

**Adolescent Girls in India
Choose a Better Future:
*An Impact Assessment***



**The Centre for Development and Population Activities (CEDPA)
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Executive Summary

India has one of the fastest growing youth populations in the world, with an estimated 190 million adolescents. Girls below 19 years of age comprise one quarter of India's rapidly growing population. The majority is out of school and has limited choices available for the future. Girls are caught in the cycle of early marriage, repeated pregnancy and poverty. The Centre for Development and Population Activities (CEDPA) has been implementing the pioneering Better Life Options Program (BLP) for adolescents in India through its partner organizations since 1989. The program uses an empowerment model that offers adolescent girls a combination of life skills: literacy and vocational training, support to enter and stay in formal school, family life education, and leadership training. A unique feature of the program is its holistic approach integrating education, livelihoods and reproductive health.

A cross-sectional comparative impact study was conducted to assess the impact of CEDPA's Better Life Options Program on the decision making and reproductive health behavior of adolescent alumnae girls who graduated from the program in the peri-urban slums of Delhi (implemented by Prerana, Delhi), rural Madhya Pradesh (implemented by Bharatiya Grameen Mahila Sangh – BGMS) and rural Gujarat (implemented by Gujarat State Crime Prevention Trust – GSCPT). The study compared BLP alumnae who completed the program between 1996 and 1999 with a similar control group of young women (15-26 years old) who had not been exposed to the program. To reduce possible self-selection bias, two confounding variables were controlled: girls' education and parents' education/occupation.

The study found significant differences between the controls and BLP alumnae in terms of education, vocational skills, economic empowerment, autonomy and mobility, self-confidence, reproductive health and child survival behavior, and health seeking. BLP alumnae were significantly more likely to be literate, to have completed secondary education, to be employed and to have learned a vocational skill. More BLP girls traveled outside their village and went to a health center alone in the last six months. In addition, BLP alumnae were more likely to make autonomous decisions about going to the market, spending what they earned and deciding when to marry. These differences in autonomy were significant even after controlling for education of girls and their parents.

Married alumnae reported significantly more positive behaviors compared to married controls in a host of indicators related to reproductive health and child survival. A significantly higher number of BLP alumnae were married at age 18 or above and reported to use contraception. Among respondents who had experienced a pregnancy, alumnae were more likely than controls to have received ante and postnatal care and to have delivered in a health institution. Girls' education seemed to be the critical factor in many of the positive reproductive health behaviors. However, even after controlling for girls' education, receiving prenatal care, two doses of Tetanus Toxoid (TT) and postnatal care remained significant. For child survival practices among married respondents with children, BLP alumnae reported higher rates of complete primary vaccinations among children over one year old compared to controls, and higher rates of having given oral rehydration solution during bouts of diarrhea. Awareness of HIV/AIDS was significantly higher among BLP alumnae as compared to the control group. These child survival

practices and HIV awareness remained highly significant even after controlling for girls' education.

The BLP empowerment model has resulted in significant impact on participants' economic empowerment, self-esteem and confidence, autonomous decision-making, reproductive health, and child survival practices. The future directions include: strengthening the adolescent-friendly reproductive health component, improving the nutritional status of girls, initiating Iron and Folic Acid (IFA) supplementation and TT immunization for adolescent girls, promoting keeping girls in schools, ensuring that girls complete secondary school and finally, initiating a Better Life Options Program for boys.

"The adolescent girl still remains a young plant that neither gets light nor water. She remains the flower that could have blossomed but didn't....."

Kamla Bhasin from "Our Daughters"

Background

In many countries, the concept of a transitional period between childhood and adulthood is relatively new. During this period, known as *adolescence*, individuals move toward physical and psychological maturity and economic independence, and acquire their adult identity. According to the World Health Organization (WHO), adolescents are individuals aged 10-19, while the broader term "youth" refers to the 15-24 age group. Girls up to the age of 19 comprise about one-quarter of India's population. The majority is out of school and therefore does not receive services from school-based health programs. Within the family, girls – especially older ones – receive less health care and education, nutrition and fewer opportunities for employment than boys. There are limited choices available for the future and girls are caught in the cycle of early marriage, pregnancy and childbearing. There are an estimated 105 million adolescent girls in the age group 10-19 in India. Despite the improvement in the economy and provision of basic services in India, the ratio of females to males has been deteriorating from 972 females to 1000 males in 1901 to 933 females to 1000 males in 2001 (provisional data 2001 Census). Discouragingly, between the 1991 and 2001 census, the sex ratio has declined in Gujarat, Punjab and Haryana. The 1991 census found that in the 0-14 age group there were an estimated 7.8 million fewer girls than boys and in the 0-19 age group the number of "missing" girls was 13-34 million.

The 2001 census provisional figures indicate that only 54% of females are literate compared to 76% of males. According to the World Youth report 1996, the total percentage of girls enrolled at the secondary level in the 15-19 age group was 38% – low compared to boys of the same age (59%). Girls drop out of school because of a lack of female teachers, distance of schools from their homes, parental fear for their daughter's safety, and failure on exams.

For young girls in India, poor nutrition, early childbearing, and reproductive health complications compound the difficulties of adolescent physical development. Anemia is one of the primary contributors to maternal mortality (20-25%) and is associated with compromised pubertal growth spurt and cognitive development among girls aged 10-19. Nutritional deprivation, increased iron demand for adolescent growth, excessive menstrual losses of iron and early/frequent pregnancies aggravate and exacerbate pre-existing anemia and its effects. Most girls are not adequately aware of their increased nutritional needs for growth (especially increasing their food intake to meet calorie demands of pubertal growth), resulting in girls that are underweight and of short stature. Fifteen percent of ever-married adolescent girls are stunted; 40% have a body mass index below 18.5, and 20% have moderate or severe anemia. The poor nutritional status of these adolescent mothers heightens obstetric risk during pregnancy and childbirth, contributes to maternal mortality, and puts their infants at risk. Neonatal and infant mortality rates among adolescent mothers are 60% higher than among infants born to mothers in the 20-29 age group.

