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Integrating adolescent livelihood activities within a reproductive health programme for urban slum dwellers in India

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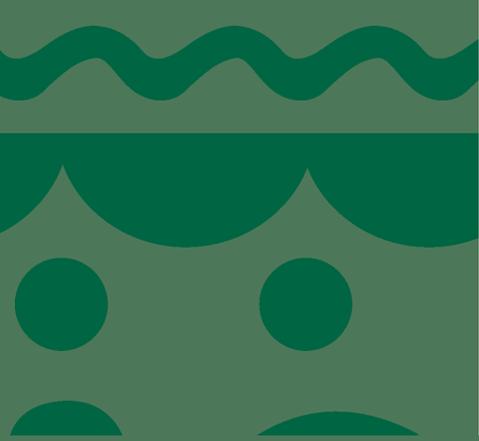
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Integrating Adolescent Livelihood Activities Within A Reproductive Health Programme For Urban Slum Dwellers In India



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Executive Summary

The need for livelihoods programmes

While adolescents in India are facing a rapidly changing economic environment, the life choices of adolescent girls are different from those of adolescent boys. Nearly half of 20-24-year-old women in India are married by age 18.¹ Moreover, most young women have little say in the timing of their marriage or the choice of spouse, and after marriage most have limited power within their marital household.² Adolescent girls are much less likely to be engaged in economic activities than adolescent boys; by ages 15-19 over 40 per cent of boys are economically active compared to about one-quarter of girls.³ When adolescent girls do participate in income-generating activities, it is often in home-based work for which they may or may not be remunerated. Even in instances when girls are paid for their labour, they may not retain control over their income. Adolescent girl's lack of opportunities for generating income is coupled with restricted physical mobility within the community and limited decision-making power within the household.⁴

Given this situation, programmes are needed that increase the ability of unmarried girls to have a say in their own lives and enhance the skills that expand life choices. By building social networks and developing critical financial and income generating capacities, *livelihoods programmes* have the potential to increase the agency and decision-making power of adolescent girls. As broadly conceived, the “livelihoods approach” to adolescent programming not only attempts to deliver technical and life skills but also seeks to transform the ways in which girls view themselves and the ways in which they are perceived by the community.⁵ However, although a wide variety of livelihood programmes for adult women exist in India, few focus on adolescent girls. Of those that do, few employ rigorous scientific methods to evaluate the impact of the intervention.

Testing the feasibility and acceptability of a pilot livelihoods project

Recognising the relative disadvantage of adolescent girls and in an effort to build the evidence base for adolescent livelihoods programmes, the Population Council teamed with CARE-India to develop a pilot project for adolescent girls in the urban slums of Allahabad, Uttar Pradesh. CARE-India has been providing reproductive health services for adult women (aged 20-49) since 1995; in 1999 reproductive health education for adolescent boys and girls (aged 10-19) also became part of its activities.

¹ International Institute for Population Sciences (IIPS) and ORC Macro. 2000. National Family Health Survey (NFHS-2), 1998-99: India, Mumbai: IIPS.

² S. Jejeebhoy. 1998. “Adolescent sexual and reproductive health: A review of the evidence from India,” *Social Science and Medicine*, 46(10): 1275-1290.

³ International Labor Organization (ILO). 1998. Yearbook of Labor Statistics 1998. Geneva: ILO.

⁴ J. Sebsted and S. Singh. 1998. Adolescent livelihoods programmes: A preliminary review. *New Delhi: Population Council*; B. S. Mensch, J. Bruce and M. E. Greene. 1998. *The Uncharted Passage: Girls' Adolescence in the Developing World*. New York: Population Council.

⁵ Population Council and International Center for Research on Women (ICRW). 2000. Adolescent girls' livelihoods: Essential questions, essential tools: A report on a workshop. New York: Population Council and ICRW.

The pilot intervention was launched in 2001 and integrated livelihood activities for adolescent girls aged 14-19 into CARE-India's existing reproductive health programme for slum dwellers. Using a quasi-experimental design, the study area was divided into an experimental and a control area. Although adolescent girls in both the experimental and control areas received reproductive health education from peer educators, only participants in the experimental area were provided with counselling on livelihoods, training in a range of vocational skills, assistance with savings formation, and supportive follow-up counselling and assistance.

Group sessions on reproductive health were held weekly for 7-10 weeks for both groups. Following the completion of the reproductive health component, participants in the experimental area attended vocational training classes. Over the course of 10 months, 19 different vocational courses were offered, each typically lasting 1-2 weeks, although some courses continued for several months. Nearly 80 per cent of the participants completed two or more courses. The entire intervention lasted 19 months.

Baseline and endline surveys measured the impact of the project by comparing changes in a set of behavioural and attitudinal outcomes for adolescent girls in the control and experimental areas before and after the intervention.

Findings from the Baseline Survey

The baseline survey clearly indicated the appropriateness of an intervention that addresses the capabilities and opportunities available to adolescent girls. In Allahabad there are substantial gender differences among adolescents in their mobility, time use patterns, and savings and work experience. Several noteworthy findings were revealed by the data:

- Approximately half of girls indicated that they had not travelled outside Allahabad during the past six months, compared to only about one-quarter of boys.
- Girls were much more likely to report that they needed to seek permission to make visits outside of their homes than boys, and both boys and girls report that there are no places in the community where unmarried girls can safely congregate for any purpose, a finding that reflects local norms governing the limited use of public space by unmarried girls.
- Dramatic differences between boys and girls were seen in the amount of time spent on household chores: girls reported spending almost four times as many hours as boys on chores.
- The proportion of boys who reported that they have ever worked for pay is five times greater than the proportion of girls.

- Despite the fact that girls were much less likely to work for pay, they were more inclined to save; 54 per cent of girls and 26 per cent of boys reported some money saved and of those who saved, 7 per cent of girls and 28 per cent of boys indicated they had money in a savings account.
- Knowledge of reproductive health was poor in certain critical areas. For example, few adolescents in the survey knew about the fertile period of a woman’s menstrual cycle (6 per cent of boys and 2 per cent of girls), even though the large majority of girls (97 per cent) and about one-third of boys (39 per cent) reported that they know about menstrual cycles in general. Although the large majority of respondents reported knowing at least one contraceptive method (94 per cent of boys and 91 per cent of girls), only about one-third (32 per cent) of girls spontaneously reported knowing about condoms as compared with 82 per cent of boys.

Table ES.1:

Effectiveness of the intervention

Project Outcomes	Significance*
Social skills index	S
Self-esteem index	NS
Group membership	S
Knowledge of safe spaces	S
Can go alone to visit relatives (yes/no)	NS
Gender role index	NS
Reproductive health knowledge index	S
Expectation to be working in 10 years (yes/no)	NS
Hours spent visiting with friends (inside and outside household)	NS
Hours spent on domestic chores	NS
Hours spent on labour market work (paid/unpaid/vocational training)	NS
Hours spent in leisure time	S

*S = significant effect; NS = insignificant effect

Note: Indices were constructed to measure social skills, self-esteem, gender role attitudes and reproductive health knowledge; characteristics of these indices are described in Appendix 1, and a list of the questions used to create these indices is included in Appendix 4.

Evaluation of the Intervention

Despite the brevity of the intervention, some significant effects were observed on adolescent girls in the project area. Girls in the experimental areas were significantly more likely to know about safe locations for unmarried girls to congregate, be a member of a group, score higher on the social skills index, be informed about reproductive health, and spend time on leisure activities than the matched control respondents.

The greatest changes were found in those measures that most closely reflected the content of the intervention. Participation in the intervention provided a context where adolescent girls could build friendships, develop critical thinking, and gain self-confidence while working with their peer group. The vocational training classes and savings formation also required participants to interact with elders and others from outside the community. Consequently, girls in the experimental areas had a greater increase in their social skills than did girls from the control area.

Likewise, girls in the experimental area were more likely to indicate knowledge of safe places for unmarried women to gather and to identify themselves as group members than did girls from the control area. Although all girls met in groups at the home of the peer educator, those in the experimental area spent more time together and participated in a wider variety of group activities.

It is encouraging that intervention participants showed a significant increase in reproductive health knowledge relative to control respondents. Although some of this change may be related to better attendance in the experimental areas—as the vocational training classes were conditional on good attendance during the reproductive health component—there may also be some unmeasured aspect of the livelihoods component that encouraged the retention of information on reproductive health.

Finally, more than 80 per cent of participants in the experimental area continued to use their vocational skills after the programme ended, and more than half were able to open savings accounts in their name at the local post office. However, only 10 per cent managed to earn any income from their newly acquired skills.

Several lessons emerged from this pilot project. It is important to emphasise that a livelihoods programme for adolescent girls was not only acceptable to parents in this very traditional slum community but also feasible to implement. While a short-term intervention cannot alter the structure of opportunities available to adolescent girls, it can raise awareness, social skills, knowledge of safe spaces and group identification. However, in order to reduce deeply entrenched gender disparities that exist and enhance girls' ability to have a greater voice in influencing their lives, it would be desirable if future programmes had considerably more contact hours than the experimental intervention described here. Moreover, increased efforts are required to develop group cohesion, and improve the communication, negotiation and decision-making skills of adolescent girls.

Introduction

Adolescence is a time for acquiring the capabilities and resources necessary for a successful transition to adulthood. Adolescents who are unable to develop sufficient assets and skills enter adulthood with a distinct disadvantage, particularly in this time of increasing global change. As the Indian economy expands and becomes more market-based, it is likely that unskilled workers will lag behind in productivity and wages, and may face greater insecurity and decreased bargaining power relative to their more educated peers.⁶

While adolescents in India are facing a rapidly changing economic environment, the life choices of girls are very different from those of boys. Nearly half of 20-24-year-old women in India are married by age 18.⁷ Moreover, most adolescent girls have little say over the timing of their marriage or the choice of spouse, and after marriage have limited power within their marital homes.⁸ Approximately 43 per cent of girls aged 15-19 complete middle school, compared with 56 per cent of boys, with twice as many girls as boys illiterate (32 and 15 per cent, respectively).⁹ Girls are much less likely to be engaged in economic activities than boys; by ages 15-19 over 40 per cent of boys are active economically compared to about one-quarter of girls.¹⁰

When adolescent girls do participate in income-generating activities, it is often in home-based work for which they may or may not be remunerated. Even in instances when girls are paid for their labour, they may not retain control over their income. The lack of opportunities for generating income is coupled with restricted physical mobility within the community and limited decision-making power within the household.¹¹

Given this situation, programmes are needed that increase the ability of unmarried girls to have a say in their own lives and enhance the skills that expand life choices. By building social networks and developing critical financial and income generating capacities, livelihood programmes have the potential to increase the agency and decision-making power of adolescent girls. However, although a wide variety of livelihood programmes and projects for adult women exist in India, few focus on adolescents.¹²

Recognising the relative disadvantage of adolescent girls living in the slums of Allahabad, in 2001 the Population Council and CARE-India developed a pilot intervention that integrated livelihood activities for adolescent girls aged 14-19 into CARE-India's existing reproductive health programme for slum dwellers. Although reproductive and sexual

⁶ R. Jhabvala and R. Kanbur. 2002. *Globalization and economic reform as seen from the ground: SEWA's experience in India*. Paper presented to the Indian Economy Conference, Cornell University, 19-20 April 2002. Accessed 6 August 2004 at www.sewa.org/globalisation/index.htm.

⁷ IIPS and ORC Macro, 2000.

⁸ Jejeebhoy, 1998.

⁹ IIPS and ORC Macro, 2000.

