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

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Integrating Adolescent Livelihood Activities
within a Reproductive Health
Program for Urban Slum Dwellers in India



June 2004

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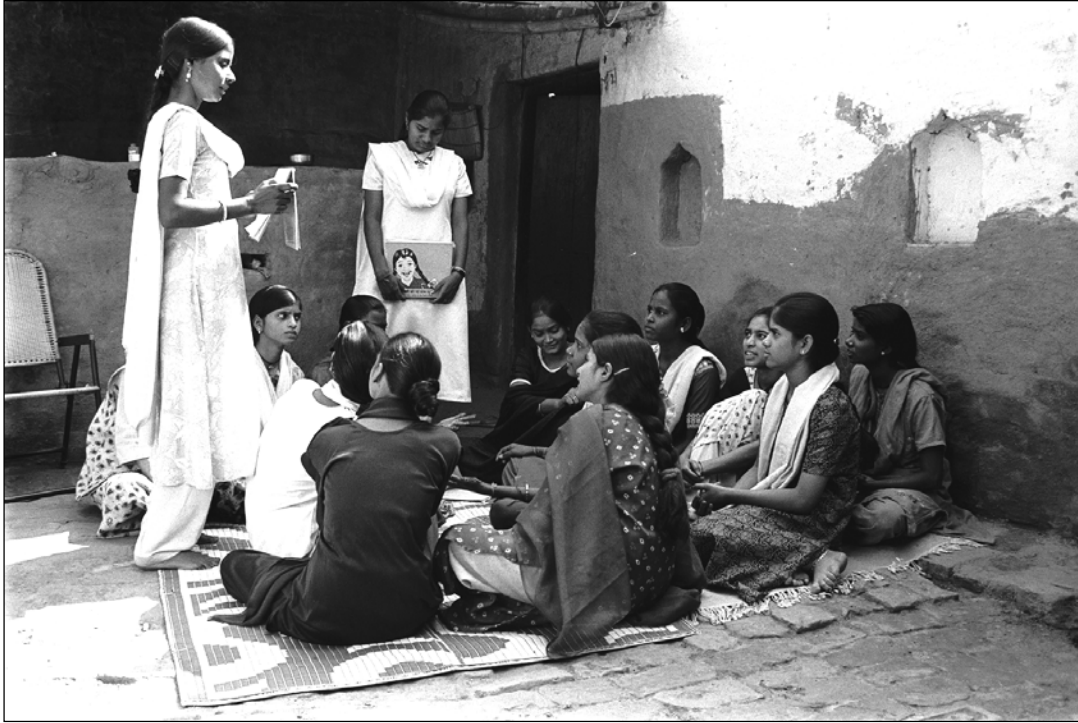
EXECUTIVE SUMMARY

The Population Council's Frontiers in Reproductive Health Program (FRONTIERS) and Policy Research Division, in collaboration with CARE India, conducted an operations research (OR) study in Allahabad, Uttar Pradesh to examine the feasibility and impact of adding livelihood counseling and training, savings formation activities, and follow-up support to an ongoing reproductive health program for adolescents. CARE India began a pilot project in 1997 in 65 slum areas of Allahabad, which was renewed for five years in July 1999 with funding provided by the United Kingdom's Department for International Development (DFID). This new project, Action for Slum Dwellers' Reproductive Health, Allahabad (ASRHA), worked with 66,000 adolescent boys and girls ages 10-19 and about 45,000 women ages 20-49 in 143 slum areas of Allahabad.

The Population Council's OR study began in January 2001. The short-term objective of the study was to foster development of alternative socialization processes for adolescent girls that encourage positive sexual and reproductive health behaviors. The study also aimed to produce a replicable model for CARE and other agencies to use in adding livelihood activities to adolescent reproductive health programs.

The OR study used a quasi-experimental pre- and post-test design that compared the intervention (experimental) group with a comparison (control) group of adolescents. Baseline, midline, and endline surveys of adolescents living in the slums, and one of each of their parents or guardians, measured the impact of the intervention. The immediate effects of the intervention were captured through a mid-term follow-up interview conducted with adolescents who participated in one or more of the vocational training sessions or savings formation activities. The experimental group consisted of five large slums, and the control group was comprised of nine smaller slums.

CARE selected peer educators from the slums and trained them in reproductive health. They subsequently formed adolescent groups in their area and introduced reproductive health education by conducting weekly meetings. The peer educators were also trained to use flipbooks developed for vocational counseling. The courses were organized either in the slums or at a training center in the city. Each girl could attend a maximum of five courses so that more new girls could take advantage of the intervention. A total of 525 different girls attended courses. After the intervention about 250 have opened savings accounts in post offices, a concrete step for preserving girls' control over their earned income.



The baseline survey was conducted before the ASRHA Project started group formation activities and before any reproductive health or vocational training activities were conducted. All of the adolescents between the ages of 14 to 19 who lived in the study areas for at least a year and expected to remain for another year were included in the baseline survey (i.e. both married and unmarried, in-school and out-of-school, boys and girls). Young girls (aged 10-13) were not included in this study as effects on livelihood were more likely to occur in the older age group. In addition, one of the parents/guardians from each house was interviewed.

A total of 2,452 households were listed in the study areas. Out of the 4,284 eligible adolescents living in these households, 3,199 (75%) were interviewed for the baseline survey. Similarly, 2,014 parents or guardians (82%) were interviewed out of the total sample of 2,452 households. While there are some important differences between the study's experimental and control groups (primarily related to religious and caste characteristics), the two groups were largely similar in their general characteristics.

Girls reported that they needed to seek permission to make visits outside their homes more frequently than boys did. Thus girls had fewer opportunities to interact with their peers or to develop social competencies. Fifty-two percent of boys and 59 percent of girls in the study said that they would like to go to places outside their homes more often. Interestingly, both girls and boys reported that social norms restricted their mobility; slightly more than one-half acknowledged that venturing outside their homes damaged their reputations.

In general, boys reported spending more time in paid work than girls did. The average number of hours spent in paid work was almost double for older boys ages 17-19 (2.6 hours) compared to younger boys ages 14-16 (1.5 hours). The opposite effect was seen in the

amount of time that boys and girls spent on education. 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 did.

Twenty-nine percent of boys reported that they were currently working for pay, compared to only five percent of girls. Overall, slightly more than one-half (54%) of the boys in the study reported having some cash savings, as compared to about one-quarter (26%) of the girls. Among the girls who reported some savings, most kept it in their homes.

An almost equal proportion of boys and girls (12% and 13%, respectively) reported prior experiences with vocational training. A large majority of the adolescents in the study sites expressed a desire for vocational training.

In the area of reproductive health, 97 percent of the girls had knowledge about menstruation, compared to 39 percent of the boys. Eighty-eight percent of the boys in the study reported knowing about sexual intercourse and conception, compared to only 42 percent of the girls. Knowledge of contraceptive methods was also higher among boys than girls.

Parents' attitudes regarding their adolescents' mobility were also investigated. Sixty-three percent of male and 54 percent female respondents said that they would allow their adolescent children to visit nearby towns unaccompanied by an adult. About 40 to 55 percent of parents expected adolescents to visit other places only with company. Awareness about contraceptive methods was not very high; only 55 percent of men and 50 percent of women were currently using family planning. Fathers had comparatively better knowledge of HIV/AIDS; knowledge of other sexually transmitted infections (STIs) was poor.

The midline survey was conducted in April 2002 only in the experimental slums. Girls who participated in the first group of vocational training courses offered in August and September 2001 were the respondents for the survey. Of the 232 girls identified, 206 were interviewed, yielding an 89 percent response rate. Only 62 respondents were interviewed in both the baseline and midline surveys.

A comparison of the baseline and midline findings shows an increase in adolescents' autonomy. The proportion of adolescents who were allowed to visit friends without chaperones rose from 29 percent at baseline to 77 percent at the time of the midline survey. Similarly, the percentage of girls who could visit a shop alone increased from 45 percent in the baseline survey to 77 percent at the midline evaluation.

Of the matched sample, 45 percent of the girls at the midline survey felt that they could convince other people of something they believed in, a significant increase from the 18 percent during the baseline survey. Seventy-two percent in the mid-line evaluation, as compared to 36 percent in the baseline survey, were confident about talking in front of a group. When asked at the midline period whether boys make better leaders than girls, 23 percent said yes, down from 68 percent at the baseline.

While 89 percent could correctly name one or more contraceptive methods at the baseline, 97 percent were able to name contraceptive methods at the midline. Compared to 67 percent in the baseline, 94 percent were able to name a sexually transmitted infection at the midline. All of the girls were able to correctly answer the question about the duration of pregnancy. Almost all (98%) knew that sexual contact between a boy and girl is required to make a girl pregnant. Only 44 percent knew this at the time of the baseline survey.

Results from the midline survey showed a positive impact of the intervention in terms of increased skill use, changing time use patterns, increased work aspirations, and more progressive gender role attitudes. Girls expressed satisfaction with the courses and the trainers, and reported that they used the skills after completing the vocational courses. The majority (97%) also expressed a desire for the adolescent meetings to continue and said that they provided them with a time to relax and mingle with their peers.



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ABBREVIATIONS

AGG	Adolescent Girl Guide
AIDS	Acquired Immunodeficiency Syndrome
ASRHA	Action for Slum Dwellers Reproductive Health, Allahabad
CARE	CARE India
DDWS	Diocesan Development and Welfare Society
DFID	Department for International Development, United Kingdom
HIV	Human Immunodeficiency Virus
IUD	Intrauterine Device
NGO	Nongovernmental Organization
OR	Operations Research
STI	Sexually Transmitted Infection



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I. BACKGROUND

Girls around the world have to manage their transition through adolescence, a transition marked by physical and psychological changes. In India, they live in environments that force them to drop out of the formal schooling system and enter into a cycle of early marriage, repeated pregnancy, and poverty. The situation is further compounded by the lack or limited number of policies and programs directed toward adolescent girls, even within the health sector. Proponents of adolescent policies have stressed the health consequences of early sexual activity and pregnancy to adolescents. Little attention has been paid to preparing girls for future livelihoods and fostering their social mobility. However, legitimate income-generating work is likely to transform girls' adolescent experiences by providing them with a degree of autonomy and freedom from traditional gender roles. Most importantly, it should help to reframe the second decade of girls' lives from a period devoted to preparation for marriage and childbearing to a time when they can develop as individuals and gain knowledge and skills for a more productive adulthood. In addition, it should provide girls, who are often confined to the home with heavy domestic responsibilities, with a degree of mobility and with networks and peer support groups outside the family. Work has the added benefit of offering girls an alternative source of social status that is likely to delay marriage. Girls who contribute income to the household have greater control over their sexual and reproductive lives (Bruce and Mensch 1999; Mensch, Bruce, and Greene 1998).

