

AN EVALUATION OF THE  
PLAINFIELD TEEN PARENTING PROGRAM

Final Report  
May, 1994

This report was prepared by Diane Fuscaldo, New Jersey Chapter of the National Committee for the Prevention of Child Abuse, and the staff of Philliber Research Associates, Accord, New York.

SAMPLE

*The only  
copy*

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	p.i
INTRODUCTION .....	p.1
THE PLAINFIELD TEEN PARENTING PROGRAM .....	p.2
THE EVALUATION DESIGN AND SAMPLE .....	p.9
SOURCES OF SUPPORT .....	p.12
SELF-SUFFICIENCY OUTCOMES .....	p.14
Academic Performance .....	p.14
Employment .....	p.17
Access to Pediatric Health Care .....	p.18
MEASURES OF IMPROVED PARENTING .....	p.20
The Adult Adolescent Parenting Inventory .....	p.21
The Parenting Stress Index .....	p.23
The Nursing Child Assessment Teaching Scale .....	p.25
EMOTIONAL STABILITY AND SELF ESTEEM .....	p.29
The Brief Symptom Inventory .....	p.30
The Coopersmith Self Esteem Inventory .....	p.31
THE PLAINFIELD HIGH SCHOOL STUDENT SURVEY .....	p.32
THE PLAINFIELD HIGH SCHOOL FACULTY SURVEY .....	p.35
CONCLUSION .....	p.38
REFERENCES .....	P.43
APPENDIX .....	P.44

# AN EVALUATION OF THE PLAINFIELD TEEN PARENTING PROGRAM

## *Executive Summary*

The Plainfield Teen Parenting Program, located at Plainfield High School in Plainfield, New Jersey is a cooperative project of several groups. The Plainfield Board of Education and the Plainfield School Based Youth Services Program are hosts for the program. Other partners in the project are the Parent Linking Project of the New Jersey Chapter of the National Committee for the Prevention of Child Abuse, the Community Coordinated Child Care of Union County, the Plainfield Health Center and AT&T. This public/private partnership has implemented a comprehensive program for teen mothers and their babies, including parenting education, school-based child care, health services, linkages to employment, social services, and ongoing counseling and support.

This evaluation followed over 30 mothers and 17 comparison mothers in Plainfield over a two-year period. The mothers were well matched by race and age of their children, but the comparison mothers were older at the time of their first births. This difference should mean better outcomes among these comparison mothers. Also, the small size of the samples of mothers followed makes the achievement of statistical significance more difficult.

The findings of the evaluation may be summarized as follows:

### **On self sufficiency:**

- ◆ A significantly higher percentage of program mothers than of comparison mothers graduated from high school;

◆ About two years after giving birth, 11% of the program mothers had had a subsequent birth, compared to one-third of the comparison mothers;

◆ Similar percentages of mothers in each group were receiving AFDC payments at the time of follow-up, but program mothers were significantly more likely to be either working or in school;

◆ Program mothers were more likely than comparison mothers to report having a regular source of medical care for their children.

#### **On parenting:**

◆ Among program mothers, there were statistically significant increases in scores on the Adult Adolescent Parenting Inventory overall and on three of its four subscales;

◆ Differences between the program and comparison mothers were particularly large among those mothers aged 17 and older;

◆ There were no significant differences in the changes in AAPI scores over time between program and comparison mothers;

◆ Stress associated with parenting decreased significantly among program mothers as measured by the parenting domain subscale of the Parenting Stress Index;

◆ Program mothers were more likely to show such decreases than were comparison mothers, with this difference reaching statistical significance on the subscale measuring stress relative to the baby's father (comparison mothers were more likely to have maintained such a relationship).

#### **On emotional stability and self esteem:**

◆ There were no significant changes in scores on the Brief Symptom Inventory and no differences between the program and comparison mothers on this measure of symptoms such as depression, anxiety, or hostility;

◆ Program mothers were significantly more likely to increase their general self esteem scores on the Coopersmith Inventory than were comparison mothers but were not more likely than comparison mothers to increase their

scores on the school, home or social environment subscales of this measure.

---

**On quality of mother-child interaction:**

◆ Videotaped and coded interactions between mothers and children using the Nursing Child Assessment Teaching Scale showed significant increases in scores among program mothers, especially among those with younger infants and among those who did not live with their own mothers;

◆ While increases were greater than among the program mothers, changes in the scores between these mothers and comparisons did not differ significantly.

**On the school-wide impact of the program:**

◆ Students at Plainfield High School generally support the presence of a child care center on school grounds, particularly if they have friends using the Center;

◆ Faculty too, are generally supportive of the program and feel that it makes the difference for some girls in being able to graduate. Still, many worry that the presence of the Center may make parenting appear easier than it really is.



## INTRODUCTION

---

The Plainfield Teen Parenting Program, located at Plainfield High School in Plainfield, New Jersey is a cooperative project of several groups. The Plainfield Board of Education and the Plainfield School Based Youth Services Program are hosts for the program. Other partners in the project are the Parent Linking Project of the New Jersey Chapter of the National Committee for the Prevention of Child Abuse, the Community Coordinated Child Care of Union County, the Plainfield Health Center and AT&T. This public/private partnership has implemented a comprehensive program for teen mothers and their babies, including parenting education, school-based child care, health services, linkages to employment, social services, and ongoing counseling and support.

The evaluation of the Teen Parenting Program had as its specific aims:

1. To test the utility of a public/private/corporate partnership in achieving positive outcomes for teen mothers and their babies;
2. To improve previous evaluations of programs of this type by the inclusion of a comparison group, and follow up of teen mothers and their babies;
3. To measure outcomes for mothers which are ordinarily not included in evaluations of this kind, such as the success of this program in relieving stress and its symptoms as major barriers to achievement among mothers in school and in their parenting roles, and
4. To measure the impact of a school-based facility of this kind on the broader population of high school students, the faculty and the staff at the school.

## THE PLAINFIELD TEEN PARENTING PROGRAM

---

The Plainfield Teen Parenting Program (PTPP) is a unique partnership among private non-profit agencies, social service agencies, corporations, the state government and the local school district. The PTPP is a component of the Plainfield High School, School Based Youth Services Program, a state funded program for adolescents.

The School Based Youth Services Program (SBYSP) was developed by the New Jersey Department of Human Services to provide adolescents, especially those with problems, with the opportunity to complete their education, to obtain skills that lead to employment or additional education, and to lead mentally and physically healthy lives. There are 29 SBYSP's in New Jersey and each one is located near a school. This makes it possible for SBYSP to link the education and human services systems to provide "one stop shopping" for teens in need.

The Plainfield SBYSP is located in Plainfield High School, Plainfield, New Jersey. The staff includes an administrative director, psychologists, social workers, and recreation coordinators.

The services of the Plainfield SBYSP include: employment counseling, training and placement, life skills training, family counseling, primary and preventive health services, recreational opportunities, academic counseling, and family life education.

The mission of the PTPP is to enable school age parents to successfully meet their parenting, educational, vocational, and health care responsibilities by facilitating access

to support services. The program is available to all teenage parents in Plainfield including those not currently enrolled in school. The following describes the major components of the Plainfield Teen Parent Program.

**The Plainfield Infant Toddler Center**

The Plainfield Infant Toddler Center is housed in Plainfield High School. From 1989 through 1993, the Infant Toddler Center was administered by Community Coordinated Child Care of Union County. The Center provides:

- ◆ free child care services during school hours to twenty infants and toddlers of parents enrolled in Plainfield High School, as well as those in the Teen Parenting Program;
- ◆ daily transportation for both parent and child to and from the school;
- ◆ 2 meals and a snack for toddlers; formula and diapers for infants;
- ◆ a curricula to address the developmental needs of the infant/toddler;
- ◆ bi-weekly visits from a Plainfield Health Center nurse for well baby care as well as monthly visits from a pediatrician for immunizations and medical check-ups;
- ◆ opportunity for parents to interact with their children during lunch hour or free periods and,
- ◆ regular parent conferences with the child care center staff to keep parents up to date on their children's progress.



This full-day program is designed to provide the infants and toddlers with care, nurturance, and stimulation to promote optimal growth and learning, and to provide their young parents with the information and support they need to assist them with their parenting roles. In addition to providing child care services, the Center also acts as a teaching laboratory to students who are enrolled in the Plainfield High School Child Care Class. Students in this class act as interns for the center throughout the year and learn about child development and child care.

### Parenting Classes

All students who have children in the Plainfield Infant Toddler Center are required to enroll in the Parenting I or II class. This course is also offered to pregnant and parenting teenagers who do not have their children in the Center, but who are enrolled at the school. The purpose of this class is to educate the young parents on child development and child guidance, parenting skills, maternal and child health, and family planning. Topics are covered through the use of group discussion, written information, audio-visual materials and guest speakers. In the Center the course also teaches students and parents how to use stimulating and educational activities with their children to enhance development and the parent-child relationship.