¹⁰ ILO, 1998.

¹¹ Sebsted, and Singh, 1998; Mensch, Bruce and Greene, 1998.

¹² Sebsted and Singh, 1998.

health education was provided in both the control and experimental slum areas, participants in the experimental areas were also provided with counselling on livelihoods, training in a range of vocational skills, assistance with savings formation and supportive follow-up counselling and assistance.

This report examines whether this intervention:

- increased knowledge of reproductive health;
- increased physical mobility and contact with individuals outside the family as well as awareness of safe places for girls to congregate;
- increased self-esteem and social skills;
- altered work aspirations and encouraged more progressive gender role norms;
- reduced time spent on domestic tasks and increased time spent on income-generating tasks.

The report is divided into five chapters. First the rationale for the intervention is discussed and existing livelihoods programmes and policies for adolescents in India reviewed. The report then describes the setting, study design and the response rate for the baseline and endline surveys. Chapter 2 presents the situation of adolescent boys and girls living in slums. Information is provided on the respondents' household environment, including living arrangements, caste, and parents' educational attainment, and the respondents' characteristics, experiences and attitudes, including educational attainment, work, marriage, migration, time use, self-efficacy, mobility, gender role attitudes, reproductive

health knowledge, and savings habits. In Chapter 3 the different components of the intervention for adolescent girls, including reproductive health education, vocational training and assistance with opening savings accounts are described. Using data from the surveys and in-depth interviews, Chapter 4 examines the impact of the intervention on self-efficacy, mobility, gender role attitudes, knowledge of reproductive health, work, time use, friendships, knowledge of safe spaces, use of vocational skills and savings formation for girls. The survey results are compared across three groups- girls from the control area, girls from the experimental area who participated in the intervention, and girls from the experimental area who did not participate in the intervention. The last chapter of the report provides a summary and conclusions.

Background

Livelihoods are widely understood to comprise “the capabilities, assets (human, financial, natural, physical and social) and activities required for a means of living.”¹³ Broadly conceived, the “livelihoods approach” to formulating programmes for adolescents not only attempts to develop technical and life skills but also seeks to affect social networks and improve access to savings, loans, and markets. Although most livelihoods programmes are designed with the social context of the youth they serve in mind, they share an emphasis on building skills (e.g., through vocational training, financial literacy, and self-efficacy), improving access to and control over resources (e.g., by introducing micro-finance and

¹³ J. Grierson, and J. Schnurr (eds.). 2003. Pathways to Livelihoods and Decent Work, p. 11. Canada: The Canadian Youth Foundation.

micro-credit programmes), and structuring economic opportunities (e.g., developing cooperative enterprises, promoting access to markets or infrastructure, and developing institutions that advocate for workers' rights or provide networks and social support to workers). Livelihood programmes that target adolescent girls often use peer group activities and skills instruction to transform the ways in which girls view themselves and the ways in which they are perceived by the community.¹⁴ Most importantly, the livelihoods approach acknowledges the interrelationship between health, education and productive activities, leading to programmes that holistically address the needs of youth.¹⁵

Opportunities for formal remunerated work for adolescent girls in developing countries are sparse in comparison to boys. While some livelihoods programmes focus on teaching girls technical skills that can be used in emerging employment sectors that are as yet “ungendered” and not traditionally associated with male or female labour,¹⁶ other programmes address the dearth of job opportunities by teaching girls vocational skills that can lead to self-employment.¹⁷ In India, for instance, many organisations working on issues of sustainable development have taken advantage of the recent growth in the export of handicrafts¹⁸ and assist women and adolescent girls in developing skills that cater to the increased demand for handicrafts in the international market.

As noted earlier, although there are many initiatives that promote livelihoods, micro-finance and entrepreneurship in India, most of these are directed at married adult women. Unmarried girls are often viewed as a ‘high-risk’ lending group, largely because they leave their parental home when they marry, and because they generally lack control over decision-making in their lives.¹⁹ However, the few experiments directed at young girls suggest that appropriately designed programmes can be effective. For example, one of the earliest livelihoods programmes for adolescent girls in India, the Adithi programme, provided goats to girls aged 8-14. By raising, breeding and selling the goats, these girls were able to engage in a profitable economic activity and participate in a savings programme.²⁰

Existing literature on the effect of work and livelihoods on the lives of young women is highly speculative.²¹ Work is believed to transform the lives of girls by providing them with the freedom and space to gain knowledge and capabilities, to develop autonomy, and to foster progressive gender role norms and skills required for a productive adulthood. These were among the goals of the Better Life Options Programme (BLP) conducted by the Centre for Development and Population Activities (CEDPA). Since 1989, CEDPA has provided vocational skills training, literacy classes, family life education and reproductive health services to more than 10,000 adolescent girls in India through the BLP programme.

¹⁴ Population Council and ICRW, 2000.

¹⁵ Y. Kobayashi. 2004. Economic livelihoods for street children: A review. Bethesda, MD: Development Alternatives, Inc.

¹⁶ Population Council and ICRW, 2000.

¹⁷ J. Grierson. 1997. Where there is no job: Vocational training for self-employment in developing countries. Bern: University of Edinburgh Centre of African Studies.

¹⁸ M. Liebl and T. Roy. 2003. “Handmade in India: Preliminary analysis of crafts producers and crafts production,” Economic and Political Weekly, 38(51-52): 5366-5376.

¹⁹ Sebsted and Singh, 1998.

²⁰ Population Council and ICRW, 2000.

²¹ *ibid*

An evaluation indicated that programme participants were significantly more likely to be employed and to have learned a vocational skill than a control group of women who had not participated. In addition, BLP participants were more likely to be involved in decisions related to their income and when to marry, to be literate, and to have completed secondary education than the control group.²² However, because of the limitations of the study design, it is not possible to determine whether these findings represent actual outcomes of the programme or whether literate and educated girls were more likely to participate in the programme in the first place. The evaluation consisted of a “post-test only control group design” that cannot detect changes in behaviour and did not control for the self-selection of girls into the programme.

More recent pilot studies of adolescent livelihoods interventions have been designed with quasi-experimental pre- and post-test designs. The UCSF-Women’s Global Health Imperative is currently working with Samuha to develop an intervention for adolescent girls in Bangalore and urban Karnataka. This project focuses on building the economic resources and reproductive health knowledge of adolescents in order to increase their current and future negotiating skills in sexual relationships and reduce their vulnerability to HIV. Although research in the pilot phase has focused on participant observation, intensive qualitative interviews with participants and members of the

community, and process documentation of the pilot, the next phase of the project will involve a pre- and post-intervention cohort study of participants and a control group.²³

A number of government programmes and policies in India have components for young people, although, for the most part, a thorough evaluation of their reach and impact is lacking. In 2000, the National Population Policy recognised adolescents as an underserved group with special needs.²⁴ The National Youth Policy 2003 is directed at those aged 13-35, using a multi-sectoral approach that focuses on education, nutrition, skills building, and leadership development. Government programmes addressing adolescent reproductive health include the Reproductive and Child Health (RCH) programme, the Integrated Child Development Services (ICDS) scheme, and the State Plans of Action for the Girl Child Scheme. The Adolescent Girls Scheme (renamed Kishori Shakti Yojana) provides unmarried girls aged 11-18 from poor households with nutrition and health care, non-formal education, training in home-based skills, health awareness, and social awareness, using the ICDS infrastructure.²⁵ Skill development is included to encourage adolescent girls’ participation in economic activities. An evaluation of the programme by the National Institute of Public Cooperation and Child Development (NIPCCD) has shown that the main limitations of the programme are the lack of monitoring and uniformity in implementation of the scheme in different states.²⁶ The Ministry for Youth

²² M. Levitt-Dayal, R. Motihar, S. Kanani and A. Mishra. 2003. “Adolescent girls in India choose a better future: An impact assessment of an educational programme,” In S. Bott, S. Jejeebhoy, I. Shah and C. Puri (eds.). *Towards Adulthood: Exploring the Sexual and Reproductive Health of Adolescents in South Asia*, pp. 187-189. Geneva: WHO.

²³ Anupama Tantri, UCSF-Women’s Global Health Imperative. *Personal communication*, 30 June 2004.

²⁴ Ministry of Health and Family Welfare. 2000. *National Population Policy 2000*. New Delhi: Government of India.

²⁵ Editorial. 2003. “Towards universalisation of Integrated Child Development Services (ICDS),” *Indian Journal of Community Medicine*, 28(4): 148.

²⁶ National Institute of Public Cooperation and Child Development (NIPCCD). 2002. *Adolescent girls’ scheme- An evaluation*. New Delhi: NIPCCD.

Affairs organises youth club development and work camps through the NGO Nehru Yuva Kendra Sangathan, which is the nodal agency for conducting these activities.²⁷ However, such programmes are only available for the rural population and are implemented unevenly across states.

Setting

Uttar Pradesh (UP), with a population of 166 million, one fifth of whom are adolescents, is the most populous state in India.²⁸ It is primarily rural; 80 per cent of the population live outside urban areas. Age at marriage is lower in UP than in the rest of India. Fifty-one per cent of 20-24-year-old females in UP are married by age of 18, compared to 46 per cent in India as a whole. In the urban areas of UP, approximately one-third of 20-24-year-olds marry by age 18.²⁹ Fertility is higher in UP than in the rest of India. The total fertility rate (TFR) is 3.99 children compared to 2.85 for India as a whole. The urban fertility rate is 2.88 for UP compared to 2.27 for India as a whole. Fertility rates for 15-19 and 20-24-year-olds are also higher in UP than the rest of India.

Allahabad, the site of the project, is the sixth largest city in UP, with a population of approximately one million. The project was conducted in the slum areas of the city where CARE-India has been conducting its reproductive health programme. To facilitate programming and research, CARE-India divided the 143 slums of Allahabad into seven wards/

clusters. For this project, two comparable wards in which CARE-India was about to start activities for adolescents were selected; one was randomly assigned as the experimental site and the other as the control site. Five slums in the experimental area and nine slums in the control area were then randomly selected as project sites.³⁰

Study Design

The study used a quasi-experimental pre- and post-test study design that compared the intervention group with a control group of adolescents. A baseline and endline survey of all adolescents and one of their parents measured the differential effects of exposure to the various components of the intervention. Centre for Operations Research and Training (CORT) conducted the fieldwork. A midterm follow-up interview with the adolescents who participated in one or more of the vocational training sessions captured the immediate effects of the livelihoods intervention. In-depth interviews provided insights into differential participation in the intervention. At the baseline, a household roster was used to identify eligible adolescents (i.e., those aged 14-19 years) and to collect demographic and economic information. Efforts were made to collect information from all households in both the experimental and control areas. Thereafter, all eligible adolescents and one adult in each household, in most cases the parent of the interviewed adolescent, were approached for an interview.

²⁷ Ministry of Youth Affairs and Sports. 2002. Annual Report 2001-02. New Delhi: Government of India.

²⁸ www.censusindia.net

²⁹ International Institute for Population Sciences (IIPS) and ORC Macro. 2001. National Family Health Survey (NFHS-2), India, 1998-99: Uttar Pradesh. Mumbai: IIPS

³⁰ As the slums in the control area had a smaller population than those in the experimental area, the number of slums selected as the control and experimental group varied.

The endline survey was conducted in 2003. A roster was again prepared for each household to identify the respondents from the baseline as well as those who were missed at the first survey round. Adolescents interviewed at the baseline were matched with their endline responses, allowing a direct measurement of change attributable to participation in the intervention. In addition, efforts were made to re-interview the adolescents surveyed at the baseline. The endline survey was supplemented by 32 in-depth interviews sampled purposively to gather information about the experience of the intervention as well as the motivations and barriers that influenced participation and continued skill use.

