Development Agency, Charities Aid Foundation-America, Columbia University (USA), Conrad N Hilton Foundation, Danish International Development Agency, DEKA Emergence Energy (USA), Department for International Development (DFID) of UK, Embassy of Denmark, Embassy of Japan, European Commission, Fidelis France, GITAC Consult GmbH, The Global Fund, GTZ-Germany, Government of Bangladesh, The Holpital for Sick Children, ICDDR, B Centre for Health and Population Research, ICLARM/World Fish Centre, Institute of Development Studies (Sussex, UK), Inter-cooperation Bangladesh, International Committee of the Red Cross, Japan International Cooperation Agency, International Research and Exchange Board, The Johanriter, Land O Lakes (USA), Manusher Jonno Foundation, Micro-Nutrient Initiative, NORAD, NOVIB, OXFAM America, Plan Bangladesh, The Population Council (USA), RNE/DGIS, Embassy of the Kingdom of the Netherlands, Royal Norwegian Embassy, Scojo Foundation Incorporation, SIDA, Sight Savers, Stanford Medical School, Swiss Development Cooperation, ULG Northumbrain, UNICEF, United Way International, University of Calgory, University of Leeds, University of Manchester (UK), World Bank, World Food Programme, and World Health Organization.

Abstract

Lately there has been a surge in the variety of approaches to assist the adolescents, specially the girls, in building up their lives and livelihoods. With financial assistance from Nike Foundation, BRAC started combining financial and social interventions in 2005 by setting up ELA (Employment and Livelihood for Adolescents) Centres for the ELA microfinance group members. This study is intended to assess the usefulness of this combined approach. It is based on a panel dataset of ELA Centre participants and non-participants, which tried to capture changes using qualitative tools. Despite a number of methodological drawbacks, we found indication of the programme being useful in reducing the chances of early marriage, engaging the participants in economic activities, increasing their mobility and involvement in extracurricular reading. Qualitative exploration indicated much stronger effects than our survey estimates, which may have happened because of the participants' over-attribution of their status on their participation, which is biased by self-selection. On the other hand, there are some indications that the surveys failed to capture some changes due to methodological limitations. Nonetheless, it appears that girls at disadvantaged position in terms of education and parents' openness to girl's empowerment are less likely to participate in the programme. It points the need for targeting such girls. Moreover, the skill development training should include a generic module on financial literacy focusing on budgeting, financial management, insurance schemes etc. There is still scope of improvement in general awareness on health issues. The materials that are provided to the centre should include more health specific knowledge based issues.

Introduction

Adolescents in Bangladesh and BRAC's approaches

In developing countries such as Bangladesh, adolescent girls are forced to curtail their childhoods, and are unable to experience this crucial transition between youth to adulthood. The patriarchal family model that underpins Bangladeshi society condemns women to a subordinate role both within the family and in the community as a whole. Women's roles are traditionally and primarily restricted to the household chores while men participate more actively outside. A UNICEF-sponsored baseline survey on rural adolescents in Bangladesh shows clearly that adolescence is the period when girls tend to lose their mobility, their friends and the limited freedom they might have had (Amin *et al.* 2002). Thus, adolescent girls in Bangladesh are victims of "social vices" that impede their advancement and development. The lives of the adolescent girls here are predetermined by a world characterized by inequality and subordination to family and to society, a world in which vulnerabilities such as early marriage, dowry, frequent pregnancy, abandonment or divorce, domestic violence, marginalization and exclusion from social and economic opportunities are all active realities.

Handicapped by these vulnerabilities, along with illiteracy, malnourishment, and early motherhood, which have life-long damaging consequences, these adolescents are forced into a lifelong cycle of deprivation and exclusion. To break down this vicious cycle, it is immensely necessary to enable these girls to take control over their lives and to allow them the opportunities that will build human capital and with it, human integrity.

BRAC commenced working with the adolescents since 1990 under its BRAC Education Programme (BEP). One innovative approach it has used is building peer organized network known as Adolescent Peer Organized Network (APON) where the main idea is to make a balance of knowledge, values and life skills for adolescents as the most effective method of developing positive behaviours helpful to deal with the demands of everyday life. These are five-month long intensive classroom based training. It combines psychosocial and interpersonal skills to help young girls to make informed decisions, be assertive, set goals, and negotiate and other competencies that assist to promote their overall well being. The experiences of APON showed that the adolescent girls are also extremely

interested in running their own businesses and contribute in the family. Based on these objectives, a whole new set of course aimed at providing the essential knowledge of running a business called 'APON Abrito' was thus developed in September 2002.

A separate 'Reading centre' programme was initiated in 1993 for the BRAC school graduates. Since many of these girls did not continue their education after graduating from BRAC School, the reading centres were intended to provide them with the opportunity to socialize and reading materials so that they can retain their literacy skills. Later this initiative was renamed as Adolescent Centre in 2002 since the idea is not only to create reading habits but also create a safe social space. These centres consist of a one-room house with a collection of novels, magazines, storybooks and various sports items. Each centre is comprised of approximately 20-30 members and one leader is identified among them to run the centres. Findings from the mid-line survey on girls, who attended the similar kind of interventions undertaken by Adolescent Development Programme, indicate that relatively longer period spent at Adolescent Centres increases girls' age at marriage, decreases the drop-out rate from secondary schools and thus improves their quality of life.

The Kishori Abhijan Project, started in 2001 by UNICEF, involves both adolescent boys and girls, working to create and sustain a supportive environment for adolescent girls' development at a household and community level (UNICEF² 2007). Providing adolescents with livelihood and leadership skills to boost self-esteem and knowledge, Kishori Abhijan has also implemented Adolescent Centres in which teenagers have been equipped with knowledge on social issues and life skill-based education. Since the project's first phase, 20,000 girls have become role models for their community and other adolescents; and more than a hundred thousand have been equipped with life skill-based education and knowledge. Of those, 7500 adolescents now have their own businesses/enterprises after receiving livelihood training (UNICEF¹ 2007).

Microfinance has been a relatively new addition to the history of programme for adolescent girls. In January 2003, Employment and Livelihood for Adolescents (ELA) programme was introduced where adolescents formed their own groups and were offered savings and credit facilities by BRAC. This programme scaled up rapidly to include more than 300,000 members in 10,600 groups (ELA VO-village organization). Cumulative disbursement to these ELA VO members stood at Tk. 1.6 billion (US\$22.85 million).

ELA Centres: a new intervention for adolescent girls

Though the ELA VO (Village Organization) and Adolescent Centre programs continued to expand separately, there was no initiative to combine the financial

and the non-financial approaches. As such, an initiative for providing the two sets of interventions simultaneously for the adolescent girls took place with financial assistance from Nike Foundation. In 2005, BRAC started setting up ELA Centres for the ELA microfinance group members. In the pilot phase, 1725 ELA Centres were set up in 144 branch offices for ELA microfinance groups. In other words, 1725 ELA VOs were converted to ELA Centres by adding non-financial components. In only 25 of these centres, the participants received APON training courses.

In addition to credit, the participants of ELA Centres are provided with skill based training on income generating activities, books for extracurricular reading, equipments for indoor games and a space to socialize among themselves. For the credit activity, they meet weekly to pay loan and savings installments. They also gather once more in the centres every week to spend 2-3 hours among themselves. In these gatherings, they play games, exchange books and discuss whatever they want. However, a specific issue is selected every month for more focused discussion. Facilitated by the Programme Supervisor (PS), these 'issue based meetings' include health, child marriage, dowry, girls' rights, her role and responsibilities towards family and society etc. The skill development trainings are provided classroom based and are conducted at BRAC office premises. Furthermore, the PS (Programme Supervisor) also holds meetings with the parents and community people periodically. The objectives of these meetings are creating a positive attitude among the parents and the community members to the participation of their daughters in activities beyond study and household chores.

This program is targeted towards the girls aged between 10 and 24 years. However, older girls may sometime join the programme. Before setting up a centre, an assessment of the number of eligible adolescent girls is done. Villages with adequate number of girls (at least 35) are selected for the intervention. Afterwards, the PS (Programme Supervisor) approaches the girls and their parents to describe the program. Though participation of all the adolescent girls is expected, they may decide not to participate in the program. On average, each centre consists of 30 participants.

It is expected that when safe space and other inputs for socialization and cognitive development is combined with concrete livelihood support in the form of income generation skills and microfinance access, it will facilitate the process of adolescent girls flourishing as self-confident and independent individuals. It also aims to combine psycho-social and interpersonal skills to help young girls make informed decisions, be assertive, set goals, gain negotiation skills and other competencies that assist to take greater responsibility for their own lives and promote their well-being. Over and above, the ELA Centre intervention aims to create empowering opportunities and choices for adolescent girls and to support

them in defining and implementing their own agenda for changing their situations.