In India, school systems are ambivalent about imparting sex education. Even in some schools where sexual and reproductive health education exists in the curriculum, teachers are often too embarrassed and uncomfortable to effectively instruct. On average, most adolescent girls in India have little knowledge of menstruation, sexuality and reproduction. Large numbers of rural and urban populations believe that menstruation contaminates the body and makes it unholy. As a consequence, the girl often sees herself as impure, unclean and dirty. According to the Nutrition Foundation of India, the average age of menarche is 13.4; yet 50% of girls aged 12-15 do not know about menstruation. This is true for rural as well as the urban poor. The lack of information can be attributed to a veil of secrecy that surrounds menarche.

From the beginning of their lives, girls are socialized to accept male domination and ignore their own needs. Discrimination against the girl child in health, nutrition and education is heightened in adolescence. Onset of puberty decreases autonomy and mobility, with increasing restrictions on speech, appearance, conduct and interaction with the opposite sex. Girls inherit their mother's domestic chores and adopt stereotypical gender roles. Low self-esteem and self-worth are common. After marriage, her husband and in-laws control the bride's life. Consequently, the girls enter the "culture of silence."

In India, early marriage for girls receives religious and social sanction. Despite laws raising the legal age of marriage to 18 for girls, there are strong cultural pressures on parents to marry their daughters early. The median age at first marriage among women 20-49 in India is 16.7 with a two-year difference between urban and rural women (18.7 versus 16.0).¹ Among married young women aged 15-19, autonomous decision making and freedom of movement is very low with only 38.6% involved in decisions about their own health care and 86% needing permission to go to the market.² In addition to the psychological immaturity of an adolescent bride, very often her body is not prepared to accommodate the early onset of childbearing. Knowledge about care needed during pregnancy, lactation for health of mother and child, and access to prenatal-postnatal services is limited.

There are over 10 million pregnant adolescents and adolescent mothers in India, with one in six girls age 13-19 beginning childbearing. The National Family Health Survey from 1998-1999 (NFHS-2) found that 56% of adolescent girls are anemic and only 7.4% of married girls age 15-19 use contraception. According to the NFHS-2, among mothers less than age 20, only 68.7% received prenatal care from a health worker or professional, 79.9% received a 3+ month-supply of iron and folic acid, 67.6% received two or more doses of Tetanus Toxoid, and only 41.6% were assisted at delivery by a skilled birth attendant. Statistics show that 50% of maternal deaths in girls 15-19 are due to unsafe abortions.³ Only 37.2% of married women 15-24 have heard about AIDS.⁴

¹ *National Family Health Survey 1998-1999* (NFHS-2), IIPS, Mumbai, 2000.

² NFHS-2.

³ *India's Progress Towards Reproductive Health Goals: ICPD+5*, India Country Paper, MOHFW, February 1999.

⁴ NFHS-2.

CEDPA's Better Life Options Program

CEDPA is an international not-for-profit organization whose mission is “*to empower women at all levels of society to be full partners in development.*” Since 1974, CEDPA has developed and implemented programs aimed at improving women’s access to information and services, and choices and participation related to their reproductive health and life options. Over the years, CEDPA recognized that the specific needs of adolescent girls and young women were not being addressed. When CEDPA began its work with adolescents in India in 1987, a baseline survey was conducted in Delhi. This survey found that the majority of girls were not enrolled in school. Thus, CEDPA launched the Better Life Options Program to challenge life inequities and expand the life options of low-income adolescent girls and young women between the ages of 12 and 20 years. The program uses the empowerment model through an integrated and holistic approach. CEDPA also works to improve girls’ status and increase their income opportunities. Over the years, CEDPA’s advocacy initiatives in India have included increasing public awareness concerning gender discrimination and the needs of girls through community activities and conferences, implementing programs to enable girls to acquire skills in traditionally male-dominated vocations, and increasing joint programming between girls and boys for improving gender-sensitivity.

The Better Life Options Implementation Approaches

The Better Life Options Program (BLP) is grounded in a holistic approach that aims to broaden the life options of adolescent girls by meeting their development needs, while also promoting social change through the education of parents, the family, the community, and decision makers at the local, national and international level. CEDPA believes that girls cannot be worked in isolation. The various stakeholders also have to be sensitized. The framework of the BLP model includes: individual capacity building through literacy, post-literacy and linkages with formal education, Family Life Education (FLE); livelihoods such as Vocational Skills Training (VST); age-appropriate general and reproductive health services; and social mobilization through advocacy and community involvement. These strategies are all geared toward reaching the BLP’s ultimate goal of building the self-esteem and self-confidence of adolescent girls, and expanding their choices related to marriage, fertility, health, vocation, and civic participation. While it was initially difficult to convince parents to permit their daughters to leave their homes and attend the program, it became acceptable to parents when vocational skills training was introduced.

