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FINAL TECHNICAL REPORT

"THE EFFECT OF CONTINUING EDUCATION
ON TEENAGE CHILDBEARING"

CONTRACT NO CI88.22A

THE JAMAICA WOMEN'S CENTER

May 15, 1988 - July 14, 1989

The Population Council, an international non-profit organization established in 1952, undertakes social and health science programs and research to develop and improve contraceptive technology. The Council provides advice and technical assistance to governments and international agencies and it disseminates information on population issues through publications, conferences, seminars, and workshops.

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FINAL TECHNICAL REPORT

The Effect of Continuing Education on
Teenage Childbearing: The Jamaica Women's Centre

Contract No. CI88.22A

May 15, 1988 - July 14, 1989

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This operations research project was the product of the entire Women's Centre organization. It would not have been possible without the cooperation and dedication of all staff of the Kingston and Mandeville Centres, the interviewers, and particularly without the devotion of young mothers to a better life and their willingness to share perhaps their most personal experiences with the world.

SUMMARY

The many physical and psycho-social consequences of early childbearing among teenage mothers prompted the creation of the Jamaica Women's Centre Programme in 1978. The programme was designed to continue the education of those girls who become pregnant while in school and assist them to re-enter the school system after the birth of the child.

The only evaluation of Centre activities was a small scale evaluation in 1979. That evaluation demonstrated that, in the short run, the programme was successful in assisting young mothers. The Centre felt that it was now time to initiate a comprehensive evaluation of the impact of its programmes. The objectives of the project were to: 1) determine the short-term effect on women and their children of providing continuing education for young mothers; 2) assess participants' perceptions of the long-term benefits derived from participating in the program; 3) identify the benefits to the mother and the child; 4) estimate the costs of the program; and 5) assess the community's perception of the Women's Centre and the problem of teenage pregnancy in Jamaica.

The evaluation focused on the short term impacts of the Kingston programme, and compared an experimental group of women who graduated from the programme since 1985, with a matched sample of teenage mothers who had not been exposed to the Centre's programme or any other similar programme for young mothers. Profiles of recent and older programme graduates were also prepared based upon the follow-up of graduates in Kingston and Mandeville.

The results demonstrate that, while only 15% of women in the control group who became pregnant while in school returned to school, about 55% returned to school among recent Centre graduates in Kingston. In Mandeville 73% of the graduates returned to school. With respect to employment, salary levels were higher among recent graduates than in the control group, and girls who reached high school earned the highest salaries.

The counselling sessions provided by the Centre have had a positive effect on the knowledge of contraceptive methods. Contraceptive use prevalence was high in both groups in Kingston; 85% of recent graduates were using methods, compared with 81% in the control group. The difference lay in the mix of methods. Among Centre graduates in Kingston the leading method was the IUD (40%), followed by orals (22%). Among the control group, the leading method was the pill (38%), followed by injectables (27%). Contraceptive use was similarly high in Mandeville (89%), but with greater reliance on pills (65%) and condoms (18%).

Subsequent pregnancies pose a serious problem to the teen mothers. Among recent graduates 15% had a subsequent pregnancy by the time of the interview at the three year follow-up in Kingston. In contrast, subsequent pregnancies had occurred to 39% of teen mothers in the control group. Similarly in Mandeville, only 8% of

recent graduates had experienced a subsequent pregnancy.

The school programme is the most complex component of the Centre's operation, drawing upon multiple centre staff, and is heavily dependent on the physical plant and centre administration. The cost of keeping a girl in the programme for one academic year is approximately US\$437. Keeping a child in the nursery during the academic year incurs an annual cost of US\$83 per child.

The cost of providing services to former students, which entails counselling and school visits, and at times financial support to the girls, was an average of US\$22 per girl. Women who seek walk-in attention generally are referred to a social service agency and followed up to insure that the women's needs are met. The average cost of providing these services is US\$18. Providing the services to the girls in rural areas through the outreach programme cost an average of US\$42 per girl.

In conclusion, the Jamaica Women's Centre Programme should continue to provide opportunities for continuing education and support for family planning for teenage mothers. The services are effective and their cost is sustainable. Furthermore, these education and family planning services for young mothers have the broad support of parents and the community.

The Centre should continue directing its efforts towards policy makers and the general public to communicate the results of the research demonstrating the impact of their efforts to support continuing education for teen mothers. However, additional efforts should be dedicated to provide mothers with a wider and more marketable range of skills to facilitate entry in the difficult labour market. The skills offered at each centre should meet local needs. Finally, the Centre should continue to fortify linkages with other national skills programs and with small business associations to stimulate the creation of work opportunities for Centre graduates.

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I. PROBLEM DESCRIPTION

In the past decade, the incidence of pregnancy and childbearing among teenagers, as well as its causes and consequences, have been widely discussed in the Caribbean and internationally. Although not a new phenomenon in Jamaica, because of its demographic and sociological consequences, teenage childbearing has become recognized as a more serious problem during the past two decades. In 1975, according to the World Fertility Survey the fertility rate among women 15-19 in Jamaica was 137 per 1000, quite similar to that for all women 15-49 (144/1000). Statistics available for Jamaica, for 1982, reveal that out of a total of 59,395 births, 15,807 or 26.6 percent were to teenage mothers (United Nations, 1986). However, during the period 1975-1984 there was a significant decline of 32% in the fertility rate of women 15-19 in Jamaica from 137 to 109 per 1000 (Jamaica, 1988).

The problems experienced by teenage mothers in the United States of America and the negative health consequences of the early birth for the mother and the baby have been well documented (Menken, 1981; Trussell, 1981; Liskin, 1985). The demographic and sociological implications of high rates of teenage childbearing for developing nations are also serious. Early motherhood shortens the period between generations and is associated with high fertility rates and rapid population growth. Sociologically, the young mothers are often left out of the national development process and are likely to be caught up in a cycle of poverty and exploitation.

However serious the implications of childbearing for the out-of-school teenager, the consequences for the teenager who is still in school are even more severe. In the context of Jamaica, the young woman who becomes pregnant while she is at school very often does not have the opportunity to complete her basic education. Data from the Jamaica Young Adult Reproductive Health Survey indicates that nearly one-third of all 15-24 year old females were in school when they became pregnant with their first child. Most of these young mothers (81%) did not return to school after they gave birth, and three-fourths of them reported the birth as unintended (Warren et al, 1988). Although statistics are not available on the number of dropouts from school which are related to pregnancy, extrapolating from birth data would indicate that each year about 6 percent of women are deprived of the opportunity to continue their education by being denied re-entry into the school system following a pregnancy.

Although the implications of teenage childbearing for the society as a whole are serious, community attitudes towards the girl who becomes pregnant while at school can be a constraint to the implementation of successful interventions. The prevailing attitudes in Jamaica during the 1970s toward the provision of

continuing education and other rehabilitation services for pregnant teenagers tended to be negative. The feeling was that the girl should be punished for becoming pregnant. In those circumstances it was difficult to use public funds to assist pregnant teenagers or teenage mothers. On the other hand, the society did not look with disdain on the "baby father", i.e. the father in the teen pregnancy, although it also did little to help him.

II. SOLUTION DEVELOPMENT

In spite of the negative community attitudes, concerns about the problems created by early childbearing, have over the years motivated health and social service programme administrators to search for appropriate and effective strategies to address the problem of teenage pregnancy and childbearing. Most of the strategies implemented prior to 1978, however, had the objective of preventing the first pregnancy in teenagers. None of them was designed to address the problems of spacing a second birth or the consequence of dropping out from school because of a pregnancy.

The Women's Centre Programme for Adolescent Mothers was one such innovation. The programme was designed to continue the education of those girls who became pregnant while in school and to assist them in re-entering the school system after the birth of the child as well as to avoid subsequent pregnancies while they were in school. Established in 1978 with the assistance of the International Planned Parenthood Federation (IPPF), the Pathfinder Fund and the Government of Jamaica, the programme included two distinct sets of activities. First, the programme provided support through counselling and classroom instruction for pregnant teenagers between 12 and 16 years of age with a view to returning them to school after the birth of their babies and delaying the subsequent pregnancy. Second, the programme was to offer skills training and assistance with job placement for those teenage mothers who were too old to return to school.

The first Centre opened under that programme was established in 1978 in Kingston, the capital city of Jamaica. Over the 11 years of operation, four additional Centres have been opened in Mandeville (1981), Brown's Town (1986), Montego Bay (1987), and Port Antonio (1989). Proposed new Centres in Spanish Town and Savannah-la-Mar will be established within the next two years. (See Figure 1)

Pregnant teenagers who are referred to the Women's Centre enter the programme in an "induction class" known as Class II. This programme focuses on counselling (individual and group), with some inputs in basic academic subjects. The objective of the counselling is to help the pregnant teenager adjust to the pregnancy, and the related social and domestic problems.

At the end of one term in the "induction class", the teenager, who probably has had her baby by that time, transfers to Class I. The programme at this level is more academic in nature but has three components: academic preparation, family life and family planning education, counselling, and other support services.

The academic programme offered at the Centre allows the teenage mother to return to an academic or technical institution after the birth of her baby. Students who are unable to return to the formal school system but who are able to take the Caribbean Examination Council (CXC) examinations (examinations taken by all students in the final year of high school) are allowed to do so at the Kingston Centre which has been designated as an examination centre. Dormitory space is provided at the Kingston Centre to facilitate rural students wishing to take their examinations. Other programme participants who are not eligible to return to the normal school system are provided with training in a manual or technical skill.

The counselling programme at the Centre is open to parents of programme participants and to the "baby fathers". The teenage mother also receives contraceptive counselling and is encouraged to use a reliable family planning method, such as the IUD or orals, before returning to school. The health of the pregnant teenager and teenage mother is carefully monitored and provision is made for supplementing her food intake while she is at the Centre. The Centre arranges regular health centre visits for ante-natal care prior to delivery, and post-partum and well-baby care after childbirth. Each Centre participant receives lunch and an afternoon snack. If required, breakfast is also provided.

Centre participants are encouraged to attend the Centre with their babies. To support the idea, a day nursery is integrated into each Centre. Babies are cared for at the nursery while their mothers are attending classes at the Centre. The day nursery provides the opportunity to instruct the teenage mother in child care, especially nutrition, and child development. Centre staff encourage the young mothers to breastfeed their children.