The rationale for developing livelihood programs for girls is particularly applicable to India, where over one-quarter of girls are married by age 15, over half are by age 18, and over one-third of girls ages 13-16 and nearly two-thirds of those ages 17-19 are mothers or are pregnant with their first child (Jejeebhoy 1996). In addition, there are big gender disparities among adolescents in educational attainment and literacy. About one-third of girls between the ages of 15 and 19 complete middle school, compared to over one-half of boys, and 56 percent of girls are literate, compared to 81 percent of boys. Mortality rates among adolescent girls are 25 to 50 percent higher than among boys; nutritional deficits are greater and access to health care is lower (Jejeebhoy 1996). In short, adolescent girls in India are particularly disadvantaged in comparison to boys.

CARE India began a pilot project in 1997 in 65 slum areas of Allahabad that created reproductive health services for approximately 28,000 disadvantaged adult women. The Allahabad district is located in India's most populous state, Uttar Pradesh, and has an estimated population of 800,000. The CARE India pilot project was renewed for five years starting in July 1999 with funding from the British Department for International Development (DFID). This project, Action for Slum Dwellers' Reproductive Health, Allahabad (ASRHA), put young women's reproductive health issues at the center of a development approach that recognizes the competing needs of about 66,000 adolescent boys

and girls ages 10-19 and about 45,000 women ages 20-49 in 143 slum areas. The CARE India strategy takes as its starting point the low priority status of women's reproductive health concerns and works to demonstrate that multiple benefits accrue from reproductive health care activities, particularly when community participation and local capacity building activities are emphasized.

Objectives

The study has several primary objectives:

- Foster the development of alternative socialization processes for adolescent girls that enhance the development of positive sexual and reproductive health behaviors.
- Integrate vocational counseling, training, and follow-up support for adolescent girls coupled with encouragement of savings formation into CARE's Action for Slum Dwellers' Reproductive Health project in Allahabad.
- Increase participation by adolescent girls in other reproductive health-related activities of the ASRHA Project (e.g., sexual health, hygiene, and nutrition).
- Foster community acceptance of physical mobility by adolescent girls, strengthen and enlarge positive peer-to-peer support networks, and develop new mentor relationships between younger and older women.

Hypotheses

The following hypotheses frame the study's intervention and design:

- The provision of vocational counseling, training, and follow-up support to married and unmarried adolescent girls will result in positive changes in their economic livelihoods.
- Participation in livelihood activities will have a positive effect on sustaining adolescent girls' involvement in the CARE ASRHA's reproductive health care activities and lead to improved reproductive health knowledge and practices.
- The creation of savings mechanisms among adolescent girls who have undergone vocational training will have a positive effect on their long-term use of newly acquired livelihood skills.
- The integration of livelihood skills within the reproductive health program will have a positive effect on the adolescent girls' physical and social mobility within their communities and will expand their social support networks.



II. STUDY DESIGN

The study used a quasi-experimental pre- and post-test design that compared the intervention (experimental) group with a comparison (control) group of adolescents. Differential effects of exposure to the various elements of the intervention were measured by baseline and endline surveys of all adolescents living in the slums and one of their parents or guardians before and after the 12-month intervention period. The parental interviews provided insight into the context in which the girls live. A mid-term follow-up interview conducted with adolescents who participated in one or more of the vocational training sessions and savings formation activities captured the immediate effects of the intervention. The experimental group consisted of five large slums, and the control group consisted of nine smaller slums. A household listing done prior to the study indicated that there were 1,676 households containing approximately 9,900 persons in the control group and 1,716 households with about 10,000 persons in the experimental group.





III. INTERVENTION

The intervention included four different activities:

1. Counseling about livelihoods, vocational training, and savings formation
2. Vocational training courses
3. Savings formation
4. Follow-up counseling and assistance

The counseling about vocational training and livelihoods provided information about short-term, non-formal training courses available in the vicinity, courses offered by various government institutes and nongovernmental organizations (NGOs), and courses organized specifically by the project. Interested girls were assisted in several ways to enable them to participate including completing application forms, having project staff speak to a parent about the course, and contributing to payment of course fees. The project provided follow-up counseling to adolescents who received vocational training or who were interested in setting up a savings accounts. For instance, they developed action plans for beginning a livelihood activity and opening a savings account in a local post office.

Principal Outcome Indicators

- Vocational training knowledge and awareness
- Attitudes towards gender roles
- Specific knowledge of vocational training and procedures for participation
- Skill development and livelihood activities
- Savings activities
- Change in time use pattern
- Physical mobility within the community
- Participation in peer group organizations
- Contact with non-family members (quality and quantity)
- Work aspirations
- Attitudes toward conflicts between work, family roles, and responsibilities

Key Elements of the Intervention

The Population Council's intervention used the same strategy as CARE India to reach out to the adolescents in the community: Adolescent Girl Guides (AGGs) served as peer educators and provided counseling about vocational training and savings formation. The AGGs were chosen from the slums and given a six-day reproductive health training course by CARE India staff that included guidance and practice to improve their communication skills. Adolescent girls who could read and write and were willing to bring together other adolescent girls in the slum were chosen as AGGs to conduct the reproductive health sessions

using specially developed storybooks. The storybooks were educational materials in the form of flipbooks that related the experiences of a typical 12-year-old girl named Paro as she learns about her reproductive health. The story is presented in a set of five flipbooks in Hindi referred to as the Paro flipbooks. The AGGs (two or three per slum) were responsible for forming groups in the slums and conducting Paro classes. To the extent possible, CARE India staff was present at these meetings to help the AGGs educate the girls. Usually weekly meetings were held at the residence of one of the AGGs in the slum. One Paro flipbook was completed in each session. Each session took approximately 1-2 hours depending on the girls' participation and the questions that they asked.

Paro Flipbooks

The Paro story used in the reproductive health training sessions covered the following content:

- Book 1: Physiological and behavioral changes at onset of puberty
- Book 2: Menstruation and vaginal discharge and infection
- Book 3: How a baby is formed, sex of the fetus, pregnancy, and birth
- Book 4: Age at marriage, birth spacing, and care during pregnancy
- Book 5: Family planning, role of the husband, and family planning methods: condoms, IUD, pills, and sterilization

Additional peer educators who are able to read and write and had attended all the Paro sessions were selected by CARE India staff to reach girls who did not attend the adolescent meetings. These “assistant peer educators” supported the more intensive group work of the AGGs. All of the assistant peer educators received a three-day training about reproductive health and how to use reproductive health leaflets when counseling one-on-one. The AGGs and assistant peer educators worked as volunteers and received no payment or other compensation for their time. The recruitment, training, and initial work of the AGGs and assistant peer educators preceded the introduction of the OR study.

Preparing the Intervention

The first step in developing the intervention was to collect information about all of the vocational training courses available in Allahabad. The list contained courses that lasted from a week to almost a year and were conducted either by a government institute or by a local NGO involved in development programs. Courses that required an investment in expensive capital equipment were excluded. The final list of 21 courses included government-sponsored courses such as food preservation and beekeeping. However, the study team organized the majority of the vocational training courses available.

Most of the courses required a minimal investment to purchase training equipment and supplies. After the training, some materials were needed to produce the handicrafts at home. Initially, the project provided some of this capital investment (e.g., handlooms for rope weaving classes and subsidized materials for sewing or weaving). Participants also contributed a small amount towards the purchase of raw materials.

Project staff identified sites for the training and course instructors. Some of the courses were held at a nearby training center run by the Diocesan Development and Welfare Society (DDWS) through locally hired trainers. Courses like *mehndi* (henna body painting) and creative painting were conducted in the slums by locally hired trainers who were adept in working with adolescents. The dates and venue for each course were fixed and the adolescents were informed through the AGGs. The project purchased bulk supplies of raw materials (e.g., bales of cheap cotton fabric for sewing classes) from wholesale shops to keep costs down. Project staff arranged transportation for all courses that required participants to leave their slums to attend training in the city.

Training Adolescent Girl Guides in Counseling about Livelihoods and Savings Formation

The OR study team organized additional trainings for the AGGs and their assistants in counseling about livelihoods and savings formation. These training courses were conducted after the CARE adolescent reproductive health project had been underway for a short while. The first group of training courses was held in two one-day training sessions on consecutive Sundays in July 2001. This time was preferred because many of the girls attended school.

Twenty-one AGGs from the 10 existing groups in the five experimental slums were trained to provide counseling about vocational training courses and savings formation activities. An additional eight assistant peer educators who were selected from the adolescent reproductive health groups were also trained. A second group of training courses was held in November 2001 for the AGGs and assistant peer educators recruited by the CARE project from August to October. With the completion of the second training program, the project involved all the AGGs from the experimental areas in the livelihoods program.

Topics Covered During AGG Training

- Objectives of the workshop
- Vocational training in the OR project and the courses offered
- Importance of savings and ways to save
- Role of AGG in the Adolescent Livelihoods project
- Using IEC materials to communicate with peers and parents

The study team and consultants facilitated the training sessions for AGGs and the assistant peer educators. The courses were highly participatory and used methods such as games, group discussions, role plays, and demonstrations. Each AGG and assistant peer educator received a flipbook containing vocational flash cards to guide them in describing the vocational courses in their respective adolescent groups. The AGGs and assistant peer educators practiced talking to their peers about vocational training courses using the flipbook and other materials. Some of the participants were confident while others were still shy and needed more practice.