Response Rates

As mentioned earlier, the baseline and endline surveys were intended to be a census of all adolescents (aged 14-19) living in the study area, regardless of their participation in the intervention. At the baseline, the survey identified 2,452 households that contained a total of 4,292 eligible adolescents. Response rates in the experimental and control areas were the same, with

Box 1.1: Project timeline

April–June 2001	Baseline survey
June 2001–December 2002	Intervention, including follow-up support
April 2002	Mid-term survey
March–June 2003	Endline survey and in-depth interviews

approximately 75 per cent of eligible adolescents completing the baseline survey. In both the experimental and control areas, more than 80 per cent of eligible adolescent girls completed the survey, compared to less than 70 per cent of eligible adolescent boys (see Table 1.1).

While these response rates were encouraging, questions remained regarding the selectivity of the adolescent girls identified and interviewed. At the baseline only 4 per cent of the girls aged 14-19 were married, considerably less than the expected proportion. Married adolescents may have been excluded from a listing of “adolescents” living in the

Table 1.1:
Response rate: Baseline and endline surveys

	Control Site			Experimental Site			Total
	Male	Female	Total	Male	Female	Total	
Baseline							
Number of eligible adolescents	890	835	1,725	1,341	1,226	2,567	4,292
Number of adolescents interviewed	615	671	1,286	901	1,012	1,913	3,199
Response rate*	69.1	80.4	74.6	67.2	82.5	74.5	74.5
Endline							
Number of eligible adolescents	1,451	1,407	2,858	2,259	2,455	4,714	7,572
Number of adolescents interviewed	1,300	1,215	2,515	1,773	1,860	3,633	6,148
Response rate*	89.6	86.4	88.0	78.5	75.8	77.1	81.2

* The response rate was calculated by dividing the number of interviewed adolescents by the number of eligible adolescents.

Table 1.2:
Follow-up rate

	Control Site			Experimental Site			Total
	Male	Female	Total	Male	Female	Total	
Number of respondents interviewed at the baseline	615	671	1,286	901	1,012	1,913	3,199
Number of respondents interviewed at the baseline who were interviewed at the endline	325	382	707	545	635	1,180	1,887
Follow-up rate*	52.9	56.9	55.0	60.5	62.8	61.7	59.0

*The follow-up rate was calculated by dividing the number of respondents interviewed in both survey rounds by the number of respondents interviewed in the baseline survey.

household because families do not regard married girls aged 18-19 to be adolescents. Moreover, the Hindi word *kishor(i)*, used in the survey to denote an adolescent, was understood by many families to mean an unmarried person only. Furthermore, households wishing to hide an illegal under-age marriage may not have reported these young women as residing in the household.

Given the lower response rate of boys compared to girls, and the under-representation of married adolescents at the baseline, considerable efforts were made to improve the coverage in the endline survey. For example, visits were scheduled at times when young men were more likely to be at home, and households were probed more extensively than at the baseline for the presence of young person aged 15-21, either married or unmarried. These efforts yielded an additional 1,401 households with eligible young persons, for a total of 3,853 households at the endline. The endline survey also added a roster to identify all young people aged 15-21 who were married and no longer living in their natal home.

On the whole, response rates were higher at the endline than at the baseline, with more than 85 per cent of males and females in the control area and more than 75 per cent of males and females in the experimental area completing the survey (see Table 1.1).

It should be noted, however, that of the 6,148 young people interviewed at the endline, only 1,887 had been interviewed at the baseline. Of the original 3,199 baseline respondents, the follow-up rate was slightly higher in the experimental than in the control area (62 and 55 per cent respectively), with girls in both areas showing slightly higher follow-up rates than boys (see Table 1.2).

We can only speculate about the reasons for the 57 per cent increase in identified households with eligible adolescents at the endline. Possible factors considered were in-migration, better coverage of married adolescents, and improved efforts to identify eligible young people within households. The endline data indicate that the majority (73 per cent) of newly identified respondents had lived in the slum their entire life. Assuming that reporting is accurate, these

³¹ IIPS and ORC Macro, 2001.

are young people who should have been identified in the baseline survey; indeed, of all the endline respondents, only 7 per cent reported that they had lived in the slum for two years or less. Although this figure disguises any moves that households and individuals may make within the slums, it suggests that the increase in the sample from the baseline to the endline is more likely to be due to the differential diligence of the data collection team than to the migratory tendencies of the sample population. These efforts also improved the coverage of married adolescents- from 4 per cent at baseline to 16 per cent at endline. This is comparable to the percent married for the state reported in the National Family Health Survey (14.6 per cent of urban females aged 15-19).³¹ Although some of this increase may be attributed to the aging of the sample, a substantial proportion of the married adolescents at the endline were among those newly identified at that survey round.

It is possible that some of the increase in sample size had little to do with the efforts of the data collection team and more to do with the greater

willingness of the adolescents and their parents to be interviewed. At the baseline, there may have been a deliberate misreporting of age because members of the community were suspicious of the survey. Over time, adolescents and their parents may have become more comfortable with being interviewed for a survey. Moreover, some residents might have thought that by being interviewed at the endline they would be able to participate in other programme activities. Consequently, some adolescents may have reported being of an eligible age at the endline when in fact they were not. Thus, some of the “increased” coverage observed at the endline might be no more than age misreporting either at the baseline where respondents or parents “aged” themselves out or at the endline where they were “aged” in.

To assess the impact of the intervention, the quantitative analysis will be limited to the 1,017 girls who were interviewed in both survey rounds. While there is some concern about the selectivity of these youth, this potential bias will be controlled in the multivariate analysis (discussed in Section 4).

Dimensions of Adolescents' Lives

The experiences and opportunities of adolescents are influenced by the household environment in which they reside. In order to set the stage for understanding the environment in which the intervention occurred, this section draws on the baseline data and presents a discussion of the household context in which adolescents in the slums of Allahabad reside. It focuses on living arrangements, asset ownership, caste and parents' educational attainment. Individual characteristics of the respondents, namely educational attainment, work experience, time use and gender role attitudes are also discussed.

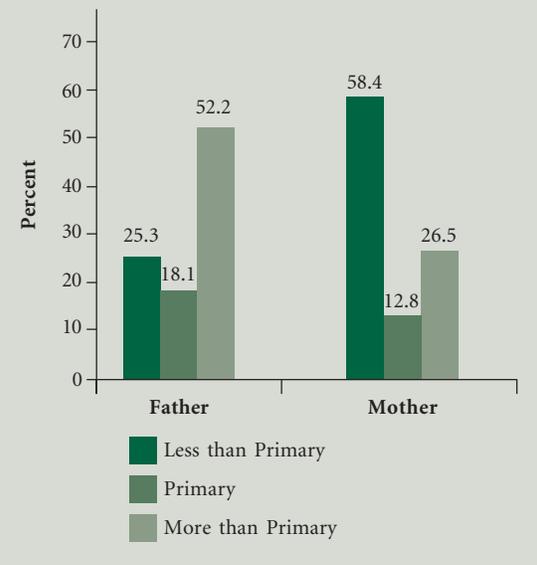
Household Environment

Parental Education

All the participants of the survey report that their fathers have attained a higher level of education than their mothers (Figure 2.1). For example, one-quarter report that their father had not completed primary school, as compared to almost 60 per cent of mothers. Likewise, 52 per cent report that their fathers had completed classes higher than primary school, as compared to 27 per cent of their mothers. Adolescent boys were slightly more likely than girls to report higher levels of educational attainment for both their mothers and their fathers. However, it is difficult to discern whether these differences were due to an actual observed difference or to differences in the reporting of males and females.

Figure 2.1

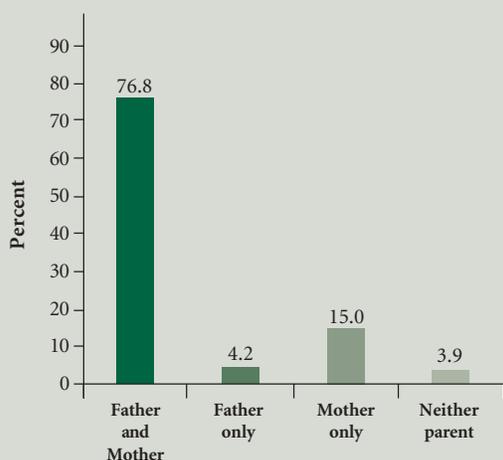
Parental education: Level completed, baseline, reported by adolescent boys and girls



Living Arrangements

Over 75 per cent of the adolescents reported that they live with both their mother and their father. Approximately 15 per cent live only with their mother; in 80 per cent of these cases the father is deceased, with the remainder living in a different location. Fewer than 5 per cent of adolescents live with their father only, and less than 4 per cent live with neither parent. There were no significant differences in the living arrangements of adolescent boys as compared to girls.

Figure 2.2

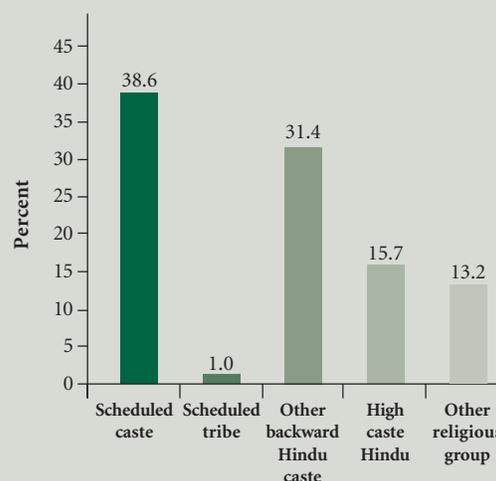
Percentage of adolescent boys and girls living with their mother and father, baseline

The mean size of households containing adolescents is 6.5. Only 5 per cent of households in the study area are nuclear;³² most are multigenerational, comprising a couple, their married children and their grandchildren.

Caste

As can be seen from Figure 2.3, there is considerable diversity in the caste of adolescents surveyed. Almost 40 per cent of adolescents belong to a scheduled caste, and an additional 31 per cent belong to other backward castes. Approximately 16 per cent are high-caste Hindu, while only 1 per cent are from a scheduled tribe. Finally, 13 per cent of adolescents

Figure 2.3

Caste distribution of adolescent boys and girls, baseline

belong to a non-Hindu religious group, almost exclusively Muslim.

Household Amenities

Recent research has shown that indices based on household assets can be used as a reliable proxy for household socio-economic status.³³ Socio-economic status was calculated by measuring household possessions (not discussed here³⁴) and amenities, including building materials used for the home, access to piped water and flush toilets and a separate room for cooking. While almost 80 per cent of adolescent boys and girls reside in households with access to piped water and nearly three-quarters live in

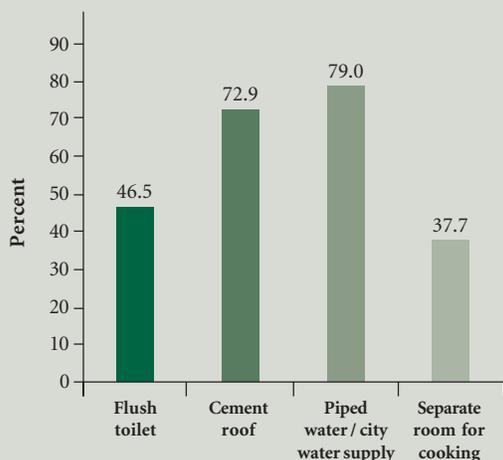
³² Household size is the mean of all members of the household listed in the household roster and reported as usually living in the household. Nuclear households are defined as households with only a married couple and their unmarried children.