The objective of this study is to assess the usefulness of the programme in terms of delaying the age of marriage of the girls, keeping them enrolled in schools, increasing their mobility, enhancing sociability among themselves, awareness about health issues and economic empowerment.

Methods

We used both quantitative and qualitative methodologies in this study. In the quantitative sections we mostly focus on the differences in the outcome variables between the ELA Centre participants and non-participants. However, in qualitative part we have three main groups of respondents, viz. ELA VO participants, ELA Centre participants and non-participants. Moreover, among the ELA Centre participants of the qualitative section, some received APON training courses and others did not. Since participants from only 2 of the 50 ELA Centres in the sample survey received the course, we do not distinguish them in this quantitative analysis.

Two rounds of survey were conducted on the same respondents in 2005 and in 2007. There were three groups of respondents in the sample i.e. participants of 'ELA Centres', participants of 'ELA VO' and 'Non-participants'. ELA Centre participants received both credit facility and Adolescent Centres, ELA VO participants received only the credit and skill training; and the Non-participants are not directly engaged in any activities supported by BRAC.

Multistage cluster sampling procedure was followed. In the first round of survey, there were 400 respondents from each group. Out of 20 regions where the ELA Centre activities were being extended in 2005, 10 regions were randomly selected. From each of these regions, 5 ELA Centres were selected randomly. Finally, 8 randomly selected participants from each of these 50 centres were interviewed.

Sampling strategy for the ELA VO members was similar to that of ELA Centres i.e. 5 groups from each of 10 regions and 8 members from each group. The non-participants, who were taken up as a comparison group, came from the villages where the ELA Centres were located. After listing the non-participants girls of age between 11 and 25 years in each of these localities, 8 were randomly identified for interview.

In the second round, it was possible to interview 949 out of the 1183 respondents from the baseline. Overall attrition rate is 20% and no variation is observed in this rate across the three groups. The major reasons of attrition are changing location after marriage (53%), permanent migration for non-marriage purposes (27%) and visiting relatives (14%).

During the two waves, some changes have occurred in their participations as well. A good portion of the respondents who were initially surveyed as ELA VO participants have actually become ELA Centre participants when new centres were set up in those areas (Table 1). Similarly some of the non-participants have joined in ELA Centres.

Table 1. Respondents of different groups in 2005 and 2007

Year		2005 (Baseline)						
<u></u>		ELA	ELA	Non-	Total			
(End line)		Centre	VO	participants				
p	ELA Centre	322	126	74	522			
Œ	ELA VO	0	185	5	190			
07	Non-participants	0	0	237	237			
2007	Attrition	70	89	75	234			
	Total	392	400	391	1,183			

Because of these changes in participation category, we were left with very few of respondents on the ELA VO arm. Therefore, we have dropped the ELA VO group from our analysis. We have not included the 74 respondents who have joined ELA Centre from comparison group either. Therefore, most of our analysis is based on the 322 cases of ELA Centre participant and 237 of non-participants. While migration of the 74 cases is likely to dilute the results as we see significant difference between them and those who remained in the non-participant group in terms of their age and enrolment. Inclusion of these cases amplifies the initial difference between the participants and non-participants.

For analysis, we start with difference in difference. This is a useful analytical tool when the participants and non-participants have very similar characteristics. However, this is not the case in our sample. Therefore, we also use multivariate analysis and propensity score matching. Multivariate analysis shows the key characteristics, besides program participation, associated with the outcome variables. However, in non-experimental settings, propensity score matching is increasingly being used as a credible method of impact evaluation (Ravallion 2005).

Limitations

There are several key limitations of this evaluation, which needs to be discussed to interpret the results with appropriate caution, which is why it is stated right after the methodologies and not after the results, so that the readers can have a clear understanding of the shortcoming of the report.

Firstly, the attrition rate (19%) is reasonably high for a two-year interval. Longitudinal studies with this age group often suffer from high attrition rate, e.g.

68% response rate for evaluation of TRY programme in Nairobi (Erulkar and Chong 2005). If the individuals who could not be followed-up are significantly different in some characteristics, the panel will give biased estimates. As we see that marriage is the predominant reason of sample attrition, our sample is biased towards those who are likely to have delayed marriage.

Secondly, and probably most remarkably, this group assignment was not done randomly. There is a certain extent of self-selection in the program participation. As we would see in their profile, there are some significant differences between the participants and non-participants. If the girls with higher level of confidence and/or mobility are more likely to participate in the programme, the differences that we observe in these domains are their inherent characteristics and may not have anything to do with their participation. This would cause overestimation of impact in variables, which require confidence, e.g. participation in earning activities. Another important way through which this self-selection can cause overestimation of impact is the openness of the parents towards girls' involvement in extracurricular activity. Since girls can participate in the program only when their parents permit them, possibility of such overestimation cannot be ruled out.

On the other hand, the absence of a proper control group due to this non-random program assignment may have caused serious underestimation of impact in domains where the participants were already better off than the non-participants. For example, in assessing political awareness, we found that greater portion of participants knew the name of the chairman of their local government (83% vs. 69%) in 2005. In the follow-up survey, these figures changed to 87% and 83% respectively for the participants and non-participants. Only the difference-in-difference (-10%) may lead us to conclude that the programme is having a negative influence in their political awareness. For the variables where the participants were already performing better and the room for further improvement was limited, such underestimation is highly plausible. This could have been one of the reasons of noticing disparity between the quantitative and qualitative findings.

Thirdly, for comparison, the non-participant respondents were identified from the same villages where the ELA Centres were operating. This strategy helps in reducing the level of disparity between the participants and non-participants arising from geographical differences. However, because of the possibility of spillover effects within villages, the results could be significantly underestimated. Variables on knowledge and awareness are more likely to have been affected by spillover. When the girls learn new things from their readings, they can share these learning with their neighbors who are not necessarily programme participants. Non-participants' mobility or engagement in earning activity may also be influenced through demonstration effect.

Finally, the activities of ELA VOs started in 2003 while setting-up ELA Centres started in 2005. In other words, the ELA Centre has been layered on the existing ELA VOs. A number of the ELA participants had actually joined the VOs well before (6 months to 2 year) the baseline survey was conducted in 2005. Therefore, only the marginal effect of ELA Centre activities on existing VO members can be observed.

Findings

Profile of the adolescents

The basic profile of the adolescent girls from the ELA Centres and non-participants in 2005 is compared in Table 2. This shed some light on the nature of selection biases in the ELA Centres. Clearly the non-participants come from slightly older age groups of the community where the surveys were conducted. In 2005, about 40% of the non-participants were at least 20 years old while the comparable figures for the Centre participants were about 20%.

Table 2. Profile of the respondents in 2005

	ELA Centre	Non-participant	Chi square
Age (%)			
10-13	16	5	44.10***
14-16	42	29	
17-19	23	26	
20-22	11	21	
22+	8	18	
Currently enrolled in schools (%)	52	24	44.38***
Education			
No Education	4	10	9.22***
Primary	34	38	
Secondary and above	62	52	
Main occupation			
Student	51	25	49.89***
Household chores	36	66	
Income earning	7	5	
None	6	4	
Marital status (% married)	19	50	59.58***
Parents			
Father has at least primary			
education (%)	37	39	0.23
Mother has at least primary			
education (%)	25	21	1.28
Mother has ever been a BRAC			
member (%)	45	24	26.60***
N	322	242	

^{***} Significant at less than 1% level

School enrolment ratio was more than double among the participants than the comparison group. According to Bangladesh Adolescent Survey 2005, enrolment rate of 12-24 old girls in Bangladesh was 31 percent, which is higher compared to the enrolment figure of the non-participants in this survey (BRAC 2006). Education levels of these adolescent girls reflect their differences in enrolment ratio.

Primary engagements of the adolescent girls are invariably either studying as students or household chores. Extents of student as the primary occupation closely follow the figures of enrolment rates. Less than 10% of the girls had income earning activity as their main occupation. There were sharp differences in marital status between the participant and non-participant groups in 2005.

Besides the characteristics of the adolescents, we looked at a few variables of their parents. It is interesting to note that the adolescent girls, whose mothers are also BRAC VO members, have greater chance of being ELA Centre members.

Because of these disparities in profile, any difference-in-difference analysis is likely to produce biased results. Therefore, in the outcomes that we looked at, effort was put to control these differences by using PSM.