The groups discussed savings formation in detail. Participants were interested in the topic and were keen to open their own savings accounts. Many were not aware that they could open and operate their own accounts. Others wanted to take part in the vocational training courses.

Role plays were used to demonstrate how people made decisions by studying available alternatives, analyzing the alternatives, and choosing one of them. It was interesting for many of the participants to try decision making from their parents' perspectives. In this role, the

AGGs were more supportive of their daughters than their sons and attempted to budget the

Role Play Scenario

A middle-aged couple acts out a situation where the husband's job is not secure, the wife does regular housecleaning jobs to earn money, and they have three unmarried teenaged children: a son age 17, and two daughters ages 16 and 15. The three adolescents are excited about the opportunities to develop some income generation or livelihood skills and seek their parents' permission to receive training. The parents are trying to decide how to manage the course fees with their limited resources.

family income so that their daughters could attend the vocational courses.

Participation in Vocational Training Courses

The project team ran a total of 18 different courses and conducted 86 sessions with a total of 1,198 participants. The actual number of girls who took part in one or more courses was 525, as many participated in more than one course.



Table 1. Participation in vocational training courses

Course name	Location	Duration	Run by	Number of times the course was offered	Total number of girls who took part
Mehndi	Slum	1 week	Project	25	294
Creative painting	Slum	1 week	Project	14	207
Jute doll	Slum	1 week	Project	2	45
Mending and embroidery	Slum	10 days	Project	5	70
Silver ornament link making	Slum	1 week	Project	1	12
Jute craft, Jute bag	Slum	3 weeks	Project	2	18
Fabric painting	Slum	1 week	Project	2	37
Macramé	Slum	2 weeks	Project	1	12
Crochet	Training center, slum	2 months	Project	5	76
Pot decoration	Training center, slum	1 month	Project	5	101
Soft toys	Training center, slum	2 weeks	Project	2	28
Personal grooming	Training center, slum	2 weeks	Project	5	64
<i>Dhari</i> (rug) weaving	Training center	1 month	Project	2	22
Tailoring	Training center	4 months	Project	7	101
Basic cooking	Training center	2 weeks	Project	1	12
Chinese cooking	Training center	2 weeks	Project	1	10
Candle making	Training center	1 week	Project	4	54
Food preservation	Govt. institute	15 days	Govt. Institute	1	25
Beekeeping	Govt. institute	45 days	Govt. Institute	1	10
TOTAL				86	1,198



IV. STUDY RESULTS

As of November 2002, the baseline and midline surveys, including a survey of parents, were completed and analyzed. The following sections present the methodologies and results of the baseline and mid-line surveys.

Baseline Survey

All adolescents boys and girls ages 14-19 who were living in the study areas for at least a year and expected to remain for another year, irrespective of their marital and schooling status, were identified and listed for the baseline survey. In addition, one parent or recognized guardian who was older than 25 was interviewed. The baseline survey was conducted before the ASRHA Project started the group formation activities and before any reproductive health or vocational training activities were conducted in either the control or experimental sites. Prior to the interview, informed consent was sought from the parents for their personal interview and for interviews with their adolescent children. In addition, informed consent was sought from the adolescents themselves.

The baseline survey used a mapping exercise to determine the exact number of households and eligible adolescents. This preliminary step revealed many of the difficulties of working in urban slums, including fixing boundaries of the slum versus non-slum area and arriving at a functional definition of a household where many structures are temporary shelters for migrant laborers and others are dwellings that are locked shut and semi-abandoned. The latter category required the survey team to go back to validate whether households that had been listed in the sampling frame were abandoned or not eight months after the baseline survey. The results from the locked-house validation study were used to determine a final response rate for the study.



In total, the study identified 6,401 households and successfully contacted at least one occupant in 95 percent (n=6,086) of these households. According to the neighbors, approximately 57 percent (n=181) of the 315 households that were not contacted during the baseline survey had residents even though no one was living in the house at the time of the baseline survey or during the locked-house validation study. About one-quarter (27%) of the households that could not be contacted had residents who worked odd hours.

Boys and Girls Survey Findings

The household listing showed that the 2,452 households had 4,284 eligible adolescents of which 3,199 were contacted and interviewed. This represented a response rate of 75 percent. The remaining 1,013 adolescents were not interviewed because researchers could not contact them despite making at least three follow-up visits at different times and setting up appointments in advance through other family members. The remainder of the adolescents who were not included in the baseline survey either refused to take part in the study (n=28) or did not complete the interview (n=44).

Overall, about 53 percent of the baseline sample was composed of girls and 47 percent of boys. The number of respondents was larger in the experimental group (n=1,913) than in the control group (n=1,286), even though the preliminary mapping exercise and pre-study information suggested that the populations of the slum areas used for each study group were similar. The baseline survey collected data on several background characteristics, which are summarized in Table 2.

Table 2. Background characteristics of adolescents by sex and study sites (percentage)

Background Characteristics	Boys		Girls	
	Experimental (n = 901)	Control (n = 615)	Experimental (n = 1,012)	Control (n = 671)
Education				
Mother illiterate	54	50	54	56
Mother some secondary schooling	18	19	14	15
Father illiterate	22*	18	21	21
Father some secondary schooling	37	41	35	37
Both parents live in household	77	76	76	76
Ever attended school	90	94	83	86
Currently attends school (among those who ever attended)	58	60	67	64
Unmarried	99	98	95	96
Caste & Religion				
Scheduled caste or tribe	28***	55	29***	58
Lower caste Hindu	38	27	34***	22
High caste Hindu	15	16	15	18
Muslim	18**	2	23***	2

Differences between experimental and control sites significant at: p<.05*; p<.01**; p<.001***
 "Some secondary schooling" means studied beyond grade 8.

The results show that the two study groups were quite similar regarding characteristics for both the boys and the girls, with a few notable exceptions. Slightly more than one-half of the mothers and about one-fifth of the fathers in both study groups were illiterate. There was a small, but statistically significant, difference in the proportion of the boys' fathers who are illiterate by study group. A small difference was observed in the proportion of boys who had ever attended school within the two study groups.¹ Interestingly, about one-quarter of the households in both study groups had only one parent who resided in the household.

Table 2 also shows differences in the caste and religious composition of the two study groups. The proportions of scheduled caste/tribe members and Muslims were much lower in the experimental group than the control group. These caste and religious differences could significantly influence the impact of the intervention and need to be considered in the final analysis. The large majority of adolescents in both study groups reported that they were not married (99% of boys and 96% of girls), despite the inclusion of married adolescents in the case definition.

Mobility

One of the study's immediate objectives was to increase the community's acceptance of adolescent girl's mobility. The results presented in Table 3 clearly show the importance of encouraging this change. A higher percentage of girls than boys reported that they need permission to make visits outside of their homes. This restriction gives girls fewer opportunities to interact with their peers or to develop social competencies.

Table 3. Adolescents who needed permission to visit places outside the home (percentage)

Place	Girls (n= 1,683)	Boys (n= 1,518)
Neighbor	74	40
Shop	74	37
Field	49	39
Friend	85	55
Relative	95	85
Nearby village	84	75
Nearby health outlet	88	71
Shopping mall	87	67

Figure 1 shows that boys were more likely than girls to report multiple places that they had visited in the past six months. They were also more likely to have visited any single area than girls. Forty-eight percent of girls (n= 812) had not traveled outside of Allahabad during the past six months, as compared to only 24 percent of the boys (n= 370).

¹ Note that small differences at the extremes of the range are statistically significant though substantively unimportant.

Figure 1. Places that adolescents have visited in past six months

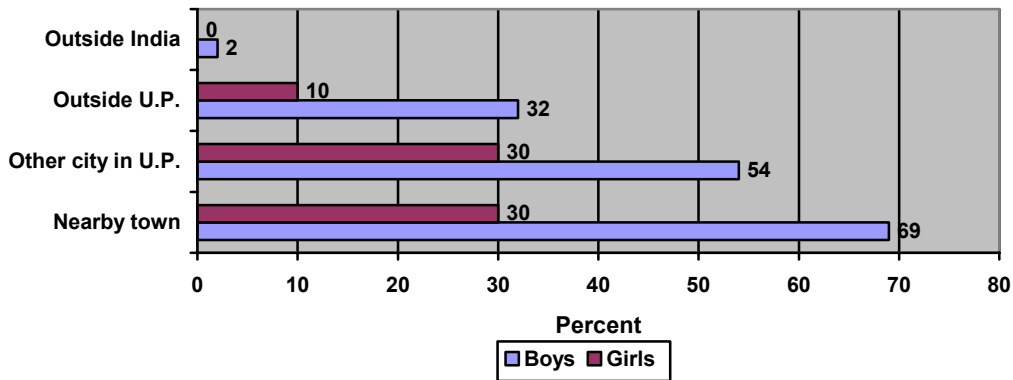
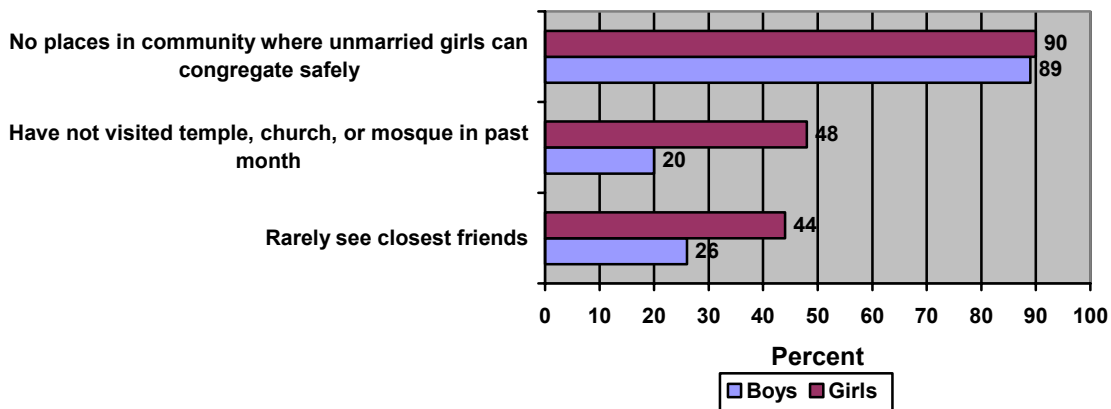


Figure 2. Perceptions about mobility and ability to move within neighborhood



Further analysis revealed that 52 percent of boys and 59 percent of girls expressed a desire to go to places outside the home more often. However, when asked to name a specific place they would like to visit frequently, more girls (58%) than boys (37%) gave a definite reply. The places they would like to visit also differed significantly: 36 percent of girls wanted to visit their relatives more frequently as compared to only 15 percent of boys. Interestingly, both girls and boys reported an influence of social norms that restricted their mobility, as about half (51% of boys and 58% of girls) acknowledged that venturing outside their homes could damage their reputations.