The BLP approach is flexible to enable implementing NGOs to tailor it to the local context. Prerana works in the peri-urban slums of Delhi and uses a community center approach where girls gather for a six-month program of vocational skills, non-formal education and family life education. This consists of a two-tiered structure with a main center run by staff and self-sustaining sub-centers operated by alumnae. Through alumnae clubs, Prerana encourages networking and joint action by girls who have graduated. Bharatiya Grameen Mahila Sangh (BGMS) in Indore, Madhya Pradesh used three distinct approaches to reaching adolescent girls: girls’ collective, a village-based center approach, and a residential program. At the village, BGMS facilitated girls in forming their own collectives that provided a forum for girls to work together on community issues. Girls involved in the collective enrolled in the village training

center to learn vocational skills, non-formal education and family life education in an eight-month program. In addition, there was a more advanced four-month residential program held at the BGMS campus in Rau for a select group of girls. After completing the residential course, girls were encouraged to serve as peer educators and assist instructors in managing village centers. The Gujarat State Crime Prevention Trust (GSCPT) worked in rural Gujarat using a 10-month center approach focusing on vocational training and family life education and leadership training.

Rationale/Justification of the Study

The Better Life Options Program has been implemented in India since 1989. The long-term changes that it has brought to the lives of low-income girls and young women have been documented descriptively but not quantitatively. Therefore, it was important to quantify the impact on the lives (in terms of behavior) of the alumnae girls. In order to strengthen and expand the Better Life Options Program in the future, it was imperative to elucidate the direct and indirect benefits incurred by the alumnae. Furthermore, it was time to reflect on whether the goals and objectives of the Better Life Options Program had been achieved, and if the Program was to continue and expand its outreach in a more effective and efficient manner.

Aim and Objectives of the Impact Study

The *aim* of the study was to measure the impact of the Better Life Options Program on the lives of the girls and young women (age 15-26 years) in comparison to those young women who had not participated in the BLP. The study findings would assist CEDPA in further strengthening and expanding the Better Life Options Program according to the changing needs of girls and young women in India. The *specific objectives* of the study were to determine the extent to which the Better Life Options Program alumnae exhibited a change in behavior in the areas of education, engagement in income-generating activities, decision making, mobility, self-esteem/self-confidence, empowerment, fertility, age of marriage, child spacing, use of contraceptives and health seeking behavior. A registered voluntary organization, Aarogya, which focuses on action-research and is based in Vadodara, Gujarat was selected to design and pre-test the data collection tools, train data collectors, monitor data collection, and analyze the data.

Research Methods, Sampling Frame and Sample

A cross-sectional comparative study design was selected to meet the objectives of this study. This Post-Test Only Control Group Design⁵ was selected, as there was limited baseline data available. In this experimental design, the groups are assumed to be similar before the program intervention based on socio-demographic indicators. This design allows the investigator to measure the effect of a program intervention on the experimental group by comparing that group with matched controls. But this design limits an investigator to determine the extent (or

⁵ This design is described in the *Handbook for Family Planning Operations Research Design* by Andrew A. Fisher, John E. Laing, John E. Stoeckel, John W. Townsend, Population Council, USA, 1998.

magnitude) of change within the experimental group because a baseline pretest measurement was not taken.

The three non-governmental organization (NGO) partners selected for the research were – Prerana in peri-urban Delhi; Bharatiya Grameen Mahila Sangh (BGMS) in rural Madhya Pradesh and Gujarat State Crime Prevention Trust (GSCPT) in rural Gujarat. These three organizations have been partners with CEDPA on their adolescent program in India. The Prerana adolescent program has been implemented since 1989, BGMS since 1993, and GSCPT since 1995. Data were collected through a structured survey questionnaire based on the Demographic Health Survey - DHS (National Family Health Survey – NFHS) in India. The sample comprised alumnae girls who had attended the program from 1996-1999 (the years were selected to maintain a uniformity in the participation of the alumnae girls in the program) and a control group of young women living in comparable areas untouched by the program.

The sampling frame comprised unmarried and married young women (age group of 15-26 years) from alumnae communities, and a control cohort of a similar size, matched on ethnic group and access to health facilities. First, a list of contactable BLP alumnae (married and unmarried) was obtained from each NGO. All contactable married BLP alumnae were part of the study as they formed an important group for assessing the impact of the program on reproductive health (100% sample, n=269). The study included two to three times as many unmarried girls as married girls to obtain the sample size desired. From the list of girls given by each NGO, the research organization, Aarogya, drew a simple random sample using the random number tables and submitted the list to each NGO. This helped prevent any selection bias in sampling. An attrition rate of 10-20% was expected during data collection, which was considered acceptable.

In the sampling for the control group, each NGO selected villages/slums with approximately equal (in terms of number of households) numbers of girls and young women to those in the BLP sample, i.e. the BLP group and control group were drawn from a similar number of sites as far as possible for each NGO. The list of the control villages/slums with the approximate population size and number of households in each was obtained. Depending on the total number of girls to be sampled, for each village/slum, a sample size proportionate to its population was decided. For example, if a village or slum has 15% of the total population in all the control villages/slums combined, the number of girls sampled from that village/slum was also 15% of the total control sample for that NGO. The proportion of married to unmarried girls in the control group was kept the same as the BLP group, i.e. 1:2 or 1:3. Having decided the sample size for each control village/slum, the village was divided into four approximate equal quadrants by area and a one-fourth sample was selected from each quadrant, randomly. Thus, a total of 1693 girls (858 controls and 835 BLP alumnae) formed the study sample. There was no significant difference between BLP alumnae and controls in age, marital status, residential setting, or religion.