Each of the Centres offers an outreach programme to provide services to pregnant teens to whom a Centre is not accessible. The most effective strategy used in the outreach programs has been the use of churches or other community buildings for the establishment of sub-centres. Using volunteers as teachers, the pregnant girls are instructed in academic subjects and child care. Outreach counsellors visit the sub-centres two times per week to counsel the girls and monitor the progress of the programme. Although the girls do not have access to the skills training and other services provided at the Centres, the outreach programme does allow them the opportunity to further their education and to return to the school system if possible.

The programme for former students provides both moral and financial support to girls who have been returned to the school system. For at least two years, the Centre provides follow up counselling and monitoring of their progress in school. Periodically, it is necessary for the Centre to provide continued financial support to keep the graduates in school. This extends both through secondary and tertiary level education. It is not uncommon for girls to return to the Centres for counselling with the staff several years after leaving the programme.

Occasionally, young mothers come to the Centre in search of assistance but are ineligible for the programme. The staff accepts these "walk-ins" and provides them with counselling and makes referrals to appropriate social service agencies. The Centre is willing to take responsibility for ensuring that the young mothers' problems are resolved, although they are not programme participants.

The Women's Centre programme is directed by a National Coordinator. Each Centre is staffed by a Centre Manager, at least one full-time counsellor, a supervisor and assistants of the day care programme. Part-time teachers are hired for the skills and academic programme. Each Centre is required to operate income generating projects for the programme and its participants.

The Centre programme has served as a model for the development of continuing education programmes for teenage mothers in Africa and Latin America. However, apart for one small evaluation conducted during the first year of its operation, the effect of programme strategies had never been systematically assessed (Powell, 1980). Such an assessment was designed and implemented by the Women's Centre Programme in collaboration with the Population Council to coincide with the 10th Anniversary of the Programme.

III. STUDY OBJECTIVES AND HYPOTHESES

The evaluation of the Women's Centre Programme was designed to provide answers to questions raised by users, programme administrators and donors. Since the programme is the only one of its kind in the Caribbean, it was also thought that the study could be useful in pointing the way to addressing problems associated with childbearing among teenagers throughout the Caribbean.

The study had four basic objectives:

1. determine the short-term effect on women and their children of providing continuing education for young mothers;
2. assess participants' perceptions of the long-term benefits derived from participating in the program;
3. identify the benefits to the mother and the child;
4. estimate the costs of the programme; and
5. assess the community's perception of the Women's Centre and the problem of teenage pregnancy in Jamaica.

Through collecting qualitative and quantitative data in two areas of Jamaica, the study attempted to evaluate a series of hypotheses related to programme effects. More specifically, the study tested the following hypotheses among a group of recent graduates of the Centre and a comparison group who had not participated in the program:

1. Women's Centre graduates will have fewer subsequent pregnancies than women who did not participate in the programme;
2. Women's Centre graduates will have higher contraceptive prevalence and use more reliable methods than women in the comparison group;
3. Women's Centre graduates will earn a higher salary than women in the comparison group; and
4. Women's Centre graduates are more likely to breastfeed their babies and for a longer duration than women in the comparison group.

IV. METHODOLOGY

A. Assessment of Programme Effects

Two study designs were used in the evaluation of the effects of the programme on teenage mothers and their children. In order to measure the short-term effects, a static-group comparison design was used in Kingston. In this design, the experimental group was the teenage mothers who were registered in the Women's Centre programme during the period September 1985 to June 1987. All of these women were 16 years old or younger. The comparison group was composed of a sample of teenagers younger than 17 years, who had a first baby between 1985 and 1987, and who had not participated in the Women's Centre or any other similar programme. Recent graduates were also visited in Mandeville, but data on a valid comparison group is not available.

These two groups were chosen because it was thought that one to three years after birth was an appropriate amount of time for the mother to recover from the immediate childbearing experience, either having returned to school or working. Furthermore, by including the three years, it was possible to draw a sample large enough that would allow valid statistical comparisons to be made.

The long-term effects of the programme were examined through a non-experimental design which included women who had participated in the programme between 1982 and 1985. Since the only desired output of this part of the analysis was a profile of the older graduates, it was not necessary to include a comparison group. The specific time period was chosen because it would allow an adequate amount of time for the mothers to have completed their education, take their exams and either continue schooling or begin working.

The evaluation was carried out using graduates from the two oldest Centres in order to be able to contact an adequate number of women. The Kingston Centre had been in existence for ten years at the time of the evaluation, and would generate information on women living in the urban areas. The Mandeville Centre was also included because it has been in existence since 1981 and represents a more rural population. Using these two centres would allow the largest number of graduates to be contacted as well as collect information on young mothers in both urban and rural areas.

The Centres' registers served as the sampling frame for selecting programme graduates. The name and address of each graduate were available from the records. The comparison group of teenage mothers in Kingston was selected from hospital delivery records. In the Kingston area, the sample for the comparison group was selected from the Victoria Jubilee Hospital (VJH) delivery records. Every fourth teenage mother, 16 years or younger at the time of her first birth, appearing on the hospital delivery record

whose name did not appear on the list of Centre participants was selected. Teenage mothers who satisfied these criteria were only selected if complete address information was available, specifically either a Kingston or a St. Andrew address for the Kingston Centre, to facilitate follow-up.

Between September and December 1988, 10 trained female interviewers worked in the Kingston and St. Andrew Corporate area (KSAC) to locate and interview Centre graduates and teenage mothers in the comparison group. Data collection was impeded by the dislocation resulting from hurricane Gilbert. Consequently, of the 382 women included in the comparison group, a total of 111 (29%) were contacted. Eighty-nine (15%) of the 583 mothers included in the recent graduate group (1985-1987) were able to be interviewed, as were 66 (15%) of the 452 older graduates (1982-1984). In total, 266 interviews were completed with women in the KSAC area who had been teenage mothers.

Data collection in the Mandeville area was conducted during February and March 1989. The rural nature and size of the Mandeville catchment area would have made the cost of interviewing the centre graduates in their homes prohibitive. Consequently, the methodology was adjusted to allow Centre graduates to be interviewed at the Centre. Twenty-six (14%) of the 183 recent graduates (1985-1987) in the sample were interviewed, as were 14 (7%) of the 187 older graduates (1982-1984).

The survey data collected during the face-to-face interviews with Centre graduates was supplemented with information collected during focus group sessions with graduates and present participants of the Kingston Centre. Three focus group sessions, which included a total of 25 women, were conducted in March 1989. Fifteen of the participants were long-term graduates of the Kingston Centre, and 10 were current students at the Centre.

B. Cost and Effectiveness Data

Financial records from the Women's Centre Programme in 1987 were reviewed in order to determine the costs of opening a new Centre. These costs include capital expenditures, personnel and operating expenses, and administrative expenses. The overhead costs incurred by the National Coordinator's office in Kingston were not allocated to the costs associated with operating a Centre. Although increasing the number of centres implies a larger administrative structure at the national level, these costs are a step removed from the actual service delivery and are due to some extent to governmental bureaucracy. Additionally, neither opportunity nor social costs have been calculated.

The effectiveness of the programme was measured by: number of girls in the school-oriented programme; the number of babies in the nursery; the number of walk-ins seeking information on family planning and social services; the number of girls reached through the outreach programme; and the number of former students still being monitored by the Centre.

C. Community Attitudes and Perceptions

In the past, negative community attitudes about the Centre programme have been one of the major obstacles to service delivery. As part of the evaluation, therefore, it was important for Centre Managers to assess the present attitudes and perceptions of the community in the KSAC and Mandeville areas.

An intercept survey of community members was conducted in four locations in the KSAC area and three locations in Manchester. Markets were selected for these interviews because they draw a wide range of economic groups and serve different geographic areas. Fifty interviews were conducted in each of four markets in the KSAC (Coronation, Cross Roads, Papine and Constant Spring) and in three markets in Manchester (Mandeville, Spaulding and Christiana). Two interviewers visited each market location on two consecutive weekends (Friday and Saturday) to conduct the interviews.

V. RESULTS

Data collected from the teenage mothers in Kingston and Mandeville have been analyzed to show background characteristics of the samples, as well as the effects of the Women's Centre Programme on education and employment; on knowledge of family planning and reproduction; on contraceptive knowledge and prevalence; and on subsequent pregnancy. Results of the programme effects for each Centre area will be presented independently, given the nature of the comparisons.

A. Kingston

1. Background Characteristics

The recent graduates and the comparison group in Kingston shared several similar characteristics. As shown in Table 1, the average age of the recent graduates was slightly lower than the comparison group, 17.2 years versus 17.7 years old. Although the difference was statistically significant, the size of the difference was very small, and thought to have little or no public health effect. None of the girls in either group was married, and they displayed little variation in their civil status. Of the recent graduates, 12% were living in a common law union, 68% had visiting relationships, and 20% had no boyfriend. Similarly, in the comparison group, 17% were living in common law union, 66% had visiting relationships, and 17% had no boyfriend.

There was no difference between the two groups in the school level when they first got pregnant. Among the recent graduates, 13% were in primary or all age school when they became pregnant, 51% were in secondary school, and the remaining 36% were in high school or technical school. The comparison group had 19% of its members in primary or all age school, 58% in secondary school, and 23% in high school or technical school. The difference between the groups was not statistically significant. However, the highest educational level achieved is different. Among the recent graduates, only 5% had reached only primary or all age school, with 52% reaching secondary school, 35% reaching high school and 8% in technical school. The comparison group had a much lower educational achievement, with 17% reaching only primary or all age school, 56% in secondary school, 19% in high school, and 8% in technical school. The difference between the two groups with respect to highest educational level achieved was statistically significant ($X^2=9.09$, $p<.01$).

Although household characteristics at the time of the interview varied somewhat between the two groups, the overall indication is that the teenage mothers come from fairly poor backgrounds. In the comparison group, the average household had 7.3 people living in an average of 3.6 rooms. The recent graduates

were slightly better off, with an average of 6.5 people living in 4.0 rooms. In the comparison group, 30% of the households received water in the house itself, compared with 51% among the recent graduates. Electricity was available in the households of 79% of the recent graduates and 80% of the comparison group.

2. Programme Effects on Recent Graduates

a. Education and Current Status

One of the principal aims of the Women's Centre Programme is to place the teenage mothers back into school. In general, 55% of recent graduates returned to school following pregnancy, compared with merely 15% in the comparison group in Kingston. However, because the girls enter the programme from different types of educational institutions and at various educational levels, it is important to group the teenage mothers by education level at which they become pregnant: primary/all age schools, new secondary schools, and high schools. Each of the three groups had different levels of return to school after the delivery due in part to the characteristics of the girls. Results are shown in Table 2.