Figure 2 shows that both boys and girls agreed that there was no place in the community where unmarried girls could safely congregate for any purpose. This finding reflects the local norms governing the limited use of public space by unmarried girls. Traditionally, both married and unmarried women in India follow religious customs and visit temples, mosques, churches, or other places of worship. However, the findings from the baseline survey revealed that only about one-half of girls (48%), as compared to the majority of boys (80%),

had visited a place of worship in the past month. The normative restriction on girls' mobility is also shown in Figure 2, which indicates that girls were more likely than boys to report that they rarely saw their closest friend in the past month (44 and 25%, respectively).

Time Allocation and Work

Tables 4 and 5 present an analysis of how boys and girls used their time. It is expected that younger adolescents would spend their time differently than older adolescents (see Table 4). In general, boys reported spending much more time in paid work than girls, and older adolescents spent more time than younger ones in paid work activities. The average number of hours spent in paid work was almost double for older boys 17-19 years old (2.6 hours) compared to younger boys 14-16 years old (1.5 hours). The opposite effect was seen with time spent on education. In general, younger adolescents reported spending more time on their education than older adolescents, and boys spent more time than girls. Big differences between boys and girls were seen in the amount of time devoted to household chores: girls reported spending almost four times as many hours as boys, with both older girls and boys spending more time than younger adolescents on these tasks.

Table 4. Time reported on activities during the day before the interview, by age group (average hours)

Activities*	Girls (n= 1,683)		Boys (n= 1,518)	
	14-16 years	17-19 years	14-16 years	17-19 years
Household chores	4.0	4.8	0.90	1.1
Education	3.9	2.8	4.7	3.2
Personal care (including napping)	3.3	3.5	3.1	3.3
Recreation	2.6	2.6	3.3	3.3
Unpaid work	0.15	0.20	0.34	0.42
Paid work	0.10	0.17	1.5	2.6

*Does not include time spent sleeping during the night.

Table 5 shows the number of girls and boys involved in activities during the day before the interview. More girls than boys engage in watching TV for recreation and on average they watch it for a longer period of time. The average hours spent by boys and girls on recreational activities other than watching TV is similar (1.6). More boys (28%) than girls (3.3%) engaged in paid work. Boys who were engaged in paid work, on average, spent 8.7 hours a day as compared to the 3.9 hours reported by girls.

Table 5. Reported activities during the day before the interview, by time in activity (average hours)

Activities*	Girls (n= 1,683)			Boys (n= 1,518)		
	Number	Percent	Average hours	Number	Percent	Average hours
Household chores	1,515	90	7.4	350	23	2.4
Education	704	42	3.3	685	45	3.4
Personal care (including napping)	1,610	96	2.2	1,507	99	2
Recreation other than watching TV or movies	288	17	1.6	583	38	1.6
Watching TV or movies	1,255	75	2.4	893	59	1.9
Unpaid work	111	7	2.6	88	6	6.5
Paid work	55	3	3.9	346	23	8.7

*Does not include time spent sleeping during the night.

Employment and Savings History

The results presented in Figure 3 are congruent with the time use findings. The proportion of boys who had ever worked for pay (34%) was five times greater than the girls (6%). Similarly, a big difference was observed among those who were currently engaged in paid work (see Figure 3).

Figure 3. Employment among girls and boys

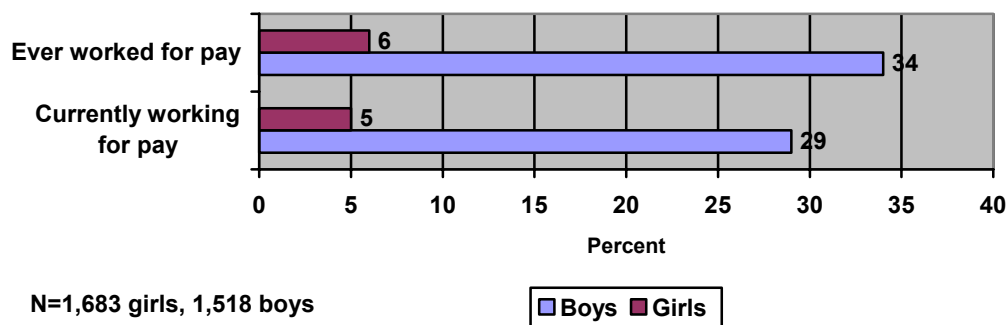
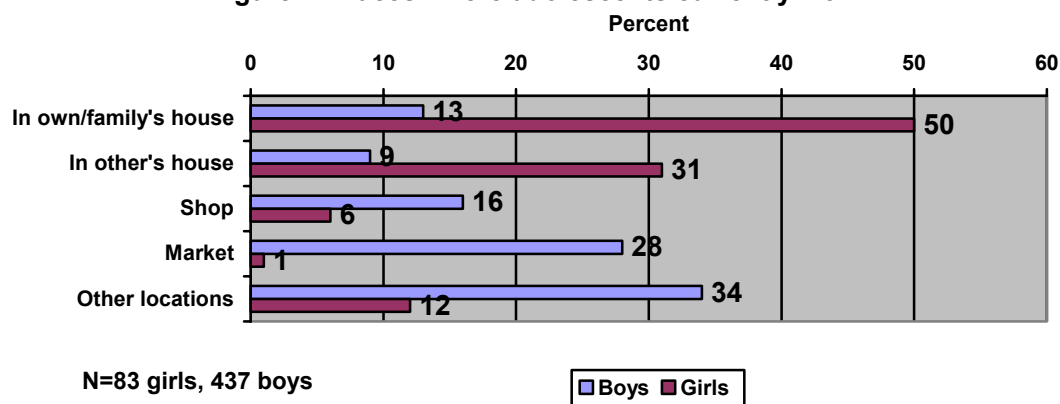


Figure 4. Places where adolescents currently work

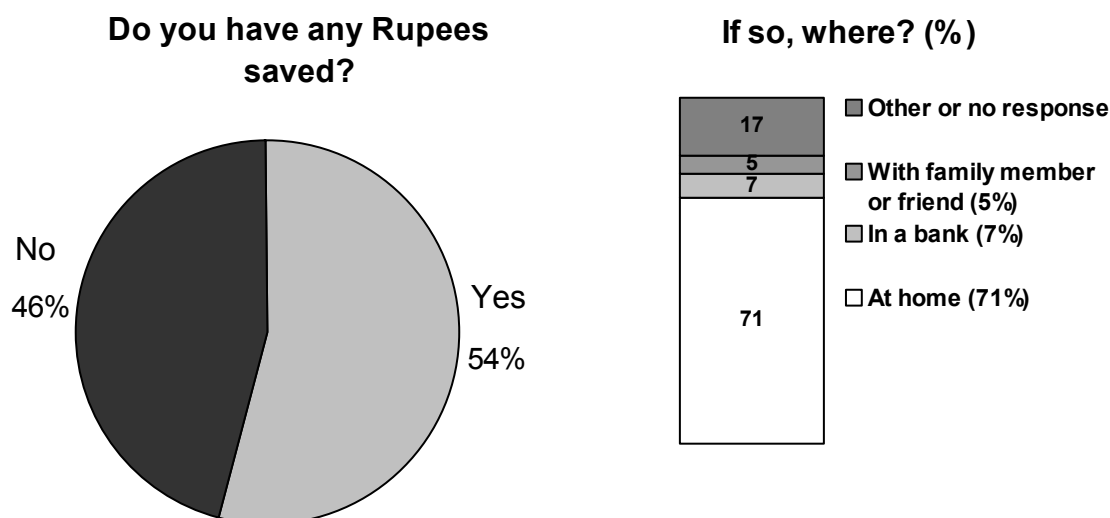


An analysis of the place of work of boys and girls currently engaged in paid work (see Figure 4) revealed that while girls mostly worked at their own home (50%) or someone else's home (31%), the common workplaces for boys were shops (16%), markets (28%), and other locations (34%). Generally, the paid work girls were doing at home included production of light bulb filaments, silver links for simple jewelry, and packing materials for storage.

Savings

Overall, slightly more than one-half (54%) of the girls in the study reported having some cash savings, as compared to about one-quarter (26%) of the boys. The results presented in Figure 5 are for girls only, and show that among those girls who had some cash savings, most kept it at home (71%). Anecdotal reports suggested that girls were hesitant to open savings accounts because of the mistaken belief that banking regulations require joint ownership of the account with one of their parents. Other findings from the baseline survey

Figure 5. Savings practices among adolescent girls

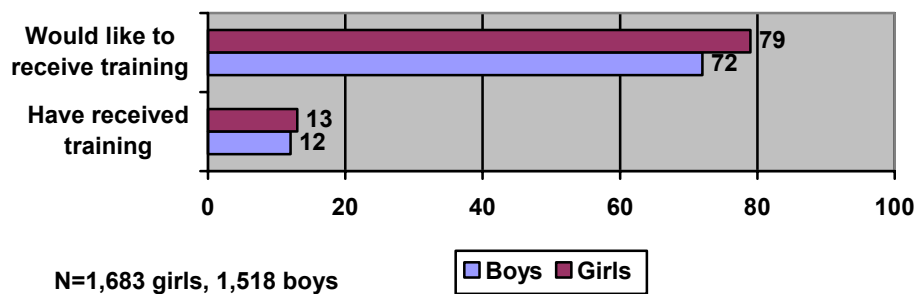


(not shown in Figure 5) reveal a strikingly different distribution of places where boys kept their savings. Among boys who had savings, 52 percent kept their savings at home, 26 percent used a bank, and 14 percent kept the savings with a family member or friend. The greater reliance on banks among boys is, in part, a result of their greater mobility and autonomy.