³³ D. Filmer and L. Pritchett. 1999. "The effect of household wealth on educational attainment: Evidence from 35 countries," *Population and Development Review*, 25(1): 85-120; K. A. Bollen, J. L. Glanville and G. Stecklov. 2002. "Economic status proxies in studies of fertility in developing countries: Does the measure matter?" *Population Studies*, 56(1): 81-96.

³⁴ In addition to these household characteristics, the survey collected information on a range of household possessions, including ownership of piped natural gas or LPG gas cylinder; an electric, gas or oil stove; black and white television; colour television; video cassette recorder; radio/cassette player; compact disc player; camera; sewing machine; refrigerator; telephone; fan; motorcycle/scooter; bicycle; car; and air cooler. These variables were used to construct an index of household wealth, based on a principal components analysis. The first component was scored and divided into quintiles of approximately equal size, creating a measure for relative wealth within the study area.

Figure 2.4

Percentage of adolescent boys and girls living in households with various amenities



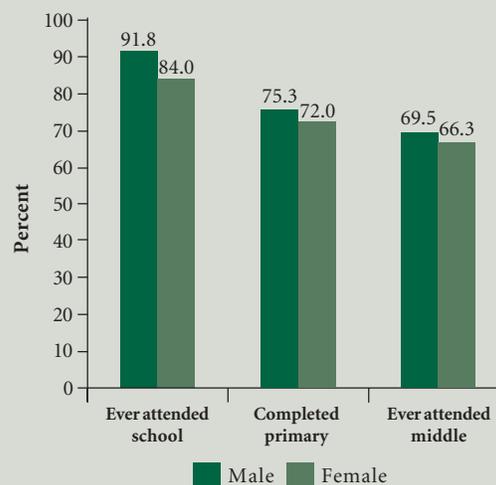
households with a cement roof, less than half reside in households that have a flush toilet. Only 38 per cent of adolescents live in households that have a separate room for cooking (Figure 2.4).

Characteristics, Experiences, Knowledge and Attitudes of Adolescents

While adolescence is considered a crucial period for developing the skills necessary for a productive adulthood, the experiences of adolescent girls are often more restricted than those of adolescent boys. The following discussion highlights the gender differences at the baseline in marriage, work and educational attainment, as well as differences in the outcomes like gender role attitudes, self-esteem, social skills and reproductive health knowledge that the intervention intended to influence.

Figure 2.5

Educational attainment of adolescent boys and girls, baseline



Education

Access to schooling is critical to the development of adolescent boys and girls. Not only does education impart literacy and numeracy skills, but school attendance generally provides exposure to new ideas and can give young people an opportunity to form relationships with peers and adults outside the family.

Although the overwhelming majority of adolescent boys and girls interviewed at the baseline have attended school, there are differences in the educational attainment of boys and girls. Figure 2.5 indicates that 92 per cent of adolescent boys have attended school compared to 84 per cent of girls. Without delays, all adolescents should have completed primary school by the age of 14, the lower age boundary of our adolescent sample. However, only 75 per cent of boys and 72 per cent of girls had done so (Figure 2.5).

Although there are differences in school attendance and primary completion rates for boys and girls, the gender gap is much smaller for adolescents than for their parents. While primary school completion has increased for both males and females in the study area, there have been significant gains in the education of women, such that 72 per cent of adolescent girls have completed primary school as compared to 27 per cent of their mothers.

Work

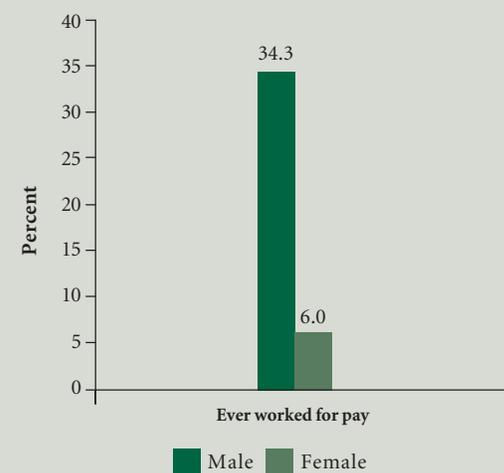
Access to safe and productive work is an important aspect of the transition to adulthood. Although wage earning alone is not enough to improve the status of women in a community, participation in legitimate income-generating work may increase autonomy and self-respect by promoting an alternative source of social status, networks and peer-support groups outside the family.³⁵

Relatively few 14-19-year-olds in the study area have ever worked for pay (Figure 2.6). Substantially more boys had ever worked than girls (34 per cent and 6 per cent respectively). Although the survey used the widest possible definition to identify participation in any non-domestic work (e.g., unpaid, paid in cash or kind, family enterprise, piece work, raising vegetables or livestock for sale), it is possible that some adolescent girls did not perceive their contributions to be “work”; therefore, this may be a slight undercount of actual participation.

In terms of non-remunerative work, girls are much more likely to engage in domestic labour than boys. Adolescent girls reported that they spent at least four hours a day on domestic labour, whereas boys spent approximately one hour a day on household

Figure 2.6

Adolescent boys and girls who have ever worked for pay, baseline



chores. Although adolescent boys are more likely to participate in paid labour, they also have more time available for leisure activities.

In addition to current work patterns, the survey asked whether or not the respondent expected to be working for pay in ten years. While it was not remarkable that 93 per cent of boys expected to be working, it was surprising to find that 74 per cent of girls also expected to work for pay given that only 30 per cent of women aged 25 and above were currently working.

Marriage

Early marriage exposes young women to the risk of early childbearing³⁶ and shortens the time that could be used for personal development and the acquisition of skills.³⁷ Although it is speculated that paid

³⁵ Mensch, Bruce and Greene, 1998.

³⁶ Jejeebhoy, 1998.

³⁷ Mensch, Bruce and Greene, 1998.

employment delays marriage and increases a girl's decision-making power within marriage, few studies have effectively tested this relationship. One study in Bangladesh found that adolescent girls who were employed in garment factories were more likely to delay marriage.³⁸

In India, over one-third of girls aged 15-19 are married, as compared to 4 per cent of boys aged 15-19.³⁹ However, at the baseline less than 4 per cent of 14-19-year-old girls in Allahabad and 1 per cent of boys report having ever married. As discussed earlier, this is a much smaller number than expected.

Migration

Most adolescents report having always lived in Allahabad. Eighty-nine per cent of adolescent girls and 85 per cent of adolescent boys interviewed at the baseline had lived in Allahabad their entire life. If, however, a respondent had moved to Allahabad with parents at a young age, he or she may be unaware of having done so.

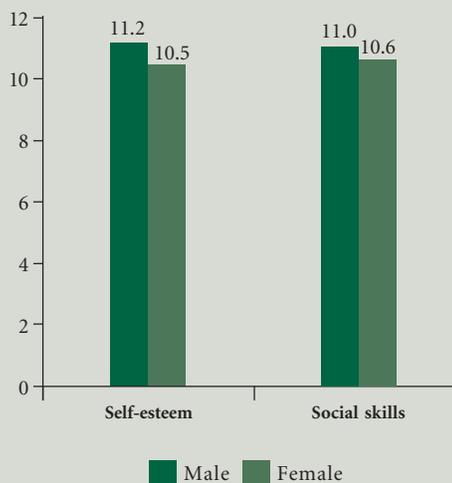
Self-efficacy

Self-efficacy skills characterise the ways that adolescents are able to communicate their ideas to others, gain self-esteem and participate in community life. Using the baseline survey, two indices were constructed to measure social skills and self-esteem. Respondents were asked 21 questions—measured by a three-point Likert scale—related to their sense of self-efficacy. A principal component factor analysis grouped six of the items together. The responses to these six questions were coded to be positive and

summed, creating an index of self-esteem (Cronbach's alpha=0.90) ranging from 0, low self-esteem, to 12, high self-esteem. An index of social skills (Cronbach's alpha=0.73) was purposively created from 10 questions that measured the respondent's ability to convey her/his opinions and interact with others and ranged from 0, low social skills, to 20, high social skills. Characteristics of these indices are described in Appendix 1, and a list of the questions used to create these indices is included in Appendix 4.

For both self-esteem and social skills, adolescent boys reported higher values than girls (Figure 2.7). Adolescent boys had a mean score of 11.2 on the self-esteem index, as compared to a mean value of 10.5 for girls. On the social skills index, boys had a mean value of 11.0, as compared to a mean value of 10.6 for girls.

Figure 2.7
Mean value on the self-esteem and social skills indices, adolescent boys and girls, baseline



³⁸ S. Amin, I. Diamond, R.T. Naved and M. Newby, 1998. "Transition to adulthood of female garment factory workers in Bangladesh," *Studies in Family Planning*, 29(2): 185-200.

³⁹ IIPS and ORC Macro, 2000.

T-tests reveal that although these differences appear to be relatively small, they are highly significant (self-esteem $p=0.000$, social skills $p=0.000$).

Self-efficacy is also related to participation in community life. The survey attempted to capture this by asking whether or not the respondent was a member of an organised group. At the baseline, only 6 per cent of adolescent boys and 3 per cent of adolescent girls reported group membership.

Mobility

The mobility of adolescent girls is generally more restricted than that of adolescent boys, as a result of the greater concern for the reputation and safety of unmarried girls. In the survey, the respondent's ability to go alone to visit a relative was used as a proxy for mobility. While 93 per cent of adolescent boys were able to visit a relative on their own, only 22 per cent of girls were able to do so. Moreover, only about 10 per cent of male and female respondents were able to name a place where unmarried girls could safely congregate.

Gender Role Attitudes

In addition to questions about the self-efficacy and mobility of adolescents, the survey also asked about gender role attitudes, in particular the acceptability of female wage labour, shared domestic responsibilities and recognition of the value of women in general.

An index of gender role attitudes was created from the 21 relevant questions in the survey; a principal components analysis identified the eight questions that grouped together. These were coded to

the positive and summed to create an index (Cronbach's $\alpha=0.84$), ranging from 0, indicating gender inequitable attitudes, to 16, indicating equitable attitudes (see Appendix Table 1 for a listing of the characteristics of the index and Appendix Table 4 for questions included in the index).

Adolescent boys had a mean score of 12 on the index, whereas girls had a mean score of 13. T-tests revealed that this was a significant difference ($p=0.000$), indicating that adolescent girls had a slightly more progressive outlook than their male peers.

Reproductive Health Knowledge

A reproductive health knowledge variable was created by counting the number of correct answers given to eight questions related to the menstrual cycle, fertility, contraception, and sexually transmitted infections (for a complete list of questions included in this measure, see Appendix Table 4). At the baseline survey, boys had greater knowledge of reproductive health than girls. On an average, boys correctly answered 5.6 out of 8 questions, whereas girls correctly answered 4.2.

Savings Accounts

Despite the fact that boys were much more likely to work for pay, at the baseline survey, twice as many girls as boys (54 per cent versus 27 per cent) reported that they had any money saved. However, of those with money saved, only 6 per cent of girls had their money saved in a bank account, compared to one-quarter of boys. The majority of girls kept their money at home or at a place other than the bank.