### Parent Support Group

The Parent Support Group uses a combination of parenting education and group counseling. Students with children enrolled in the Infant Toddler Center meet weekly for

one hour after school over the course of the school year for personal growth and development, problem solving, and support from other teenage mothers who share similar problems and concerns. The parents are divided into two groups: parents of infants (2 months to 12 months) and parents of toddlers (13 months to 30 months).

### The Teen Support Group

The Teen Support Group was developed to serve those pregnant and parenting teens who are not enrolled in the Plainfield Infant Toddler Center, but who are registered at the Women's Center of the Plainfield Health Center. The Teen Support Group began in the Spring of 1991, and meets weekly for 1 ½ hours to learn parenting, life skills, and to receive support and information. A special Teen Prenatal Clinic is also held at this time to ensure that the pregnant teenagers receive early and on-going pre-natal care.

### Life Skills Training

The Life Skills component is a series of specially designed workshops focusing on career development and planning, job preparation, and home management and budgeting. Through the use of speakers, audio/visual aids and hands-on career planning sessions, the students are exposed to information designed to assist them in preparing for their futures. The Life Skills workshops are held weekly for the students with children enrolled in the Infant Toddler Center. Individual sessions to help all Plainfield High School student-parents prepare for their futures are held on an as-needed basis. Additional life skills training was provided during the summer through a grant from the Jobs Training and

Partnership Act (JTPA).

---

**Job Skills Training**

Plainfield High School students who have demonstrated an interest, a need, and a readiness for work are provided the opportunity in local corporations. This work experience is intended to introduce students to work in a corporate setting, to improve job skills, and to increase awareness of career opportunities. Many of the work experiences have led to permanent employment.

**Tutoring**

Tutoring services are available to all teen parents in need of educational assistance. Student attendance and academic performance are monitored throughout the school year in order to intervene with support before major academic difficulties are encountered. Tutors for this program are teachers and volunteers from AT&T and the community.

**Mentors**

The mentoring component of the PTPP provides program participants with positive role models for developing vital life skills. Each teen parent is assigned a volunteer mentor who meets at least weekly with the teen either after school or on the weekend. Mentors can provide moral support, advocacy services, cultural development, and career development and training services. This component enables the PTPP to provide more individualized counseling services to the teens, particularly after regular school hours. The

mentors for the PTPP are volunteers from AT&T or the community. The mentor component is managed by a volunteer from AT&T who is responsible for assigning mentors and providing for their support and training.

### Grandparent Support

The Grandparents' Support Component was designed to provide support and information to the parents of the teenagers enrolled in the Plainfield Teen Parent Program. The goal for this group is to provide a supportive environment in which they can share their concerns, voice their fears, and receive confirmation of their own self-worth from other grandparents who are in similar circumstances. In order for a teen to enroll in the program, the grandparent must agree to meet with program staff a minimum of five times over the course of the program year. Individual and family counseling services, as well as resources and referrals are also available to the family of the teenager.

### Young Fathers

A Young Fathers Group began in the winter of 1991 to further address the needs of young fathers who are enrolled in Plainfield High School, as well as those who may not be high school students. Group recreational activities were held to gain the interest and participation of the young fathers. Volunteer mentors from AT&T and the community were also assigned to meet with several young fathers on an individual basis. In addition, any teen father (or significant other) in need of support and information can receive counseling through the broader School Based Youth Services Program. Young fathers can

also enroll in the Parent Education Class, as well as attend the after-school support group,

if their children are enrolled in the Infant Toddler Center.

## THE EVALUATION DESIGN AND SAMPLE

---

Between the Fall of 1990, and the Spring of 1993, 41 mothers who enrolled in the Teen Parenting Program have participated in evaluation activities. However, not all mothers have been included in each component of the evaluation.

All mothers who enrolled in the program during 1991, 1992 and 1993 were interviewed at the time of their enrollment and at the end of each school year. These interviews provided baseline and follow up data including the Adult Adolescent Parenting Inventory, the Parenting Stress Index, and the Coopersmith Self-Esteem Inventory. Thus, mothers who left the program during the school year were not available for follow up measures on these instruments. Information about outcomes including high school graduation, second births and employment status was obtained for some of these mothers by program staff or through a telephone survey.

Outcome measures were also obtained for some mothers enrolled in 1989 and 1990 who were participants during the first year of the evaluation; however, because these mothers had been receiving services prior to the initiation of the evaluation component, they do not have baseline data available and thus are not included in the part of the analysis that examines change over the period of program participation. Finally, those mothers enrolled in 1993 who are not yet eligible for graduation are included in the comparison of baseline and follow up parenting measures, but are not included when calculating graduation rates. Given the different eligibility criteria for various parts of the

analysis, the sample size of program participants ranges from 21 to 32 mothers.

A comparison group of young mothers who reside in the same community but who did not receive services through the program was identified using several strategies. First, mothers attending the same high school were approached as comparisons. However, some of these mothers later enrolled in the Teen Parenting Program and thus, were eliminated from the comparison group. Young mothers were also recruited at a community health clinic and at a local WIC program. The most successful strategy involved asking mothers enrolled in the program to provide the names of friends who might serve as comparisons, and then paying the program mothers a small incentive (\$10) for each friend who actually appeared for an interview. Comparison mothers also were paid to compensate them for the time spent in data collection.

As shown in Figure 1, nearly all of the adolescent mothers served by the program as well as those in the comparison group are African American. Mothers enrolled in the comparison group were significantly older at the time of their first interview than the program mothers. Program mothers were also younger at the time their babies were born; 38% of the program mothers were age 15 or younger when they gave birth compared to 29% of the comparison group. This should suggest poorer outcomes among program mothers, net of other differences.



Figure 1: Ethnicity and Age

	Participant Mothers (N=29)	Comparison Mothers (N=17)
Ethnicity		
Black	92%	94%
Hispanic	4%	6%
Other	4%	0%
Age at Birth		
MEAN**	16.43	17.46
13-15 Years Old	38%	29%
16-17 Years Old	52%	29%
18-19 Years Old	10%	42%
Age of Child at Intake (Mean Months)	6.5	9.1
Age of Child at Follow-up (Mean Years)	1.94	2.14

There were no significant differences in the ages of the children either at intake or follow up. Each group was followed approximately two years following a first birth. Thus, the evaluation does compare experiences of mothers with children of similar ages.

## SOURCES OF SUPPORT

The sources and level of support available to these young mothers are likely to affect their capability to parent, to continue their education, and to become financially self-sufficient. The perceptions of these mothers about support may also be thought of as potential outcomes of the program. About seven out of ten of the adolescents served through the program reported at follow up that they were still living with their mothers; among the comparison group, only about 40% reported living with their mothers at follow up. However, despite the difference in actual living situation, the two groups report equally high levels of support from their mothers. As shown in Figure 2, 80% of the teens in each group reported at follow up that they had received a lot of help from their own mothers.

Figure 2: Sources of Support

Percentage reporting that they had received a lot of help from...	Participant Mothers (N=28)	Comparison Mothers (N=17)
Their own mother	78%	71%
The baby's father	46%	59%
Other family*	59%	29%
Friends	24%	18%
Church	4%	12%
School	64%	13%

\*Statistically significant at  $p < .05$

The relationship with the baby's father is quite different for the two groups of

mothers. Sixty percent of the comparison mothers stated at follow up that they had continued their relationship with the baby's father since the time of the birth. By contrast, only one-quarter of the program mothers had maintained the relationship. However, about one-quarter of the program mothers stated that they had remained friends with the baby's father even though they had discontinued their relationship; the percentage reporting that the baby's father has "helped a lot" reflects this broader involvement, although the level of support provided by fathers remains higher among those in the comparison group.