Descriptive of changes

It is sometimes difficult to conceptually distinguish between the process and outcome variables of social interventions. Often the processes themselves are taken up as outcomes because of either the process itself being of utmost importance or it closely proxies some other outcome. For example, microfinance intervention is one of the most prevalent processes to help the disadvantaged group to build their livelihood. Here the key assumption is that the beneficiaries have lack of access to credit. Therefore, borrowing is often considered as a proxy outcome for access to credit though it is part of the process. For the ELA programme, providing microfinance services, spaces for indoor and outdoor games, extra-curricular reading facilities, health and life-skill training are all parts of the intervention process. The distinctions are necessary in evaluating outcomes not to mix up with process. In this section we report the changes in several variables both from process and outcomes (Table 3).

In 2005, extent of borrowing was already more than double among the centre participants. This is mostly because they had been participating in microfinance as ELA VO members. Interestingly, about a quarter of the non-participants also had history of borrowing in the baseline. Increases in borrowing were observed between the two periods for both groups. Since borrowing was already very high among the participants, the difference-in-difference is not significant.

Table 3. Changes in different indicators

	2005 2007		07		
	Non-		20	Non-	
	ELA	parti-	ELA	parti-	Diff in diff
Indicators	Centre		Centre	cipant	(t value)
Took loan in the last 2 years (%)		24	60		-2 (0.36)
Received income generation training (%)	53 16			33	-2 (0.36) 36 (7.12)***
Have been involved in IGAs in last 2	10	19	51	17	36 (7.12)
	30	20	59	41	15 (2 62)***
years (%)	30	28	39	41	15 (2.62)***
Amount earned in last 6 months (average in taka)	242	266	1000	575	F26 (2.10)**
Extra curricular activities	243	266	1088	575	536 (2.19)**
	57	22	5 0	31	2 (0.57)
Played indoor game in last month (%)		33	58		3 (0.57)
Played outdoor game in last month (%)	30	15	27	12	1 (0.85)
Read non-textbook materials in last	10		2.4	0	0 (0 15) 44
month (%)	13	6	24	9	9 (2.15)**
Time spent on such reading (mean hour	<i>7</i> 1	2.0	<i>7</i> 4	2.5	0.7 (0.60)
last month)	5.1	2.8	5.4	2.5	0.7 (0.60)
Watched TV last week (%)	77	65	73	63	-2 (0.42)
Literacy	62	7 0	<i>~</i> ~	5 .0	4 (1 (0)
Score of reading (mean)	63	58	65 5.5	56	4 (1.60)
Score of writing (mean)	53	45	55	42	5 (1.78)*
Score of financial literacy (mean)	-	-	39	35	
Health awareness	0		2.1	10	5 (1.00)
Knows about STDs (%)	9	6	21	13	5 (1.20)
Knows about HIV/AIDS	50	47	6 7	50	2 (0.55)
transmission (%)	52	47	67	59	3 (0.57)
Knows about how HIV/AIDS does not	2.4	22	40	40	5 (0.05)
transmit (%)	34	33	48	42	5 (0.85)
Score of wrong believe on health			1 22	1.76	
(average)	-	-	1.33	1.76	-
Knows male sperm determines the sex of	2.2	2.4	20	20	
a baby (%)	23	24	38	38	1
Socio-political awareness and mobility	0.2		0.7	0.0	10 (0.00)
Knows the UP chairman (%)	83	69	87	83	-10 (2.22)**
Knows the ward member	80	70	83	78	-5 (1.07)
Knows the number of reserved seats per	22	2.1	2.5	20	0 (4 05)
UP for females	32	31	36	28	8 (1.37)
Perceived mobility (average score out of					
18)	11.53	11.52	12.46	12.09	0.35 (1.73)*
Actual mobility score (average score out		0.00	1.50		0.04 (0.05)
of 6)	1.27	0.93	1.58	1.23	0.01 (0.05)
Aware of the legal age of marriage	97	95	98	98	-2 (0.69)
Aware about the consequences of early	00	00	0.0	0.5	2 (0.55)
marriage	88	88	93	96	-2 (0.57)
N	322	242	322	242	

^{*} significant at 10%; ** significant at 5%; *** significant at 1%

Similar proportion of respondents of both groups received some form of income generation training in 2005. Since one of the core interventions of ELA Centre is the skill development training, we observe some differences in 2007. Noticeable increase in engagement in earning activity is observed in the two periods between both the participants and non-participants. It is noted that a positive difference-in-difference is more likely for the variables in which the two groups were similar in 2005.

Extent of playing games, both indoor and outdoor, was higher among the participants in 2005. Since age is the most significant factor in the likelihood of playing games, a decline in the extent of playing outdoor games has been observed. However, the centre participants are more likely to spend more time in extra-curricular readings. There is also a strong possibility of sharing the books with the non-participant neighbors. In fact, about 25% of non-participants who read books have reported that they have done so in their neighbor's or friend's house as oppose to only 7% of ELA Centre members.

Some basic literacy tests were done. They were provided with 10 questions each on reading and writing. Their performance has been scored on a scale of 0 to 100. No significant difference is observed in the reading skills. However, the participants had higher writing skills compared to the non-participants in 2005 and the differences persisted in 2007. Though not included in 2005 survey, a financial literacy test was conducted in 2007 since it was hypothesized that this cognitive skill is likely to be affected by programme participation. This module included 9 items and the score has been ranged between 0 and 100. We see that the participants had slightly higher level of financial literacy than the non-participants.

When asked about STDs or HIV/AIDS, there is no significant difference between the groups in either 2005 or 2007. Greater proportions of all three groups have become aware about these diseases in 2007. However, in 2007, an additional module was incorporated to assess the level of critical thinking about superstitions among these adolescents. Six statements of some prevalent superstitions about menstruation were presented to them and they were asked to report whether they agree or disagree with each of these statements. On average, the participants agreed with 1.3 of the statements and the non-participants agreed with 1.8 statements.

It is noteworthy that the adolescents are more aware about the HIV/AIDS than they are about the fact that male sperm determines the sex of the offspring. This simple information could be crucial for empowerment of young women since there is strong preference of boys and girls and often the women are blamed for giving birth to daughters. However, no significant difference was observed between the two groups. Interestingly, awareness about this fact was similar

between the married and unmarried respondents though one would expect the married girls to be more aware about it.

To assess mobility, the respondents were asked whether they have visited 6 different places (the ones that are equally applicable for all three groups viz. market, health centre, movie theaters, village fair and library) in the last month. They were also asked to report whether they believe that they can visit these places on their own or would require someone to accompany. The index of 'actual mobility' is the number of these 6 places they have visited in the last month. For the index of 'perceived mobility', their response for each of the places was ranked into four categories between 'cannot go at all' and 'can go alone and without permission'. This index ranged from 0 to 18. Improvements are observed both in the perceived mobility and actual mobility of the adolescents between 2005 and 2007. Though the non-participants perceive themselves equally mobile, the ELA Centre participants have greater actual mobility. The change in perceived mobility of the non-participants could be influenced by demonstration effect from higher mobility of the ELA members. However, the difference-in-difference is downscaled by the higher initial mobility among the participants.

Exploring changes in 'outcome'

As outcome of the programme, we looked at few specific variables viz. marriage, level of socialization, wrong-believes on health, school enrolment, financial literacy, engagement in earning activity and financial market participation. Except for loan taking, the programmes do not directly address these issues. However, changes are expected in all those variables with programme participation. Moreover, considering variables that are not direct part of the programme process can limit the endogeneity between participation and observed outcome.

Several links can be identified between the programme process and each of the hypothesized outcome variables. Here we try to present brief explanation of the key plausible links. Since the programme promotes awareness about the vice of early marriage among the girls and their parents, this may affect early marriage. Increased socialization among girls in the centres can extend beyond the centre by creating bonding among them. Reading the books that contain information about vice and nature of superstitions should create an open mindedness to judge 'right' and 'wrong' beliefs. Engagement in earning activity can lead the girls to dropout from schools if the substitute time for earning conflicts with their time for school. It can reduce the chances of dropout, as well, if the activity is taken as complementary one and they invest these earnings in their own education. Both extracurricular reading and engagement in earning can have influence on their financial literacy.

Marriage

Early marriage is one of the major concerns for the adolescent girls. A large portion of the girls drops out from schools after completing primary education. Female net enrolment ratio drops from 95% to 51% between primary and secondary education (UNDP 2006). Marriage is often reported as the prime reason for school dropouts of girls and the causality has been investigated (Field and Ambrus 2007).

Participation in ELA can influence the likelihood of getting married at an early age in several ways. Access to credit can generate delayed marriage by influencing labor force participation. Life-skill training and social space can increase the awareness among the participants and empower them to delay their marriage. Social engagement can also reduce the impression of 'doing nothing'.