Knowledge about Vocational Training

Prior to the introduction of vocational counseling and training courses by the OR research team, very few adolescent boys or girls had ever received any type of training. Remarkably, an almost equal proportion of boys and girls reported a prior experience with vocational training: 12 percent and 13 percent, respectively (see Figure 6). A large majority of the adolescents in the study sites indicated a desire for training. The majority of boys' responses to a question about desired types of vocational courses fell into two categories. They expressed an interest in computer training (41%) or other technical and manual skills (43%). The girls indicated a broader range of preferred courses, including dressmaking or tailoring (56%), computer training (24%), handicrafts (17%), cooking (14%), and beautician skills (12%). Many adolescents gave multiple choices for training courses desired. These results clearly indicate the appropriateness of the intervention from the participants' perspective.

Figure 6. Adolescents who had or wished to receive vocational training



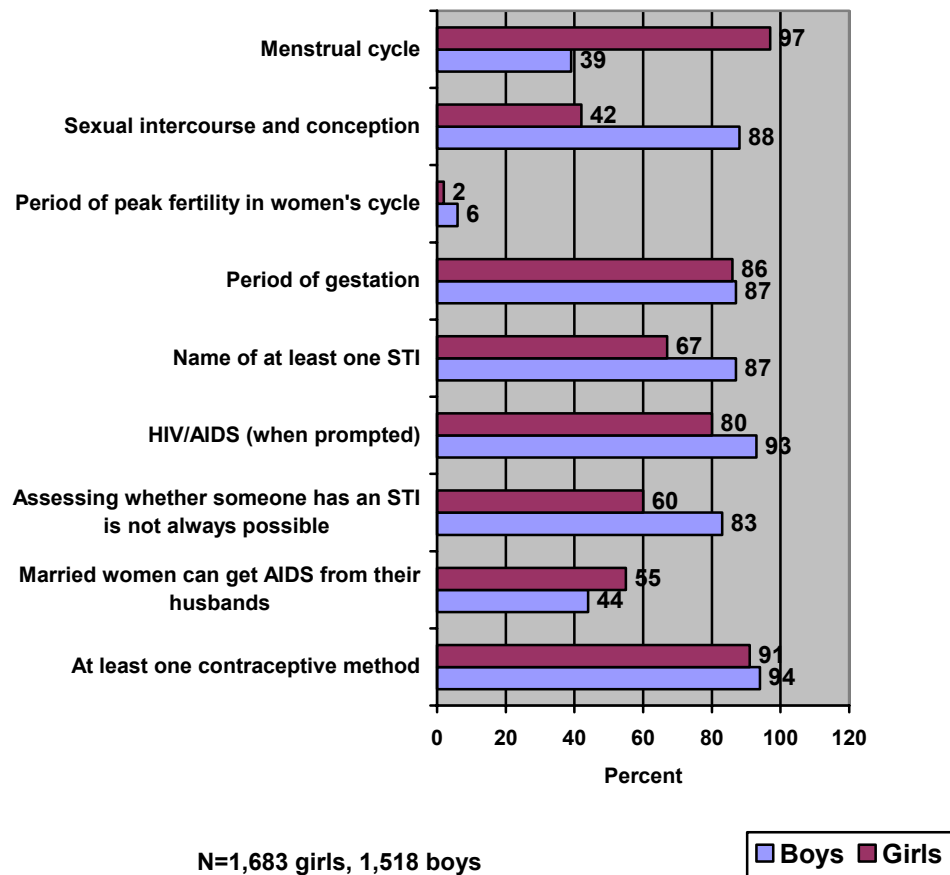
Reproductive Health Knowledge

The baseline survey results indicated there were several areas of insufficient knowledge and awareness about reproductive health among both adolescent boys and girls. Overall, girls reported less knowledge than boys on most of the indicators listed in Figure 7. However, on some subjects such as the menstrual cycle, girls had better knowledge than boys (97% of girls compared to 39% of boys). Eighty-eight percent of the boys had knowledge of sexual intercourse and conception compared to only 42 percent of the girls.

For certain indicators, however, knowledge among both boys and girls was remarkably low. For example, very few adolescents knew about the fertile period of the woman's menstrual

cycle (6% of boys and 2% of girls). Although more than 90 percent of adolescents were aware of at least one contraceptive method, only about one-third (32%) of the girls mentioned condoms spontaneously, as compared to 82 percent of the boys (not shown in Figure 7). Other findings also showed that girls' knowledge about condoms was weak: only 37 percent of them knew that using condoms could provide protection from HIV infection, as compared to 84 percent of the boys.

Figure 7. Knowledge of reproductive health issues



Parent Survey Findings

Of the 2,452 households identified with respondents (parent and adolescent), parent interviews were completed in 82 percent (n=2,014) of the cases. Among the 438 parents who could not be interviewed, 54 percent (n=237) were unavailable, 29 percent (n=128) failed to complete the interview, and the remaining 17 percent (n=73) refused to take part in the study.

In all, 1,199 parents in the experimental areas and 815 parents in the control areas were interviewed. In these interviews, information was collected about the household, adolescents (e.g., literacy, employment, vocational training), and about the parents themselves.

Drinking Water, Toilet, and Bathroom Facilities

The main source of drinking water in the two areas was similar. Over three-fourths of the households were using tap water. Another 18 percent in the experimental area and 14 percent in the control area were using hand-pumps (tube wells), while the remaining four to five percent of households were dependent on tanker trucks, rivers, or dug wells for their drinking water.

There was a significant difference between the experimental and control areas regarding the type of toilet and bathroom facilities. Less than half of the households had their own toilet with water flush facilities. Thirty-one percent of households from the experimental areas and 42 percent from the control areas had no toilet facilities. Seventeen percent of the households in the experimental areas and nine percent in the control areas had a pit toilet or latrine, while three to four percent used public toilets.

It is important to have a facility for bathing to maintain the health and hygiene of the family. Fifty percent of households in the control areas and 43 percent in the experimental areas had no bathroom facilities. Only one-third of families owned a bathroom with a roof and doors, while others had a bathroom with no roof or doors. Thus, the majority of the population bathed without removing their clothes and was unable to clean themselves properly.

Educational Status

Table 6 shows the educational status of the household members as reported by parents. About three-quarters of the population in the experimental areas (72%) and the control areas (76%) ever attended school. The levels of education of the household members were similar in both areas, with around 40-42 percent having attended up to the middle or secondary level.

Table 6. Educational status of household members age 6 and above (percentage)

Educational Status	Experimental			Control		
	Male (n=4,632)	Female (n=4,030)	Total (n=8,622)	Male (n=2,918)	Female (n=2,561)	Total (n=5,479)
Ever attended school	76	65	71	81	67	74
Level of schooling						
Illiterate	24	36	29	19	33	26
Primary	27	23	25	25	25	25
Middle or secondary	41	34	38	45	35	41
Graduate or higher	8	7	8	10	7	9

In both areas, a higher percentage of males than females completed each level of schooling. One-third of the female population in the study area was illiterate, while one-fourth of the males in the experimental areas and one-fifth in the control areas were illiterate.

Marriage

Table 7 shows that some parents were married by the time they were 12 years old. However, the number of female respondents who were married between the ages of 13-17 was quite high both in the experimental (57%) and in the control (54%) slums.

In case of male respondents, about one-fifth got married between the ages of 19 and 20; about half did so after reaching 21, the legal age for men to marry. However, a large proportion of their spouses were between the ages of 13 and 17 when they married (47% in the experimental and 40% in the control group).

Table 7. Age at marriage (percentage)

	Experimental		Control	
	Male (n=342)	Female (n=822)	Male (n=191)	Female (n=610)
Age at first marriage				
≤ 12	2	10	5	11
13-17	13	57	18	54
18*-20	35	24	37	27
21≤**	48	8	38	6
Do not know	2	2	2	2
Age of spouse at first marriage				
≤ 12	8	2	13	4
13-17	47	9	40	12
18*-20	31	28	32	29
21≤**	13	56	13	52
Do not know	1	5	3	4

* Legal age of marriage for girls ** Legal age of marriage for boys

Permission for Attending Vocational Training Courses

According to the parents, more girls (28%) than boys (20%) sought permission to attend vocational training courses. However, only 22 percent of the girls and 17 percent of the boys were permitted to attend the course. A still lower percentage of girls (9%) and boys (10%) actually attended any vocational training courses.

Mobility

Parents were asked about their perceptions of mobility for boys and girls within and outside Allahabad. The analyses are based on parents' responses about each of the adolescents in their family. Sixty-three percent of male and 54 percent of female respondents revealed that they would allow their adolescent children to visit nearby towns of Allahabad unaccompanied. Further analysis shows that the permission to visit nearby towns would be granted more to older adolescents (ages 17-19), those who are married, and to sons. Both in the experimental and control areas, 80 percent of all respondents (male and female) would allow sons to go to another town alone, while less than one-third of them would allow their daughters to do so.

The parents were asked to list various places in or near Allahabad where they would allow their adolescents to go with or without company (see Table 8). In both experimental and control groups, one-fourth or less of the parents said that they would permit their adolescent girls to visit places like shops, nearby villages, friends' homes, or fields alone. The majority of parents did not object to their daughters visiting these places if accompanied by someone. In the case of boys, the majority of parents did not feel the need for such restrictions. According to the parents surveyed, one-fourth of the girls from the experimental and control sites could go to shops unaccompanied, as compared to 70 percent of the boys. One-third of the girls could visit a neighbor or friend without company.