The Intervention

At the onset of the project, literate 14-19-year-old females who had been permitted by their parents to participate in the programme, were identified and trained to be peer educators. Peer educators were not paid for their services but were given a conveyance fee for the days they attended training in the city. Peer educators were given a six-day training on reproductive health issues as well as a two-day training to help them become more effective communicators and facilitators for discussions on vocational training opportunities and savings formation. Emphasis was placed not only on the provision of information on reproductive health and livelihoods, but also on communication and group formation skills; the goal was to train peer educators to encourage girls to be active participants in the group discussions. These training sessions were highly participatory and used methods such as games, group discussions, role-playing exercises and demonstrations. The first round of training sessions were held in June-July 2001, followed by a second round in November 2001.

Peer educators were expected to visit every household in a specified area in their slum and invite all eligible adolescents to participate in the project. A group (approximately 20 girls) was then formed that met once a week at the home of a peer educator. The membership of the groups varied—two groups had only 8 members whereas one group had 40.

In total, 27 peer groups were formed in the experimental area and 15 were formed in the control area.

Reproductive Health Education

The first reproductive health sessions were held in June 2001. Peer educators led the discussion using a series of five flipbooks that narrate the story of a 12-year-old girl, Paro, as she learns about different aspects of reproductive health.⁴⁰ Staff from CARE-India attended the group meetings and assisted in the discussion of sensitive topics, such as contraception and sexually transmitted infections. Groups typically completed this component in seven to ten weeks, depending on the level of interest and discussion.

Box 3.1: Paro flipbooks

- *Book 1:* Physiological and behavioural changes at the onset of puberty.
- *Book 2:* Menstruation and vaginal discharge and infection.
- *Book 3:* How a baby is formed, sex of the foetus, pregnancy and birth.
- *Book 4:* Timing of marriage, birth spacing and care during pregnancy.
- *Book 5:* Family planning, role of the husband, and contraceptive methods: condoms, IUD, pills and sterilisation.

⁴⁰ Reproductive and sexual health education was also provided to adolescent boys living in these slums. Like adolescent girls, boys met in peer groups with male peer educators. The flipbooks used in these sessions with boys were similar to the books about Paro, describing the experiences of a boy as he learns about different aspects of reproductive health. However, since the pilot project of livelihoods training and savings formation was only available for girls, boys are excluded from the discussion of the impact of the intervention.

It was intended that the reproductive health component would be the same in the control and experimental areas; however, girls in the experimental slums were more likely to be regular attendees given that participation in the livelihoods component was contingent on good attendance. Furthermore, the promise of vocational training and assistance in opening savings accounts motivated more parents in the experimental area to grant permission to their daughters to attend regularly. In total, 525 girls completed the reproductive health education sessions in the experimental area; attendance records were not kept for the control area.

After the sessions on reproductive health education were completed, CARE-India set up Adolescent Resource Centres (ARCs), typically in public halls built by the District Urban Development Authority (DUDA). Each Centre is shared by five adjacent slums. CARE has supplied these Centres with reading material and equipment for games and sports. Occasionally, lectures and counselling sessions by doctors and lawyers, as well as *mehndi* competitions (painting the hands and feet with henna), have been organised to encourage girls from the adjacent slums to visit these Centres.

Vocational Training

On completion of the reproductive health component, participants in the experimental area attended vocational training classes. Six to ten courses were offered at a time, beginning in August 2001 and continuing through May 2002. Courses were conducted on Sundays to facilitate the attendance of school-going girls. The first round of courses began with *mehndi* and creative painting and was held in the

home of the peer educators. By conducting the initial classes within the peer groups, the project was able to establish familiarity and credibility with the parents.

A list of additional courses was developed from a survey of vocational courses available in Allahabad. Those that required large capital investment were not included. A final list of 19 short-term vocational courses was drawn up based on discussions with NGO staff, trainers and adolescents themselves. Courses were selected because they suited the interests of the girls, had the potential for continued skill use, or reduced gender bias related to what was considered appropriate work for girls. These courses were then listed in a flipbook, along with details of the skills to be learned, the length of each course, course fee, and photographs of the finished products. Participants paid Rs.10 for a one-week course and Rs.25 for a course that continued for a month or longer; they shared the cost of materials, which was partly subsidised by the project, and kept the finished product.

Girls who were interested in enrolling for courses were assisted in several ways, for example, by helping them complete the application form, having the project staff speak to their parents about the course, or even by subsidising the course fee. Courses were held if a minimum of 10 girls expressed an interest in the subject. Since a number of girls wanted to participate in more than one course, a limit was set of five courses per girl to allow newcomers an opportunity to enrol. As the project progressed, courses were offered at a training centre outside the slum. Participants travelled to the centre with other members of their peer group; group travel not only helped continue the building of social connections

within the group, but also reduced the apprehensions of parents. In addition to the courses run by the project, arrangements were also made for older girls (those 18 years and above) to attend government-run livelihoods courses, which were located in a government-training centre in the city.

Of the 525 participants from the experimental area, 487 completed at least one vocational course,

and almost 80 per cent completed two or more courses. In total, 19 different vocational subjects were offered (for details see Table 3.1).

During the final phase of the intervention, the project provided follow-up support to the “graduates” of the vocational training courses to ensure that they used their new skills. An exhibition was organised in each of the experimental slums where girls displayed

Table 3.1:
Participation in vocational training courses, adolescent girls

Name of the course	Location	Duration	Organised by	Number of times the course was offered	Number and percentage of girls who participated
Mehndi	Peer educator’s house, slum	1 week	Project	25	294 (56.0)
Creative painting	Peer educator’s house, slum	1 week	Project	14	207 (39.4)
Jute doll making	Peer educator’s house, slum	1 week	Project	2	45 (8.6)
Mending and embroidery	Peer educator’s house, Slum	10 days	Project	5	70 (13.3)
Silver ornament link making	Peer educator’s house, slum	1 week	Project	1	12 (2.3)
Jute craft, jute bag	Peer educator’s house, slum	3 weeks	Project	2	18 (3.4)
Fabric painting	Peer educator’s house, slum	1 week	Project	2	37 (7.1)
Macramé	Peer educator’s house, slum	2 weeks	Project	1	12 (2.3)
Crochet	Training centre, slum & city	2 months	Project	5	76 (14.5)
Pot decoration	Training centre, slum & city	1 month	Project	5	101 (19.2)
Soft toys	Training centre, city	2 weeks	Project	2	28 (5.3)
Personal grooming	Training centre, slum & city	2 weeks	Project	5	64 (12.2)
<i>Dhari</i> (rug) weaving	Training centre, city	1 month	Project	2	22 (4.2)
Tailoring	Training centre, city	4 months	Project	7	101 (19.2)
Basic cooking	Training centre, city	2 weeks	Project	1	12 (2.3)
Chinese cooking	Training centre, city	2 weeks	Project	1	10 (1.9)
Candle making	Training centre, city	1 week	Project	4	54 (10.3)
Food preservation	Govt. Institute, city	15 days	Govt. Institute	1	25 (4.8)
Bee keeping	Govt. Institute, city	45 days	Govt. Institute	1	10 (1.9)
Total: Any Course	-	-	-	-	487 (92.8)

Source: Project records of the Population Council, New Delhi.

Note: Figures in brackets are percentages, based on the 525 participants who completed the reproductive health education component.

their finished products. Around 60 girls also participated in exhibitions and sales outside the slums. Several “graduates” attended refresher courses run by the project on pot decoration (15 girls) and crochet and knitting (30 girls) to update their skills and to meet the demands of the market.

Savings Formation

As indicated earlier, at the baseline, while only 5 per cent of adolescent girls were working for pay, 54 per cent had saved some money. There are various formal and informal savings options available in the community such as savings accounts in post offices and banks, chit funds (rotating saving and credit associations) and group savings clubs. While peer educators discussed these options in adolescent groups, virtually all the girls who were interested in savings wanted to open an individual account. The girls reported that money kept at home gets spent; those who had a joint account with other adults of the family claimed that they were not able to save as the adults withdrew the deposited money. Along with

vocational skills training, girls were assisted in opening savings accounts. All of the new accounts were opened in a post office rather than in a bank because the procedures in the post office were simpler and the amount of money required for the initial deposit less (Rs.50 in a post office compared to Rs.500 in a bank).

One of the project staff was issued an Identity Card by the main post office to introduce girls to their respective post office banks. Around 250 girls opened savings accounts in their name in the post office. Girls who opened savings accounts were encouraged (and assisted if necessary) in making additional deposits. In many instances, once accounts were opened, family members gave girls money for depositing in their accounts. However, since girls were reluctant to go alone to the post office and were often unable to find someone to accompany them, many did not continue to actively use their savings accounts. The problems faced by girls in opening and operating their accounts is discussed in the next session.

Impact of the Livelihoods Intervention

The intervention was evaluated through a set of indicators that measured physical mobility, self-efficacy, knowledge of reproductive health, gender role attitudes, work aspirations and time allocation. For three of the indicators—gender role attitudes, self-esteem and social skills—indices were created (the content of these indices is discussed and outlined in Appendices 1 and 4 and index construction in Chapter 2). By comparing the endline responses of the intervention and control respondents with their baseline responses, it is possible to discern the degree of change attributable to participation in the intervention.

The analysis is restricted to adolescent girls who were interviewed in both survey rounds (1,017 girls out of 3,075 girls interviewed at the endline): 382 girls in the control and 635 in the experimental areas. It should be noted that only 122 girls who participated in the livelihoods intervention from the experimental area were interviewed in both survey rounds. Hence for the analysis respondents are divided into three groups: control, experimental—non-intervention, and experimental—intervention. ‘Control’ refers to the girls from the control area. Respondents from the experimental areas who

participated in the intervention were examined separately from respondents who did not participate in the intervention. The significant effect of participation in the intervention on the outcome variables is based on the results from the multivariate analysis.

To assess the effect of participation in the intervention, a series of regression models were estimated for each of the outcome variables. For each multivariate model the dependent variable is the endline value of a behavioural, attitudinal or knowledge indicator that the intervention targeted. Also included is the baseline measurement of the variable as well as the variable defining participation in the intervention.⁴¹ As the experimental and control samples differed in terms of socio-economic characteristics, it was necessary to control for potentially confounding factors, including respondent’s age, education, duration of residence in Allahabad, number of siblings, whether the respondent’s father lives in the same household or has completed more than primary schooling, socio-economic status (measured in quintiles of asset ownership, mentioned in Chapter 2), and the caste of the family.⁴²

⁴¹ By comparing residents in the experimental area with those in the control area, we can minimise maturation effects, that is changes in outcomes that arise only because knowledge and responsibilities increase as young people age.

⁴² As is generally the case with a quasi-experimental design, we had no control over which youth residing in the experimental area participated in the intervention. Since those who participated are likely to be selective for certain characteristics that may make them more receptive to the intervention’s messages, it is difficult to make any causal inferences without controlling for potential self-selection bias. We used propensity score matching to control this bias by identifying those respondents from the control area who would be most likely to have participated in the intervention had they resided in the experimental area. The propensity score of an individual is the conditional probability of participating in the intervention, given the baseline characteristics. The propensity score is calculated such that $p(X) \equiv \Pr\{D=1|X\} = E\{D|X\}$ where $D = \{0,1\}$ is the indicator of exposure to the intervention and X is a multidimensional vector of the baseline characteristics listed in Appendix Table 2. Computation of the propensity score was restricted to the 122 intervention participants and 381 respondents from the control area who were interviewed in both survey rounds. Once the propensity score was calculated, the value was used to identify a respondent from the control area with the nearest possible value to that of an intervention participant. For details, see B.S. Mensch, M.J. Grant, M. Sebastian, P. Hewett and D. Huntington. 2004. The effect of a livelihoods intervention in an urban slum in India: Does vocational counseling and training alter the attitudes and behavior of adolescent girls? Policy Research Division Working Paper No. 194. New York: Population Council.