Table 4. Determinants of getting married¹

	Got married between 2005 and 2007				
	(logit model)				
	Eq 1 Eq 2 Eq 3				
	-0.463	-0.385	-2.389		
ELA Centre (1=yes, 0=otherwise)	(2.30)**	(1.80)*	(1.97)**		
	-0.083	0.279	-1.398		
ELA VO (1=yes, 0=otherwise)	(0.37)	(1.07)	(0.99)		
		0.129	0.042		
Age (in years)	-	(4.20)***	(0.69)		
Involved in earning (1=yes,		0.075	0.081		
0=otherwise)	-	(0.37)	(0.40)		
Education of HH head (years of		-0.051	-0.052		
schooling)	-	(2.35)**	(2.36)**		
-			0.121		
ELA Centre X Age	-	-	(1.66)*		
-			0.100		
ELA VO X age	-	-	(1.18)		
Regional dummies	-	Not reported	Not reported		
	-0.830	-3.641	-2.191		
Constant	(4.95)***	(5.60)***	(2.01)**		
Observations	871	871	871		
Pseudo R ²	1%	7%	7%		

Robust z statistics in parentheses

In 2005, 19% of the participants and 50% of the non-participants were married. The respective figures have increased by 13 and 7 percentage points in 2007.

RED Working Paper No. 3

^{*} significant at 10%; ** significant at 5%; *** significant at 1%

¹ We used the ELA VO group only for this part

However, these differences across the groups cannot be taken seriously for two basic reasons. Firstly, there were differences between the participants and non-participants in terms of their age and school enrolment, both of which have significant influence on the chances of getting married. Secondly, the panel data includes only those adolescents who were surveyed on both rounds. Given that 53% of the attrition from the panel was related to the respondents getting married, any results on marriage without considering them would be flawed.

Table 4 considers all those adolescent girls (not only the ones in the panel) who were single in 2005. Among these 871 unmarried girls, a quarter got married during the survey intervals. According to the first equation, exposure to ELA Centre significantly reduces the probability of marriage. However, when other relevant variables are considered, participation in ELA Centre becomes weaker determinants of the probability of getting married. Age of the adolescent girls and education of their household heads are significant factors in equation 2 and 3. When the interaction variable of centre participation and age is introduced (third equation), it is seen that the interaction variable is positively and participation is negatively associated with the probability of marriage. Intuitively it makes sense since participation is more likely to reduce the chances of getting married for premature adolescents than the tardy or delayed adolescents.

Enrolment

Being enrolled and married are almost two exclusive options for the adolescent girls. Marriage is often identified as the single most important reasons for the adolescents to dropout from schools. If the programme can delay marriage, their school enrolment is likely to increase. On the other hand, there is a fear that options of economic engagement can create an incentive to school dropout.

Table 5 looks at several outcome variables along with school enrolment. Regressions include village level fixed effects. Though we have observed difference in enrolment rate between the two groups in their profiles, this difference is not significant when controlled for their age, marital status, educational attainment and mother's education. Borrowing does not seem to have any significant association with enrolment either.

Superstitious notions of health

This is being used as an indirect way of exploring the health awareness of the adolescents. On average, centre participants showed lower extent of its prevalence (Table 3). However, no significant difference was observed in the regression. Education and schooling are the most important determinants of existence of wrong beliefs (equation 2 in Table 5). Access to media has strong influence on reducing the extent of health related superstitions. Though ELA

Centre or VO participation by itself do not show significant relation with this outcome variable, time spent on extracurricular reading reduces it. Time spent on extracurricular reading, an important process variable of ELA Centres, can enhance health awareness. Therefore, provision of some books more focused on health issues should be made for the centres.

Mobility

Mobility is one of the least debated and easily observable facets of empowerment. One of the major concerns of the program was to ensure mobility of the adolescents through increasing their social and economic space. The processes that were used to enhance it were by providing them a place to play indoor and outdoor games, getting them involved into extracurricular reading, giving chance to get training and involve themselves in several IGAs, school enrolment etc. Marriage creates an obstacle to mobility of the girls.

From the regression analysis two types of mobility can be observed, one is perceived mobility and the other mobility attained in real. We find that the girls perceive themselves more mobile than they actually are. However, program participation seems to have direct impact on their mobility.

Sociability

Socialization during adolescence determines the nature of involvement of the individual with society at a later age. Adolescence is an age of uncertainty, stress and feeling insecurity. Studies have shown that greater sociability can reduce this uncertainty through providing greater access to information and developing socio-emotional skills (Hartup and Stevens 1997). The act of creating social space for the adolescent girls is intended to create greater sociability. Sociability is often emphasized in the context of social capital as well.

The survey reveals many interesting facts on socialization of the adolescents. We used the extent of visiting friends in the month prior to the survey as a proxy for sociability. The girls involved in centres tend to socialize more than the non-participants. Greater socialization by the participants increases the chance of spillover their knowledge to their friends. Older girls are less mobile and, therefore, have lower likelihood of going out of home to socialize. Similarly married girls are less likely to socialize as in majority cases they stay away from their natal families or are busy in household chores.

Table 5. Determinants of different outcome variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Currently	Wrong beliefs	Perceived	Mobility	Socialization	Log of	Whether	Financial
	enrolled	on health	mobility	-		earnings	took loan	literacy
ELA Centre	0.427	-0.106	0.132	0.175	2.785	0.470	1.622	-1.004
(1=yes, 0 otherwise)	(1.61)	(0.61)	(1.22)	(3.08)***	(3.47)***	(2.27)**	(9.45)***	(0.75)
Adolescent education	0.494	-0.107	0.059	0.034	-0.325	0.123	-0.103	1.565
(years of schooling completed)	(7.53)***	(3.43)***	(2.91)***	(3.19)***	(2.17)**	(3.42)***	(3.47)***	(5.58)***
Adolescent married	-2.135	0.123	-0.289	-0.143	-4.289	-0.207	0.759	5.065
(1=yes, 0 otherwise)	(6.63)***	(0.63)	(2.13)**	(2.02)**	(4.27)***	(0.84)	(3.74)***	(2.44)**
Adolescent age (years)	-0.521	-0.033	0.067	0.005	0.071	0.157	0.064	-0.037
	(9.49)***	(1.37)	(4.48)***	(0.63)	(0.64)	(5.82)***	(2.66)***	(0.17)
Loan taken	-0.188					0.453		2.385
(1=yes, 0 otherwise)	(0.73)					(2.27)**		(1.49)
Mother's education	0.134	-0.078	0.021	0.005	-0.023			0.310
(years of schooling completed)	(3.12)***	(3.91)***	(1.08)	(0.50)	(0.16)			(1.10)
Time spent on extracurricular	0.014	-0.019						0.332
reading (hours in last month)	(1.36)	(4.41)***						(5.35)***
Year 2007	0.044		0.674	0.333	-3.134	1.054	0.171	
(1=yes, 0 otherwise)	(0.21)		(6.89)***	(6.51)***	(4.34)***	(5.87)***	(1.17)	

[continued...]

Table 5. [continued]								
Currently enrolled in schools		-0.314	0.189	0.282	-0.475	0.394	0.041	3.418
(1=yes, 0 otherwise)		(1.72)*	(1.37)	(3.92)***	(0.46)	(1.61)	(0.20)	(1.63)
TV hour in last week		-0.218	0.075	0.110	1.178			0.998
		(2.85)***	(1.47)	(4.16)***	(3.13)***			(1.43)
Played outdoor game last					3.264			
month (1=yes, 0 otherwise)					(3.31)***			
Involved in earning activity								1.825
(1=yes, 0 otherwise)								(1.24)
Received training						1.668	0.467	0.631
(1=yes, 0 otherwise)						(7.59)***	(2.63)***	(0.43)
		3.534	9.788	0.489	9.007	-2.932		19.648
Constant		(6.15)***	(31.24)***	(2.99)***	(3.82)***	(5.32)***		(4.03)***
Observations	1724	860	1852	1852	1852	1852	1775	564
Number of villages	104		122	122	122	122	110	
R-squared		0.15	0.09	0.14	0.09	0.21		0.16
Model	FE Logit	Village cluster	FE	FE	FE	FE	FE Logit	Village
	_		regression	regression	regression	regression	_	cluster

Note: Robust t values in parenthesis, *significant at 10%; **significant at 5%; ***significant at 1%

Engagement in earning activity

Engaging adolescents in earning activity was one of the major objectives of ELA. It was initiated with a plan of involving young girls in several IGA by providing them with credit and saving facilities. It was assumed that adolescents participation in the labor market or in other IGA can shape their future life more than anything and can ensure them with hope and aspirations of a more prosperous and meaningful life.