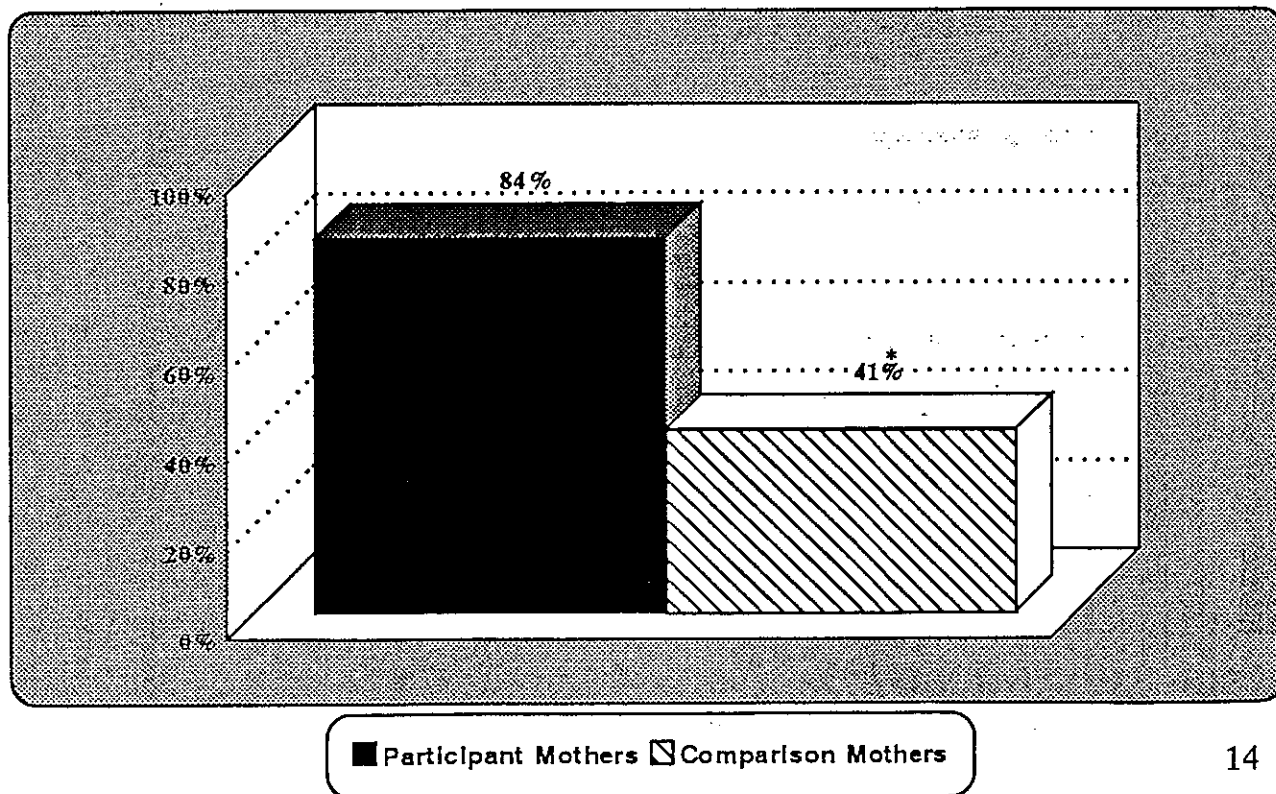
Other family members are cited as having provided a lot of help by a larger percentage of program mothers, while friends and the church have been more limited sources of support for both groups. Figure 2 also suggests that the Teen Parenting Program is perceived by these mothers as providing considerable support. Just 11% of the comparison mothers report receiving "a lot of help" from school compared to 63% of the mothers enrolled in the Teen Parenting Program (this percentage increases to more than 80% when the mothers are asked specifically about the help provided through the program per se). Support is a key ingredient of the Plainfield model, and is provided in a variety of ways including group sessions, parenting classes, ongoing availability of staff at the school-based site, and through the relationships established with the mentors to whom the young mothers are linked as part of the project.

## SELF-SUFFICIENCY OUTCOMES

The stated mission of the Teen Parenting Program is "to enable school age parents to successfully meet their parenting, educational, vocational and health care responsibilities..." Graduation from high school is a primary outcome objective. Linkages to health care and preparation for employment (including job placement when possible) are two other important goals.

As shown in Figure 3, a significantly higher percentage of the program participants graduated from high school than did comparison mothers. While 84% of the program mothers who were eligible to do so had completed high school, 41% of the comparison mothers had achieved this goal. This finding is particularly encouraging owing to the older ages of the comparison mothers at the time they gave birth.

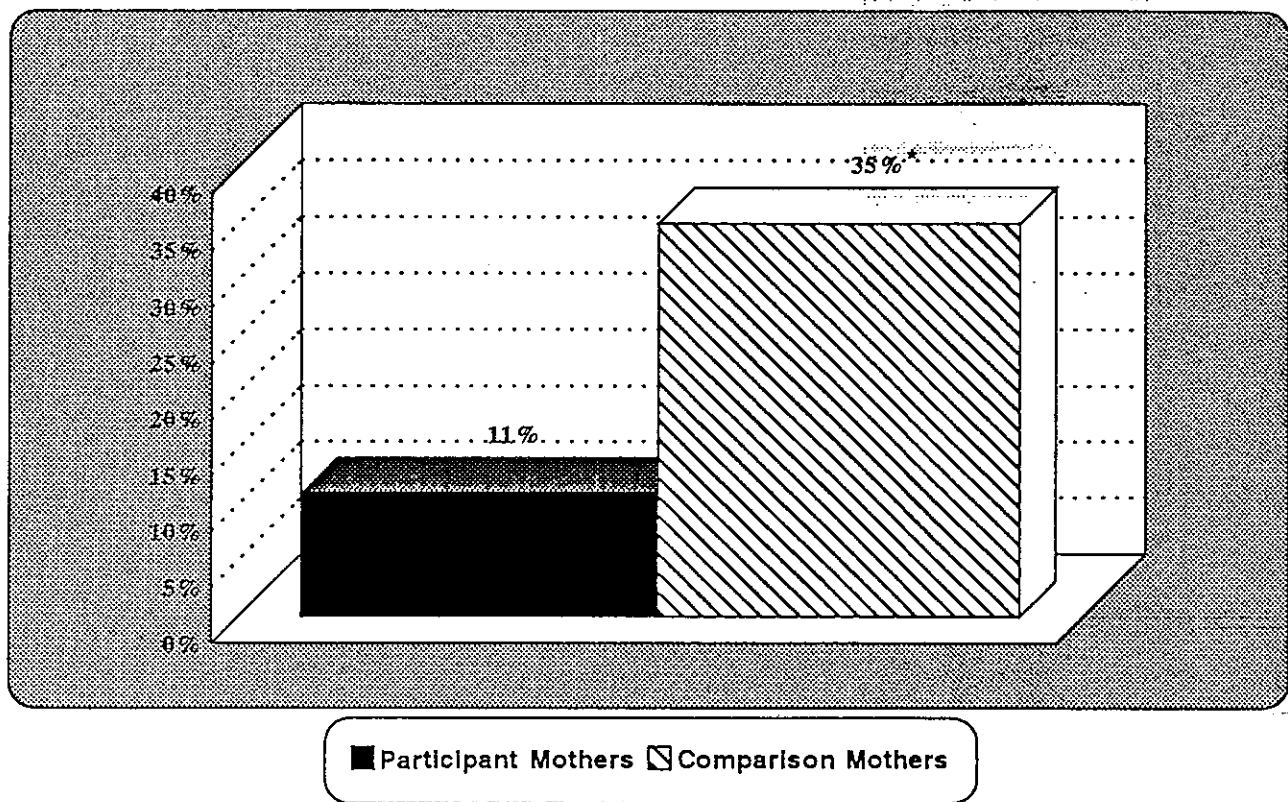
**Figure 3: High School Graduation**



Participant Mothers-N=32  
Comparison Mothers-N=17  
\*Statistically significant at  $p < .05$

Another encouraging outcome is shown in Figure 4. By the time of the follow up interviews, at about two years after the birth of these children, just 11% of the program participants had had a subsequent birth, as compared to one-third of the comparison mothers.