Among the recent graduates who had become pregnant in primary/all age school, 58% were able to continue their formal education. This group generally represents the youngest group of teen mothers in Jamaica, and the high rate of return to school may be due to the fact that they are so young. However, among the comparison group, only 14% returned to school. The low percentage returning to school in the comparison group indicates that the educational system is abandoning a large number of young mothers.

Within this same group of teenagers who got pregnant in primary/all age school, the current activities in which they participate are very different. Among the centre graduates, 50% are still studying, and another 17% are working and studying. Eight percent are only working and 25% are neither working nor studying. Of the group, 8% have reached either fifth form or about 11th grade. Since the group was so young when the girls had their babies, it is likely that many more will continue to study, reaching fifth form and sitting the external General Certificate of Education (GCE) 'O' level or the regional equivalent, the CXC examinations.

The comparison group exhibits a very different profile. The majority of the girls (62%) are neither working nor studying. Ten percent of the girls are currently studying and 28% are working. None of the girls had reached fifth form, and it is highly likely that none will.

Among girls getting pregnant in secondary school, the outlook is less positive. Among Centre graduates, 44% of the group returned to school. In contrast, only 13% of the comparison group at this educational level returned to school. Also worth noting is that the girls getting pregnant in secondary school represent 51% of the total of recent graduates and 58% of the comparison group. The high pregnancy rate among secondary school girls may be due to two factors: 1) the very large number of girls in secondary school as opposed to high school, and, 2) the secondary school girls' feeling that they have a very limited future. In either case, the Ministry of Education should be addressing the problem.

Since there are so many pregnancies occurring in the secondary schools, the Ministry of Education should realize that it has an ideal audience for teaching human reproduction and family planning, and that it is failing to meet the needs of the school girls. If the pregnancies are occurring because the girls do not have sufficient motivation for the future, then again, the curriculum and activities associated with the secondary schools should be examined more carefully.

Of the girls who got pregnant in secondary school, at the time of the interview, most of them were neither working nor studying. Among the Centre graduates, 67% are neither working nor studying, with 20% of the remainder studying and 13% working. 11% of the total reached fifth form. The comparison group has similar results: 70% are neither working nor studying, 6% are studying, 22% are working, and 2% are both working and studying. 6% of the comparison group has reached fifth form.

Girls getting pregnant while in high school have the highest percentage of return in both the comparison and recent graduate groups. Among the recent graduates, 68% returned to school. Currently, 35% are still studying, 10% are working, 10% are working and studying, and 45% are neither working nor studying. Among the comparison group, 22% returned school, with 9% currently studying, 17% working, 9% working and studying, and 65% neither working nor studying. The high percentages of girls neither working nor studying is illustrative of the serious problem of unemployment in Jamaica, especially among young women. This will be discussed in more detail in a later section.

b. Income and Employment

Employment for young mothers is particularly important as they frequently must care for their child without the assistance of the "baby fathers". The results suggest that salary levels tended to be higher among recent graduates than the comparison group. (Table 3). However, the number of girls with jobs in each of the groups included in the analysis was so small that the differences were all

statistically non-significant. (All averages were based on samples of less than 10 mothers per category). Among the girls whose highest education was primary or all age school, recent graduates earned on average J\$165 (US\$30) per week, compared with J\$96 (US\$17) earned by the comparison group.

The secondary school girls earned substantially less, with recent graduates earning J\$110 (US\$20) per week, and the comparison group earning J\$93 (US\$17) per week. The fact that the average salary earned by the secondary school graduates is lower than that earned by primary/all age school girls may be a further indication that secondary school girls suffer from low self-esteem which affects their job seeking ability. Girls who reached high school earned the highest salaries, with recent graduates earning an average of J\$177 (US\$32) and the comparison group earning J\$130 (US\$24). It was only among the girls who attended technical school that the comparison group earned a higher average salary than the recent graduates: J\$110 (US\$23) versus J\$126 (US\$20).

Regardless of whether it is the recent graduates or the comparison group who earns a higher salary, the salaries are very low. This is made worse by the fact that only about 29% of mothers in the three groups actually have jobs. The percentage of mothers employed by sample were as follows: recent graduates 17.0%, comparison group 25.0%, and older graduates 50.0%. It should be kept in mind that fewer recent graduates work, because many are still in school. Among the girls whose highest academic achievement was primary or all age school, 38% were working. The percentage drops for secondary school girls, with 25% working. Approximately 30% of the high school girls were working, and 38% of the technical school girls had jobs.

Among the three groups of women interviewed, the most common type of job was as a sewing machine operator in an in-bond plant, which provided an average weekly salary of J\$146 (US\$27) to 28 women. Jobs in sales were the second largest providers of employment, with 13 girls working as higgglers or vendors. These girls earned on average J\$120 (US\$22) per week. Clerical jobs yielded the highest salaries, with an average of J\$174 (US\$32) per week. However, only 7 of the girls had this type of job. Finally, four girls were working as domestics, and earned an average of only J\$61 (US\$11) per week. The jobs held by the other women were less formal, and the wages were difficult for them to report.

These figures illustrate the situation with respect to employment among young women in Jamaica. Ministry of Labour (Jamaica, 1987) indicates that approximately 63% of women over 14 years are part of the labour force, and among them the unemployment rate is approximately 33%. Unemployment is even higher among young women. For example, in 1981 approximately 82% of Jamaican women aged 15-19 were unemployed (ILO, 1983). And as the salary figures

indicate, even if a young woman is working, there is no guarantee that she will earn enough money to live on.

c. Knowledge of Reproduction

Although the differences in knowledge between recent graduates and the comparison group are generally not statistically significant, the answers reported in Table 4 indicate that neither the recent graduates nor the comparison group have an adequate knowledge of reproduction.

When asked if a girl can get pregnant the first time she has sex, 13% of the recent graduates and 14% of the comparison group indicated that it was not possible. In spite of the fact that all of these girls have had at least one pregnancy, a relatively large number of girls were uninformed about the risk of pregnancy on having sex for the first time.

Another question dealt with the effectiveness of withdrawal as a contraceptive method. Forty-four percent of the recent graduates erroneously thought that a woman can not get pregnant if the man withdraws prior to ejaculation; 62% of the comparison group believed that pregnancy could be avoided through withdrawal. The difference between the recent graduates and comparison group on this question was statistically significant, but also indicates that a large percentage of both groups are misinformed about the effectiveness of this method. Furthermore, most of the girls erroneously reported that women are most fertile the week before their period: 80% of the recent graduates and 78% of the comparison group.

Nevertheless, attitudes toward family planning were very open. When asked if contraceptives were only for married people, 95% of the recent graduates, and 96% of the comparison group stated that they were not.

d. Health Care

Data presented in Table 5 indicate that the use of ante-natal care was high among both the recent graduates and the comparison group. The majority of the girls received care from health centres: 67% of the recent graduates and 74% of the comparison group. About a fourth (22%) of the recent graduates obtained care from the hospital and 10% went to private physicians. Among the comparison group, only 10% sought care at the hospital and 9% from private physicians. In total, 99% of the recent graduates and 93% of the comparison group received ante-natal care. However, the recent graduates, on average, began seeking ante-natal care during the third month of the pregnancy, and the comparison group began seeking care during the fourth month.

Use of postpartum care was also fairly high, with 90% of the recent graduates seeking care six weeks after delivery and 82% of the comparison group doing so. The major reasons for not obtaining postpartum care were that they didn't know where to go, or they didn't have money to pay. Many lacked information that postpartum services are free.

Little difference was observed in the average birth weight of the babies born to the women in the two groups. See Table 5. The average weight of the recent graduate group was 3062 grams, while the comparison group weighed slightly less with 2979 grams. Both of these average weights are very close to international standards for birth weight. A fairly equal proportion of the babies in both groups were low birth weight (less than 2500 grams): 13% in the recent graduates and 14% in the comparison group. Although the Centre participants receive lunch at the centre, if the girl does not receive additional nutrition at home, the food supplements cannot cause all the babies to weigh over 2500 grams. For example, many studies have shown that "dietary supplements" often do not in fact add to total dietary consumption, but merely serves as a replacement for food that ordinarily would have been consumed at home (Klein, 1979).

Breastfeeding was also fairly high among the two groups: 91% of the recent graduates initiated breastfeeding and 92% of the comparison group did. The median duration of breastfeeding was 2 months in the recent graduates, and slightly higher for the comparison group (2.5 months). The primary reason that the Centre has a day nursery is so that the young mothers will breastfeed their babies for at least three months. However, the Centre does not oblige the mothers to bring the babies to the nursery or to breastfeed them.

e. Contraceptive Knowledge and Prevalence

Knowledge of contraceptives was high among recent graduates, with the average girl identifying 8.3 methods. See Table 6. The comparison groups could identify on average 6.2 methods. The difference was statistically significant ($p < .01$). The counselling sessions at the Centre are clearly having a positive effect on the participants by making them aware of a large number of contraceptive methods.

Contraceptive prevalence was high among both groups at the time of the follow-up. Most (86%) of the recent graduates were using methods, compared to 81% of the comparison group. The difference lay in the mix of methods used by the two groups. Among the Centre graduates, the leading method was the IUD (40%), followed by orals (22%). Condoms and injectables were used by 11% each. Among the comparison group, the leading method was the pill

(38%), followed by injectables (27%). Condoms were the choice of 13% of the girls, and only 2% used IUDs. The method mixes indicate that Kingston Centre participants favor the IUD, because it is not a coitus-dependent method, unlike pills and condoms. The IUD is an appropriate method for this population. On the other hand, the comparison group depends heavily on the pill and injectables. Pills generally have a lower use-effectiveness than IUDs or injectables because of non-compliance on the part of the user (Hutchings and Sanders, 1985).

f. Subsequent Pregnancies

Subsequent pregnancies pose a serious problem to the teen mothers. Second pregnancies create further economic and health problems as well as reduce the educational opportunities for the mother. Among the recent graduates, 13 of the 88 girls (14.6%) had a second pregnancy by the time of the interview. Of the 13, ten (77%) had not returned to school. Three had gone back to school, two of whom had already left secondary school when the children were born almost three years after the first birth. Only one of the 88 girls was still in high school when she had her second baby 16 months after her first child was born.