Table 8. Perceptions of parents regarding mobility of young adolescents to places in or near Allahabad (percentage)

Place	Daughter or daughter-in-law				Son or son-in-law			
	With Company		Without Company		With Company		Without Company	
	Exp. (n=1,004)	Cont. (n=661)	Exp. (n=1,004)	Cont. (n=661)	Exp. (n=1,023)	Cont. (n=644)	Exp. (n=1,023)	Cont. (n=644)
Neighbor	45	43	33	35	28	22	66	69
Shop	47	45	27	29	28	22	68	73
Field	46	45	15	18	29	24	54	64
Friend	57	53	22	25	28	24	66	70
Relative	67	68	14	14	35	30	60	63
Nearby village	64	63	12	14	34	28	57	63
Nearby health outlet	66	64	13	17	32	27	63	66
Shopping mall	63	62	14	16	32	28	63	65

Exp. = Experimental Cont. = Control

Reproductive Health

Table 9 presents unprompted knowledge of different contraceptive methods by fathers and mothers. The table shows that awareness of contraceptive methods in the two study sites was quite similar. In general, men were more aware of male methods while women were more familiar with female methods. The methods that were more commonly known were pills, condoms, male sterilization, female sterilization, and the IUD. Few knew about injectable contraceptives (6% of men and 14% of women). With the exception of the pill and the condom, awareness of all modern methods is low and there is adequate scope for further improvement.

Table 9. Parents' spontaneous knowledge of contraceptive methods (percentage)

Awareness of contraceptive methods	Experimental		Control	
	Males (n=368)	Females (n=828)	Males (n=198)	Females (n=616)
Pill	84*	87*	85	89
IUD	21*	40	37	45
Injection	6	14	6	15
Norplant®	3	1	2	1
Condom	75	48	79	59
Female sterilization	51*	46	55	47
Male sterilization	50*	31	49	32
Rhythm/safe period method	7	6*	5	3
Withdrawal	5*	5*	3	1

* p<0.01

The percentage of men and women who ever used a contraceptive method is shown in Table 10. About 60 percent of the parents reported ever using contraceptives. A higher proportion (69%) of male parents from the control group reported use. The more commonly used methods were female sterilization and condoms, followed by pills and IUDs. Use of natural family planning methods like safe period or withdrawal is not uncommon and many parents from both the groups reported use of these methods, particularly the safe period method.

Table 10. Parents' ever use of contraceptive methods (percentage)**

Contraceptive method used	Experimental		Control	
	Male (n=370)	Female (n=830)	Male (n=190)	Female (n=616)
Pill	13	11	22	7
IUD	5*	8	13	11
Injection	1*	1*	3*	1*
Norplant®	0*	0*	0	0
Condom	29	12	35	14
Female sterilization	31	41	45	43
Male sterilization	1*	2*	8*	3*
Rhythm/safe period method	10	5	10	3*
Withdrawal	2*	2*	4*	3*
Percentage ever used any method	59	56	69	59

* less than 20 cases

** Percentage adds to more than 100 because of multiple responses

Among the men and women who were currently married, more than half were currently using a contraceptive method (see Table 11). The most widely used method was female sterilization, followed by condoms. The method use pattern was similar to ever used methods described in Table 10.

Table 11. Current contraceptive method use among married respondents

Current Use	Experimental		Control	
	Male (n=328)	Female (n=699)	Male (n=173)	Female (n=522)
Number of current users	166	372	102	281
Percent	51	53	59	54

Knowledge about Sexually Transmitted Infections

Knowledge about HIV/AIDS was high compared to knowledge of other sexually transmitted infections (STIs) (see Table 12). Fathers had comparatively better knowledge of HIV/AIDS. Seventy-seven percent of men from the experimental areas and 84 percent from the control areas mentioned that they have heard of HIV/AIDS. The corresponding figures for women were 68 and 66 percent, respectively. The majority of the fathers and mothers knew that HIV/AIDS was transmitted through sexual intercourse. More mothers than fathers were aware that HIV/AIDS could be transmitted by using infected needles or syringes and by receiving an infected blood transfusion. Moreover, the majority of mothers and a little less than one-half of the fathers agreed that a woman could contract HIV/AIDS even if her only sexual partner was her husband.

Parents' knowledge about other STIs was poor. Less than 30 percent of men and less than 10 percent of women mentioned syphilis, followed by gonorrhea. As seen in Table 12, a higher percentage of the fathers than mothers had knowledge of various STIs. Few of the parents could specify the symptoms of these STIs. Three-fourths of the respondents said that they did not know about the symptoms, while the others mentioned a foul smelling discharge.

Table 12. Parents' knowledge of sexually transmitted infections (percentage)

STIs	Experimental		Control	
	Male (n=366)	Female (n=832)	Male (n=200)	Female (n=615)
HIV/AIDS	77	68	84	66
Syphilis	22	6	22	9
Gonorrhea	18	5	10	6
Trichomoniasis	2	2	2	2
Genital herpes	4	2	1	1
Chlamydia	2	2	1	1

Protection Against Sexually Transmitted Infections

Parents were also asked what precautions they could take to avoid becoming infected with a sexually transmitted infection. Table 13 shows that a majority (58-60%) of the men and 20-27 percent of the women were aware of condom usage as an effective protection against STIs. Further, one-third of the fathers and one-fourth of the mothers mentioned that having only one sexual partner could help in avoiding STIs. Still, a majority (over 60%) of the mothers and one-fifth of the fathers (21%) were unaware of sources of protection against STIs.

Table 13. Parents' knowledge of protection against STIs (percentage)*

Prevention methods	Experimental		Control	
	Male (n=367)	Female (n=832)	Male (n=200)	Female (n=615)
Use condoms	60	20	58	27
Have only one sexual partner	36	26	32	24
Do not have sex	13	3	13	6
Ask partner to be faithful	4	9	5	7
Other	3	3	7	3
Don't know	21	60	22	61
Unaware of sexually transmitted infections	1	1	1	1

* Percentage adds to more than 100 because of multiple responses

Reproductive Health Topics that Respondents Want to Learn About

Parents were asked their opinions about the role of schools, organizations like CARE, doctors, print media, and others in imparting reproductive health education to adolescents and about the topics they felt should be covered in educational discussions. Ninety-five percent of men and 89 percent of women agreed that CARE could provide reproductive health education to their adolescent boys and girls. Schools were also strongly viewed as appropriate venues for reproductive health education.

Table 14. Topics of reproductive health that parents want to learn (percentage)*

Topics that parents would like to learn more about	Experimental		Control	
	Male (n=144)	Female (n=333)	Male (n=87)	Female (n=224)
HIV/AIDS	71	55	61	38
Pregnancy	11	22	18	43
Anatomy/physiology of the body	13	29	22	31
Ejaculation	16	9	9	14
Menstruation	3	15	6	19
Sexual intercourse	19	11	9	9
Contraceptives	3	7	1	16
STIs	6	12	10	11
Other	4	10	6	9

* Percentage adds to more than 100 because of multiple responses

Twenty-five to 30 percent of the parents felt confident that they knew enough about sexual and reproductive health issues to discuss them with their adolescent children or daughters-and sons-in-law. Many parents, however, indicated that they would like to learn more to be able to discuss sexuality with their children. Table 14 provides information on topics parents want to learn more about. Parental responses clearly indicated that they lacked sufficient reproductive health knowledge and felt that their children need to receive reproductive health education.

Midline Survey

The midline survey was conducted in April 2002 only in the experimental slums. Girls who participated in the first group of vocational training courses offered in August and September 2001 were eligible respondents for the midline survey. Of the 232 girls identified, 206 were successfully interviewed, yielding an 89 percent response rate. Of the 26 girls who did not take part in the survey, five girls had moved away from their previous residence after getting married, and 13 girls were unavailable either because the family had moved or because they were not residing at home at the time of survey. Seven girls declined to give interviews and one interview was only partially completed. Unfortunately, matched baseline data was available only for 62 cases. The failure to link all of the cases in the midline survey to the baseline occurred because girls either did not participate in the baseline survey or used different names (many variations are common in India). The low rate of successfully matched cases limited the research staff's ability to examine changes in the girls' lives. Further investigation of the study's impact will be undertaken by comparing the baseline and endline surveys.²

Background Indicators

Of the 206 adolescent girls interviewed, 104 were ages 16 or younger, and 102 girls were ages 17 or older. Virtually all (96%) of the girls were unmarried. The girls selected for the midline survey were only those who participated in the first set of vocational courses. Thereafter, many more new girls attended other courses (see Table 1 for a summary of course enrollment). A few new groups of adolescent girls were also formed during the months after the first set of vocational courses.

Eleven percent of the girls interviewed in the midline survey were working as peer educators. In all, 44 of the 206 girls (21%) were working as peer educators with the CARE ASHRA project. Peer educators are volunteer workers selected from slums by CARE staff to form adolescent groups and provide reproductive health education either in groups or on a one-on-one basis. Approximately 85 percent of the adolescent girls who had participated in a vocational training course had attended school. However, only 39 percent of the girls – 53 percent of those ages 16 or younger and 23 percent of those ages 17 or older – were currently attending school at the time of the survey.

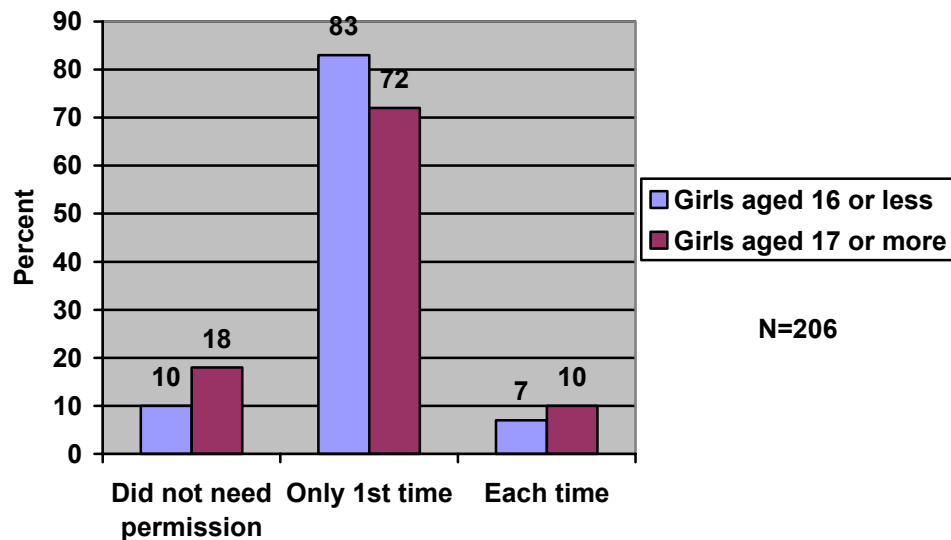
Attendance at ASRHA Project Meetings

All respondents had attended at least one reproductive health meeting; the vast majority (94%) of the girls in the midline survey reported that they regularly attended these meetings, which were held once a week for approximately an hour.