The participants appear to be more engaged in earning activity. Besides, training and borrowing also showed a positive correlation with engagement in the earning sector. This suggests the usefulness of both training and financial service in making the girls economically empowered.

Financial market participation

The extent of financial market participation is much higher among the participants than the comparison group. Since the participants self-select themselves, those who require this service are participating in the program. The positive association between receiving IGA training and borrowing reflects that at least some of them are using the fund themselves. However, we discovered that a number of them were actually giving the money to their parents or spouse for investment. This provides a scope of creating incentive for those who are not interested to participate in the programme. Some of the parents of these adolescents are allowing their daughters to participate in the centre activities to utilize the financial service that they gain through her.

Financial literacy

Recently some initiatives are taking place to improve the financial literacy of the adolescents so that they can be better entrepreneurs. Therefore, several questions that were not asked during the baseline survey were included in the end line questionnaire in order to determine the level of financial knowledge on some very practical issues that one is required to know and use in her day-to-day life. Several questions mainly on making a budget for the household, taking a loan, interest rate difference, savings account and fixed deposit, life insurance and planning for future were asked in the survey. Understandably, education is one of the key determinants of their financial literacy. However, extracurricular reading also has positive association with these variables. Controlling for the relevant variables, participation does not have any significant association with financial literacy. An important point to note here that receiving skill training does not have association with the outcome either. The present skill development training is focused on particular enterprise. We would suggest inclusion of financial literacy as a generic module in the skill development trainings.

Accounting for the selection bias: estimates using propensity score matching

In the section of methodology and limitations, it has been mentioned the existence of few biases and drawbacks which may have contaminated the findings of the study. As discussed earlier, because of self-selection relatively younger cohorts of adolescents with outgoing characteristics and supportive parents have greater probability of participating in the programme. To minimize the influence these above mentioned biases, another popular method called Propensity Score Matching (PSM) has been used, which can reasonably correct the observable biases (Ravallion 2005).

For this PSM exercise (Ichino and Becker 2002), the determinants of programme participation are identified in a logit model (Annex 1). Based on these determinants, probability of participation is predicted for each of the participants and non-participants. The predicted probabilities need to satisfy some basic balancing properties. For estimating programme effect, participants are compared with non-participant with similar probabilities.

Table 6 presents the average treatment effect of treated (ATT) of several variables after the matching exercise. For ease of comparison across variables, four indices (3rd, 10th, 14th and 15th) were rescaled between 0 and 100. Programme participation seems to have significant influence on most of the variables considered. According to the table, ELA Centre participation is likely to increase the chances of engagement in earning by 15.8 percentage points. Similarly, the amount of money earned by the adolescent girls has increased by Tk. 539 because of their programme participation.

Strong influence of ELA Centre participation is observed in borrowing as well as in investing the borrowed money. This suggests that the change observed in earning is mostly happening through self-employment of the girls. One would expect that with this engagement in earning activity at this age would help them to emerge as successful entrepreneurs. Promoting earning is important not only for the sake of increasing household income but also to translate this economic empowerment into broader social empowerment.

Table 6. Average treatment effect of participating in ELA Centre

Indicators	ATT	t-value
Whether earned in the last 6 months (proportion)	0.158	3.395***
Earning in the last 6 month (taka)	539.01	2.177**
Financial literacy (scored in the scale of 0-100)	2.65	1.502
Took loan in last 2 years (proportion)	0.39	8.635***
Amount borrowed (taka)	2473.26	3.914***
Borrowed and invested (proportion)	0.27	7.084***
Whether saved in last two years (proportion)	0.38	8.512***
Amount saved (taka)	168.95	1.272
Current savings amount (taka)	416.93	0.866
Health superstition (scored in the scale of 0-100)	-7.06	-2.199**
Sociability (visiting friend in last month)	4.07	3.908***
Time spent on extra-curricular reading (hour last week)	2.55	3.261***
Aspiration with education (years of schooling expected)	0.35	0.770
Perceived mobility (scored in the scale of 0-100)	2.42	2.648***
Mobility (scored in the scale of 0-100)	4.95	2.455**
Time spent on indoor games (hour last week)	4.09	4.861***
Time spent on outdoor games (hour last week)	0.08	0.164

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%

Average treatment effect on treated (ATT) is based on 322 ELA Centre participants and 237 non-participants

It is important to investigate whether this engagement in earning is happening at the cost of reduced leisure or at the cost of education. According to the variables of time spent on extracurricular reading and playing games, the adolescents are spending quality leisure than their non-participant counterparts. In the previous sections we have seen that ELA Centre girls are more likely to be currently enrolled in schools, partly due to the selection bias. However, from Table 6 we see that there is no significant difference in their educational aspiration, in terms of how far they would like themselves to continue their study. Apparently, programme participation is not improving their educational aspirations. This needs to be focused further to enhance the programme impact.

Programme impact on the sociability and mobility of the adolescents are significant and positive. Similar to the findings in the previous section, the influence of programme participation is stronger in their actual mobility (in terms of how often they have visited specific places in last month) compared to influence on perceived mobility (in terms of can they visit those place alone if required). Finally, it is clear that outdoor games are almost a closed option for the adolescent girls in Bangladesh.

Looking at impact from a qualitative perspective

Apart from the survey, an in-depth exploratory investigation was carried out. This part of study was intended to build a foundation upon which the understanding of ELA Centres impact on the adolescent girls could be comprehended. In line with the survey, the key respondents included the participants of 'ELA Centres' and 'non-participants'. However, unlike the survey, the qualitative part of the study included another group of ELA Centre participants who received APON intervention². APON intervention was piloted in 2006 (in only 25 ELA Centres). Therefore, the baseline survey could not include this particular group in the study. However, as the qualitative part was warped up in 2007, it had the opportunity to include this intervention group. Moreover, we talked with ELA VO members who have not received the additional interventions of a centre. Thus altogether, the adolescent girls interviewed included:

- A. ELA Centre group with APON intervention: who received financial (VO) and non-financial (centre) intervention; and additional APON courses.
- B. ELA Centre group without APON intervention: who received financial and non-financial intervention; but no APON courses.
- C. ELA VO group: who received only the financial interventions but neither non-financial nor APON course.
- D. Comparison group: who have not directly participated in any of the ELA VO, and centre.

Besides, to grasp a better understanding of the centre impact and to comprehend it holistically, the parents of the adolescent girls and members of the community were also incorporated within this in-depth exploration.

To achieve the comparative point of view, three sites were purposively selected—one with the least city influence in a remote rural area in Sylhet district; the second with relative city influence in peri-urban area in Faridpur district; and the third with the most city influence area of Comilla district. This helped in comparing the experiences of adolescent girls as per their proximity to metropolis and facilitated to portray a more pragmatic indication of the nature of intervention impact on the adolescents incorporating both their perspectives and experiences. All the areas were selected from the areas where interventions had been taking place for two years. Thus, 2 ELA Centres with APON intervention, 4 ELA Centres without APON and 3 ELA VOs were selected. The non-participants were identified from the same locality of the ELA Centres without APON. The

² This is a pilot scheme of five months' training course on different social awareness issues.

adolescents were within the age group of 15 to 22, both in schools and dropouts, mostly unmarried, and from low income to moderate-income households. Parents of the adolescents and community members were selected from the same locality of the selected centres. A list of selected areas with APON intervention is presented in Table 7.

Table 7. Field investigation matrix

Type of	Break-down of the	Number of		Sites		Number of
Participants	participants' type	Sessions	Comilla	Faridpur	Sylhet	participants
Adolescent	ELA VO group	FGD-4	1	1	2	28
girls	ELA Centre with APON	FGD-2	1	1	-	17
	ELA Centre	FGD-4	1	1	2	31
	without APON	In-depth	2	2	2	6
		Interview-6				
		Case Study-8	3	3	2	8
	Non-member adolescent girls	FGD-4	1	1	2	29
Parents	Mothers	In-depth	2	2	2	6
1 archis	Woulds	Interview-6	2	2	2	U
	Fathers	In-depth	2	2	2	6
a .		Interview-6				2.4
Community members	Community female members	FGD-3	1	1	1	24
members	Community male members	FGD-3	1	1	1	17
Programme personnel	ELA District Manager (DM)	In-depth Interview-2	1	-	1	2
personner	ELA Project Staff PS (Programme Supervisor)		2	2	2	6

Four participatory qualitative tools, namely, in-depth interviews, case studies, focused group discussions, and observation were used in this part of the study to identify the experiences of adolescent girls and to assess the impact of the ELA intervention. Each group of respondents was investigated under these methods as per convenience. As the approach of individual contact is much time consuming, it was decided to rely on group discussion as the principal data collection method. This method was selected since it allowed each respondent, who possessed experience and knowledge on the subject of discussion, to contribute in group processes. It helped to bring in the collective knowledge and perception of all the individual members representing the studied groups of adolescents. Participation of each and every adolescent was ensured through this method and everyone took part in the process of arriving at a consensus. Table 7 lays out the number of case-studies and group discussions conducted in different sites.