In contrast, subsequent pregnancies had occurred to 38.7% of teenagers in the comparison group. Of the 43 who had second pregnancies at the time of the interview, 35 (81%) had not returned to school. Eight returned to school, three of whom experienced their second pregnancies while they were still in school. The difference in subsequent pregnancy rates was statistically significant ($p < .01$), indicating that the programme is effective in postponing subsequent pregnancies.

3. Profile of Older Graduates in Kingston

After completing the programme at the Women's Centre, the majority of the older graduates returned to school, as shown in Table 2. Of those who were in primary or all age school when they got pregnant for the first time, 75% returned to school. However, only 12% completed fifth form, or about 12th grade. At the time of the interview, 63% were working or studying. The remaining 25% were staying at home. Those older graduates who were in secondary school when they got pregnant were also successful in returning to school, with 68% going back after finishing the programme. More than a third (35%) completed fifth form and 16% took exams. At the time of the interview, 55% were either working or studying, and the remaining 45% were at home. Of the group who was in high school at the time of the pregnancy, 74% returned to school and 63% of the group completed fifth form. Currently, this group is engaged in a wide range of activities: 33% working, 19% studying, 11% working and studying, and 37% staying at home.

Although the older graduates on average earned more than the recent graduates, their average monthly salaries were fairly low (see Table 3). Those whose highest education was primary or all age school earned J\$210 (US\$38) per week. Those with secondary school earned an average of J\$143 (US\$26) per week. The high school group earned J\$217 (US\$39), the highest average salary. The lowest salary was earned by the technical school group, averaging J\$140 (US\$25) per week.

Contraceptive knowledge was high, with each mother knowing an average of 9.9 methods (see Table 6). Prevalence was also high, though not as high as among the younger groups. A total of 79% of the women at risk were using methods, with pills being the most popular method, accepted by 25% of the group. IUDs and injectables were the second methods, each used by 22% of the group, and condoms were the choice of 8% of the group.

Of the 66 women included in the older graduate group in Kingston, 47% had a subsequent pregnancy. However, the average interval had been 40 months, which is considered an adequate length of time for minimizing health risks to the mothers and their children.

The older graduates in Kingston appear to be doing fairly well. Although participation in the Women's Centre does not guarantee that the woman will succeed in life, one imagines that without the programme many of these older graduates would be much worse off than they were at the time of the interview.

B. Mandeville

Information will be presented on both recent and older graduates in Mandeville. As no comparison data will be presented the following sections will merely provide a profile of programme graduates.

1. Background Characteristics of Recent Graduates

The majority (57%) of the recent graduates were in visiting relationships, and 8% were living in common law union. Unlike in Kingston, 4% of the group was married. The remaining 31% did not have a boyfriend at the time of the interview. The average household size of the recent graduates was 6.5 members living in houses with an average of 4.7 rooms. More than two-thirds 69% of the houses had electricity.

At the time of getting pregnant, 31% of the recent graduates were in primary or all age school, and 27% were in secondary school. The largest number (42%), though, were in high school or

technical school. This is somewhat different from Kingston, where the majority of the girls were in secondary school here, more than half were in either secondary or primary/all age school indicating that pregnancies may be occurring more frequently in Mandeville to girls with lower educational achievement.

2. Current Status of Recent Graduates

Nearly three-fourths (73%) of all women who became pregnant returned to school in Mandeville, and at the time of the survey 15% were working. As shown in Table 7, of the girls who got pregnant while in primary or all age school, 50% of the recent graduates returned to school, 50% of these recent graduates were still studying, and another 25% were working. The remaining 25% was neither working nor studying.

As was observed in Kingston, girls getting pregnant in secondary school are even worse off than the younger girls. Although 86% of the recent graduates had returned to school, currently, 43% of the group was neither working nor studying. Another 43% were studying, and 14% were working. The recent graduates showed progress in that 14% had finished fifth form and 29% had sat for exams.

The girls in high school and technical schools showed the most promise. In the recent graduate group, 82% had returned to school, and 82% continued to study. Another 9% were working. Of the girls in this group, 45% had completed fifth form and 9% had sat for exams.

a. Knowledge of Reproduction

Again, as was observed in Kingston, many of the mothers in Mandeville are misinformed about human reproduction (See Table 4). When asked if a woman can get pregnant the first time she has sex, 92% of the recent graduates indicated that it was possible. However, only 54% of the recent graduates realized that withdrawal is not an effective method of contraception. More than three-fourths (77%) of the recent graduates erroneously believe that a woman is most fertile the week before her period. Given that the level of knowledge was only marginal, it is noteworthy that 100% of the recent graduates thought that contraceptives were not only for married people. This attitude is encouraging, since even though they may know little about reproduction, if they are willing to effectively use contraceptives, they will be able to avoid subsequent pregnancies.

b. Health Care

Use of ante-natal care in Mandeville was very high, with all the recent graduates having received it. The recent graduates tended to use health centers (62%), and private physicians (34%). Additionally on average, they began seeking ante-natal care during the third month of pregnancy. All of the recent graduates obtained postpartum care six weeks after the delivery.

Average birth weights of babies born to recent graduates was 2899 grams. However, 35% of the babies born to the recent graduate group had low birth weight (less than 2500 grams). To offset the high percentage of low birth weight babies in the recent graduate group were 43% of the babies who weighed above average, i.e. between 3000 and 4000 grams. As discussed earlier, the food supplements offered by the Centre may be serving as a substitute for food from other sources.

Almost all (96%) of the recent graduates breastfed their babies, again for a median duration of 2 months. However, it is common for the mothers to leave their babies at home with a family member rather than bring them to the centre. If the babies are at home, then the mothers cannot breastfeed them. Although the purpose of the day nursery is to foster breastfeeding, the hope is being undermined by the weakness of breastfeeding promotion and the practices of the young mothers.

c. Contraceptive Knowledge and Prevalence

Knowledge of contraceptive methods was very high among the recent graduates in Mandeville. On average, the recent Centre graduate knew more than 8 methods. High contraceptive prevalence was also observed in the group of recent graduates, with 89% of the recent graduates using an effective method. Among the recent graduates, pills were the most common method, chosen by 65% of the group. Condoms were the second most popular method, chosen by 18% of the girls. Injectables were chosen by only 6% of the recent graduates. It is interesting to note that IUDs were not used by any of the young mothers in Mandeville, suggesting differences in the content of the IE&C component compared to Kingston where the IUD was the most frequently used method.

d. Subsequent Pregnancies

Among the group of recent graduates, two of the 23 in the sample (7.7%) had subsequent pregnancies at the time of the follow-up. Of the two, neither had returned to school after the first pregnancy. This low rate of subsequent pregnancy indicates that

the programme is motivating the participants to effectively use methods and postpone having more children.

3. Profile of Older Graduates in Mandeville

The older graduates of the Mandeville were very successful in returning to school. Of a total of 14 interviewed, 12 (86%) had continued with their education after finishing the programme. Only one of the interviewed women had been in primary or all age school when she got pregnant. She returned to school, completed fifth form and took exams. Currently, she is staying at home. Nearly three-fourths (71%) of the mothers who were in secondary school when they got pregnant returned to school and 43% of them finished fifth form. Unfortunately, 57% of them are currently neither working nor studying. All of the mothers who were in high school returned, but only 33% completed fifth form and took exams. Currently, 33% are working, 33% are studying, and 17% are both working and studying. The remaining 17% are at home.

Contraceptive knowledge was high, with each mother knowing an average of 9.4 methods. Prevalence was also high among the women, with 80% using methods. Injectables are the most popular method, accepted by 40% of the group. Orals were the second most popular methods, used by 20% of the group. Condoms and other methods each were the choice of 10% of the group. Like the recent graduates, none of the older graduates were using IUDs.

Subsequent pregnancies had occurred with six (43%) of the older graduates. It is of interest to note that none of the women who reached high school or technical school have had a subsequent pregnancy. The average interval between the first and second pregnancies in this group was 35 months.

The older graduates of the Mandeville Centre are actually doing quite well. Many are studying or working, and postponing second pregnancies. However as seen in the previous section, conditions are very severe in rural areas of Jamaica and these women have few opportunities to obtain meaningful employment.

C. Attitudes Toward Pregnancy, Child Care and the Women's Centre

1. Pregnancy Experience

There is a great deal of controversy about the real reasons why teenagers become pregnant. Some of the reasons include: a lack of adequate parental supervision and guidance; peer and media influences; poor economic and financial circumstances; and the teenagers' need to be loved and to show love. Some studies have found that teenagers become pregnant because of ignorance about the basic facts of human sexuality including contraception (Jagdeo, 1984).

Exploration of the issue during the focus group discussions indicate that while some of these explanations may be correct, there are other factors which may contribute to pregnancy among teenagers. For example, the role of peer influence manifests itself not in the sense that one pregnant teenager serves to influence others to become pregnant, but in the encouragement received from peers to form relationships with persons who have certain material assets like a car, a job, among others. The teenage girl who is encouraged to form those relationships, and her peers who encourage the friendship, are not aware of the consequences of such a behaviour.

Information collected during the group discussions also suggests that in many cases, the teenage girl's first sexual encounter is with someone who is known to the family and with whom she has had a platonic relationship. When the pregnancy is disclosed, it very often comes as a shock to the teenager as well as to her mother. For most of the teenage mothers participating in the Centre programme the initial experience of the pregnancy was negative. The experience is characterized by rejection by family and friends and feelings of guilt on the part of the teenager.

2. Attitudes toward the Child and Child Care: Kingston and Mandeville

The experience of an early pregnancy appears to have influenced the teenagers views on the timing of a first pregnancy. More than 95% of the recent graduates of the Kingston and Mandeville Centres compared to 87% of teenage mothers in Kingston comparison group, indicate that if they had to live their lives again they would postpone the first pregnancy until they were older. See Table 9.

In spite of the initial negative experience of the pregnancy, however, Centre graduates demonstrate a positive attitude toward childbearing. The negative experience of a pregnancy during their teenage years does not seem to have affected the desire to bear

children: only 13% of recent graduates and 11% of girls in the comparison group in Kingston said that they would never have a child if they had their lives to live over. Moreover, Centre graduates in both areas were more willing (84% and 81%) than women in the comparison group (67%) to have another baby. Data also presented in Table 8 indicate that fewer Centre graduates (34-36%) dislike child care compared to women in the Kingston comparison group (44%). Although many have less time for their friends, both groups are relatively happy when caring for their babies (80-90%).