² Because of the difficulties encountered in matching midline responses to the baseline, considerable effort is being devoted to develop procedures for linking endline respondents to the baseline data.

The adolescents were asked if they needed their parents' permission to attend the adolescent meetings. Three-fourths (78 percent) said that they needed permission from parents or guardians only the first time they attended a meeting (see Figure 8). Fewer than 10 percent of the girls needed to ask permission each time before attending the adolescent meetings.

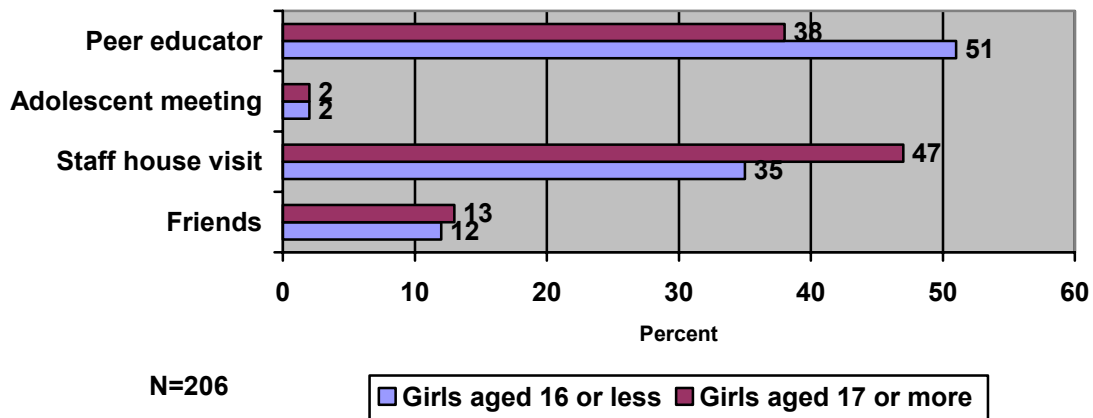
Figure 8. Percent of girls needing permission to attend adolescent meetings



It is noteworthy that one-half of the girls reported that their parents encouraged them to attend the adolescent meetings. One contributing factor could be that about one-fourth (27%) of the girls' mothers had been members of CARE's women's health associations, a sister project to the adolescent reproductive health project.

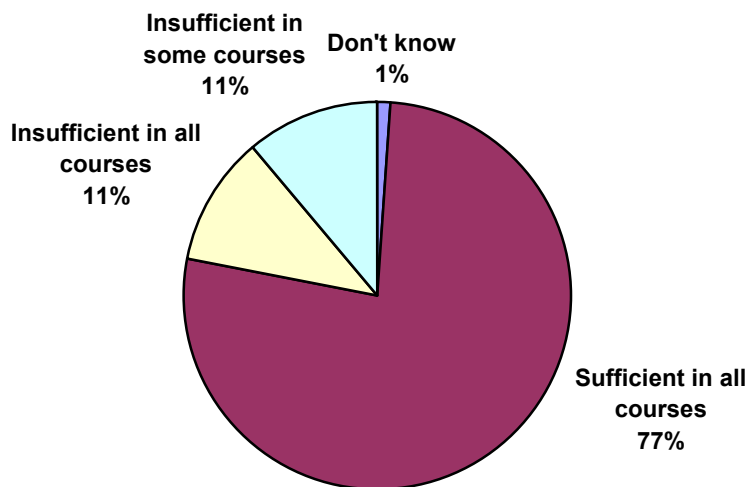
Respondents reported that they first heard information about vocational training from friends, peer educators, and home visits by project staff (see Figure 9). The most frequently cited source of information about vocational training was a peer educator, followed by project staff.

Figure 9. Where girls first heard about vocational training



The results presented in Figure 9 show that peer educators were known by their peers and passed on information. In addition, home visits by staff provided a good means to communicate information to adolescents. Field visits and discussions with adolescents and parents also suggest that, for the younger adolescents, a visit by the project staff was more important than one from the peer educator in conveying critical information about the vocational training courses. This is despite the fact that younger adolescents often first heard of the training through peer educators.

Figure 10. Percent finding the course curriculum sufficient



A flipbook was prepared with information about the 21 different vocational courses including details about the duration, fee, and the skill involved. Researchers also provided the girls with a photograph of the item to be produced during the training to help them understand the skill. Each adolescent group was given a flipbook, and most of the girls found the information provided in it sufficient (80%) or somewhat sufficient (18%) in helping them

make a decision about which course they wanted to attend. All of the 41 girls who found the content of the flipbook insufficient were asked to specify the areas that needed modification. Those that wanted more details asked about the material expenses, demand for the product in the local market, and income generation potential.

The girls were asked if they found that the vocational course curriculum to be sufficient (see Figure 14). The large majority (77%) felt that the curriculum was adequate in all of the courses, 11 percent said it was sufficient in some courses, while 11 percent felt that it inadequate in all of the courses.

Participants were highly satisfied with the trainers (80-95%). Given the level of poverty and the absence of training programs for girls in the slums, it is likely that participants were grateful for this initiative, and serious criticism was not expected. The few participants who were critical felt that the trainers went through the lessons too quickly to enable them to fully follow the instructions.

Use of Vocational Skills

The majority of the girls who took part in one or more vocational training courses reported that they had used the skills that they had learned six months later (see Table 15). This included more than 70 percent of those trained in food preservation, pot decoration, creative painting, mending, and embroidery, and 64 percent of those who took *mehndi* courses. Fifty-nine percent of girls in crochet and jute doll making courses used their skills, as did 53 percent in tailoring, and 33 percent in candle making courses. During and after the training the items that were made or the skills that were learned were used mainly within the girls' homes and for gifts.

Table 15. Utilization of skills learned through the training

Course attended	Girls who attended the course	Girls who used skills learned	Percentage who used the skills learned
Mehndi	128	82	64
Creative painting	74	54	73
Tailoring	40	21	53
Candle making	24	8	33
Pot decoration	23	17	74
Crocheting	22	13	59
Mending and embroidery	20	14	70
Rope weaving	18	2	11
Jute doll making	17	10	59
Food preservation	16	12	75

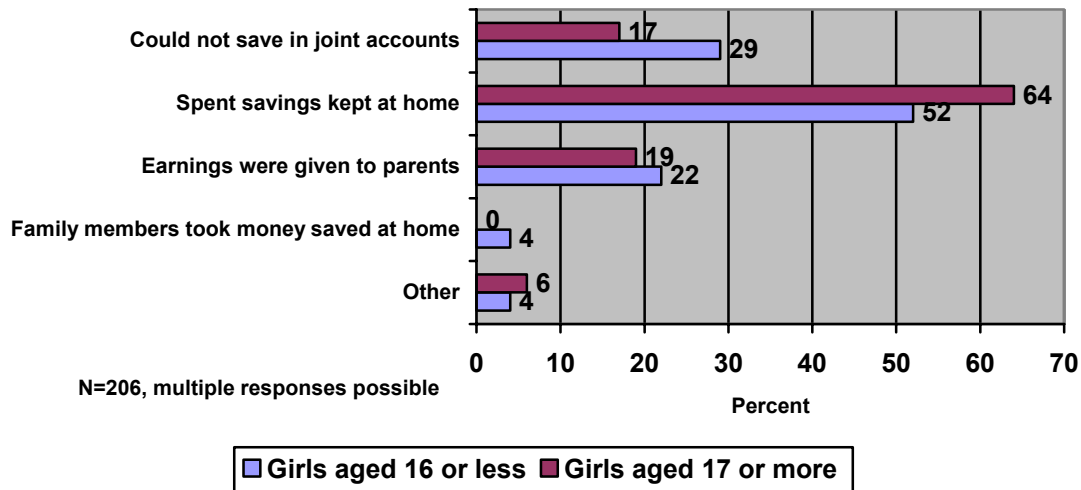
Among the girls who had not used their new skills, the main reasons cited were lack of time (100%), lack of money to buy materials (85%), lack of necessary equipment (50%), and lack of demand or opportunity to sell the product or service (35%).

While most of the girls were not engaged in paid employment after the courses ended, 43 girls (21%) reported that they had worked for pay. Of these, 15 girls (34%) got their current jobs as a result of the skills they learned during the vocational training. Twenty girls were working for pay at the time of the midline survey.

Savings Formation

According to results from the baseline survey, girls were interested in opening a savings account in their name even before the project began. About half of the girls had some savings, but only seven percent used a formal savings institution.

Figure 11. Reasons girls cited for opening a savings account



The results from the midline survey show that after the adolescent meetings began, 61 percent of participating girls opened a savings account in their name in a post office close to their home. Almost all of the girls who had a savings account (95%) said that it was very important for them to save. Girls said they opened accounts in their own names because they felt that they spent money kept at home (59%), they could not save with a joint account (22%), or earnings were given to parents in the absence of a savings account (21%).

The girls were asked if they had plans for using the money that they saved. Only 29 out of the 63 girls (46%) who had savings accounts had plans for using the money that they saved. Five of the 29 girls wanted to purchase a sewing machine, and four wanted to spend the money for household expenses or on themselves. Three wanted to purchase raw materials to start an income-generating project. The girls had other ideas for using the money that they saved, including saving money for marriage, helping a mother in crisis, and buying a bicycle.

Comparison between the Baseline and Midline Surveys: Results of the Matched Cases

This section discusses the comparisons for the 62 girls who were interviewed in both the baseline and midline surveys. While the sample of matched respondents is too small to generalize the findings and also may be somewhat selective, there are some findings that suggest the project has had some impact.

Time Use

The average number of hours spent on household chores including sweeping, cleaning, cooking, and washing clothes decreased, and the average number of hours spent on recreation and personal care increased from the baseline to the midline surveys (see Table 16).