Two pre-tested interview schedules, one for unmarried and one for married young women, containing structured questions that were pre-coded, were used to conduct the individual interviews. The tool developed was based on the topics covered in the BLP intervention, for example, reproductive health, HIV/AIDS, self-esteem, menstruation, pregnancy and lactation, childcare during diarrhea, nutrition, immunization and others. The questionnaire was suitable for computer data entry and analysis. Questions on reproductive health, autonomy and child

survival were based on the National Family Health Survey (NFHS-2). The field based pre-testing included assessment for appropriateness of content, language (especially usage of appropriate local terms), coding and format.

In each NGO, young women aged 18-30 years who knew the local language (Hindi and Gujarati) were recruited to be interviewed. Aarogya conducted an intensive three-day training program with each organization to train the investigators on the questionnaires; in particular, the manner of asking questions and the coding process. The training included field practice using the two questionnaires (for married and unmarried girls) in areas other than the study areas. To ensure unbiased interviewing and maximize objectivity, the team of data collectors was not informed that this was an impact evaluation study but rather that it was a survey of adolescent girls and young women. Those who were familiar with the program intervention interviewed the control group girls. The questionnaire also avoided any reference to the word “impact.” The process of random sampling and selection of sample by an external agency were further steps to minimize bias and ensuring that the impact of the BLP was truly measured. After training, each NGO collected the data in the study and control sites over a period of about six to eight weeks.

Constraints and Limitations

Between 1989 and 1999, the Better Life Options Program had trained over 10,000 adolescent girls and young women in India. The Better Life Options Program implementing partner organizations have tried to maintain records of their alumnae, yet it is not known how up-to-date this information is on all the trainees. Many of the adolescents have since married and moved out of their villages. The researchers had difficulties locating some of the Better Life Options Program alumnae. As there were no baseline data on knowledge, attitudes and behavior for comparison, the researchers decided to use a control group. As participation in the program is voluntary, there may have been a self-selection bias towards girls more educated. To control for this possible self-selection bias, a stratified analysis was done, controlling for the confounding influence of the girls’ education and parents education/occupation on BLP impact. Due to lack of data to compare pre- and post-intervention attitudes and behavior, the behavior changes may not be completely due to the program; other external factors may be at play. There may also be a gap between professed and actual behavior. Every effort was made to control for confounding factors and to elicit actual behaviors.

Data Analysis

At the end of the survey, Aarogya entered the data in FoxBASE, and after appropriate quality checks, analyzed the data using the EpiInfo 6.04b⁶ software developed by Centers for Disease Control and Prevention (CDC) and World Health Organization. The software enabled the research organization, Aarogya, to use chi-square tests for statistical significance and risk ratios, as well as stratified analysis using MH chi-square statistics. The analyses controlled for girls’ education, parents’ education and parents’ occupations.

⁶EpiInfo 6.04b: A word processing database and statistical program for public health, Centers for Disease Control and Prevention (CDC), USA and World Health Organization, Geneva Switzerland, Geneva, 1997.

Results

Age of Marriage

One effective strategy for improving maternal-child health and reducing the family size is increasing the age at marriage of girls. A significantly higher percentage of BLP alumnae married after the legal age of marriage, 18 years, (37%) compared to the control group (26%). The control group girls were 35% more likely to get married under 18 years compared to the BLP girls (relative risk ratio 1.35). The mean age of marriage was 17.6 in controls compared to 18.0 in BLP girls. However, from a demographic perspective, the slightly higher mean age at marriage in BLP is not of much significance. Thus more efforts are needed to increase the age of marriage. In BGMS, Madhya Pradesh, the impact of the BLP on the age at marriage was more marked with 27% of BLP alumnae versus 7% control girls married after age 18.

At the time of marriage, one indicator of empowerment is whether the girl has any say in the selection of her husband. A significantly higher proportion of girls in the BLP group (55%) had a say in the selection of their husbands than in the control group (34%), indicating a risk ratio of 1.62. In BGMS, BLP girls were 202% more likely to select husbands on their own or jointly with others compared to the control group girls.

Education Attainment

A significantly higher number of alumnae were literate compared to the controls. Many more BLP girls were also currently studying and had completed secondary schooling. Twenty-seven percent fewer control girls could read/write compared to the BLP alumnae. Twenty-one percent more girls were in formal schooling among the BLP alumnae than among the controls. Completion of secondary school among BLP alumnae was found to be highly significant as compared to the controls (66% versus 46%). Thus, the level of education attained (secondary schooling, diploma/certificate) was higher in the BLP girls. Most girls received their education in the formal schooling system. More girls in the BLP group were in continuing education “open school” programs. BLP girls were 25% more likely to be studying currently compared to the control group girls (risk ratio 1.25). The difference in BGMS is very revealing. The BGMS BLP girls were 228% more likely to be able to read and write compared to the control group girls (risk ratio 3.28). The BLP girls in Madhya Pradesh were also 573% more likely to be studying currently compared to the control group girls (risk ratio 6.73).

The proportions of girls who never went to school and of girls not currently studying were significantly higher in controls than the alumnae. The proportion of dropouts from school was significantly higher in BLP compared to the controls, but the number of girls completing school was also higher in BLP. Among those who were school dropouts, however, none of the control group re-enrolled compared to 3% of the BLP. This was most significant for the BGMS alumnae. This indicates a need for the program to strengthen its efforts at ensuring that girls either stay in school or re-enroll in school.

Livelihoods: Vocational Skills and Economic Empowerment

Ninety-nine percent of the BLP alumnae had learned a vocational skill compared to 22% in the controls. A majority learned tailoring (80%) followed by training for beauticians, printing, handicrafts, and Henna design application.