Findings from the in-depth exploration

In the qualitative exploration, effort was put to interview similar type of respondents (in terms of age, education and economic status) in the four groups. The discussions were mostly around the themes of education, income generating activities, borrowing, usage of borrowed money, marriage, quality of leisure time, management skills, socialization, mobility, awareness on health and sanitation, decision-making power, change in intra-household roles, community perception, empowerment and aspirations. Through these discussions it was tried to assess the wider impact of the ELA Centre intervention on adolescents' livelihood from a comparative standpoint. Though there were between group differences, very few regional differences were noted. Educational attainment of the respondents, their socio-economic status and access to media seemed to play crucial roles.

Education

Though it is evident that "Girls in rural Bangladesh usually continue secondary schooling until they marry" (Amin *et al.* 2007), in-depth discussion with the adolescents revealed that irrespective of the group association of the adolescent girls (Centres with/without APON, VO or none), respondents' level of education seemed to have direct implication on their future ambitions around marriage, dowry practices and work opportunities. However, ELA Centre (both with and without APON) participants expressed strong ambition of not marrying before the age of eighteen. These girls expressed an overwhelming desire to continue their education. They even reported having arguments with their parents in order to continue their education. A few of them were exemplified as utilizing their loans in order to pursue higher education.

For example, a Centre member named Shereen in Sylhet claimed,

"I received IGA training and utilized the loan to rear poultry in order to earn money and finance my own education".

To this end, the girls interviewed showed a keen understanding of the importance of education in one's life and its ability to help the girls to realize their potential and ambitions.

"Only with a good education could the girls seek qualified husbands, eradicate dowry practices, and seek job opportunities", said some of the girls participating in the FGD.

It was marked from all the discussions that adolescents with more education were inherently more aware of social issues and played an active role in disseminating

information to their friends. Members of the ELA who received APON training were reported of taking brisk initiatives in circulating information that they had learned there. Many of them were found to act as mentors to weaker and younger students; shared information with girls who had missed class; read to those who were illiterate and help them to understand the issues raised in the books such as early marriage, dowry, motherhood, reproductive rights and social rights; and they read extra-curricular books and magazines regularly in their leisure time.

Despite having the same borrowing opportunity like the centre participants, none of the VO members reported or exemplified in the discussion as taking initiative of funding their education utilizing their loans. Many of them, who are still attending schools, were found intending to stop their education because of parents' inability to provide books and school materials and they did not show any self-esteem of initiating self-initiative.

Involvement in financial affairs

"When credit is successfully utilized girls are able to scale up self-initiated activities, invest in education, expand her area of work and exercise considerable leverage in key decisions in her own life" (Amin *et al.* 2007). It was revealed that the girls of the ELA Centres (both with and without APON) who received specific skill training (such as poultry farming, sewing, or vegetable cultivation), utilized loans in the sector of the specific training they received. It was evident that they did grasp this opportunity into their own lives and most of them got involved in different income generating activities. However, the male member of their family does marketing of their produce. In one unique and innovative case, a girl opened and ran her own cosmetics store with her loan. In another case, a girl purchased a television with her loan and now community members regularly come to her house to watch programmes. She had created networks with community members, which might be useful to her in many ways. Some of them are getting involved in longer-term financial mechanisms. As one girls reported,

"I have opened two DPS (deposit pension scheme) for my future education and marriage."

According to the program personnel, the extent of borrowing increased after providing the adolescents with skill training. There are some failure cases too. For example, one respondent of ELA Centre reported that she purchased a goat using the loan but the goat died after one month. Her mother is taking care of the loan that reflects the need of family support and requirement of provision from programme for enterprise failure.

Most of the centre adolescents, who received skill training as well as loan, presumed to have significant control over the loan they had taken and expressed

their plan of using the loans in the future in order to support their own family after marriage. A few of the centre participants were very ambitious,

"We have plans to invest the surplus money in business and buy land and house. We have one house but want another one. We also want to save up so that we can pay for our own dowry."

However, a negative correlation was found between involvement in school/college and loan intake and getting involved in IGA. The underlying reason behind this relation was found to be the adolescent girls' fear that their involvement in IGA will immensely hamper their study. Furthermore, adolescents from very poor families shared their fear of not being able to repay loan and thus reported of no experience and future plan of taking loan.

In comparison, the girls of the ELA VO group did not receive skill training and showed little initiative for future plans. After taking loans, they gave away their money to their families to support the brother or father's businesses. Thus, the level of control retained by the individual ELA member over the money disbursed by BRAC varied. Very few of the VO members were found with involvement in income earning activities and no case of entirely self-utilization of loan was found in this group. Some were reported of buying cows, goats and poultry using the loan, though they did not claim these livestock as their own assets or actions out of their own plans. Thus, skill training seemed to play crucial roles in creating entrepreneurship among these adolescents.

The girls who were neither part of the ELA VO nor ELA Centre programmes showed very little understanding of loans, reported of receiving no skill training from anywhere, and had no ambition or future plans about loan intake or involvement in IGA before or after marriage. However, those who had support of family to pursue higher education, were found having plans to get involved in formal salaried employment in future.

Marriage

"Nearly two in three Bangladeshi young women are married before the legal age of 18" (UNICEF¹, 2007). To this premise, the ELA program aimed to create a setting in which marriages among adolescent girls would be delayed. It also has an intention of reducing the social vice of dowry among members by raising awareness.

Here again, in-depth exploration revealed a correlation between education and awareness regarding early marriage, dowry and motherhood. Members of the ELA Centre (both with and without APON) admitted that they had gained confidence through the ELA Centre programme and that they are able to stand together and protest actively against early marriage and dowry. Anecdotes were

that they protested against early marriage in the community; and many reported about refusing and turning down proposals until they were at least 18 years of age. In one incident, centre members united to help a girl in their village to prevent her early marriage by seeking help from the Programme personnel, who went and explained the dangers of early marriage to the parents. In another case, the centre members reported the incident of a woman getting abused by her husband to the Chairman.

They reported of escalating confidence to express to their guardians about their decision not to commit early marriage. But not all were confident in avoiding dowry in their own marriage. One of the participants commented on the prevalence of such practice and said,

"It's not possible to get married without it. Although we are being taught that it's illegal to take dowry but it is still being practiced. There is nothing we can do about this. We are compelled to give dowry. The government law is ineffective. The parents are not just going to sit with their daughter having them unmarried. So they have to pay the dowry. Even the rich people give furniture, TV and car during their weddings, which is equivalent to dowry".

The girls of the ELA VO and non-member groups, on the other hand, reported about the dependency entirely on the decisions of their parents regarding marriage, bridegroom selection, age of marriage and dowry.

Increased options and opportunities for girls

The programme intended to create options for the disadvantaged girls in rural setting to participate more fully in life. Towards this end, it arranged recreational facilities for adolescent girls in the form of indoor or outdoor play, extracurricular reading and group engagement; and strived to create a social space for them.

The centre members and members who received APON training reported that they enjoyed extra-curricular reading not only at the centre but also borrowed books to home and shared with family members and siblings in particular. At the centre, they chatted and shared their problems with other members, building a sense of solidarity and a circle of trust that allowed them to relieve stress and become empowered. All the respondents reported of having an increased number of friends, in fact many claimed to have as many as fifteen or twenty new friends, and reported an increased access to socialization with peers. The FGD participants said,

"Earlier we could not meet up that often with friends but now due to centres we can meet regularly."

They also reported of spontaneous singing and dancing at the centre (though programme did not take any initiative on this account) and had started demanding facilities from the centre (programme) that would allow them to take formal lessons, such as a harmonium and a harmonium teacher. The girls informed that they enjoyed indoor games at the centre such as carom board, ludo, bisshow-bhromon, and chess, and now had gained confidence for playing games outdoor, such as volleyball and badminton. Some of the participants said,

"Girls cannot go outside their houses that much and people do not mind if we play indoor games but it is not always possible to play outdoor games that much."

They also said,

"Girls in the cities can play volleyball and badminton and we want to do the same."