The amount of contact "baby fathers" have with their children is quite variable (see Table 9). Approximately 30% of the babies born to teenage mothers in the comparison group, compared with less than 20% of Centre graduates in both Kingston and Mandeville, never have any contact with their fathers. Contact between the baby and the father was higher in the Kingston area than in Mandeville. For example more than 50% of the "baby fathers" in Kingston saw their babies 3 or more times each week compared with 42% in Mandeville. A larger percentage of both the recent graduates and comparison group in the Kingston area also received child support from the father of the child than in Mandeville. However, local and overseas family members as well as friends also provided some support for the child.

3. Social Supports and Role of Women's Centre

The teenager who becomes pregnant while in school tends to be ostracized by her family and friends. She can be, many times, physically as well as emotionally rejected. The Women's Centre provides some of the support necessary to her survival during and after the pregnancy. As presented in Table 10 approximately half of the recent graduates of the Kingston Centre (41%) had heard about the programme from friends, 15% heard from the school counsellor and 11% from the health centre. Most graduates of the Mandeville Centre were first informed through the health centre (42%). Referrals follow a similar trend. About 60% of the Kingston Centre graduates were referred by a friend or a relative, while in Mandeville, 46% were referred by friends or relatives, and 35% of the graduates were referred by the clinic nurse.

The majority of pregnant teenagers referred to the Women's Centre are happy to have been there primarily because it allowed them the opportunity to continue their schooling, and because the Centre provides the support systems that they had lost. In the words of Centre graduates participating in the focus group discussions:

" You don't have to feel left out"

"I lost everything and then when you reach here (Women's Centre) and you realize that there are some others in the same

position as you. And you say .. I wish I could come here every morning"

" It's like a family. You feel warm and you feel together".

The views of graduates from the Kingston and Mandeville Centres about the programmatic aspects of the Women's Centre Programme were very similar. Almost all the graduates (98% and 100%) from the two areas were satisfied with the counselling they received at the Centre and with how they were treated by Centre staff. Centre graduates also expressed positive views about the academic component and the nursery service. The only aspect of the Centre programme with which graduates were generally not satisfied was the skills training. Graduates felt that they were not given enough exposure to skills training.

Centre graduates feel that participation in the Centre programme has made a difference in their lives. More than 90% of the graduates interviewed felt that the programme had helped to improve their self image, their self esteem and self confidence. The programme had served to increase their awareness of the responsibility that they have for their life and their children, and improved their life planning skills. Other aspects of the programme which received a more than 90% rating from graduates were family planning knowledge and human sexuality. The areas of academic preparation; job placement; and personal relations with the "baby father", and with parents were perceived to have been less useful.

D. Cost Analysis

Unlike most cost-effectiveness studies which consider inputs and outputs of a programme, the opening of a new centre involves a large capital expenditure for the purchase of the building and furnishings. Capital expenditures are amortized over the useful life of the assets. Operating expenses reported are for a full 12 month period.

Although the Centre is a part of the Ministry of Labour, Welfare and Sports of the Government of Jamaica, it is very dependent on outside funding for capital expenditures. For example, at the Kingston Centre, the Norwegian government recently donated a building which houses the classrooms, library, and skills centre. Similarly, automobiles have been donated by UNFPA, the Red Cross, and other international organizations.

While the Centre is willing to help its students and graduates with some of their expenses like school fees, it tries to avoid costs associated with the health care provided. Consequently, no costs are included for ante-natal care, delivery, or postpartum checkups for mother or child. The cost for ante-natal care is less than US\$10. At the Victoria Jubilee Hospital, the girl must pay at her initial visit. At the University Hospital, the girl can pay for the delivery over time, but does not receive the birth registration until the bill is paid in full; this option is not available at the Victoria Jubilee.

Programme costs for 1987 are broken down into six categories: administration, school-oriented programme, nursery, walk-in services, outreach services, and services for former students. Centre administrative costs are calculated and allocated to the five same activities conducted at the centres. As mentioned earlier, none of the costs at the national coordinator's level are allocated to the individual centres.

As detailed in Table 11, the administrative costs associated with one centre total J\$86,000 (US\$15,600) per year. Of these costs, 56% represent personnel (Centre Manager and Administrative Assistant), 36% represent utilities, office and maintenance supplies, and 8% for maintaining the centre's vehicle. The administrative costs are allocated to the centre programmes as a proportion of the total operating costs: 61% to the school programme, 21% to the outreach programme, 10% to the nursery, 2% to the walk-in services and 6% to services for former students.

Capital expenditures normally are amortized over the useful life of the assets and then allocated on an annual basis to the programme. In this study, the physical building and renovations are amortized over a 30 year period, furnishings over a 20 year period, skills centre machines over a 15 year period, and vehicles over a 10 year period. As shown in Table 12, the annual amount

charged to the programme for the fixed assets is J\$25,250 (US\$4,590). The capital expenses are then allocated to the different services provided by the centre. Since some of the activities depend more heavily on the centre infrastructure, a larger portion of the amortization was allocated to these services.

As shown in Table 13, the school programme is allotted with 60% of the capital expenses, the nursery receives 25%, and the outreach walk-in and former students programs each receive 5%. The direct costs are the actual costs associated with the delivery of the five types of services provided by the Centre. In the school programme, as shown in Table 13, the direct costs are composed of salaries to teachers and counsellors, travel and vehicle maintenance expenses, student allowances, and school/exam fees. Since hot lunches are provided to the programme participants, the expenses associated with the kitchen staff and food are also allocated to the school programme. The other activities generally depend on either counsellors or staff time, or transportation and vehicle expenses.

Each of the activities uses its own measure of programme effectiveness, depending on the population that is served per year. For this analysis, the school programme serves 75 girls, the nursery programme serves 75 babies, the outreach programme provides services to 250 girls in the rural areas surrounding the centre, 60 walk-in clients, and 150 former students who still receive counselling and/or support from the centre.

Total activity costs are then calculated by summing the direct costs and allocated administrative and capital expenditures. Dividing the total cost by the effectiveness measures described above yields a cost-effectiveness ratio, as shown in Table 14. The school programme is the most complex one offered by the centre, drawing upon several types of centre staff, as well as heavily dependent on the physical plant and centre administration. The cost of keeping a girl in the programme for one academic year is approximately US\$437. Keeping a child in the nursery during the academic year incurs an annual cost of US\$83 per child.

The cost of providing services to former students, which entails counselling and school visits, and at times financial support to the girls, was an average of US\$22 per girl. Women who seek walk-in attention generally are referred to a social service agency and followed up to insure that the women's needs are met. The average cost of providing these services is US\$18. Providing the services to the girls in rural areas through the outreach programme cost an average of US\$42 per girl.

The school programme provides a broad range of services to the girls, including counselling, teaching, hot meals, and books. When comparing the cost of the school programme with that of

keeping a girl in the school, it is highly likely that the Centre programme is a more economical programme. In many parts of Jamaica, the outreach programme is the most cost-effective strategy for providing pregnant girls with continued education. The strategy takes advantage of other organizations' facilities and volunteers to reach the girls who do not have access to one of the centres. The advantage to this strategy is that it does not require a large investment in infrastructure. Although the cost per participant is much lower than for centre-based participants, the girls in the outreach programme do not have access to the range of activities offered by the centres.

E. Community Attitudes and Perceptions

1. Kingston

Interviewing members of the Kingston and St Andrew (KSAC), and Manchester communities provided an opportunity to gauge the public's perception of the Women's Centre programme and teenage pregnancy in Jamaica. These interviews were conducted in four markets in the KSAC area (Constant Spring, Papine, Cross Roads and Coronation) which serve a broad range of socio-economic groups and geographic sections of the city. Approximately 50 people were interviewed in each of the markets, for a total of 189 people. Of those interviewed, 37% were males and 63% were females. The average age was 35, and the sample included a range of occupations; professionals, people working in the service sector, students and vendors.

When asked if they had ever heard of the Women's Centre Programme, 47% reported that they had. Another 8% recognized the programme after it had been explained to them. Of those who had ever heard of the programme, only a few (8%) knew that it was an educational and counselling programme for pregnant teenagers. (i.e. a programme with three components). However, 55% knew that it was a programme oriented toward pregnant teens (only one component). More than a third (38%) of the public was also aware that the programme has an educational focus (only one component). Another 38%, though had heard of the programme but couldn't correctly identify its purpose.

Among the Kingston public, the mass media played an important role in providing information about the Centre, with 35% learning about the programme from the radio, and 18% from the television. Individual contact was also important in spreading information about the Centre, with 21% learning from friends and neighbors and 12% learning from teachers, counsellors, or nurses.

After explaining the programme's purpose to those interviewed, 92% considered it to be useful. The major reason for its

usefulness was because it allowed the pregnant teens to continue their schooling (31%). The centre provides the teen mothers with a second chance (21%) and offers help and a caring environment to them (17%). Only 6% suggested negative answers toward the usefulness of the Centre, with the primary negative reason being that it encourages the girls to become pregnant.

The notion that teenage pregnancy is a problem in Jamaica was corroborated by 92% of those interviewed. Almost three-fourths of the sample believed that specific actions can be taken to reduce the teen pregnancy rate. Many (41%) believed that the solution lies in providing contraceptives to the teenagers. Others saw a reduction through teaching sex education (17%) and providing counselling (22%). These answers indicate that access to contraceptives alone will not resolve the problem. Still others saw the solution on an even larger scale, suggesting that community education (5%) and employment opportunities (4%) need to exist in order to reduce teenage pregnancy. Finally, a small group (5%) saw legal interventions as the means of reducing the problem, suggesting that the fathers should be legally bound to support their children.

On the other hand, the remaining quarter who said that nothing can be done to reduce teenage pregnancy offered reasons as to why this is the case. Almost half (49%) said that "youth are stubborn" and do what they want to do regardless of the consequences. Another 17% indicated that teens will not use the services that are provided to avoid pregnancy. These answers indicate that a portion of the public believes that the youth have adequate knowledge of sex education and access to services providing family planning.

When asked if funds should be spent on providing services for pregnant girls in school, 80% indicated that they should, and another 10% were uncertain, depending on the situation. Since pregnancy occurs within all types of educational institutions, the public was asked to consider separately assistance for the younger girls in primary or all age schools, and for the older girls in secondary or high schools.