Although the following discussion focuses on a descriptive analysis of the changes in the outcome indicators, it will also refer the regression results in order to discern whether these changes are significantly associated with participation in the intervention (the distribution of these variables is discussed in Chapter 2, and the regression results are provided in Appendix Table 3).

Self-efficacy

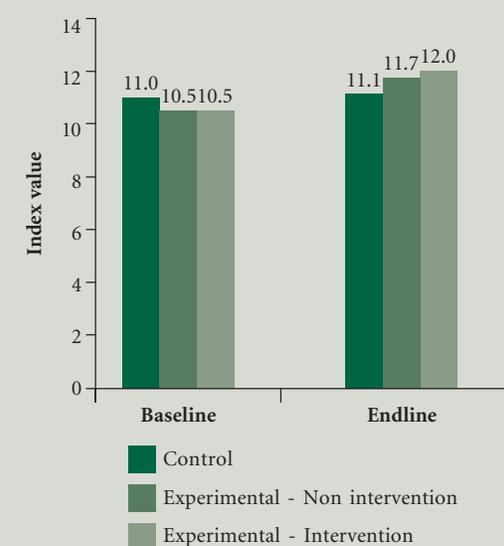
Participation in the intervention provided a context where girls could build friendships, develop critical thinking and gain self-confidence while working with their peer group. These capabilities were captured by two measures: the first assessed the social skills necessary to effectively convey one's opinions to others, initiate activities in a group and solve one's daily problems, while the second measured self-esteem and confidence in social situations.

Participation in the intervention had a strong influence on the social skills of adolescent girls (Figure 4.1). While the social skills of intervention participants increased (10.5 at the baseline versus 12.0 at the endline out of a maximum of 20), there was virtually no change in the social skills of girls living in the control area (11.0 at the baseline versus 11.1 at the endline). This relationship was strongly supported by the regression results, showing that the change experienced by project participants was significantly greater than that of adolescent girls in the control area.

Peer interactions during the adolescent group meetings were the first step toward building effective communication skills. The vocational training classes and savings formation also required participants to

Figure 4.1

Adolescent girls' social skills index, at baseline and endline



interact with elders and others from outside the community. After the project ended, girls reported increased skills in negotiating with shopkeepers to purchase raw materials and sell their finished products as well as in communicating with other non-family members. In-depth interviews revealed the ease with which girls assessed changes in these circumstances:

Now at least I can speak on my own, if I need something I can go and get it... I don't even feel scared. I feel that I am able to say what I want to. (17-year-old intervention participant)

However, increased social skills did not translate into improved self-esteem. Figure 4.2 shows that there was little change in self-esteem amongst the intervention participants.

Figure 4.2

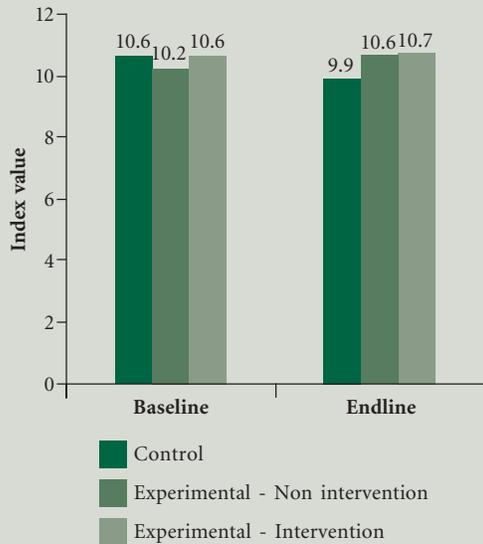
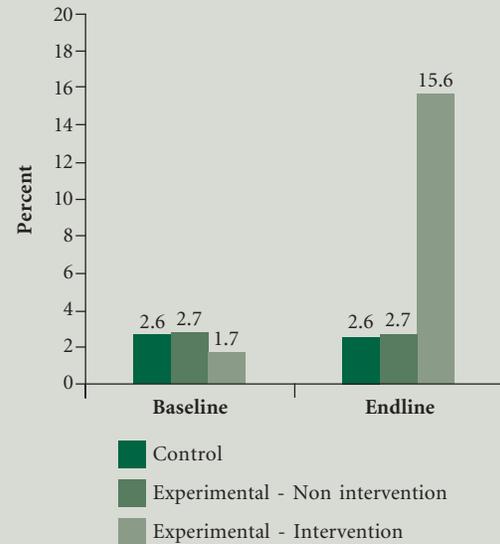
Adolescent girls' self-esteem index, at baseline and endline

Figure 4.3

Adolescent girls' membership in an organised group, at baseline and endline

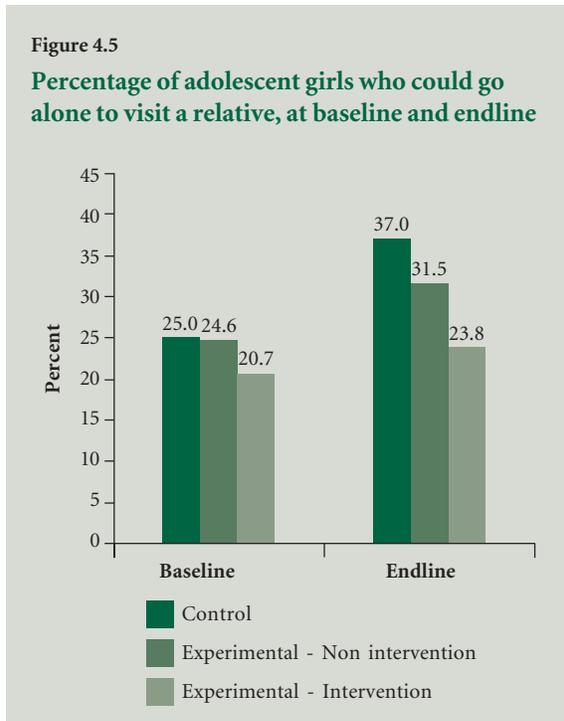
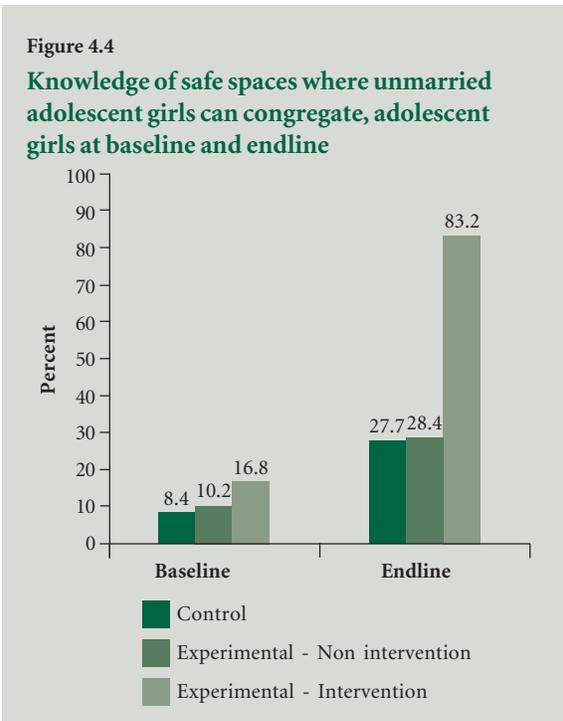
Group membership is an important indicator of the peer connections that are available to adolescents outside of the household, reflecting potential social resources that may be utilised in the future, in addition to the general benefits of friendship and association with one's peers. As can be seen from Figure 4.3, few respondents reported membership in an organised group. However, six times as many intervention participants as control respondents belonged to a group by the endline. Of the intervention participants who indicated group membership, over 90 per cent explicitly mentioned their peer group. Although relatively little time was spent on group formation, and the duration of the intervention was too short for the development of a group identity, it is significant that even 15 per cent of girls maintained this connection.

Mobility

By broadening the acceptability of female mobility and increasing the range of public spaces open to girls, their social and economic options can increase.

In addition to developing the social assets necessary to participate in decision-making, the intervention intended to increase the acceptance of girls' mobility and visibility in the community.

Respondents were asked whether they knew of safe spaces where unmarried adolescent girls could congregate. As can be seen from Figure 4.4, participation in the intervention had a substantial impact on respondent's knowledge of safe spaces. Eighty-three per cent of intervention participants reported knowledge of a safe space at the endline, compared to less than one-third of control respondents. Of these, more than 60 per cent



mentioned the home of a peer educator, which is the location where peer groups met for reproductive health classes and some vocational training. In the absence of public sites for unmarried girls to congregate, it is important to recognise private spaces that remain accessible.

The intervention also aimed to increase the acceptability of adolescent girl’s physical mobility. As a proxy for this, the survey asked whether the respondent could go alone to visit a relative.⁴³ Figure 4.5 shows that though more girls could go alone to visit their relative at the endline, there was no

relationship to participation in the intervention. Surprisingly, girls in the control slums reported the greatest increase in mobility from the baseline to the endline, although this was not significantly different from the change reported by the intervention participants.

However, it is important to note that participation in the vocational training was dependent on girls’ increased mobility. Although the first round of courses was conducted within the slum at the peer educator’s house, subsequent classes were held at a training centre outside the slum. Furthermore, girls

¹ The question on going alone to visit places was not comparable across the two rounds. At the endline, all respondents were asked questions on visiting places alone. In contrast, at the baseline respondents were first asked whether they needed permission to visit various places, and only if they needed permission were they asked if they were able to go alone to these locations. Those who reported that they did not need permission were not asked the subsequent question on visiting alone. At the baseline, in response to the question on visiting a relative, more than 95 per cent of respondents reported that they needed permission; thus virtually all respondents were asked the question on visiting relatives alone. Although there is a slight bias in the number of respondents, this question provided a good measure of changing mobility options for young women in the communities surveyed.

who attended the government-run courses were required to travel to the government institute. At each stage of the intervention, parents were able to observe the safety of their daughters, making it easier to accept subsequent increases in distance to the training site. At the end of the intervention, parents' acceptance of girls' increased mobility continued:

Now all the parents tell the girls to go and buy what they want, make what they want, etc. (21-year-old peer educator)

When I ask for permission to visit my friends [in another slum], they [parents] tell me to go. They don't stop me...I go alone. (16-year-old intervention participant)

Gender Role Attitudes

Although the intervention did not directly address the gender role attitudes of project participants, it was hoped that their increased exposure to the world around them would facilitate changes in attitudes that supported the acceptability of female wage labour, shared domestic responsibilities and recognition of the value of women in general.

Although mean scores shown in Figure 4.6 indicate a greater increase in egalitarian gender role attitudes among intervention participants than respondents living in the control areas, this difference is not significant. However, while the changes are small for the girls resident in the experimental area, they are in the expected direction. Had project activities been conducted for a longer period of time, and explicit discussion of gender roles been included in the project schedule, significant change may have been observed.

Reproductive Health Knowledge

A reproductive health knowledge index was created (see Appendix Table 4 for the list of questions included in this measure).