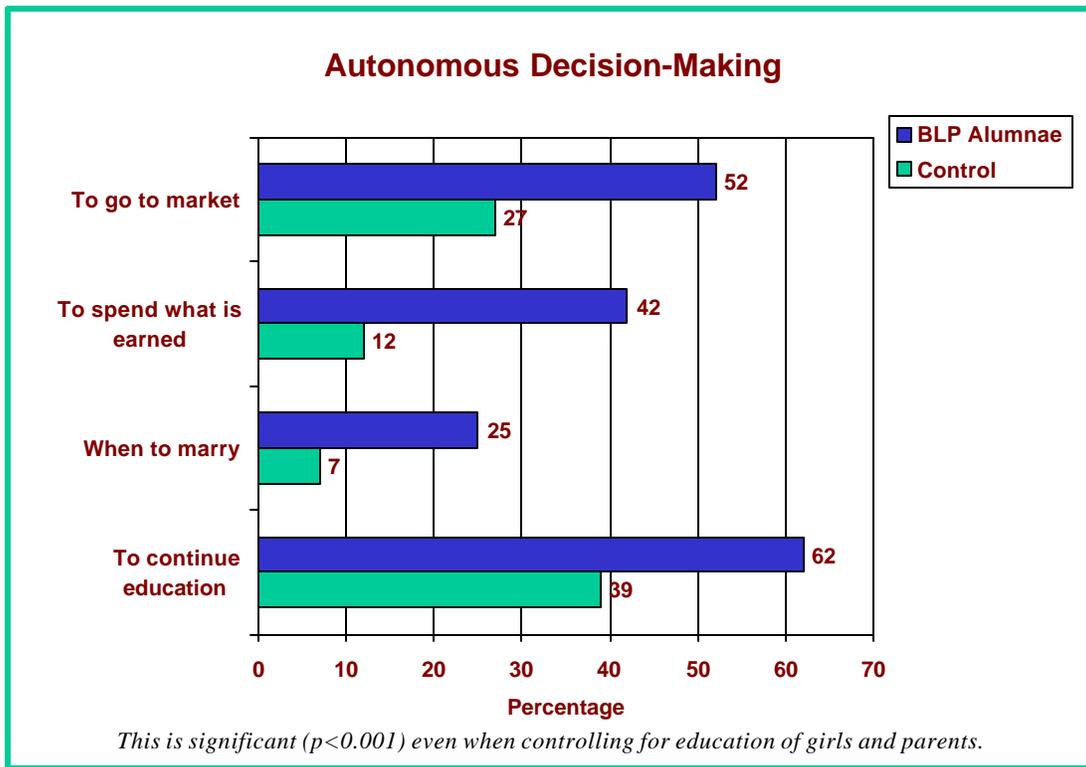
All indicators for economic empowerment were found to be highly significant for BLP alumnae in comparison to controls, including exposure to vocational skills, current gainful employment – the most common occupations being “own business/self employed” and “in service,” holding a savings account, and having autonomy on how to spend money one earned. The probability of BLP alumnae earning currently was 39% higher than the control girls (risk ratio 1.39). It is also possible though, that the higher levels of education in the program have contributed to their earning capacity. Economic empowerment is further indicated by the fact that four times as many BLP girls were in business or self-employed compared to the controls. BLP alumnae were more likely to decide, on their own or with other family members, how to spend their income. Among the controls, other family members made the decisions. Additionally, a significantly higher percent of BLP girls had an individual or joint savings account.

Most of the responses related to occupation were similar in the three NGOs, with some exceptions. In BGMS, though a significantly higher percent of BLP girls had learnt a vocational skill, the proportion earning was similar in the BLP and control girls. The difference lay in the type of occupation – the control group was engaged more in “daily wage labor,” while the BLP group was more in business or self-employment or in regular employment

Empowerment: Self-Esteem, Decision-Making and Mobility

Very highly significant differences emerged in the areas indicating socio-emotional empowerment between BLP and controls. Selected indicators of self-esteem revealed that many more BLP girls had less difficulty in talking in front of elders in the family or a group; could express their ideas or convince others of their viewpoint, and found it easier to make friends. For example, BLP girls are 50% more likely to talk in front of elders in the family than the controls (risk ratio 1.5). A similar pattern emerged in the three NGOs studied.

BLP alumnae were more in control of all major decisions. A significantly higher proportion of BLP girls were empowered to make their decisions on their own or jointly with others in matters of education, age of marriage, vocational training, health care and day-to-day matters, such as what food should be cooked or items purchased. The risk ratios values indicate, for example, that 56% more BLP girls are likely to make decisions on their own or jointly to study further. Regarding whether to work or not, 113% (risk ratio 2.13) more BLP girls are likely to make decisions on their own or jointly with others. Similarly, 261% (risk ratio 3.61) more BLP girls make decisions on their own or jointly with others regarding when to get married.



Another indicator of empowerment for girls in India is mobility as it is markedly restricted especially after puberty. The mobility of BLP alumnae is also significantly higher: BLP alumnae are twice as likely to use public transport (58% versus 25%) and 46% more likely to go alone to the market. Fewer BLP girls needed permission to visit the market or friends/relatives.

Assessing Impact on Empowerment after Controlling for Education

To assess the impact of the Better Life Options Program after controlling for the effect of education, stratified analysis was done. The data were compared for the BLP and control groups on selected indicators related to decision making, mobility, earning income and self esteem, after stratifying girls into non-literate (cannot read-write) versus literate (can read and write); lower level of education (primary school) versus higher level of education (secondary school). The BLP has had a significant impact on the abilities of girls to make decisions influencing their lives – to be more mobile and confident, to earn and spend the money earned as they desired, and to contribute to the community through participation in clubs/groups. The MH chi-square values are highly significant between BLP and the controls.