Table 16. Reported activities during the day before the interview, by time in activity (average hours)

Activities*	Baseline (n=62)			Midline (n=62)		
	Number	Percent	Average hours	Number	Percent	Average hours
Household chores	60	97	2.9	60	97	2.1
Education	18	29	3	23	37	2.9
Personal care (including napping)	60	97	2.2	62	100	2.7
Recreation other than watching TV or movies	12	19	1.4	13	21	1.8
Watching TV or movies	14	23	2.7	47	76	2.6
Unpaid work	4	7	1.6	5	8	2.2
Paid work	1	2	2	5	8	2.4

*Does not include time spent sleeping at night

There was an increase both in the number of girls and the average time spent on paid work. At the same time, time spent on unpaid work—using skills at home that were acquired during vocational courses, helping mothers in their shops, or making things for sale—increased as well.

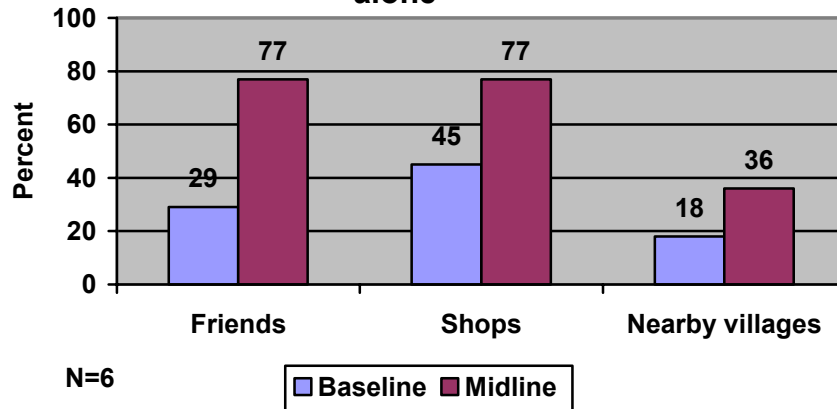
Although the average hours spent on education changed little from the baseline to the midline surveys, the number currently pursuing education has increased from 18 to 23. Similarly, there was a significant increase in the number who reported watching TV or movies during the midline survey from 14 to 47 girls.

Mobility

One of the objectives of the project was to test whether the livelihoods intervention would increase girls' physical mobility and their contact with individuals outside of their families. To assess this, the girls were asked if they could go alone to visit a friend, a shop, or a nearby

village. During the baseline survey, only 29 percent reported being allowed to visit their friends, while in the midline survey, 77 percent said they could visit their friends unaccompanied (see Figure 12). Similarly, only 45 percent could visit a shop alone at the time of the baseline survey; this increased to 77 percent at the midline.

Figure 12. Percent able to visit select locations alone

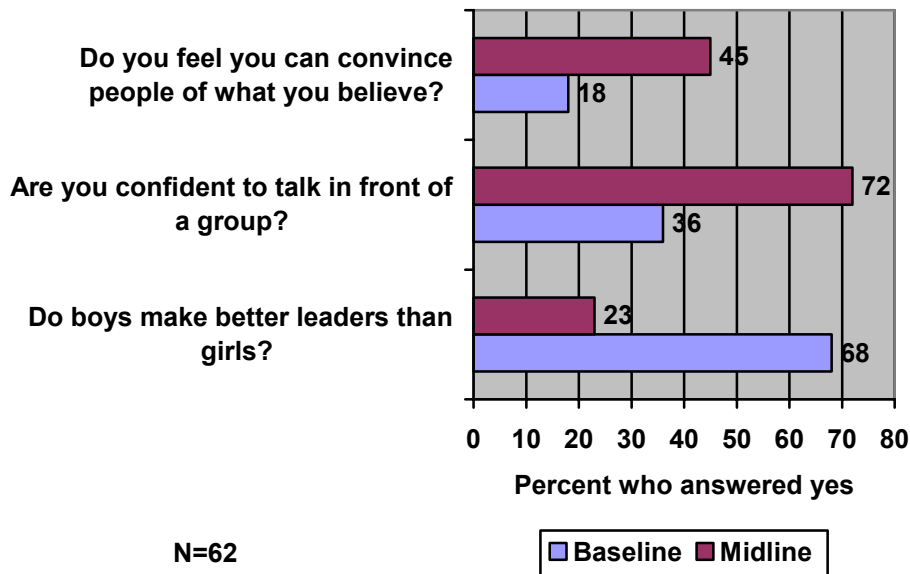


The project helped the girls to organize exhibitions with sales in their own slums and in some places outside of the slums. The purpose of organizing exhibitions in their respective slums was to make others in the community aware of the project’s intervention and thus allow new adolescents to participate. It also created opportunities for greater mobility for the girls. Girls who had been involved in the exhibition felt that it helped them learn skills required for organizing sales, doing neat work, and developing new ideas about designs.

Attitudes and Behaviors

The girls’ attitudes about the roles of men and women in performing different tasks were explored. Figure 13 shows that there were significant changes in the attitudes of adolescent girls between the baseline and midline surveys. Of the 62 matched samples, 45 percent of the girls at the time of the midline survey, compared with only 18 percent in the baseline survey, felt that they could convince other people of something they believed in. Seventy-two percent of the girls were confident talking in front of a group during the midline survey, whereas only 36 percent in the baseline survey reported that they had enough confidence. When asked in the midline survey whether “boys make better leaders than girls?” 23 percent of the girls said “yes,” down from 68 percent in the baseline survey.

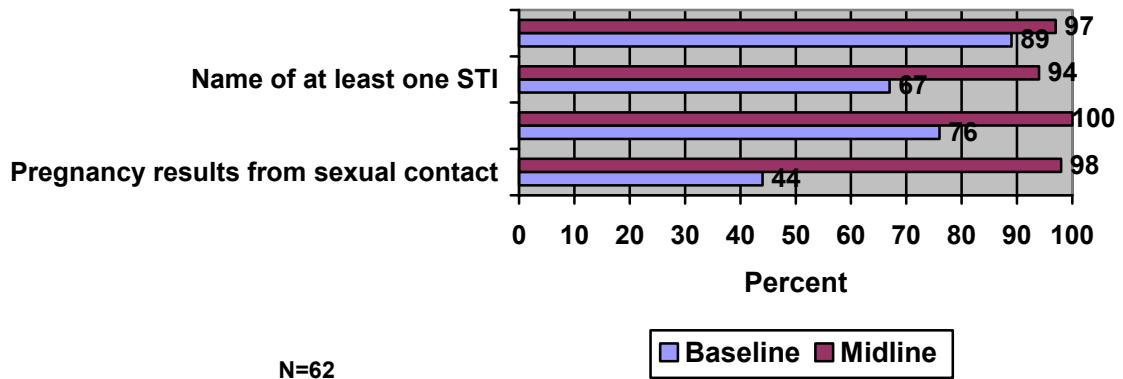
Figure 13. Percent reporting attitudes of self-confidence



Reproductive Health Knowledge

Figure 14 shows that the girls’ reproductive health knowledge increased from the baseline to the midline, in some cases significantly. Ninety-seven percent of respondents in the midline survey, as compared to 89 percent in the baseline survey, could correctly name contraceptive methods. Similarly, 94 percent were able to name a sexually transmitted infection in the midline survey, compared to 67 percent in the baseline survey. All of the girls were able to correctly answer the question about the duration of pregnancy, and 98 percent knew that girls get pregnant through sexual contact.

Figure 14. Girls' reproductive health knowledge



Safe Places

Creating a safe place for girls to convene assured that girls and their parents would be willing to take an active part in the project interventions and would be more likely to participate in future community activities. At the time of the baseline survey, only 13 percent of the adolescent girls indicated that there was a safe place in the community for unmarried adolescent girls to meet. After the intervention began, 95 percent identified a place.

New Friends

A few questions were asked to determine whether the girls developed friendships and felt connected to their peers as a result of the intervention. In the three months preceding the midline survey, over half of the girls had made a new friend (53%). The matched sample revealed that the proportion of girls who made new friends had increased from 16 percent in the baseline survey to 48 percent in the midline survey.



V. CONCLUSIONS

The results from the baseline survey indicated that while there were some differences between the experimental and control groups (primarily with the religious and caste characteristics), the two groups were largely similar in their general characteristics. The baseline survey clearly indicated the appropriateness of the intervention, particularly in pointing to the differences between boys and girls with respect to mobility, time use patterns, savings, and work experience. The types of courses provided for the girls matched well with their interests, and the strategy of integrating vocational training and savings formation activities within CARE's ongoing ASRHA Project reproductive health outreach work was a success. Girls who lived in the study sites generally had weak knowledge of reproductive health topics before the intervention.



The results of the parent survey revealed that parents lacked knowledge of reproductive health, which affected their use of contraceptives. Parents agreed that schools or organizations like CARE should offer reproductive health education. Parents revealed that although many adolescents had asked them for permission to attend vocational courses, some did not get permission. The same was true for mobility. Many adolescents were not allowed to go to places within or beyond Allahabad unaccompanied, with more girls than boys facing

this restriction. The intervention appears appropriate and timely to encourage changes in restrictions placed by parents on adolescents. Adolescents also expressed interest in obtaining vocational training

The midline survey shows some positive changes in the expected direction. These changes are reflected in terms of increased use of new skills, change in time use patterns, increased work aspirations, and more progressive attitudes regarding gender roles. Girls expressed satisfaction with the courses and trainers. Many used their skills after completing the vocational courses. They also expressed a desire for the adolescent meetings to continue (97%) and talked of these meetings as a time to relax and mingle with their peers.

In the baseline survey, only 13 percent of adolescent girls said that there was a safe place in the community for them to congregate, as compared to 95 percent in the midline survey. This result strongly reinforced the importance of providing girls with a safe place to gather near their homes. A large number of participants opened savings accounts and felt confident about going to the post office on their own to deposit money. The full effect of the intervention will not be known until the endline survey is conducted and the control and experimental groups are compared. However, the results from the midline survey of a sub-sample of adolescent girls suggested that the livelihoods project had the desired effect on adolescent girls.



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