It should be noted that the programme could not take any step to start off outdoor games in any intervention area due to unfriendly environment of the rural setting.

Mobility

"In Bangladesh, girls typically are not allowed to leave their homes, go to the marketplace alone, especially in rural areas, after puberty begins" (Keller 1997). However, ELA Centre member and members who had received APON training reported about thinking differently on mobility, being able to go to specific places within their communities without accompanies, and about considerable improvements in their mobility. Because the centre had accomplished a solid and positive reputation among parents and the community, the girls could now go to the centre unaccompanied and without permission. Some of them also reported of their occasional visits to the village playground to watch different types of games and competitions, a leisure activity formerly reserved for boys only. The girls informed that they became much more confident of themselves, traveled in groups to go out of the village and enjoyed trips to the city-market, cinema, fair, concert and circus. This was a tremendous feat for the girls, who used be restricted to household chores and indoor activities when they were not at school. These excursions greatly improved the lives of these girls, helping them to improve their communication skills, grow confidence, experience and enjoy the small pleasures of the world, and release the stresses of everyday life.

In stark contrast stand the girls of the organization and non-participant groups, who had almost no scope for these types of excursions. They did not report of developing confidence, of their abilities within themselves or with their parents regarding their outside mobility; they were restricted to outings with only family and relatives. None of them did report of traveling alone with other adolescent girls outside village.

Leadership and management skills

One of the many acquired skills demonstrated by the girls of the ELA Centres (both with and without APON) was that of management. These girls informed that they formed their own groups and played in-door games in rotations provided in the centre. They showed that they could take care of books and game equipment, keeping the centre neat and clean. On a long-term basis, the girls showed that they now had more control over their lives and life decisions. For instance, they were able to better manage their loans and repay on time and they could manage household work better on the days they went to the centre. They were also able to better implement skills they had learned in IGA training. Some girls even demonstrated confidence in dealing with issues in formal settings, such as the ability to leave the village in order to pay electricity bills.

Awareness on health issues

Bangladesh has one of the world's highest rates of adolescent motherhood. (UNICEF¹ 2007). Findings show that 60% of adolescent girls become mothers before reaching the age of 19. Forty-eight percent girls, aged between 15 and 19, get married which causes death risk during delivery to 67% while health hazards to 60% (UNFPA 2005). Thus, maternal mortality for adolescents is double the national figure. Furthermore, given the socio-cultural environment of pervasive gender discrimination, girls are treated differently from birth, resulting in inequalities of nutrition, health, and education (UNICEF² 2007) Discussing about reproductive health related issues is still a taboo in Bangladesh, particularly with adolescent girls. With very limited access to healthcare facilities, knowledge and education, they have no understanding about the ways of protecting themselves (Alam 2007).

Direct correlations between education and awareness of HIV/AIDS and between a family's socio-economic status and the use of sanitary latrine and hygienic practice e.g. using sanitary napkins during menstruation were revealed from the in-depth discussion with the adolescents. However, ELA Centre members and members who had received APON training had gained more thorough knowledge on health and sanitation issues and applied this new knowledge to improve and adjust lifestyle practices. They reported of becoming more aware of hygienic menstruation practices: they cleaned cloths with hot water and soap and hanged

them to dry outside, whereas earlier they used to wash cloths during menstruation with cold water and hanged them to dry inside out of shame. Some girls, depending on socioeconomic status, currently initiated using sanitary napkins. They also informed that they now ate more nutritious foods and freely went out during menstruation instead of staying indoors as they were formerly told to do so. It was evident that ELA Centre members took initiative to purify their drinking water, build sanitary latrines, and aware other community members including their friends and family regarding different health issues. Finally, the girls of who had received APON training in particular, were much more aware of HIV/AIDS and STDs and how to prevent such diseases. This is mostly because the APON course includes specific module on HIV/AIDS.

For the VO and non-member groups, the sources of knowledge on health and sanitation issues were predominantly media and school education, thus their knowledge was less thorough. This was apparent in their daily hygienic practices, as most of the girls washed their cloths used during menstruation in cold river water and dried them inside the house out of shame. Moreover, many were still unclear about HIV/AIDS and the majority had no idea about STDs.

Role change in the family and community

ELA Centre members (both with and without APON) reported of becoming the agents of economic change for their families, through borrowing and their involvements in income generating activities. They also reported of becoming confident to advocate for their rights and empowered to have their voice heard in issues regarding early marriage, abuse and dowry. Their self-involvement in such issues gave evidence to these claims; they became able to protest and report incidences of abuse and early marriage to the chairperson. Moreover, their decision making power in the family had definitely increased as of the report that they initiated purchasing their own clothes during Eid, and also they were asked to buy clothes for their family members. One of the FGD participants in Faridpur said,

"I want to use the money for family use. I have to save as much as I can because I want to make new dresses and buy ornaments for myself." She further added by saying that another reason why she needs to save up is because she wants to help out her parents with the cost and expenditure of her wedding.

The VO participants had also demonstrated an increase in confidence within the family; they reported of being able to speak their mind on certain issues in front of parents and elderly relatives. They also informed about their ability to express themselves, share their opinions, and offer recommendations on family issues.

However, they were not yet adamant about issues regarding education, early marriage, dowry, loan intake and work. It was evident, with a few exceptional cases that if they were not encouraged by family members to pursue education, then would not continue education. Although some of the case studies are very inspiring but most of the adolescents were still unable to protest for their rights. The non-participant group, on the other hand, had almost no say in family matters, as parents for them made all decisions.

Empowerment and aspirations

At the outset of the project, it was anticipated that the activities undertaken over the course of two years would have an impact on girls' sense of well-being, life choices, self-esteem and assertiveness. The adolescents' insights of their place within the family were discussed. They also talked about whether their participation in the programme contributed towards their desire for, or achievement of, increased self-reliance.

The adolescents discussed their position and influence over the family prior to membership and the perceived effects of membership. Responses varied from minor change to a significant level of change. However, it was evident that these adolescents became empowered within their household arena when they were valued by other family members as being an intermediary to access credit and agents of economic change through their involvement in IGA. They also became empowered in the outer world through their increased socialization and regular interaction with BRAC staff and peers, and expanded mobility from centre to outside the village.

ELA girls were found ambitious and eager to participate fully in the public realm. During discussions of the future, the adolescents' ambitions ranged from professions such as doctor, lawyer, BRAC staff, to other NGO staff members, and the desire become a "good official". Most of the adolescents wished to move outside of the traditional female role and have aspirations to become engaged in a job or career. Girls who had taken part in the APON programme, in particular, had voiced their interests in continuing on to higher education, getting good jobs, marrying later and financially supporting their families.

Overall change in perception

One of the foremost objectives of the centre intervention had been to create and expand a sustainable social networking atmosphere for ELA adolescent girls. To this end it intended to create an enabling environment and increase the proportion of community members supportive of girls' active participation in the society.

Adolescent girls

When adolescent girls of the ELA Centre first began their involvement at the centre, it reported that they attended mainly in order to receive training for income generating activities and tailoring in particular. Now, they had also started appreciating the opportunity to acquire knowledge about various social issues that were available in the books at the centre. The girls also found the centres as a place in which their interaction with other girls could release stress of everyday life and bring knowledge and understanding, creating both leisure time and a circle of trust amongst the adolescent girls. The FGD participants have reported to say,

"Earlier our knowledge about centres was vague and unclear but now it is not so. We knew about some of the other members before going to the centres but due to the regular interaction in the centres our friendship has deepened. We now try to help each other in every possible way."

The VO members and non-participant adolescent girls from nearby households of the centre were also found well informed about the centre participants and they very much appreciated their engagement. When asked whether they wanted to get involved with the centre, the non-members answered very positively. However, few of them could avail the centre facilities (playing and reading books) without being a member.

Adolescent boys

The males interviewed were contemporaries of the ELA members, often their brothers, relatives or neighbors. Their responses to ELA were continuously positive, and they clearly displayed approval for the activities carried out by ELA members. The centre participants also reported that the adolescent boys started appreciating their activities (adolescent girls' issues, their incidents of get together etc). They claimed this to be a by-product of their enhanced voice. Some of the centre participants' brothers initially objected to their participation, insisting that their sisters should remain home in order to assist their mothers.

One of the FGD participants cited few cases, she said,

"The attitude of the boys has changed. My brother used to think that girls should remain home and not goes outside. Initially he disagreed to the idea of the girls' going to centres." She further added that her brother said to her, "Why mother should work home while you go outside", but now his behavior has changed. Other participants said, "Now they also play with us and think that we are good girls."