Most (94%) of the community felt that girls who become pregnant in primary/all age schools should be allowed to continue their schooling. As to where they should continue their schooling, 45% indicated that the public schools were the appropriate place, but 30% indicated that a special school would be more appropriate. This may be to keep the young mothers away from the rest of the girls, since it is commonly thought that the young mothers would be a bad influence on the rest of the school girls. Or they may feel that there will likely be less pressure from their peers, if they attend a school with girls with similar problems.

The public was slightly less supportive of the girls getting pregnant in secondary and high school. Most (91%) felt that they

should be allowed to continue their education after the babies are born. Again, the most common response (50%) as to where was in the public schools, and 23% felt that they should be in a special school.

The issue was addressed more personally by asking what those interviewed would do if they had a daughter who became pregnant in school. Nearly all (91%) gave positive responses, with the most common being that the girl should go back to school (67%). Other positive responses included: "let her have the baby" (6%) and provide her with skills training (5%). Most respondents (86%) indicated that they would allow their daughter to use the Women's Centre Programme because the Centre provides counselling and support (47%), educational opportunities (43%), and the Women's Centre "deals with those type of problems" (10%).

Overall, the Kingston community believes that the Women's Centre is useful because it provides schooling and counselling to teenage mothers. They are sympathetic to the young mothers, and favor having them return to school. Most indicated that if they had a pregnant daughter, she would be allowed to attend the Centre.

2. Mandeville

In Mandeville, 59% of the population had heard of the Women's Centre Programme, and another 4% recognized it after a brief explanation. This is somewhat higher than that observed in Kingston perhaps because the community is smaller and the town is more aware of the local activities. The public was made aware of the Centre principally through radio (31%) and television (21%), although many learned about the Centre from friends (10%).

The public felt that the Centre's activities were quite useful. Almost all (97%) of the Manchester public felt that the Centre served a purpose because it offered a helping, caring environment (24%), gave the girls a second chance (16%) and allowed the girls to continue their education (16%). It is interesting to note that almost twice as many people in Kingston saw the value of the Centre in its educational capacity than did the people in Manchester.

Teenage pregnancy was perceived as a problem by 94% of the people interviewed in Manchester, with 72% believing that something can be done to alleviate the problem. The most commonly proposed solutions were counselling (24%), and providing contraceptives (29%). Only 7% saw sex education as the vehicle for reducing the problem. On the other hand, 28% of the community felt that nothing could be done to reduce the problem. More than one-fourth (27%) who believed this indicated that "youth do what they want to", and that there is little reason to do anything to educate or provide contraceptive services to them. Another common thought was that

contraceptives do not work (20%). This may be due to the individual's experience with method failure because they were not using them correctly, or were not using effective methods. Finally, another group thought that "women don't care" about what happens to them. According to these people, the number of children that a woman has does not affect her outlook on life.

When asked if money should be spent on providing services to girls who are pregnant in school, 85% of the community said they agreed. The majority of the community was in favor of allowing girls who get pregnant at any level of schooling, primary through high school, to continue their education. When asked where the girls should continue their education, the most common place was in the public schools (53%).

Although the rural area seems to place education as a lower priority than did the Kingston community, 68% of the Manchester community indicated that if they had a daughter who got pregnant while in school, they would want her to go back to school. Unlike in Kingston, none of the responses to the question in Manchester were negative, indicating that they are more supportive of young mothers. Support of the Women's Centre was also shown by the 98% who indicated that they would allow their daughters to use the Centre if the daughters were to become pregnant while in school.

Overall, the people living in Mandeville also strongly support the programme because of its counselling services rather than educational ones. They see teenage pregnancy as a problem, and have ideas as to how it can be reduced. Their support is indicated by 98% indicating that they would let their daughter use the Centre if they were pregnant.

VI. DISCUSSION AND CONCLUSIONS

The objectives of the Women's Centre Programme are to continue the education of teenagers who become pregnant while at school and to assist these girls in re-entering the school system after the birth of their babies. The ultimate goal of the programme, however, is to affect national education policy in such a way as to ensure that girls who become pregnant, while at school, are given the opportunity to continue formal schooling after the birth of the baby.

Given that so many pregnancies occur in the secondary schools, the Ministry of Education should improve its efforts in teaching human reproduction and family planning, as it is currently failing to meet the needs of the school girls. If the pregnancies are occurring because the girls do not have sufficient motivation for the future, then again, the curriculum and activities associated with the secondary schools should be examined more carefully.

In general, the results of this evaluation have been very positive. The Centre programs have been shown to be effective in assisting the teenage mother to overcome the domestic and social problems she faces when she leaves school because of pregnancy. The Centre allows her to continue her education, provides her with counselling; she is given family life instruction and contraceptive services which support her resolve to delay the next pregnancy.

The results of the evaluation demonstrate that, while only 15% of women in the control group who become pregnant while in school returned to school, about 55% returned to school among recent Centre graduates in Kingston. In Mandeville 73% of the graduates returned to school. With respect to employment, salary levels were somewhat higher among recent graduates than the comparison group, and girls who reached high school earned the highest salaries. However, prevailing low wages and the relatively high levels of unemployment among all young women remains a problem.

The counselling sessions provided by the Centre have had a positive effect on the knowledge of contraceptive methods. Contraceptive use prevalence was high in both groups in Kingston; 85% of recent graduates were using methods, compared with 81% in the control group. The difference lay in the mix of methods. Among Centre graduates in Kingston the leading method was the IUD (40%), followed by orals (22%). Among the control group, the leading method was the pill (38%), followed by injectables (27%). Contraceptive use was similarly high in Mandeville (89%), but with greater reliance on pills (65%) and condoms (18%).

The initiation of breastfeeding was high, i.e. above 90%, in both Centre graduates and the comparison group, but the duration was relatively short, i.e. 2 to 3 months. Moreover, there was no

significant difference in the duration between Centre graduates and the comparison group in Kingston.

Subsequent pregnancies pose a serious problem to the teen mothers. Among recent graduates 15% had a subsequent pregnancy by the time of the interview at the three year follow-up in Kingston. In contrast, subsequent pregnancies had occurred to 39% of teen mothers in the control group. Similarly in Mandeville, only 8% of recent graduates had experienced a subsequent pregnancy.

The school programme is the most complex programme, drawing upon many centre staff, and is heavily dependent on the physical plant and centre administration. The cost of keeping a girl in the programme for one academic year is approximately US\$437. Keeping a child in the nursery during the academic year incurs an annual cost of US\$83 per child.

The cost of providing services to former students, which entails counselling and school visits, and at times financial support to the girls, was an average of US\$22 per girl. Women who seek walk-in attention generally are referred to a social service agency and followed up to insure that the women's needs are met. The average cost of providing these services is US\$18. Providing the services to the girls in rural areas through the outreach programme cost an average of US\$42 per girl.

Over the 11 years of operation, the Women's Centre programme has been successful in other important areas. Programme staff attest to the obvious changes in women who have participated in the classes. The reticence and lethargy seen among groups that have just entered the programme is replaced at the end of the exposure by alertness and optimism. Centre graduates themselves attest to this change in their self-image and self-esteem and their relationship to their parents and the father of the baby.

During this time, the Women's Centre Programme has also gained the respect and trust of the Community. The programme is perceived as useful and necessary in the quest to find solutions to the problem of pregnancy among teenage students.

In conclusion, the Jamaica Women's Centre Programme should continue to provide opportunities for continuing education and support for family planning for teenage mothers. The services are effective and their cost is sustainable. Furthermore, these education and family planning services for young mothers have the broad support of parents and the community.

VII. DISSEMINATION

The Women's Centre Programme for Adolescent Mothers is the first of its kind in the region, and is currently the only

programme in operation designed to intervene in returning teenage girls to the formal school system following a pregnancy. To date the only information available on the effects of education and health interventions on the subsequent pregnancy in teenage mothers is from the developed countries. The outcome of this evaluation is therefore of particular interest to local and regional health, education and family planning programme administrators involved in the search for appropriate and effective strategies to address the problem of childbearing among teenagers. In addition, the findings are of interest to international donor agencies concerned about teenage fertility.

Building on the Centre's tradition of sharing results and experiences, a national seminar was conducted on June 28, 1989 at the Jamaica Conference Centre. Seminar participants included educators, senior administrators of social service organizations, school counsellors, representatives of international donor agencies and staff from all five Women's Centres. The University of the West Indies Social Science faculty and Early Childhood and Extra-Mural Departments were also represented. Evaluation findings presented at the seminar were included in both national daily newspapers, The Daily Gleaner and The Jamaica Record.

During workshop sessions, participants had an opportunity to discuss the research findings and to make recommendations on four topics: Women's Centre Expansion; Male Involvement; Pregnancy Prevention in the Secondary Schools; and Continuing Education/ Training for Teen Mothers. Recommendations from the working group sessions have been incorporated into this report under Recommendations for Policy.

In May 1989, the Women's Centre evaluation project formed part of the discussion during a regional conference held in Barbados entitled, Operations Research: Key to Management and Policy. The preliminary results of the evaluation as well as programme experiences were shared with regional family planning and health administrators participating in that Conference. In November 1989, project results were also presented at the International Conference on Adolescent Fertility in Latin America and the Caribbean held in Oaxaca, Mexico.

As with other INOPAL projects, results from the evaluation of the Women's Centre programme have been disseminated through the INOPAL newsletter, ALTERNATIVES, and through project summaries distributed to family planning programme managers and administrators in the region. Other opportunities for dissemination will be sought at local and regional conferences on health, including teenage health, and on education. In addition, project staff will be encouraged and supported in the preparation of papers for publication in regional and international professional journals.

VIII. RECOMMENDATIONS FOR POLICY

Participants in the end-of-project seminar agreed that while the focus of the Women's Centre programme during its first 10 years has been on providing continuing academic education and some skills training for teenage mothers, the evaluation has shown that programme focus should be broadened. The Women's Centre should continue to provide opportunities for continuing education for teenage mothers. However, in the future, the Women's Centre should direct attention to the areas of: Skills Training; Male Involvement; and Sensitizing Policy Makers and the general public to the need for continuing education for teenagers who leave school because of pregnancy.