**Figure 4: Subsequent Births**

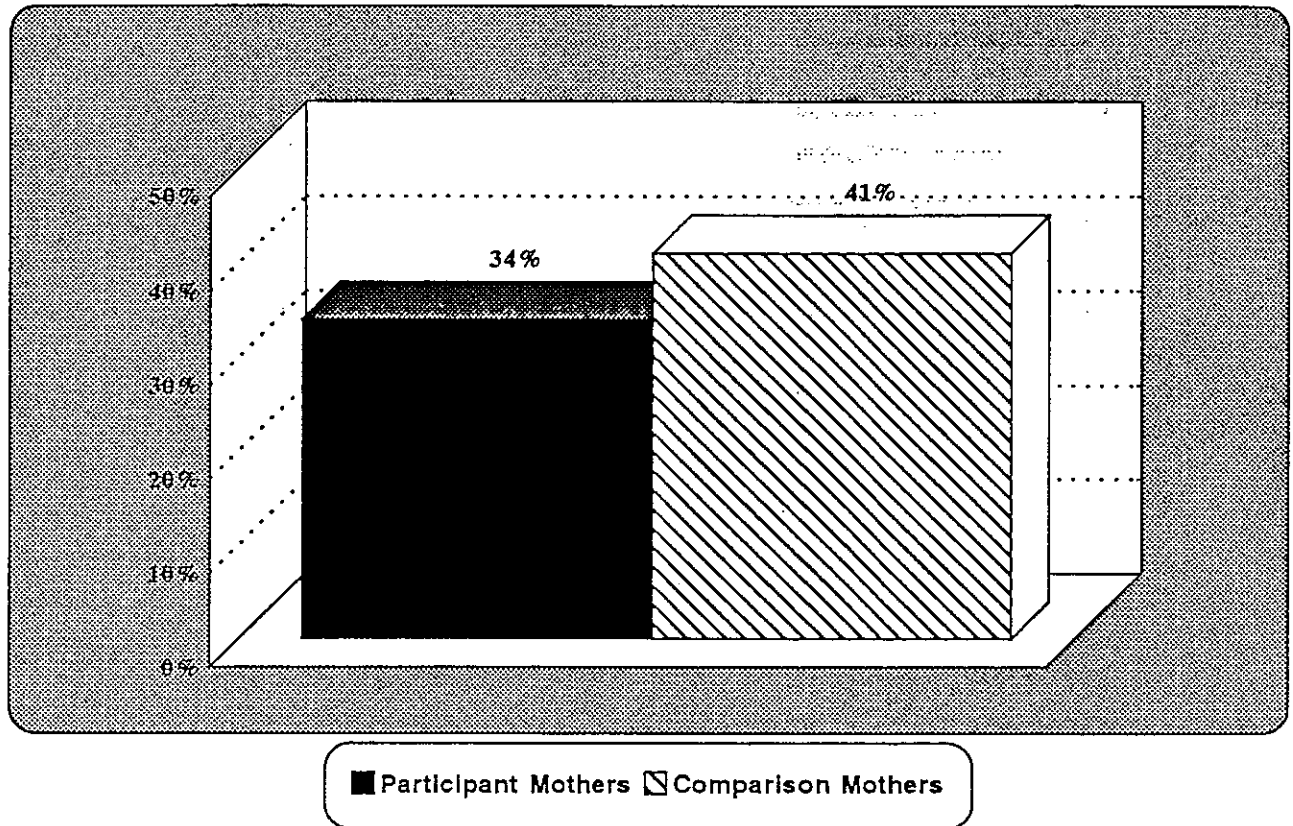


\*Statistically significant at  $p < .05$   
Participant Mothers-N=29  
Comparison Mothers-N=17

Thirty-four percent of the program...

While the difference is not statistically significant, Figure 5 shows that fewer of the Teen Parenting Program mothers than of the comparison mothers were receiving AFDC at the time of follow up.

**Figure 5: Receipt of AFDC**

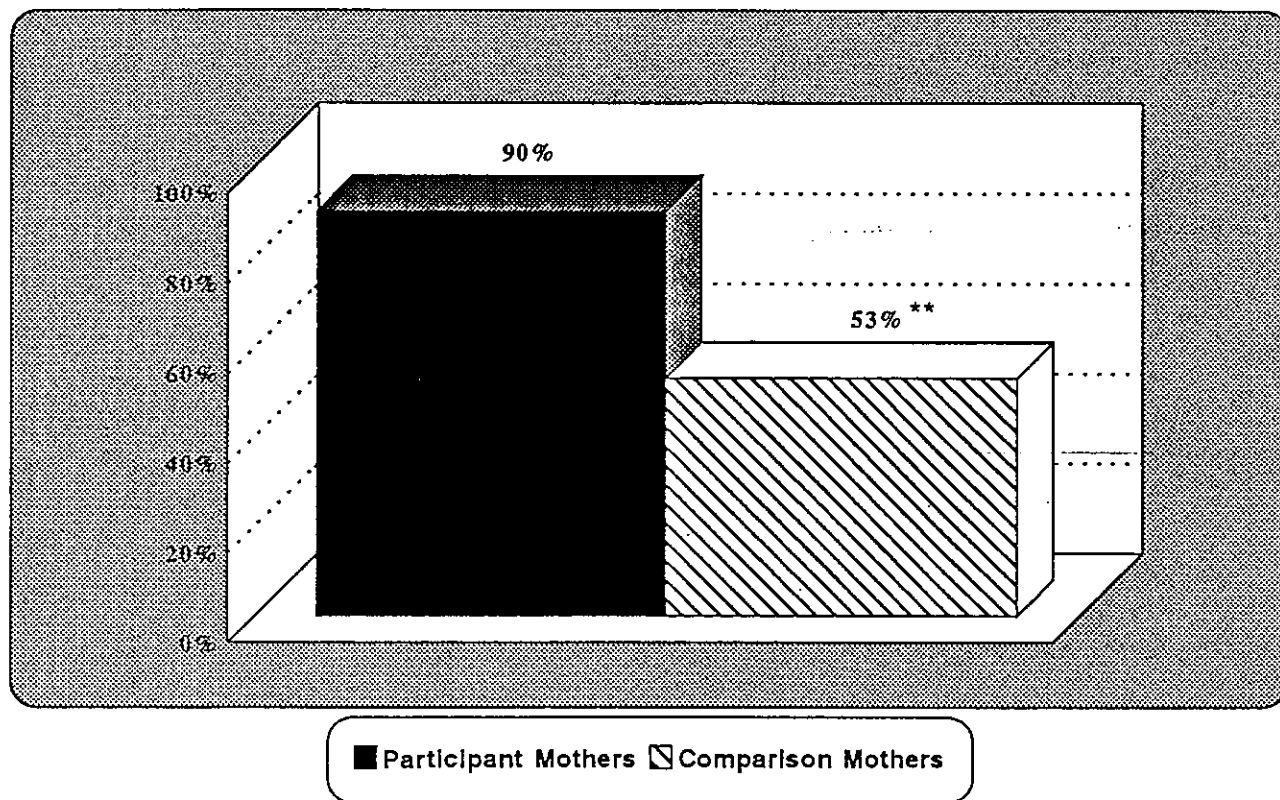


Participant Mothers-N=29  
Comparison Mothers-N=17

Thirty-four percent of the program mothers received such support, versus 41% of the comparison mothers.

Yet another positive finding is shown in Figure 6. While 90% of the program mothers were working or in school at the time of follow up, 53% of comparison mothers were on these paths.

**Figure 6: Work/School Status**



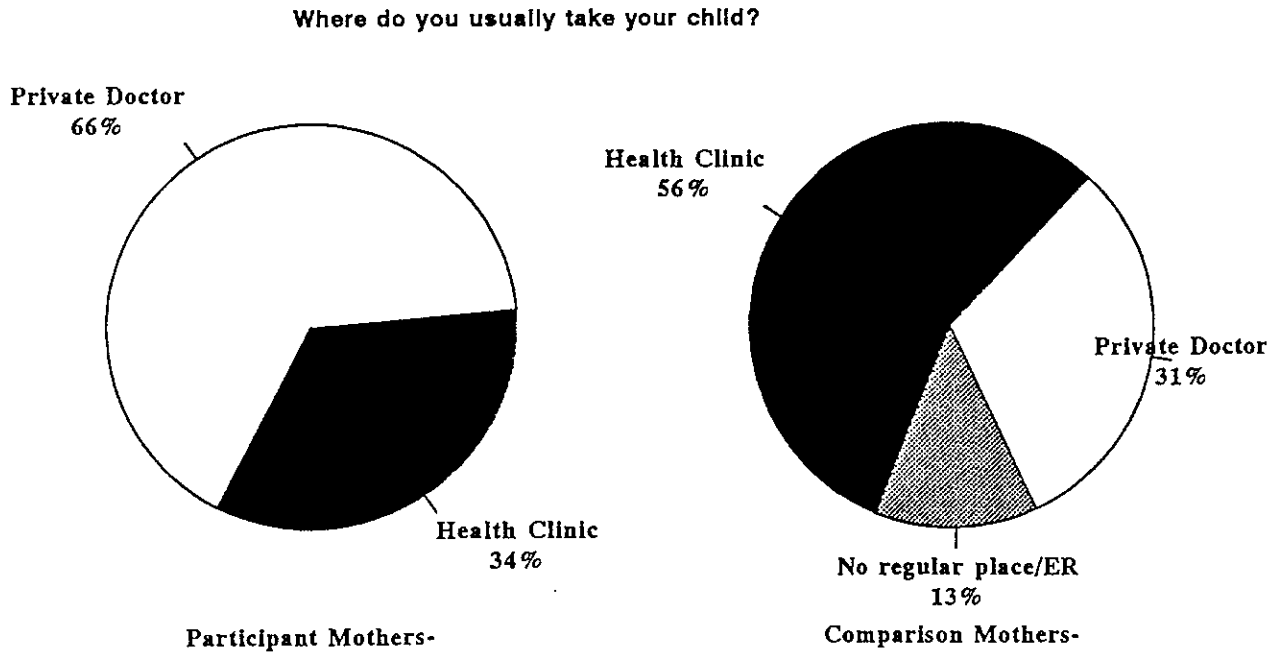
\*\*Statistically significant at  $p < .01$   
Participant Mothers-N=29  
Comparison Mothers-N=17

Living situation and other support may also have contributed to the mother's ability to manage without AFDC assistance. With the two groups of mothers combined, those living with their own mothers were much less likely to be receiving AFDC payments than those living independently or with a male partner. Sample sizes become quite small among these subgroups, but higher percentages of program participants are working or in school regardless of their living situations.