A similar pattern of impact was seen when only married girls were considered. Similarly, a highly significant impact was seen after controlling for effects of education of father and mother in the total sample and in married girls.

Table 1 – Selected indicators of education, autonomy, and mobility among alumnae and controls

Indicator	Control Group (n = 858)	BLP Alumnae (n = 835)
Illiterate	32%	5%
Completed secondary education	46%	66%
Had learned a vocational skill	22%	99%
Employed / self employed	8%	35%
Could decide when to marry	7%	25%
Could decide how to spend money earned	12%	42%
Could decide to go to market	27%	52%
Traveled alone to health center past six months	20%	59%
Traveled alone outside village past six months	21%	68%

All indicators are statistically significant (p<0.001)

Perceptions Regarding Gender-Based Roles

BLP girls appear to be more empowered with knowledge regarding gender equity than the controls. They also believed less in the gender-based division of labor and stated that men should help in the household work and women should work outside the home. Fifty-one percent (risk ratio 1.51) more BLP girls feel that a woman should initiate discussions with her husband regarding the number of children they should have as compared to the control group girls. Similarly, 50% (risk ratio 1.50) more BLP girls feel that infertility is not usually the woman's fault, as compared to control group girls. Also, 34% (risk ratio 1.34) more BLP girls (compared to controls) believe that educating girls is as important as educating boys.

Increased Exposure to Information and National/Global Issues

A significantly higher proportion of BLP alumnae use mass media for information, participate in camps, and are aware of major issues in India, especially issues facing girls/women.

Assuming Leadership Roles in the Community

The Better Life Options Program has attempted to expand the alumnaes' worldview and sought to encourage girls to become aware of national issues and issues facing women and girls. Forty-seven percent of BLP girls were members of village level groups or clubs compared to 2% among the control girls. BLP alumnae had played varied leadership roles within the community to organize events. For example, 24% of the BLP girls were involved in organizing/facilitating/helping in training camps, 26% were community volunteers, and 14% were running their own training centers.

The BLP is an Investment in the Future: A Case Study

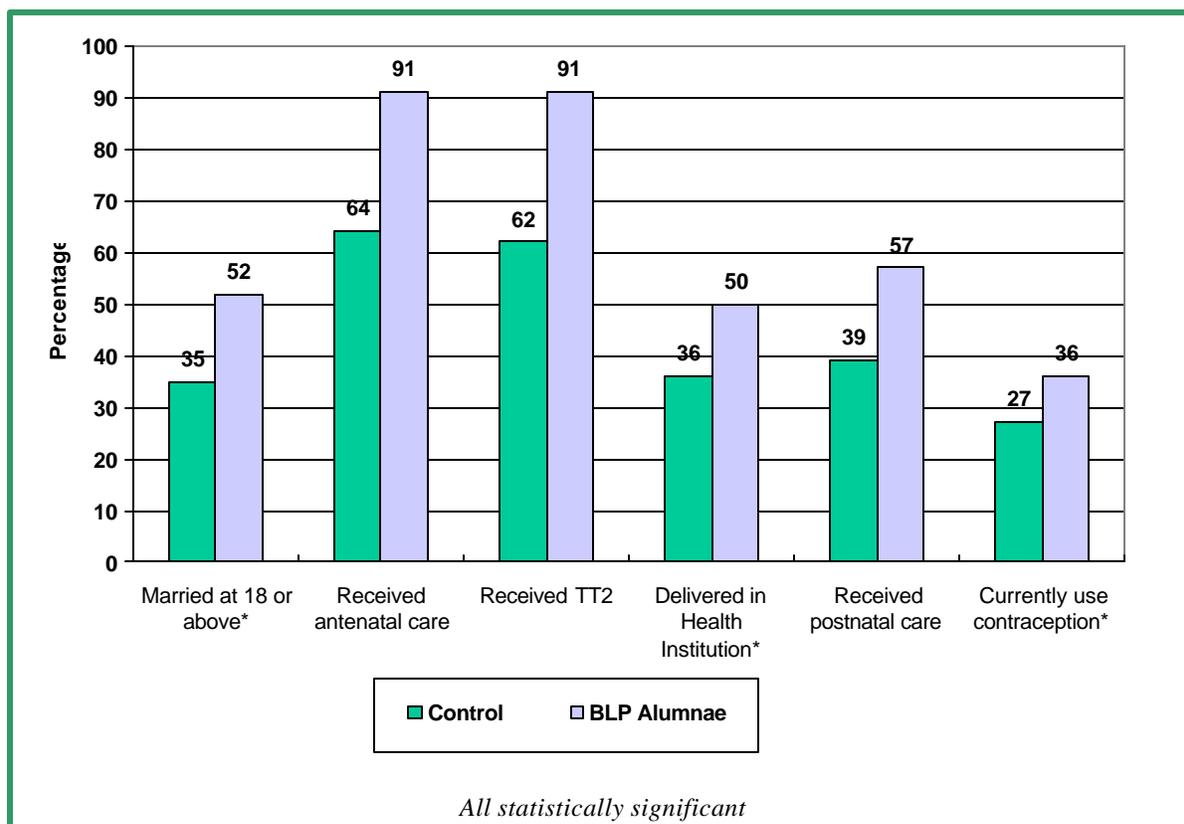
Rajni has been associated with BLP since 1995 when she joined to acquire a vocational skill. She learned a lot through the Better Life Options Program's Family Life Education sessions. At 17, she is mature and independent thinking. She believes that the right age for a girl to marry is 21 with the first child coming after only three to four years of marriage. In her opinion, it is crucial for a couple to know each other before they plan to have children. Rajni now runs her own business, which has been possible through the vocational training she received. She earns income and is self-reliant. After the BLP experience, she has become the decision maker in personal matters and is also consulted in matters related to family and the community.