The recommendations made by participants in the end-of-project seminar are as follows:

- The Women's Centre Programme should be extended to all 14 parishes in Jamaica;
- More emphasis should be placed on providing a wider and more marketable range of skills to teenage mothers;
- The type of skills offered at each Centre should be decided on the basis of community needs identified through community needs assessments;
- The Women's Centre Programme should establish linkages with other skills programs like HEART and Solidarity, and with small business associations and private entrepreneurial centres;
- In order to support the skills training component of the Centres' activities and programmes for enhancing male involvement in family planning, child care and development, the Women's Centre should establish working relationships with local and national service organizations which have those interests;
- The Women's Centre should serve as a training centre for activities in male motivation and involvement in family planning, child care, and development as it relates to teenage mothers;
- The outreach and parenting education programme for 'baby fathers' should be strengthened and be provided routinely;
- Establish peer counselling as a means of preventing pregnancy among school-age girls;
- The Women's Centre should continue to conduct research in teenage fertility and serve as a catalyst for the conduct of research and the dissemination of research results;

■ Organize and conduct sensitization seminars and workshops for specific target groups;

■ Design and market relevant information packages on the importance of providing opportunities for continuing education for teenage mothers;

■ Advocate the review of the sections of the Education code which address the educational rights of teenage mothers;

■ If the Centre is to proceed with its expansion, the importance of on-going collaboration and support of other social service agencies, especially education, must be recognized and acted on by all relevant agencies.

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Attachments

TABLE 1
Background Characteristics - Kingston

Variables	Recent Grads (n=89)	Comparison Group (n=111)	Older Grads (n=66)
Age	17.2	17.7	21.1
Civil Status			
Married	0	0	0
Common Law	12	17	25
Visiting	68	66	63
No boyfriend	20	17	12
Highest School Level Achieved			
Primary	5	17	3
Secondary	52	56	53
High School	35	19	36
Technical	8	8	8
No. in Household	6.5	7.3	6.8
No. of Rooms in house	4.0	3.6	5.4
Running water in house	51	30	52
Electricity in house	79	80	89

TABLE 2

Education and Current Status - Kingston

Level when pregnant for first time/ Current status	Recent Grads (n=88)	Comparison Group (n=108)	Older Grads (n=66)
Primary/All Age went back to school	n=12 58%	n=21 14%	n=8 75%
Study	50%	10%	0%
Work	8	28	63
Work and Study	17	0	12
Neither	25	62	25
Secondary school Went back to school	n=45 44%	n=64 13%	n=31 68%
Study	20%	6%	6%
Work	13	22	48
Work and Study	0	2	0
Neither	67	70	45
High School Went back to school	n=31 68%	n=23 22%	n=27 74%
Study	35%	9%	19%
Work	10	17	33
Work and Study	10	9	11
Neither	45	65	37
TOTAL WHO WENT BACK TO SCHOOL	55%	15%	77%
TOTAL WHO ARE WORKING	17%	25%	50%

TABLE 3
 Weekly Salaries - Kingston
 (in J \$)

Highest level of school completed	Recent Grads (N=15)	Comparison Group (N=27)	Older Grads (N=33)
Primary/All Age	165	96	210
Secondary	110	93	143
High School	177	130	217
Technical	110	126	140

Common types of work and average weekly salary earned

Machine operator	\$ 146 (28)
Higgler or Vendor	120 (13)
Clerical	174 (7)
Domestic	61 (4)

TABLE 4

Correct Knowledge of Reproduction - Kingston & Mandeville

Variable	KINGSTON		MANDEVILLE
	Recent Grads (n=88)	Comparison Group (n=108)	Recent Grads (n=26)
A girl can get pregnant the first time she has sex.	86%	84%	92%
If a girl has sex while she is seeing her period, she cannot get pregnant.	66%	53%	50%
Contraceptives are for married people only.	95%	96%	100%
If the man withdraws before ejaculation, the woman cannot get pregnant.	48%	32%	54%
The woman is most fertile the week before she has her period.	16%	14%	15%

TABLE 5
Health Care - Kingston

Item	Recent Grads (n=88)	Comparison Group (n=108)
Antenatal care		
Health centre/clinic	67%	74%
Hospital	22	10
Private physician	10	9
Didn't receive	1	7
Month began care	3.75	4.49
Postpartum care		
Yes	90%	82%
No	10	18
Birthweight		
<2500 g	13%	14%
2500-3000 g	33	35
3001-4000 g	49	51
>4000 g	5	0
Average birthweight (gm)	3062	2979

TABLE 6

Contraceptive Knowledge and Prevalence - Kingston

	Recent Grads (n=88)	Comparison Group (n=108)	Older Grads (n=66)
Number of methods known			
1-3	0%	9%	0%
4-6	11	53	18
7-9	60	32	41
10-11	29	6	41
Mean	8.3	6.2	9.9
Contraceptive Prevalence			
Method			
Pill	22%	38%	25%
Condom	11	13	8
IUD	40	2	22
Injectable	11	27	22
Other	1	0	2
Total prevalence*	85%	80%	79%

*Excludes women currently pregnant and those not sexually active.

TABLE 7

Education and Current Status - Mandeville

Level when pregnant for first time/ Current status	Recent Grads (n=26)	Older Grads (n=14)
Primary/All Age	n=8	n=1
Went back to school	50%	100%
Study	50%	0%
Work	25	0
Work and Study	0	0
Neither	25	100
Secondary school	n=7	n=7
Went back to school	86%	71%
Study	43%	14%
Work	14	29
Work and Study	0	0
Neither	43	57
High school and technical school	n=11	n=6
Went back to school	82%	100%
Study	82%	33%
Work	9	33
Work and Study	0	17
Neither	9	16
TOTAL WHO WENT BACK TO SCHOOL	73%	86%
TOTAL WHO ARE WORKING	15%	29%

TABLE 8

Effect of Pregnancy on Attitude to Childbearing
and to Child

Variable	KINGSTON		MANDEVILLE
	Recent Grads (n=88)	Comparison Group (n=108)	Recent Grads (n=26)
Would wait to have first baby	95%	87%	96%
Would never have had child	13%	11%	8%
Wants more children	84%	67%	81%
Dislikes child care	34%	43%	36%
Unable to see friends	28%	34%	44%
Happy when caring for baby	91%	90%	80%

TABLE 9

Frequency of Contact between Child and Father
and Child Support

Variables	KINGSTON Recent Grads (n=88)	Comparison Group (n=108)	MANDEVILLE Recent Grads (n=26)
Frequency of Contact:			
3 or more times weekly	51%	54%	42%
Less than 3 times weekly	31%	17%	39%
Never	18%	29%	19%
Who provides child support*:			
Father	74%	71%	63%
Local Family	81%	68%	80%
Family Overseas	33%	28%	40%
Friends	14%	20%	15%
Government	3%	9%	0%
Don't receive support	13%	18%	8%

*Multiple responses allowed, percentages do not add to 100.0

TABLE 10

Knowledge about the Women's Centre

Variables	KINGSTON Recent Grads (n=88)	MANDEVILLE Recent Grads (n=26)
FIRST HEARD FROM:		
Friends	41%	8%
School	15%	19%
Clinic Nurse	11%	42%
Relatives	23%	4%
Other	10%	27%
REFERRED BY:		
Friends	30%	23%
School	18%	15%
Clinic Nurse	14%	35%
Relatives/others	29%	23%
Self-referral	9%	4%

TABLE 11

Administrative and Capital Expenses
(in 1987 J \$)

<u>Administrative Expenses</u>		Annual Cost	
Centre Manager			36,000
Administrative Assistant			12,000
Cleaning/Maintenance			3,000
Supplies			8,000
Utilities			20,000
Vehicle maintenance			<u>7,000</u>
			86,000
Capital Expenses		Useful Life	Annual Cost
House	300,000	30 years	10,000
Remodeling	90,000	30 years	3,000
<u>Equipment</u>			
Offices	16,000	20 years	800
Dining Room	5,000	20 years	250
Kitchen	30,000	20 years	1,500
Nursery	18,000	20 years	900
Verandah	1,500	20 years	75
Classroom	14,500	20 years	725
Skills Training	30,000	15 years	2,000
Vehicle	60,000	10 years	6,000
TOTAL	<u>565,000</u>		<u>25,250</u>

TABLE 12

Allocation of Administrative and Capital
Expenditures to Centre Activities
(in 1987 J \$)

	% Expenses Allocated	Amount
<u>Administrative Expenses</u>		
School Programme	60.5	52,030
Nursery	10.2	8,772
Walk-In	1.7	1,462
Outreach	21.5	18,490
Former Students	6.1	<u>5,246</u>
TOTAL		86,000
 <u>Capital Expenses</u>		
School Programme	60	15,150
Nursery	25	6,312
Walk-In	5	1,263
Outreach	5	1,262
Former Students	5	<u>1,263</u>
TOTAL		25,250

TABLE 13

Women Centre Programme Operating Costs
(in 1987 J \$)

Programme Type	Annual Cost	% of Total Operating Cost
<u>School Programme</u>		
<u>Salaries:</u>		
Counsellors	22,400	
Teachers	20,000	
Vehicle maintenance	6,000	
Family Planning Counsellor travel	15,000	
Student allowance and welfare	13,000	
School/exam fees	10,000	
Kitchen workers	17,500	
Food	<u>9,000</u>	
	112,900	60.5
<u>Nursery</u>		
Workers	17,000	
Supplies	<u>2,000</u>	
	19,000	10.2
<u>Outreach</u>		
Counsellors	32,000	
Vehicle	7,000	
Food	<u>1,000</u>	
	40,000	21.5
<u>Walk-In</u>		
Counsellors	<u>3,200</u>	1.7
<u>Former Students</u>		
Counsellors	6,400	
Assistance	<u>5,000</u>	
	11,400	6.1
TOTAL	<u>186,500</u>	

TABLE 14

Programme Cost-Effectiveness
(Annual Cost/User in J \$)

Costs		Number of users	Cost J \$	Effectiveness US \$
<u>School Programme</u>				
Operating costs	112,900			
Administrative	52,342			
Capital	<u>15,150</u>			
	180,392	75	2,405	437
<u>Nursery</u>				
Operating costs	19,000			
Administrative	8,809			
Capital	<u>6,312</u>			
	34,121	75	455	83
<u>Walk-In</u>				
Operating	3,200			
Administrative	1,484			
Capital	<u>1,263</u>			
	5,947	60	99	18
<u>Former Students</u>				
Operating	11,400			
Administrative	5,285			
Capital	<u>1,263</u>			
	17,948	150	120	22
<u>Outreach</u>				
Operating	40,000			
Administrative	18,081			
Capital	<u>1,262</u>			
	59,343	250	237	43