The Plainfield Teen Parenting Program also provides linkages to health care services, seeking to encourage the use of preventive pediatric care. Among the comparison group mothers interviewed at follow up, 13% reported that they either had no regular source of care for their children, or that they usually took them to the emergency room for health care visits (see Figure 7). By contrast, all of the mothers who had participated in the Teen Parenting Program reported that they had a regular source for pediatric care, either through a private physician or a health clinic.

**Figure 7: Source of Pediatric Care\***



\*Statistically significant at  $p < .05$   
27 participants; 16 comparisons

Overall then, mothers in the program did better on all five of the self-sufficiency outcomes included in the evaluation. They were more likely to graduate from high school, less likely to have had a subsequent birth, less likely to be receiving AFDC, more likely to be working or in high school, and more likely to have a regular source of medical care for their children. The differences in likelihood of a subsequent birth, in working/school status and in sources of care were large enough even in these small samples, to be statistically significant.

## MEASURES OF IMPROVED PARENTING

---

One of the chief goals of most programs for parenting teens is the improvement in the parenting skills of young mothers. The Plainfield Teen Parenting Program aims many of its efforts at this goal. Consequently, part of the evaluation sought to capture various aspects of parental knowledge and coping relative to parenting.

### The Adult Adolescent Parenting Inventory

The 32-item Adult-Adolescent Parenting Inventory (Bavolek, 1984) was used to measure change in four areas that have been found to contribute to abusive parenting. The first area includes items designed to measure the parent's knowledge and expectations regarding child development. The parent is asked to indicate agreement or disagreement with items such as "Parents should expect children to feed themselves by twelve months," and "Children should be able to verbally express themselves before the age of one year".

The second set of items measures lack of empathy toward children's needs; examples of these items are "Children will quit crying faster if they are ignored" and "Parents who encourage communication with their children only end up listening to complaints." Belief in the use of corporal punishment is measured by such items as "Children learn good behavior through the use of physical punishment" and "Parents should slap their child when s\he has done something wrong."

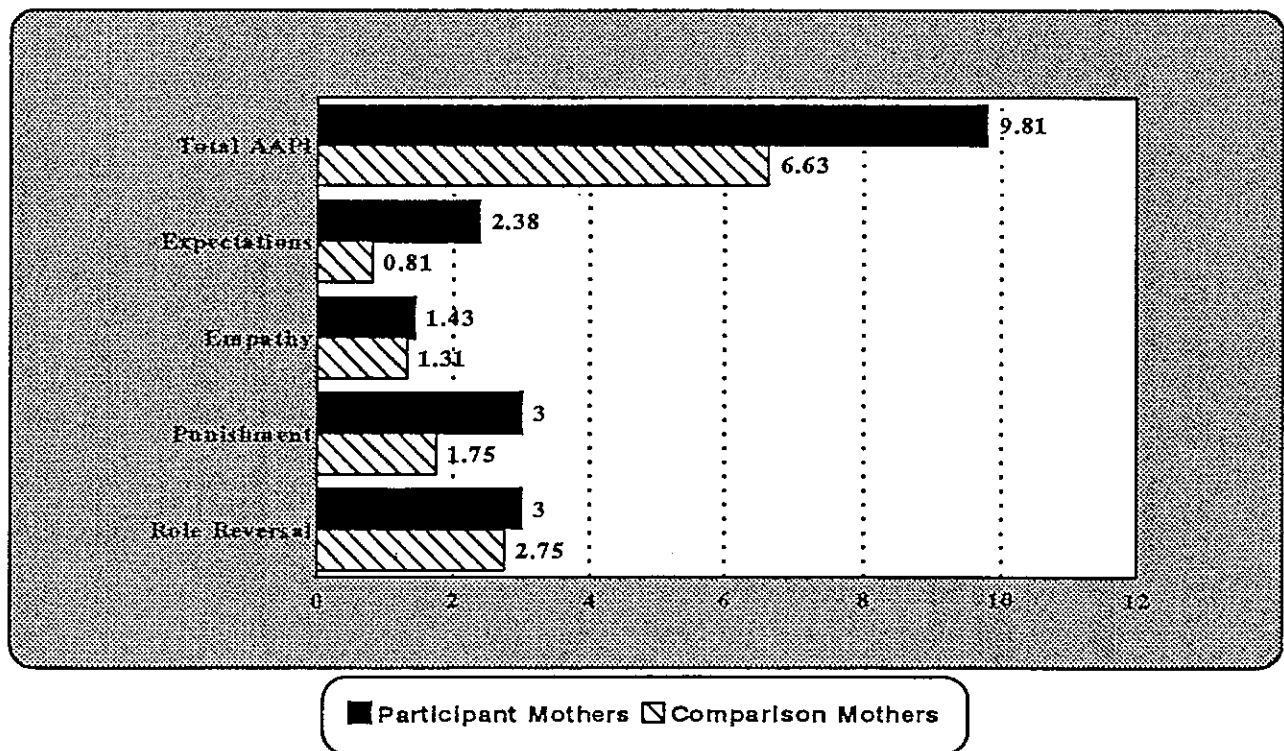
The fourth area includes items designed to provide information about the degree to which the parent believes the child should be responsible for making parents happy, and

responding to their needs. Examples of items are "Young children should be expected to hug their mother when she is feeling sad", and "Young children should be aware of ways to comfort their parents after a hard day's work."

The AAPI was administered to mothers at the time of their program enrollment; a follow up was conducted at the end of the school year, with 21 program participants completing both a baseline and a follow up AAPI. Change scores are also available from 17 comparison mothers.

Figure 8 shows that program mothers made greater positive changes on the total AAPI and all four of its subscales than did the comparison mothers. However, the differences between the two groups were not statistically significant.

**Figure 8: Mean Changes in AAPI Scores**



Participant Mothers-N=21  
Comparison Mothers-N=16

Tables A1 and A2 in the Appendix show that within the group of participants, there was a statistically significant increase in the mean AAPI score overall and on three of the four subscales. By contrast, comparison mothers increased significantly on only the total AAPI score.

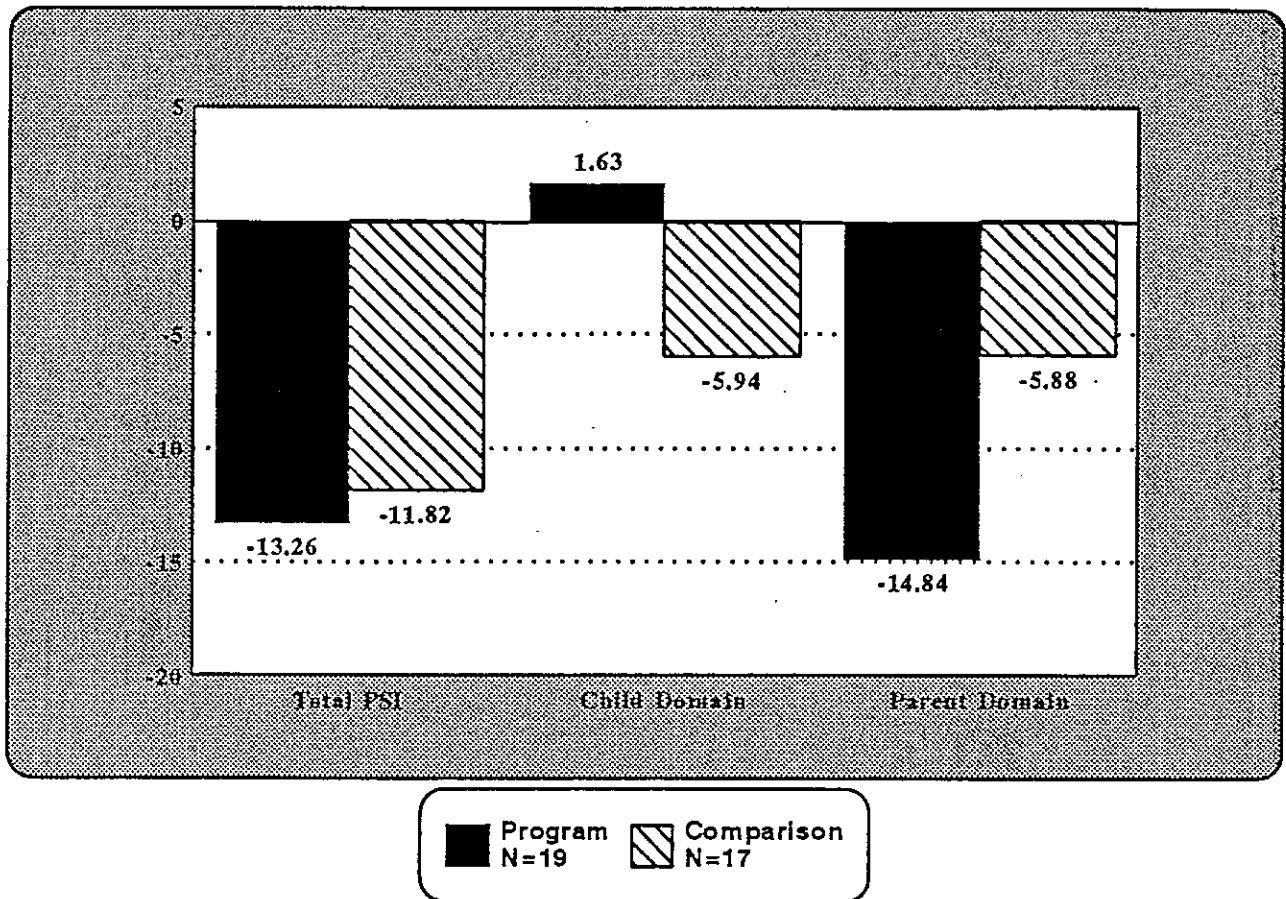
Change differences on the AAPI between the two groups are greater when the data are examined separately by age of mother. Among those mothers 17 and older, the program group shows a much higher change, on average, overall and for each subscale when compared to comparison mothers in this age group. The small sample size (8 program mothers and 12 comparison mothers age 17 and older) limits conclusions. Perhaps older adolescents may be more willing to accept the role and responsibility of parenting, and thus may be more attentive to the parenting skills and information provided through the program.