Parents

Discussion with adolescent girls as well as parents and community members revealed that since the beginning of the ELA Centre intervention, parents had become more aware and more accepting toward issues regarding adolescent girls. They now started realizing that, like their sons, their daughters also needed recreation and leisure. Mothers of the centre members became aware about the issues that their daughters discussed and learnt at the centre, which included household work, healthcare and hygiene, and childcare. Parents were now generally much more accepting of mobility, allowing their daughters to venture out of the village because of a growing confidence in their daughters' abilities. Daughters were now asked for their opinions on family matters, as parents wanted to see what daughters had learned and understood at the centre. Perhaps the most salient change of perception was the growing dependency that parents now had on their daughters due to IGA training and loan intakes. Steadily, the daughters were being given more responsibility in the family; their potential for economic productivity was now being given some worth. It should be noted here that the training for income generating activities provided by the ELA Centres gave initially reluctant parents assurance and faith toward the pertinence of the centres intentions. After the programme staff members told parents that their daughters would be provided with training for income generating activities in addition to social awareness training and social space, the parents were less hesitant and allowed their daughters to spend afternoons after school at the centre.

Community members

When the ELA Centres were first opened, community members generally opposed the idea of allowing adolescent girls to waste their time with recreation while they should be concentrating on their studies or household chores. They were also afraid that the girls would learn inappropriate things and become too mature for their age. Now, community members became more accepting of the centre and APON programmes, engendering positive attitudes due to successful outcomes of the adolescent girls. In particular, they appreciated the fact that the centre members had become well mannered, neater, and cleanlier. Some of the FGD participants said,

"Initially people used to think that we go to the centres only to gossip but now they remind us to go there when its time."

Female community members revealed in the focused group discussions that initially, they did not know what to think of the programme and believed that it would intervene in the schoolwork and housework of adolescent girls in the community. Moreover, before the programme began the adolescent girls were not

allowed to leave the house and go out on their own. Over time, the women in the community had become more aware of the centre and realize that through the programme, the adolescent girls could learn to stand up for their rights and had their own voice.

Male community members, however, were mostly unaware of the centre and of the issues regarding adolescent girls. On the other hand, some fathers were now able to appreciate the fact that their daughters could now teach the rest of the family members and make them aware of the issues that she had learned; she could give them the knowledge that the father was unable to provide because he was at work. Additionally, some fathers were able to recognize that recreation and outdoor and indoor games allowed their daughters to appreciate life; furthermore, interaction with other girls helped to disseminate information.

Suggestions from the participants

From the FGDs, different types of suggestions for the betterment of the centre have also come up. The adolescents think that the centre needs to be kept under proper lock and key. They complained that many a times the books have been stolen due to insufficient security system. They also expressed the desire to have more indoor games in the centres as playing outdoor games is difficult for them due to rural setting. They also wanted to have TV and computer there. They also feel that the centres need to have a latrine and a tube well for drinking water. The number of centres should be increased to strengthen the network and enhance the knowledge of girls. It would be most beneficial if the girls are provided tailoring training. All the girls said that they want to come till they get married and want their younger siblings to get the same opportunity. They believe if it shuts down or are closed then it will be a great loss for them.

Conclusion

Any programme for adolescent girls is intended to empower them so that they can have a better life. Providing trainings of different sorts (i.e. life-skill, social awareness and income earning activities) and social space along with financial services are all meant for the same goal (McIvor 2007). While participation in these processes is associated with positive changes in several dimensions, some facets appear to be hard to alter.

Participation in ELA Centres is strongly associated with participants' sociability and mobility. Moreover, additional inputs through ELA Centre activities strengthen their microfinance engagement. The IGA trainings seem crucial in enhancing entrepreneurship among the girls, as they are more likely to take loans as well as earn substantially higher amount.

A general improvement is observed in mobility and perceived mobility during the survey waves. Similar change is observed in borrowing and income earning as well. However, there has been a decline in sociability with friends between 2005 and 2007. While ELA Centre participation is strongly associated with each of these outcomes, there could be spillover effects of each of these variables.

There is a fear that financial engagement during adolescence may harm their studies. However, no association is observed between programme participation and enrolment rates. The fear may come true if their engagement in economic activities extend far enough. The roles of remaining enrolled in schools or educational attainments in determining of their mobility and ability to critically think about prevalent superstitions cannot be overemphasized. Therefore, regular scrutiny is necessary to ensure that economic engagement does not jeopardize their education.

How to delay marriage of the adolescent girls remains a critical question for any programme for this group of population. Participation in ELA Centres shows significant influence on their probabilities of getting married. Nonetheless, it should be reiterated here that there are several flaws in the design, especially the one of self-selection, and the results should be interpreted with cautions.

References

Alam A (2007). Women empowerment, cornerstone of HIV prevention. Ezine Articles. http://ezinearticles.com/?Women-Empowerment,-Cornerstone--of-HIV-Prevention&id=669415 (accessed on 09 August, 2007)

Amin S, Mahmud S, Huq L (2002). Rural adolescents in Bangladesh, 2001: a report drawn from the baseline survey for the Bangladesh adolescent girls' livelihood Kishori Abhijan project. Dhaka, Bangladesh: UNICEF. http://www.popcouncil.org/pdfs/TABriefs/PGY_Brief17_Livelihoods.pdf (accessed on 24 July, 2007)

Amin S, *et al.* (2007). Endline report on Kishori Abhijan: an intervention research study on adolesent girls' livelihood. Brief no. 13, Population Council, New York and the Bangladesh Institute of Development Studies. www.popcouncil.org (accessed on 25 July, 2007)

BRAC (2006). Adolescent and youths in Bangladesh: some selected issues. Dhaka: BRAC, 162p. (Research monograph series no. 31)

Erulkar AS and Chong E (2005). Evaluation of a savings & micro-credit program for vulnerable young women in Nairobi. Population Council. www.popcouncil.org/pdfs/TRY_Evaluation.pdf (accessed on 12 July, 2007)

Field E and Ambrus A (2007). Early marriage and female schooling in Bangladesh. http://www.economics.harvard.edu/faculty/ambrus/files/Earlymar Education-j.pdf (accessed on 03 March, 2007)

Hartup W and Stevens N (1997). Friendship and adaptation in the life course. Psychological Bulletin. Vol 121(3): 355-370. http://psycnet.apa.org/index.cfm?fa=main.doiLanding&uid=1997-03609-002(accessed on 10 July, 2007)

Ichino A and Becker S (2002). Estimation of average treatment effects based on propensity scores. The Stata Journal 2002, 2(4): 358-77. http://www.dse. unibo.it/ichino/psj7.pdf (accessed on 20 August, 2007)

Keller S (1997). Pressures influence contraceptive use: understanding the psychological and social pressures young adults face helps reproductive health programs to be more effective. Vol. 17 (3). www.fhi.org/en/rh/pubs/network/ v17_3/nt1737.html (accessed on 30 July, 2007)

McIvor K (2007). The European Commission supports UNICEF in the empowerment of adolescent girls in Bangladesh. UNICEF. eprints.utas.edu.au/ view/year/NULL.html (accessed on 5 July 2007)

Ravallion M (2005). Evaluating anti-poverty programs. siteresources.worldbank.org/ INTISPMA/Resources/383704-1130267506458/ Evaluating_Antipoverty_Programs.pdf (accessed on 7 July, 2007)

UNICEF¹ (2007).Despite progress, girls subjected to violence and discrimination. http://www.unicef.org/bangladesh/media_2802.htm(accessed on 2 July, 2007)

UNICEF² (2007). Adolescent empowerment project changes lives of thousands. http://www.unicef.org/bangladesh/media_2918.htm(accessed on 16 June, 2007)

UNDP (2006). Human development report. hdr.undp.org/hdr2006/ (accessed on 20 June, 2007)

UNFPA (2005). Article no17. www.newsfrombangladesh.net (accessed on 10 June, 2007

Annex

PSM: Probability of programme participation in logit regression

	ELA Centre
	participant
Mother had ever been a BRAC member	0.843 (4.10)***
Father's education	-0.050 (1.90)*
Whether enrolled in schools	0.548 (2.05)**
Years of education completed by the adolescent	0.091 (2.18)**
Age of adolescent	-0.478 (2.55)**
Age ² of adolescent	0.012 (2.48)**
Marital status of the adolescent	-0.852 (3.31)***
Religion (1=Islam, 0=Otherwise)	-0.441 (1.56)
Self perceived food status (1= Food deficit, 0=Other)	-0.083 (0.69)
Whether involved in income earning activities in last 6 months	0.248 (0.66)
Constant	4.771 (2.50)**
Observations	559

Absolute value of z statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%