Although knowledge of reproductive health in all three groups increased from the baseline to the endline, undoubtedly because the sample had aged and been exposed to more information on this topic, the greatest change occurred amongst those who participated in the intervention (Figure 4.7). Regression results revealed that this was a significant association. This result was surprising, given that reproductive health education was provided in both the control and experimental areas. The greater increase amongst intervention participants may be related to better attendance of the reproductive health classes in the experimental areas—the vocational

Figure 4.6
Adolescent girls' gender role attitudes index, at baseline and endline

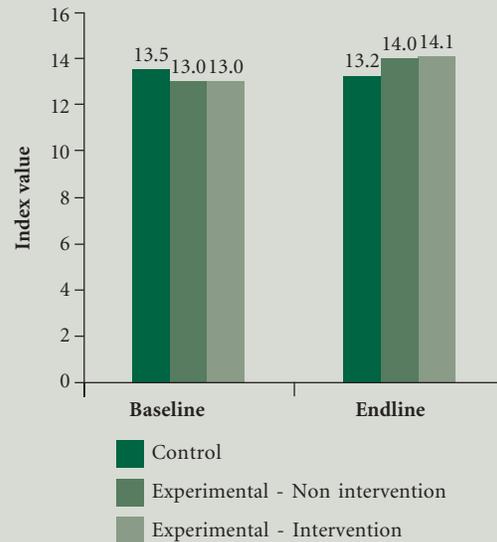
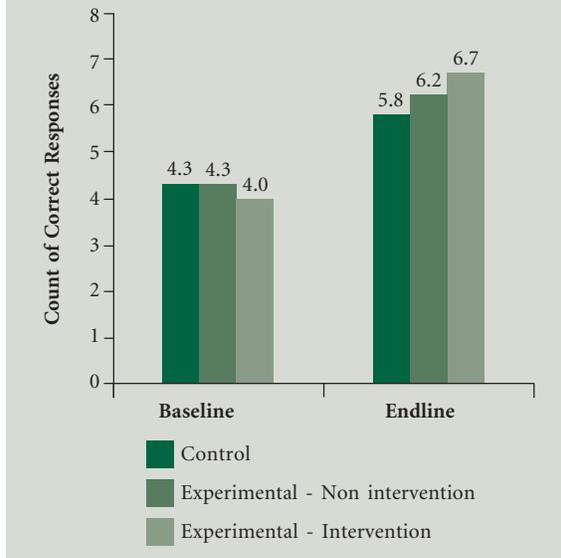


Figure 4.7

Adolescent girls' reproductive health knowledge index, at baseline and endline

training classes were conditional on good attendance during the reproductive health component—although no attendance records are available to test this hypothesis. Furthermore, intervention participants spent more time in their peer groups than girls in the control area who only attended reproductive health classes; this additional period of exposure may have influenced knowledge retention by allowing girls to continue to informally discuss the material. Although the exact mode of influence is not known, future programmes on reproductive health education should be aware of this relationship.

Time Use

In addition to changing the attitudes and self-perceptions of the participants, the intervention aimed to shift the ways that adolescents occupy themselves.

At the baseline, girls spent the largest portion of their time on domestic chores, and very little time engaged in economic activity or visiting friends. It was anticipated that after the intervention, participants would shift their use of time towards income-generating activities. Furthermore, it was hoped that any increase in mobility and peer networks would be translated into more time spent visiting friends.

In both survey rounds, a 20-hour time use schedule was recorded for the previous day; if the respondent was still in school, the time use pattern of the last school day was recorded. Although information was collected for 25 different activities, these were merged into five broad categories: hours spent on domestic chores, hours spent on economic activity, hours spent visiting friends, hours spent on leisure time (excluding time spent with friends), and hours spent on other activities.

As can be seen from Table 4.1, for all respondents, the mean amount of time spent on domestic work increased from the baseline to the endline, although this difference was not significant. Likewise, time spent on economic activity either remained the same, as in the control area, or decreased, as in the intervention area. The regression results revealed no significant differences between intervention participants and respondents from the control area. This result was surprising, since a primary goal of the intervention was to increase the time that adolescent girls spent on income-generating activities. However, as will be discussed in the next section, there is evidence that the intervention participants experienced significant difficulty translating their skills into productive activities.

Table 4.1:

Mean hours spent on various activities, adolescent girls, at baseline and endline

	Baseline			Endline		
	Control	Experimental Non-intervention	Experimental Intervention	Control	Experimental Non-intervention	Experimental Intervention
Domestic work	4.0	4.1	5.0	4.3	4.8	5.2
Economic activity	0.2	0.4	0.3	0.2	0.2	0.1
Visiting friends	0.2	0.3	0.5	0.5	0.3	0.4
Leisure and recreation	3.5	3.7	3.8	3.8	4.1	4.4

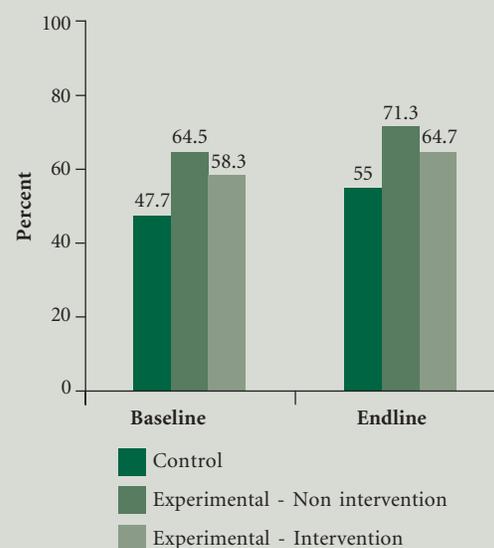
Furthermore, participation in the intervention had no influence on the amount of time spent with friends on the reference day (Table 4.1). As can be seen from Figure 4.8, the percentage of respondents who reported visiting their friends⁴⁴ increased from the baseline to the endline for all groups. Among the three groups, the greatest increase occurred amongst respondents living in the experimental area who had not participated in the intervention. However, this variable is considered to be less reliable than the actual measurement of time spent visiting with friends captured in the time use profile because the grid used to collect data employs an actual reference period and is less subjective than the respondent's estimation of the frequency of visiting friends.

Work Expectations

The number of respondents who expected to be working for pay in 10 years declined from the baseline to the endline. At the baseline, approximately 72 per cent of control respondents and 74 per cent of intervention participants expected to be working compared to only 61 per cent and 62 per cent respectively at the endline. There were no significant differences between the control and intervention

Figure 4.8

Percentage of adolescent girls who ever visit their friends, at baseline and endline



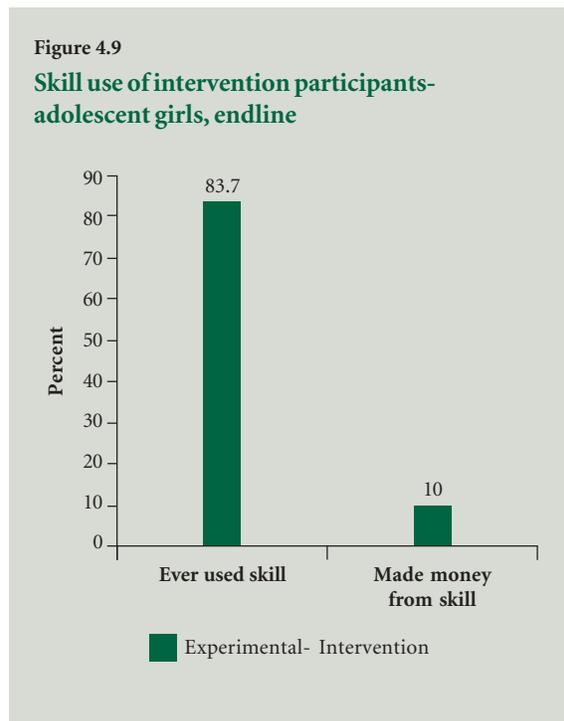
respondents. Perhaps as respondents aged, they realised that the labour force opportunities in Allahabad for women are very limited. Moreover, it is notable that the proportion of respondents who believed that it was very difficult for young people to find a good job in Allahabad also increased from the baseline to the endline.

⁴⁴ "Visiting" one's friends was defined as seeing them occasionally, often or very often. Those who answered that they rarely saw their friends were coded as negative responses.

Use of Vocational Skills

As mentioned earlier, an unexpected finding was that there was no change in the amount of time spent by intervention participants on income-generating activities. However, when focusing on the pattern of continued skill use amongst intervention participants, the results were encouraging; the majority (83.7 per cent) of girls who attended at least one vocational course reported that they used their skills after the project ended. Of these, however, only 10 per cent reported that they were able to make money from their skills (Figure 4.9). Of the handful of respondents who reported working for pay at the time of the endline, most were not using their newly-acquired vocational skills.

Clearly, the majority of girls were unable to translate their new skills into sources of income.



Some of the barriers to finding jobs or making money were mentioned during in-depth interviews.

In particular, girls cited their inability to assert themselves enough to get paid for their services or their difficulty finding full-time or piece-meal work.

No one pays. I make things for free, without earning anything. ... women come and ask me to stitch clothes... [but] will not pay me everyone comes to me and asks me to make things that they want that very day, right away. (19-year-old intervention participant)

I don't speak much about this [my new skills?] at school. No one who has learnt embroidery has taken their work [embroidered article] to school. We know that if we show it, everyone will say, 'Make this for me.' (16-year-old intervention participant)

Among the few girls who started working some mentioned harassment from boys and men.

A boy followed her [another girl] to work and back for 2 or 3 days. She got so scared that she stopped going to work. She totally stopped going because of the boy. She said that the boy walked next to her and asked her how they would look as a couple. (15-year-old intervention participant)

Yesterday I had to work late and it was 7o'clock when I left office. On the way back a man followed me and started making dirty remarks. I got very scared. I cycled fast. He followed. I felt relieved only when I reached the vegetable market. I pretended that I was buying something till he went away. At office, nobody understands these problems. I am not going to stay late. They think I am not ready to work, if I refuse. Nobody understands my problems. (21-year-old intervention participant)

The focus of the intervention from June to December 2002 was on follow-up counselling and assistance. Two peer educators were appointed as follow-up staff; they received an honorarium and worked in slums other than where they resided. However, while participants met with these staff to review their progress, in the absence of training for participants on entrepreneurial activities, these occasional interactions were not particularly useful. Indeed, the follow-up staff themselves needed on-going mentoring to improve their counselling skills.

Savings Formation

As discussed in Chapter 3, prior to the intervention, many girls had been saving money at home or in a joint account with other family members. Few found this to be an acceptable arrangement as they often lacked control of the account and were unable to prevent other people from withdrawing money. Although interest in opening a savings account at the post office was considerable, there were significant obstacles to the continued operation of the accounts. The staff at the post office, who were male, frequently expressed their reluctance to work with adolescent girls. As can be seen in the following quotes, the staff often reprimanded girls for disturbing them, and sometimes even sent them back asking them to return another day. As a result of these experiences, many girls were scared of the post office staff and were reluctant to spend money on repeated trips to the post office in order to manage their accounts.

When I go to the post office, the staff gets angry and asks me to come later. The other day I had gone to the post office, I wanted to deposit Rs. 300 as otherwise it would be spent. They said that I could not deposit the money

and that I should come after a day or two. They said it was a holiday. (17-year-old account holder).

When other girls subsequently tried to open new accounts, they were turned away and told by the postal staff, including staff who had cordial interactions with the girls, that new accounts could only be opened after all the girls with existing accounts deposited more money into them.

When we [account holders] go, then our work is done, but if we take along a girl to open a new account, then they [the post office staff] will not do our work. (18-year-old account holder)

Lack of support from peers or a friend's unwillingness to accompany them to the post office when they wanted to deposit money were cited as additional barriers, leading girls to prefer to keep their savings at home even if they had a savings account in their name.