An examination of scores using a combined sample of the 38 mothers with AAPI scores as well as a separate analysis of the program group showed no differences between those who lived with their mothers and those who did not, and those who reported receiving more help compared to those reporting that they had less help available.

Figure 9 shows mean changes in PSI scores among program and comparison

mothers.

**Figure 9: Mean Changes in Parenting Stress Index Scores**



These overall changes were not significantly different between program and comparison mothers, although program mothers showed greater decreases in overall stress and in the parent domain stress measures. In the child domain subscales, program mothers displayed slightly higher stress than did comparison mothers--especially on perceived adaptability of their children (see Appendix Tables A3 and A4). Perhaps this difference reflects the greater stress of the working or in-school program mothers.

The Appendix tables also show a significant difference in the subscale that measures the relationship with the baby's father (mothers were asked to respond to this series of questions thinking about the baby's father and not about a current partner if he was not the same person). Program mothers reported less stress over time in this relationship. This finding reflects the different relationships reported by the mothers in the two groups. Comparison mothers are much more likely to be living with the baby's father and/or to have maintained a close relationship. Thus, conflict or stress resulting from this relationship is more prevalent.

Scores on the Parenting Stress Index did not differ by age of mother or by the level of reported support available.

### Nursing Child Assessment Teaching Scale

In addition to the "pencil and paper" measures related to parenting, the Plainfield evaluation used a video tape of mother-child interaction. The Nursing Child Assessment Teaching Scale, or NCATS (Barnard, 1978) was administered soon after enrollment and repeated about seven months later.

This measure codes interaction between mothers and their children while mothers try to teach their toddlers to perform an age-appropriate task, such as building a tower of blocks. There is an overall score, generally indicating positive interaction, and six subscales on the NCATS, measuring such dimensions as the degree to which the mother is sensitive to cues, responds to her child's distress or fosters growth. The measure is also



sensitive to whether the child gives clear cues to the mother and whether the child is responsive to the mother's requests.

The use of this measure among program and comparison mothers has been only partially successful thus far because the intervals between baseline and follow-up uses of the NCATS were longer among the comparison mothers than among the program mothers. This longer interval among comparison mothers may give both child and mother more time to develop clearer interaction patterns with one another.

Tables A9 and A10 in the Appendix show that among the 31 program participants who have had the NCATS administered twice, changes in scores increased significantly overall and on three of the subscales. No such significant increases were found among comparison mothers, with the exception of one subscale. Increases are greater among program mothers with younger infants at the time of program enrollment than among those whose children were older. The increases in the NCATS total score, as well as on the parent subscale, also are significantly higher among those program mothers who did not live with their own mothers. Perhaps mothers who live independently are able to develop more positive parenting skills because they share caregiving less and spend more time interacting with their babies.

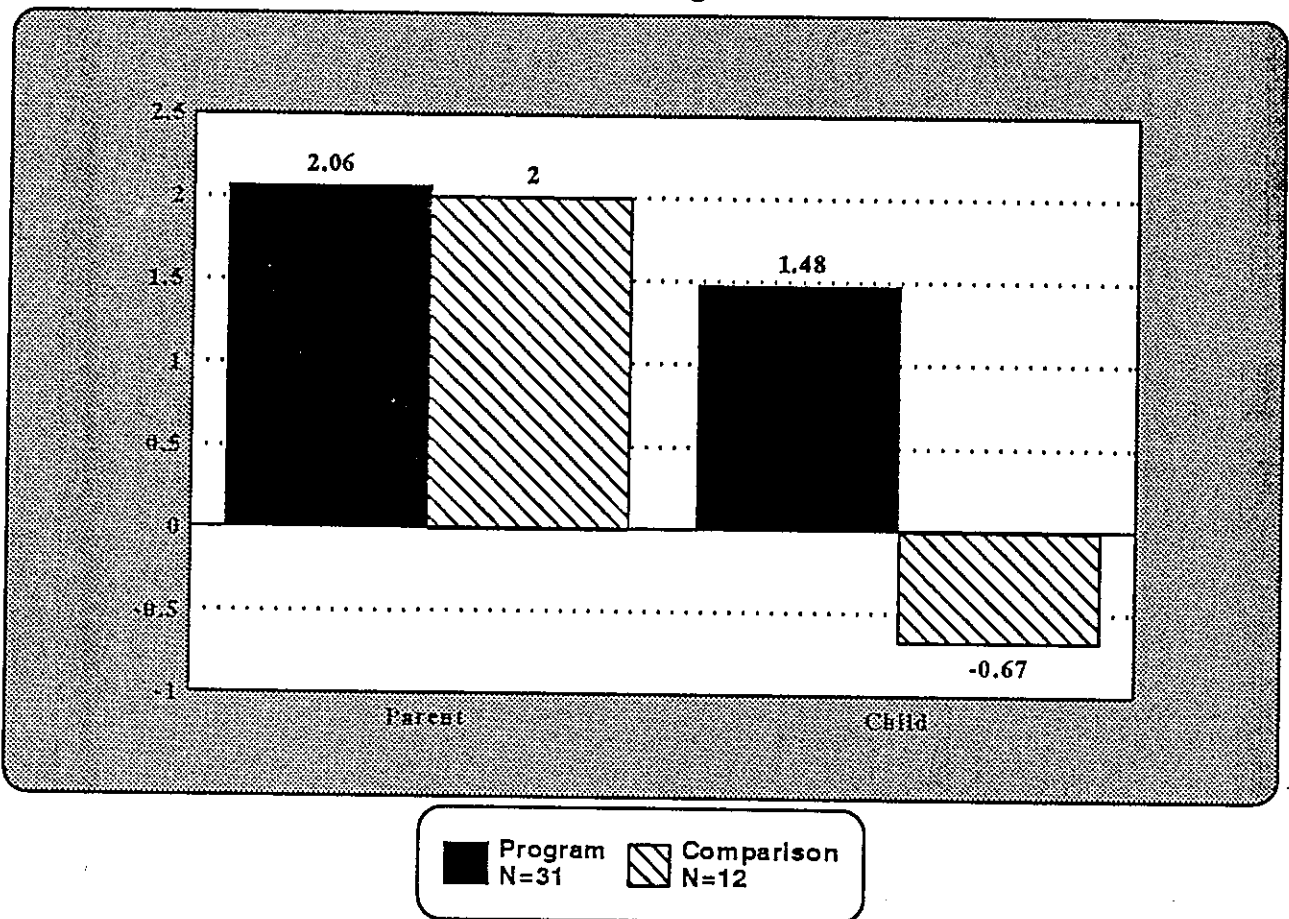
In spite of positive and significant changes among program mothers, Figures 12 and 13 show that the differences in mean change were not significant between the two groups of mothers. These findings are affected both by the small samples of mothers, and perhaps by the difference in the follow up interval between the two groups.

FIGURE 12:  
MEAN CHANGE IN SCORES ON NCATS AMONG  
PLAINFIELD PARTICIPANTS AND COMPARISON MOTHERS

	Participants (N = 31)	Comparisons (N=12)
Overall	+3.54	+1.33
I Sensitivity to Cues	+0.65	+0.42
II Response to Distress	-0.13	+0.42
III Social-Emotional Growth Fostering	+0.74	-0.33
IV Cognitive Growth Fostering	+0.81	+1.50
V Clarity of Cues	+0.65	+0.17
VI Responsiveness to Parent	+0.88	-0.83

When a sub-sample of program mothers is used that has longer intervals between NCATS, the differences between the program mothers and the comparison mothers are greater, although still not significant (data not shown).