Reproductive Health and Child Survival Behavior (Married Respondents Only)

Contraceptive Use: Information about contraceptives is obtained from various sources. The Better Life Options Program was the major source of knowledge on contraceptives for the BLP married girls. An important finding was that more than twice as many BLP girls compared to controls had discussed family planning recently, primarily with their husband (a few had talked to friends). The probability of BLP girls discussing family planning with their husbands was 55% higher than the control group (risk ratio 1.55). This is important, as inter-spouse communication regarding family planning is critical for contraceptive use.

Even more important than contraceptive knowledge is the practice of using contraceptives: past and present and intention to use in the future. Here again, a significantly higher number of BLP alumnae girls have ever used or are using temporary contraceptives. Among the types of contraceptives, the pill and condom were reported most frequently. Condom use was more frequent among BLP girls than the control group. The probability (risk ratio 1.36) of BLP girls using contraceptives at present is 36% more compared to control group girls. The intention to use contraceptives in the future was seen in a majority of girls in both groups, however a significantly higher percentage of BLP girls expressed intention to use (risk ratio 1.26) contraceptives. While the temporary methods (the pill, the condom and IUD) were mentioned, about a third in both of the groups stated female sterilization as a future method, indicating intention to use this permanent method once the desired family size was reached. BLP alumnae reported a much higher intention to use condoms in the future as compared to the control group.

Percent of BLP alumnae and controls reporting selected reproductive health behaviors (married respondents only)⁷



Prenatal Care in the Last Pregnancy: Compared to controls, the BLP alumnae were more likely to have used prenatal care in the last pregnancy. Risk ratios indicate between 43 to 106% more BLP married alumnae girls with a child were likely to have received prenatal care by a professional, to have received it in time, and to have received at least three check-ups, 100 IFA tablets, and TT immunization.

Delivery and Postnatal Care: In India, postnatal care is a crucial yet neglected service, with neither the health service providers (both government and NGO sectors) nor the community giving it due attention. Even though the postnatal care received within one month postpartum was reported by less than half the girls overall, the BLP group fared significantly better than controls especially for receiving timely postnatal care and receiving it at a health facility. Forty-eight percent more girls in the BLP received postnatal care and were 51% more likely to receive postnatal care within a month of delivery and 37% more likely to receive postnatal care in hospital as compared to the controls. As was the case with prenatal care, there were differences seen in the three NGOs. In BGMS, the differences were highly significant.

Safe deliveries are important for the survival of both mother and newborn. About twice as many BLP girls delivered at a hospital compared to control group girls (60% versus 37%). However,

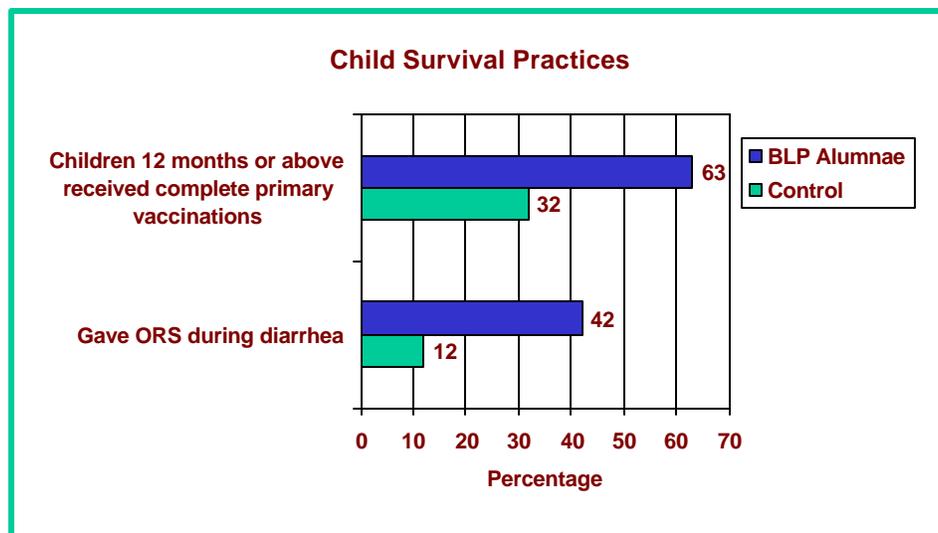
⁷ * Becomes non-significant when controlling for girls education.

whether home or hospital delivery, most of the young women had the delivery conducted by a trained person. The main reasons for not delivering in a health facility were that it was not necessary/customary or that it was too expensive.

Nutrition in the postnatal period is usually neglected despite the fact that lactating women need to meet their nutritional requirements both for their own recovery and for adequate lactation. Daily consumption of protective foods was significantly higher in BLP girls than the controls, such as milk and its products, pulses/beans, vegetables and fruits. Among the NGOs, BGMS showed the most significant impact on postnatal nutrition, while the Prerana and GSCPT mothers did not show marked differences in food practices between the two groups.

Obstetric History – Children Born and Child Mortality: Married girls with at least one child alive were asked questions about their past pregnancies and pregnancy outcomes. The mean number of children born per woman in the control group was higher (1.98) than the number born to the BLP alumnae (1.73). The risk ratio shows that 14% (risk ratio 1.14) more children were born to control group girls. Child deaths were also higher in the control group with a 40% (risk ratio 1.40) higher probability of child deaths in the control group compared to the BLP alumnae.