I deposited [money] only once when I opened the account, after that I have not been able to deposit any money. I asked many of my friends to come with me to the post office but no one listened to my request. (15-year-old account holder)

During the course of the intervention, project staff became aware of the importance of sensitising post office staff to the needs of adolescents and the barriers they face in operating these accounts. Several strategies were employed to improve interactions between young female account holders and post office staff. Informal meetings were held as part of the New Year celebrations for the girls and the staff. Incidents of continued refusal to open new accounts were reported to the Postmaster General, who then sent memos to the

concerned staff. During the follow-up period, project staff approached the Postmaster General, and a workshop was conducted for the postmasters to make them aware of the impact of

their style of communication on young clients. Although these initiatives had some impact, more efforts are needed to convince the post office staff to be supportive to young female account holders.

Summary and Conclusions

The analysis of the livelihoods intervention indicates that the project had only a minimal impact on adolescent girls in the experimental slum areas of Allahabad. Nonetheless, it is important to emphasise that a livelihoods programme was not only acceptable to parents in this traditional slum community but also feasible to implement. Moreover, it is noteworthy that girls in the intervention were significantly more likely to have knowledge of safe spaces, be a member of a group, score higher on the social skills index, be informed about reproductive health, and spend time on leisure activities than the matched control respondents. No effect was found on gender role attitudes, mobility, self-esteem, work expectations, or hours spent visiting friends, on domestic chores or in labour market work.

A number of factors posed obstacles to changing girls' attitudes and behaviour. First, as noted earlier, only 122 of the 635 girls in the experimental slum for whom both baseline and endline data are available participated in the intervention. It is thus remarkable that any significant effects were observed at all. Second, fielding a longitudinal survey in an urban slum area was more problematic than anticipated. Finding and successfully interviewing adolescents is a difficult task in the best of circumstances; attempting to do so in densely-populated slums among a very poor/ economically

disadvantaged population is even more demanding of both time and resources. The huge difference in sample size between the baseline and the endline was totally unexpected. Even though concerted efforts were made to ensure complete coverage in the endline, a large number of adolescents who had been interviewed at the baseline were missed or could not be matched. Third, even if the data collection had gone smoothly, in retrospect it is clear that the intervention was of too short a duration and not sufficiently intensive to have a substantial effect; in short, girls were not exposed to group meetings or vocational training for a long enough period of time to significantly alter their attitudes or behaviour. It was probably too much to expect that girls involved in an intervention for several months would change, particularly as very few succeeded in making any money with their newly acquired skills. Fourth, the intervention had only minimal contact with parents. Yet to a very large extent, girls in the project are not in control of their lives or their futures. Thus it is important to fully engage parents in discussions of the importance of schooling, livelihoods and delayed marriage for their daughters.⁴⁵ Finally, the question arises as to whether the outcome variables used to evaluate the impact of the intervention are the best indicators to measure change. Many of the indicators that did not show significant change were based on

⁴⁵ Moreover, girls accepted parental decisions on marriage, even when they may have preferred not to. One intervention participant said: "Grandfather had liked the boy, finalised everything and only then told us. This is how marriage decisions happen here". Another participant, whose marriage was decided after the intervention ended, recounted seeing the boy for the first time at the wedding. "I did not see the boy, how could I tell whether I liked him. Yes, surely I was unhappy with this. No, I did not tell anyone what I felt".

the assumption that the intervention would have a broad impact on the social context of girl's lives; instead changes were found only for those variables that directly measured skills or issues addressed directly by the intervention. The endline survey was adjusted to capture some measures with greater sensitivity, notably mobility, but these changes in the questionnaire also precluded their inclusion in this analysis. Future evaluations should be more grounded in the local context, identifying indicators that are sensitive to the subtleties of the intervention prior to the start of the evaluation.

Although the results of the intervention were somewhat disappointing, the greatest changes were found in those measures that most closely reflected the content of the intervention. The increased knowledge of safe spaces for girls to meet, and self-identification as a group member were direct outcomes of participation in the groups that were formed by the peer educators. Likewise, increased social skills are a logical by-product of informal interaction within the peer groups. Finally, it is most encouraging that intervention participants showed a significant increase in knowledge of reproductive health, particularly given that the multivariate analysis took into account those respondents in control areas

who attended the reproductive health classes without the added livelihoods component. Although some of this change may be related to better attendance in the experimental areas—the vocational training classes were conditional on good attendance during the reproductive health component—there may also be some unmeasured aspect of the livelihoods component that encouraged the retention of information on reproductive health.

In Allahabad substantial gender differences exist among adolescents in mobility, patterns of time use, and savings and work experience. An intervention that addresses the capabilities of girls is therefore particularly appropriate. Although a short-term project cannot alter the structure of opportunities available, it can raise awareness, social skills, knowledge of safe spaces and group identification. However, in order to reduce deeply-entrenched gender disparities and enhance girls' ability to have a greater voice in decision-making about their own lives, it would be desirable for future interventions not only to have many more contact hours than the experimental project described here, but also to devote more effort to developing group cohesion, and improving communication, negotiation and decision-making skills.

Appendix

Appendix Table 1:
Type and range of outcome variables

	Number of Components	Type of Variable	Possible Range	Baseline Range	Endline Range
Reproductive health knowledge	8	Continuous	0-8	0-7	1-8
Mobility					
Knowledge of safe spaces	1	Dichotomous	0-1	0-1	0-1
Can go to visit relatives alone	1	Dichotomous	0-1	0-1	0-1
Work expectations and time use					
Expectation to be working in 10 years	1	Dichotomous	0-1	0-1	0-1
Time Use					
Hours spent visiting friends (inside and outside household)	NA	Continuous	0-20	0-8.83	0-7
Hours spent on domestic chores	NA	Continuous	0-20	0-14	0-13.67
Hours spent in labour market work (paid, unpaid, vocational training)	NA	Continuous	0-20	0-12	0-13
Hours spent on leisure time	NA	Continuous	0-20	0-10.17	0-10
Self-efficacy					
Self-esteem index	6	Index	0-12	3-12	0-12
Social skills index	10	Index	0-20	0-17	2-20
Group membership	1	Dichotomous	0-1	0-1	0-1
Gender role index	8	Index	0-16	2-16	2-16

NA: Not applicable

Appendix Table 2:

Mean of dependent variables, including those matched by propensity score

	Baseline			Endline		
	Intervention N=122	Control (all) N=381	Control (matched) N=117	Intervention N=122	Control (all) N=381	Control (matched) N=117
Gender Role Index	13.0	13.5	13.0	14.1	13.2*	13.4
Self-efficacy						
Self-esteem index	10.6	10.6	10.5	10.7	9.9*	10.2
Social skills index	9.6	9.4	9.2	12.0	11.1**	11.0*
Group membership (%)	1.7	2.7	2.6	15.6	2.6***	5.1**
Mobility						
Knowledge of safe spaces for girls (%)	16.8	8.4*	4.6**	83.2	27.9***	33.7***
Can go alone to visit relatives (%)	20.7	25.0	19.8	23.8	37.0**	34.2
Reproductive Health Knowledge	4.0	4.3	3.9	6.7	5.8***	5.7***
Work and Time Use						
Expect to be working in 10 years (%)	73.7	71.8	67.3	61.7	60.5	56.5
Mean hours domestic work	5.0	4.0***	4.5	5.2	4.3***	4.7
Mean hours economic work	0.3	0.2	0.4	0.1	0.2	0.2*
Mean hours visiting friends	0.5	0.2**	0.3	0.4	0.5	0.6
Mean hours leisure	3.8	3.5	3.9	4.4	3.8*	3.7*

Significance is based on the *t*-test of means comparing the intervention to each control sample

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Appendix Table 3:

Summary of regression results— Effect of participation in the intervention

Dependent Variable	Coefficient	Standard Error	Odds Ratio	P	Regression type
Gender role index	0.686	0.492		0.164	Linear regression
Can go alone to visit relatives	-0.615	0.342	0.541	0.072	Logistic regression
Knowledge of safe spaces	2.495	0.405	12.126	0.000	Logistic regression
Self-esteem index	0.561	0.409		0.171	Linear regression
Social skills index	0.988	0.401		0.015	Linear regression
Group membership	1.621	0.589	5.057	0.006	Logistic regression
Reproductive health knowledge	0.952	0.153		0.000	Linear regression
Expectation to be working in 10 years	0.156	0.319	1.169	0.625	Logistic regression
Hours spent visiting with friends (inside and outside household)	-0.400	0.319		0.212	Tobit regression, left censored
Hours spent on domestic chores	0.422	0.284		0.14	Tobit regression, left censored
Hours spent in labour market work (paid/unpaid/vocational training)	-0.493	0.301		0.103	Tobit regression, left censored
Hours spent on leisure time	0.722	0.231		0.002	Tobit regression, left censored

Appendix Table 4:

Dependent variables— List of components and questions

Gender Roles:

A gender role index was created based on whether the respondent agreed with the following eight statements. The higher the index, the greater the perception of gender equitable roles.

(Agree/Disagree):

- A woman should be allowed to work for cash
- If the wife has a job outside the home then the husband should help her with the children and household chores
- Boys should be asked to spend time on household duties
- Girls should be allowed to decide when they want to marry
- Women are generally inferior to men
- If a girl has not gone to school, the best thing for her is an early marriage
- If a woman does not have a son, she should keep trying even if she is satisfied with the number of daughters she has
- Girls are as good in business as boys

Self-esteem:

An index of self-esteem was created based on whether the respondent agreed with the following six statements.

(Agree/Disagree):

- You feel like you have a number of good attributes
- You feel as important to your family as other members
- You feel as capable of doing as many things as other people
- You feel you are important to your friends
- When there is a family discussion, your parent(s) respect your opinion
- Your parent(s) or in-law(s) feel that you have many good qualities

Social Skills:

An index of social skills was created from 10 questions that measured the respondent's ability to convey their opinions and interact with others. The higher the score, the greater the respondents' social skills. The responses were coded to be positive and summed so that the higher the index, the greater the reported self-esteem.

(Never/Most of the time)

- Do you find it difficult to talk to elders in your family?
- Do you find it difficult to talk in front of a group?
- Do you think you can express your ideas to others?
- Do you think you can convince people of what you believe in?
- Do you find it easy to make new friends?

(Not good/Very good):

- How good are you at solving your daily problems?
- How good are you at making yourself understood to other people?
- How good are you at listening to other people?
- How good are you at asserting your opinions about issues?
- How good are you at initiating activities in a group?

Group membership:

“Do you belong to any organised groups or societies—popular organisations, labour unions, farmer’s unions, social clubs, athletic clubs, or any other organised groups?”

Mobility:

“Can go alone to visit relatives”

Knowledge of safe spaces

“Is there a place in your community where it is safe for unmarried adolescent girls to congregate?”

Reproductive Health Knowledge:

A reproductive health knowledge index was created by counting the number of correct answers given to the eight questions below.

- When during a woman’s monthly menstrual cycle is pregnancy most likely to occur?
- How does a girl get pregnant?
- How long does a foetus remain in a mother’s womb?

- Do you know the names of any diseases that can be transmitted via sexual relations?
- Can a person always tell if another person has a sexually transmitted disease, or is it sometimes hard or impossible to tell?
- Can a married woman contract AIDS if her only sexual partner is her husband?
- Could you tell me what methods (of family planning) you have heard about?
- Do any contraceptive methods protect against HIV/AIDS or STIs (Sexually Transmitted Infection)?

Expect to work in 10 years

“I would like to know your thoughts about your future employment. Ten years from now, do you expect to be working for pay?”



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