**Figure 13: Mean Scores and Mean Changes On Parent And Child Subscales**



## EMOTIONAL STABILITY AND SELF ESTEEM

---

While the Plainfield Teen Parenting Program does not include extensive mental health treatment services, the program does seek to improve the overall emotional stability and self esteem of its young mothers. Consequently, this evaluation included two measures of these variables.

### The Brief Symptom Inventory

A general measure of stress and emotional health was obtained using the Brief Symptom Inventory (Derogatis, 1982). This 53-item inventory asks respondents to report recent experience of symptoms in nine dimensions: somatization; obsessive-compulsive; interpersonal sensitivity; depression; anxiety; hostility; phobic anxiety; paranoid ideation; and psychoticism. Global indices can also be computed in order to provide an overall assessment of psychological status.

As shown in Figure 10, there were no significant differences between the participant and comparison group when comparing the mean change in scores. Table A6 in the Appendix also shows that there were no significant changes among program mothers between their baseline and follow-up scores. However, scores indicating worrisome psychological symptoms were generally low for these mothers at both baseline and follow-up.

FIGURE 10:  
 MEAN CHANGE IN BRIEF SYMPTOM INVENTORY SCORES  
 AMONG  
 PARTICIPANT AND COMPARISON MOTHERS

Scale	Participants (N=19)	Comparisons (N=16)
Somatization	.16	.06
Obsessive Compulsive	.03	.03
Interpersonal Sensitivity	-.13	-.02
Depression	-.11	.15
Anxiety	-.01	.09
Hostility	-.06	-.29
Phobic Anxiety	-.13	.16
Paranoid Ideation	-.21	-.00
Psychoticism	-.19	.16
Global Severity Index	-.07	.06
Positive Symptom Total*	3.21	-1.81

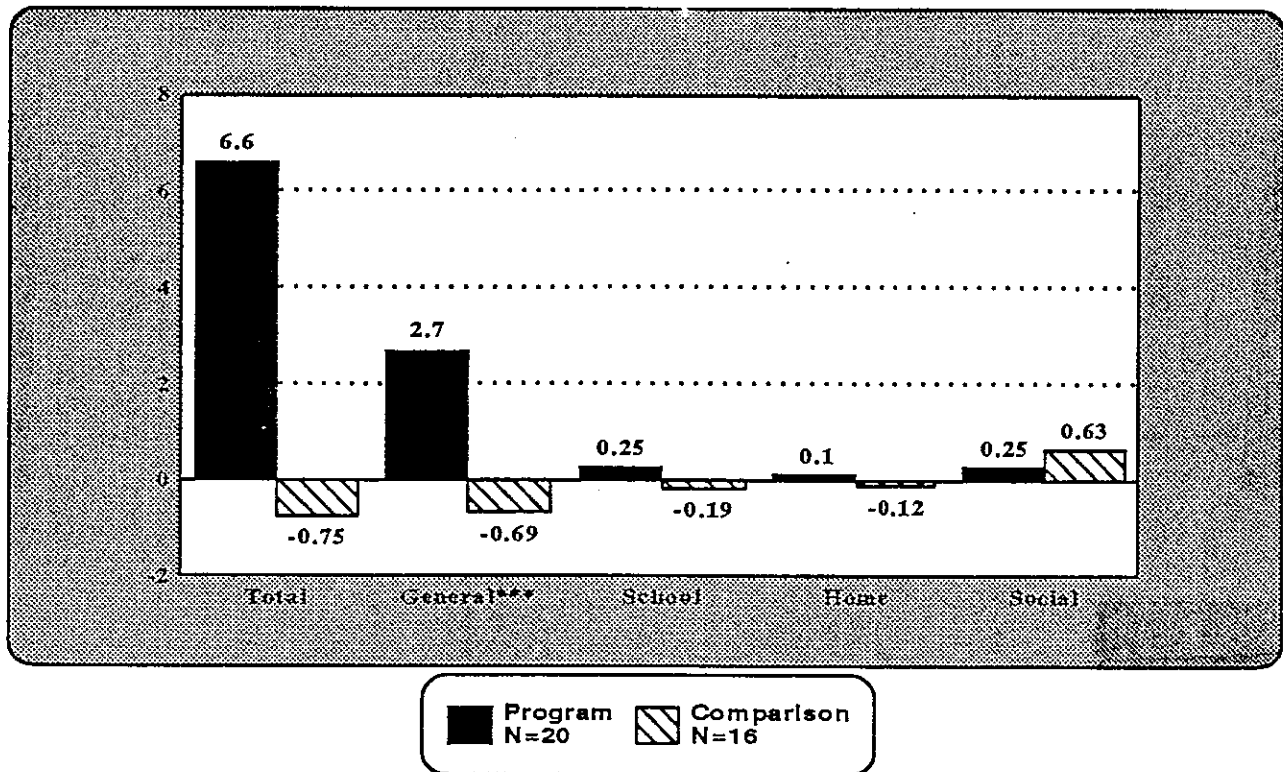
\* p=.056

### Coopersmith Self Esteem Scores

Self-esteem was measured using the School Form of the Coopersmith Inventory (Consulting Psychologist Press, 1981). This inventory provides measures of general self-esteem, as well as measures of self-esteem related specifically to school, home and social/peer environments. These four subscales can be combined into a total self esteem score.

As shown in Figure 11, program mothers were significantly more likely to improve their score on the general self-esteem subscale than were mothers in the comparison group. The difference in improvement on the total score was significant at  $p=.056$ . There were no significant differences in change on the school, home and social subscales, but on the school and home scale, program mothers showed greater improvements than comparison mothers.

**Figure 11: Mean Change in Coopersmith Self-Esteem Scores**



## THE PLAINFIELD HIGH SCHOOL STUDENT SURVEY

---

As part of the overall evaluation of this program, a survey was administered to students in health education classes at the high school where the Teen Parenting Program is based. The survey was designed to provide information about the attitudes held by other students regarding the Child Care Center located on site at the school, and about adolescent pregnancy and parenting.

As shown in Figure 14, the survey was completed by 106 9th and 11th graders; almost two out of three were female. Students were asked if they had a friend with a child who stayed in the day care center during the school day. About fifty seven of the students reported having a friend who participated in the program. Not surprisingly, girls and 11th graders were more likely than boys and younger students to have a friend in the Teen Parent Program.

As part of the survey, students were asked whether they agreed or disagreed with a series of questions that focussed on the adolescent parenting, particularly as related to staying in school. Few students agreed that mothers should stay home to take care of their babies "even if they have to stop going to school"; however, twice as many of those who did not have a friend using the Center than those who did, agreed with this statement. About four out of five of the students believe that most mothers would drop out of school without a day care center on site, with no differences apparent by gender or knowing someone who used the Center.

Asked specifically about the day care center at their own high school, about one of four students agreed that the money "should have been spent on something all students could use"; this percentage does not differ when examined separately among boys and girls, or among those who do and do not have a friend who uses the Center at the high school. Fewer than one in ten of the students believe that a girl who gets pregnant should go to a different school.

Students who have a friend who uses the Center were more likely than other students to agree that "Having a baby while you're still in school is no big deal", and that "Teenagers make better mothers because they understand children better than older women." However, only a small percentage of students, including the group who have a friend using the Center, agreed with either statement. Students with friends using the Center were no more likely than others to believe that "teenagers who have a baby together have a stronger relationship than those who wait", or that "you don't really become a man or woman until you have a child" (girls are more likely than boys to agree with the latter statement, however).

Three in five of the males and of those without friends in the Center believe that teen mothers are "too busy with their babies to spend much time with friends." Fewer of the females and of those with friends in the Center believe this.

Overall, then, the 9th and 11th grade students at Plainfield High School see value in the day care center, few begrudge the use of dollars for such a center, and few seem to feel that early parenting has no penalties.