Child Survival Practices: Respondents with at least one child were asked about selected child health practices of their last-born child. Among respondents with children above the age of 12 months, about two-thirds in the BLP group had their children completely immunized, compared to 32% among the controls. The risk ratio value shows that compared to controls, BLP girls are 97% more likely to get their child completely immunized. There were no significant differences in the two groups on the occurrence of diarrhea in the child during the past six months, and both equally provided some type of treatment of diarrhea. But a significantly higher proportion of BLP alumnae used oral-rehydration solution (ORS) packets for their child during diarrhea episodes (42% versus 12%).



HIV/AIDS Awareness Improves

The awareness of HIV/AIDS was analyzed separately for married and unmarried girls. Whether married or unmarried, significantly more BLP alumnae were aware of HIV/AIDS and the ways of preventing AIDS compared to the controls. Among unmarried girls, BLP alumnae are 65% more likely to be aware of AIDS and 17% more likely to know how to prevent HIV/AIDS. These differences are even greater among married respondents.

Assessing Impact on Reproductive and Child Health Practices After Controlling for Education

Reproductive health practices such as consuming all Iron and Folic Acid (IFA) tablets received, receiving tetanus-toxoid (TT) during pregnancy, immunizing the children and giving packaged oral-rehydration solution (ORS) to a child during a diarrhea episode were subjected to stratified analysis and the BLP girls did significantly better compared to the controls even after stratifying data to control for girls' education: literate/non-literate and primary/secondary education. A few practices, such as prenatal care and place of delivery, also tended to be better in BLP controlling for girls education but did not reach statistical significance. After controlling for parents' education and occupation for all practices (except place of delivery), the BLP girls continued to be significantly better than controls. This suggests that BLP has exerted an impact on several favorable reproductive health practices even after accounting for the influence of parents' education and occupation.

The picture emerging from stratified analysis is that even after taking into account the influence of girls' and parents' education and occupation, the Better Life Options Program has had a significant impact on the empowerment of girls in several important areas and also on some indicators of reproductive and child health. A few of the reproductive/child health (RCH) practices were influenced more by education of girls than by the Better Life Options Program. Thus ensuring completion of education by girls emerges as a critical area of focus for the future.

Discussion and Conclusions

This comparative study was an evaluation of the impact of the Better Life Options Program being implemented by the three partner NGOs in India supported by CEDPA. The goal was to assess the impact of the program on the behavior and practices of the girls and young women and how, if at all, there had been a change.

During the impact study measures were taken to ensure minimization of bias: random sampling, appropriate selection and training of interviewers. Sample size was also kept sufficiently large to permit statistical analysis and to arrive at valid conclusions.

The study has shown that the Better Life Options Program empowerment model, which contains vocational skills training, family life education (FLE), non-formal education and life skills development, has resulted in significant impact on participants' economic empowerment, self-esteem and confidence, autonomous decision making, reproductive health and child survival practices and fertility. BLP alumnae were found to have significantly higher education

completion, later age at marriage, use of public transport, greater mobility and self-confidence, use of contraceptives, use of prenatal care, TT2, iron supplementation in pregnancy, delivery in a health institution, more frequent intake of protective foods, engagement in employment and greater role in decision making, knowledge of HIV/AIDS, and use of ORS packets and primary vaccinations for their children. Furthermore, BLP alumnae had a lower mean number of children ever born. Using vocational skills as an entry point, an integrated model and involving/orienting parents was critical for the participation and continuation of the girls in the program. Furthermore, this program helped in the re-entry of the girl into her family and acceptance of her newly acquired skills and empowerment.

The study has consistently indicated that for most of the components of the Better Life Options Program, there was a significant impact on the participants. This impact was present even after removing the confounding effect of education in the area of empowerment of girls such as decision-making and earning abilities, mobility, leadership and self-esteem. Impact of the BLP, though evident, was less marked when the influence of girls' education was taken into account for reproductive health indicators. It is clear that multiple influences contribute to reproductive health practices and that educating girls will enhance the impact of the BLP towards better reproductive and child health. The study reinforces that whether it is maternal and child health or reproductive health, ensuring that girls enroll and stay in school is important. The BLP empowerment model in conjunction with education is a dynamic combination resulting in significant positive life changes.

The future directions for the program could include strengthening the adolescent-friendly reproductive health component, initiating IFA supplementation and TT immunization for adolescent girls improving nutrition for its short-term and long-term benefits, strengthening the promotion of keeping girls in schools and girls completing secondary school, upscaling and replication of the Better Life Options model, and finally, initiating a Better Life Options Program for boys.

Appendix: List of Acronyms

BGMS – Bharatiya Grameen Mahila Sangh
BLP – Better Life Options Program
CDC – Centers for Disease Control and Prevention
CEDPA – Center for Development and Population Activities
DHS – Demographic Health Survey
FLE – Family Life Education
GSCPT – Gujarat Crime Prevention Trust
HIV/AIDS – Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IFA – Iron and Folic Acid
IIPS – International Institute for Population Sciences
IUD – Intrauterine contraceptive device
MOHFW – Ministry of Health and Family Welfare
NFHS – National Family Health Survey
NFHS-2 – *National Family Health Survey 1998-1999*
NGO – non-governmental organization
ORS – oral rehydration solution
RCH – reproductive/child health
TT – Tetanus Toxoid
VST – Vocational Skills Training
WHO – World Health Organization