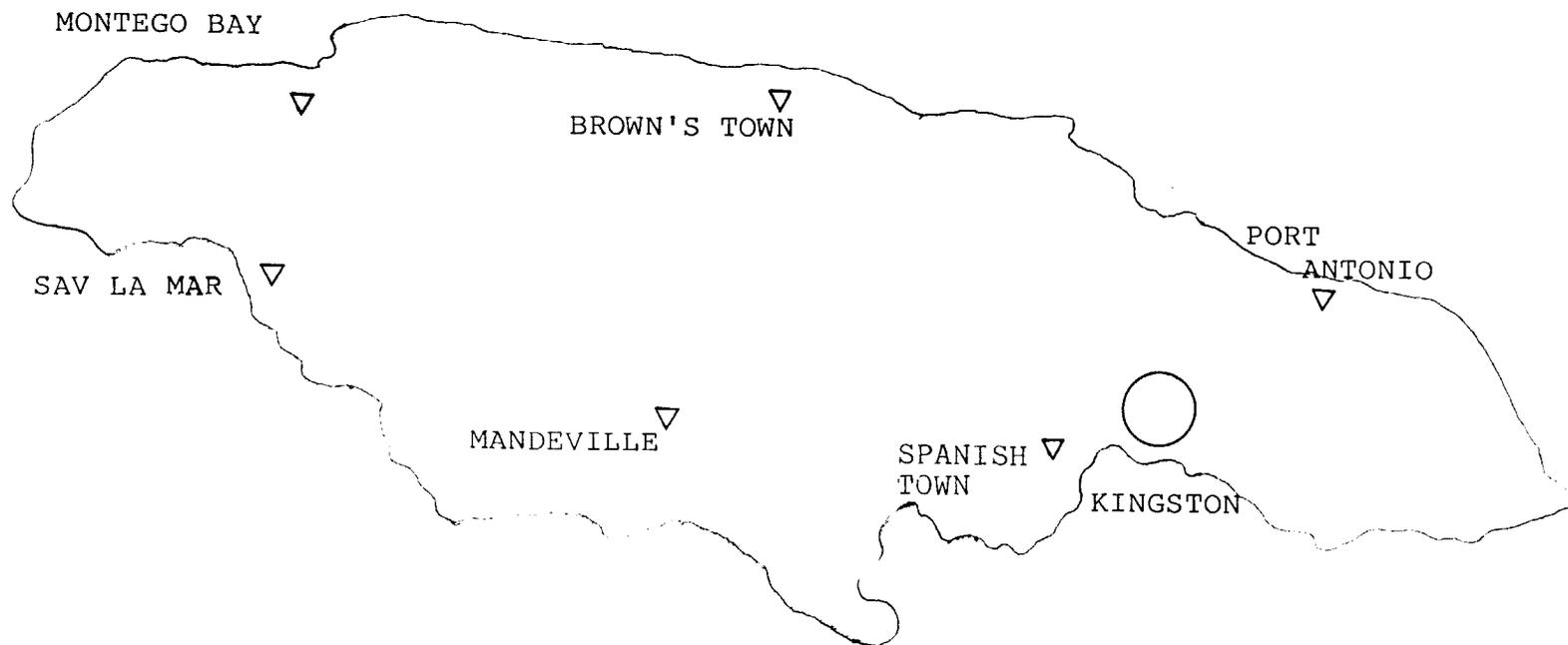


FIGURE 1: WOMEN'S CENTRE SERVICE OUTLETS

For additional information on the INOPAL Program, please contact The Population Council Regional Office in Mexico (Apartado Postal 105-152, 11560 Mexico, D. F.), The Population Council in New York (One Dag Hammarskjold Plaza, New York, NY 10017), or Office of Population, ST/POP, Agency for International Development, Washington, D. C. 20523.

The projects supported by INOPAL were as follows:

BARBADOS

Barbados Family Planning Association (BFPA). Bay Street, St. Michael, Barbados, W.I. Strategies to increase the use of contraceptives by factory workers in Barbados.

BOLIVIA

Centro de Investigación, Educación y Servicios (CIES). Edif. Santa Isabel, Bloque C-2203, La Paz, Bolivia, S.A. A CBD program with a medical back-up component for union groups in La Paz.

BRAZIL

Assistencia Medica a Industria e Comercio Ltda. (AMICO). Rua Azevedo Macedo 92, CEP 04013, Sao Paulo SP, Brazil, S.A. Assessing costs and benefits of incorporating family planning into a pre-paid HMO plan in Brazil.

Associacao Brasileira de Entidades de Planejamento Familiar (ABEPF). Rua Visconde Silva 25, Botafogo-22271, Rio de Janeiro, Brazil, S.A. Alternatives to expand family planning services in Brazil.

Promocao da Paternidade Responsavel (PRO-PATER). Rua Marques de Paranagua 359, 01303 Sao Paulo, Brazil, S.A. Measuring the cost-effectiveness of mass media promotion of vasectomy.

COLOMBIA

Asociación Sociedad Médico Farmacéutica (SOMEFA). Carrera 6a. No. 76-34, Bogotá, D.E., Colombia, S.A. A cost-effective strategy to distribute IUDs among private physicians in Colombia.

Asociación Pro-Bienestar de la Familia Colombiana (PROFAMILIA).
Calle 34 No. 14-52, Bogotá, Colombia, S.A. IEC services and condom
distribution for AIDS and STD prevention.

Asociación Pro-Bienestar de la Familia Colombiana (PROFAMILIA).
Calle 34 No. 14-52, Bogotá, Colombia, S.A. Operations research on
different approaches for vasectomy service provision in Colombia.

DOMINICAN REPUBLIC

Asociación Dominicana Pro Bienestar de la Familia (PROFAMILIA).
Socorro Sánchez 64, Zona 1, Santo Domingo, República Dominicana,
C.A. Strengthening human resources program expansion.

Asociación Dominicana Pro Bienestar de la Familia (PROFAMILIA).
Socorro Sánchez 64, Zona 1, Santo Domingo, República Dominicana,
S.A. Testing counseling options for provider-dependent
contraceptive methods.

ECUADOR

Centro Médico de Orientación y Planificación Familiar (CEMOPLAF).
Flores 912 y Manabí, Quito, Ecuador, C.A. Delivery of family
planning and health services in rural communities in Ecuador.

GRENADA

Grenada Planned Parenthood Association (GPPA). P. O. Box 127, St.
George's, Grenada, W.I. Strategies to promote contraceptive use
among women with high reproductive risk.

GUATEMALA

Asociación Pro-Bienestar de la Familia de Guatemala (APROFAM).
9a. Calle 0-57, Zona 1, Guatemala, Guatemala, C.A. Improving the
performance of distributors in APROFAM's CBD program in indigenous
areas.

Asociación Guatemalteca de Educación Sexual (AGES). 3a. Calle 3-
59, Zona 1, Guatemala, Guatemala, C.A. Client-designed family
planning service delivery systems.

HONDURAS

Federación de Organizaciones Privadas (FOPRIDEH/PROALMA). Tercer
Piso Edif. Junta Nacional de Bienestar Social, Tegucigalpa,
Honduras, C.A. Promotion of breastfeeding and family planning in
the Social Security Institute of Honduras.

Asociación Hondureña de Planificación Familiar (ASHONPLAFA). Bo. San Felipe, Calle Pueblo Nuevo, Casa No. 3368, Tegucigalpa, F.M., Honduras, C.A. Strategy to increase the availability and use of the copper IUD through private physicians.

Instituto Hondureño de Seguridad Social (IHSS). Segunda Avenida y 8a. Calle, Tegucigalpa, D.C., Honduras, C.A. Providing family planning services on the basis of reproductive risk: Honduras.

JAMAICA

The Women's Centre (TWC). 42 Trafalgar Rd., Kingston 6, Jamaica, W.I. An evaluation of the effect of continuing education on teenage childbearing.

MEXICO

Pro-Superación Familiar Neolonesa, A.C. (PSFN). Blvd. Díaz Ordaz 120, Col. Santa María, Monterrey, N.L., México. Integral development of young adults in the community: Nuevo León.

Materno Infantil y de Planificación Familiar, A.C. (MIPFAC). Plutarco Elías Calles 744 Norte, 32310 Ciudad Juárez, Chih., México. Family planning service delivery strategies in an industrial setting.

Fundación Mexicana para la Planeación Familiar, A.C. (MEXFAM). Juárez 208, Tlalpan, 14000 México, D.F., México. The use of operations research as a management tool: MEXFAM.

Academia Mexicana de Investigación en Demografía Médica (IMSS/AMIDEM). Mier y Pesado 120, Col. del Valle, 03100 México, D.F., México. The impact of providing family planning services on the basis of reproductive risk in Mexico.

Promotora de Planificación Familiar, A.C. (PROFAM). Circuito Balvanera No. 3, Fracc. Industrial Balvanera, 76900 Villa Corregidora, Qro., México. The marketing of condoms in supermarkets: Shelf vs. cashier as point of sale.

Centro de Orientación para Adolescentes, A.C. (CORA). Tenayuca No. 55 - Desp. 701/702, Col. Vértiz Narvarte, México, D.F., México. Cost-effectiveness study on the services to young adults in Mexico.

Federación Mexicana de Asociaciones de Planificación Familiar, A.C. (FEMAP). Plutarco Elías Calles 744 Norte, 32310 Ciudad Juárez, Chih., México. Testing strategies to increase men's involvement in family planning.

Centro de Investigación sobre Fertilidad y Esterilidad, A.C. (CIFE). Bajío 203 - Desp. 101, Col. Roma Sur, 06760, México, D.F., México. The effectiveness of the private physician in the implementation of a male-only clinic.

Instituto Peruano de Seguridad Social/PROFAMILIA (IPSS). Jr. Trípoli 360, Miraflores, Lima 18, Perú, S.A. Immediate post-partum and post-abortion family planning program.

PROFAMILIA/CENPROF. Bolognesi 465, Trujillo, Perú, S.A. A comparison of male and female community based distributors of contraceptives.

Universidad Nacional Mayor de San Marcos. Horacio Urteaga 1571, Lima 11, Perú, S.A. Family planning programs for special groups of high risk women.

Ministerio de Salud/Proyectos en Informática, Salud, Medicina y Agricultura (MOH/PRISMA). Av. Las Artes 360, San Borja, Lima 41, Perú, S.A. Involving family planning workers in an AIDS prevention campaign in Lima.

ST. KITTS-NEVIS

Ministry of Health, Education & Community Affairs (MOHECA). Basseterre, St. Kitts-Nevis, W.I. Increasing male use of contraceptives.