FIGURE 14:  
PLAINFIELD HIGH SCHOOL  
STUDENT SURVEY, 1992-93

The percentage of respondents who AGREED that...	Total (N=106)	Friend uses Center (N=60)	No friend uses Center (N=45)	Female (N=65)	Male (N=38)
Mothers should stay home to take care of their babies even if they have to stop going to school:	11%	8%	16%	14%	8%
Without a daycare/nursery at their school, most teenage mothers would drop out of school:	82%	84%	80%	83%	84%
Teenage mothers who want to finish school can easily find someone to take care of their babies even if the school does not have a daycare center/nursery:	36%	38%	33%	33%	36%
The money spent on the daycare center/nursery at this high school should have been spent on something all students could use:	25%	21%	29%	24%	24%
If a girl becomes pregnant before she graduates, it is better to have an abortion or place the baby for adoption than to raise a child by herself:	13%	10%	18%	19%	5%
Girls who get pregnant should go to a different school:	5%	5%	4%	6%	3%
Having a baby while you're in school is no big deal:	12%	15%	7%	14%	8%
Teenagers make better mothers because they understand children better than older women:	9%	12%	4%	11%	5%
Teenage mothers are too busy with their babies to spend much time with friends:	47%	37%	60%	41%	60%
Teenagers who have a baby together have a stronger relationship than those who wait until they finish school:	10%	11%	9%	12%	6%
You don't really become a man or woman until you have a child:	17%	16%	18%	23%	8%

## THE FACULTY SURVEY

---

During the Spring, 1993, the staff at Plainfield High School were also asked to complete a brief survey about the Teen Parenting program. About 60% of the staff completed the survey; 86% of the 69 responses were from teaching faculty, 9% from school administrators, and 5% from guidance counselors. Seven out of ten of the respondents have been at the high school for more than ten years, and an additional 15% have been working there for between six and ten years. Thus, this is a group who were familiar with the school before the program was implemented, and who have had contact with the mothers enrolled in The Teen Parenting Program. Ninety-four percent of those responding said that they know at least one mother in the program, and 88 percent have taught at least one of the program participants.

As shown in Figure 15, the teachers and administrators reflect positive attitudes about efforts to provide support services to young mothers. Eighty-eight percent believe schools should become involved in such projects. Nearly ninety percent of those responding to the survey agreed that "without a day care center at their school, most teenage mothers would drop out of school".

Despite general support for day care at school, thirty percent of the teachers and administrators felt that the money spent on the Center should have been spent on something all students could use. One in five disagreed with the statement that "providing day care on site at schools is a good idea".

These responses are clarified by the written comments made by many of the teachers. They support the program, with this support based in many instances on personal knowledge of particular students whom they feel would not have graduated without it. However, one theme highlighted by their comments is the concern that the on-site day care center may make parenting while in school appear to be far easier than it actually is.

A related theme throughout the staff comments emphasized the importance of academic responsibility. It appears that the academic requirements for program participation (mothers are asked to leave the program if they do not meet academic performance and attendance standards) are positively perceived by school staff as a means of emphasizing responsibility. Other teachers, however, felt that the program needs to more closely monitor class attendance and performance. These concerns are also reflected in the responses to the survey item asking if teen mothers have more difficulty academically than other students. Fifty-three percent of those responding disagreed, and forty-seven percent agreed.

Finally, many of the staff emphasized the need for primary prevention efforts.

**FIGURE 15:  
PLAINFIELD HIGH SCHOOL  
FACULTY SURVEY, 1993**

	Strongly agree	Agree	Disagree	Strongly Disagree
Without a day care center at their school, most teenage mothers would drop out of school:	44%	44%	12%	0%
Overall, providing day care on site at schools is a good idea:	38%	43%	13%	6%
The money spent for the day care center/nursery at this high school should have been spent on something all students could use:	8%	21%	53%	18%
Teen mothers have more difficulty academically than other students:	12%	35%	48%	5%
Schools should focus just on education and not become involved in projects like the Teen Parenting Program:	5%	8%	58%	30%

## DISCUSSION

It seems clear from this study of the Plainfield Teen Parenting Program that this program is likely to be having several beneficial impacts on the young mothers and children that it serves. Perhaps the most important of these impacts is the enhanced self-sufficiency found among the program mothers. They were more likely to graduate from high school and more likely to be working or going to school than were the comparison mothers. Both of these findings suggest better futures for these mothers and for their young children.

A second encouraging and important finding is the low rate of subsequent births among these program mothers. While an early first birth constitutes a high risk factor for future self-sufficiency and achievement, a second early birth is almost impossible to overcome. Moreover, these data show that program mothers in Plainfield are more likely to have a stable source of medical care for their children--another encouraging result that should eventually play out in greater health and fewer undiagnosed problems among their infants and toddlers.

There are other positive and encouraging findings here for the program personnel in Plainfield. Their young mothers were more likely to increase their self esteem over time and were more likely to decrease some measures of stress associated with parenting than were comparison mothers. There are some positive improvements in mother-child interaction among the program mothers as well, although their gains over the comparison

mothers were not great enough to be statistically significant in this small sample.

This research has been unable to detect any differences in changes in the parenting skills or general psychological symptoms between the two groups of mothers followed. It might be argued that these are less important than the tangible behavioral differences found in school completion and rates of second birth. More discouraging was the failure to find differences in rates of receipt of AFDC--although the timing of the follow-up data reported here may be too soon to detect eventual differences that schooling and work experience might eventually create.

Another positive finding of this study is the generally supportive climate in which the Plainfield Teen Parenting Program exists. Students and staff alike at Plainfield High School believe the child care center is valuable. Many know young women who have profited by its presence. There are some skeptics--students and teachers who believe the money should be spent on something that all students could use and teachers who worry that students may get the impression that schooling and parenting together can easily be accomplished. The skeptics are a small minority.

The limitations of this research should be repeated. Our program and comparison mothers were not randomly assigned and indeed, the comparison mothers are older. Our follow-up intervals did not match perfectly and some measures are missing for some mothers. Indeed, the very process of the study underlined the high rates of mobility among young mothers since it plagued our efforts to track them over time. The follow-up time of the study is relatively brief, so that "ultimate" outcomes for these mothers and

children cannot now be known.

This is not the first evaluation or study of parenting teens and the Plainfield program is one of many in the country trying to provide comprehensive services to this high risk group of young mothers and children. How do these results compare with those from some of these other programs?

First, the high school graduation rate of these mothers at 84% is considerably higher than the rate achieved by Project Redirection at 48% (Polit, 1989), and higher than the rate reported in a 20-year follow-up study of New Haven mothers at 71% (Horwitz et al., 1991). The Plainfield rate is also higher than the 56% reported in the late 1980's on teens nationally who had a first birth before age 18 (Upchurch and McCarthy, 1989). While the school-based nature of this program will of course, draw a higher percentage of young mothers intent on completing high school, the Plainfield program compares well with other program results on high school graduation.

The repeat pregnancy rates of these mothers also compare favorably with these other studies. Among Project Redirection mothers, the rates of repeat pregnancy were actually higher in the program sample than in the comparison group (Polit, 1989). Among Ounce of Prevention mothers, 11 percent had become pregnant a second time at the end of the first year (Ruch-Ross et al., 1992), whereas the repeat birth rate among the Plainfield mothers was 11% after two years.

Still, there is much yet unknown. The study of New Haven mothers found that in spite of making some accomplishments, the overall quality of life for teen mothers, well

**TABLE A3:  
CHANGE IN SCORES ON THE PARENTING STRESS INDEX AMONG THE PLAINFIELD TEEN  
PARENTING PROGRAM PARTICIPANTS (N=19)**

Mean Scores on...	Baseline	Follow up
Total PSI	243.95	230.68
Child Domain	111.32	112.95
Adaptability	28.58	29.58
Acceptability	14.37	14.11
Demandingness	19.32	19.42
Mood	10.15	9.89
Distractibility	28.47	30.74
Reinforces Parent*	10.47	9.21
Parent Domain**	132.63	117.74
Depression*	20.47	18.53
Attachment*	14.26	12.74
Role Restrictions	19.73	17.73
Sense of Competence	31.00	29.32
Social Isolation	13.05	12.31
Relationship with partner***	21.69	15.16
Parent Health	12.42	11.94

\*There is a statistically significant difference at baseline between participants and comparisons at  $p < .05$ .

\*Statistically significant at  $p < .05$

\*\*Statistically significant at  $p < .01$

\*\*\*Statistically significant at  $p < .001$



TABLE A4:  
CHANGE IN SCORES ON THE PARENTING STRESS INDEX AMONG THE PLAINFIELD  
COMPARISON MOTHERS  
(N=17)

Mean Scores on...	Baseline	Follow up
Total PSI	255.12	243.29
Child Domain	118.82	112.88
Adaptability**	31.47	28.53
Acceptability	15.24	15.29
Demandingness	20.82	20.00
Mood	11.88	11.00
Distractibility	26.41	27.06
Reinforces Parent'	13.00	11.00
Parent Domain	136.29	130.41
Depression	22.47	21.76
Attachment	15.41	14.94
Role Restrictions	20.23	19.06
Sense of Competence*	33.65	30.41
Social Isolation	13.24	13.76
Relationship with partner	17.71	18.00
Parent Health	13.59	12.49

\*There is a statistically significant difference at baseline between participants and comparisons at  $p < .05$ .

\*Statistically significant at  $p < .05$

\*\*Statistically significant at  $p < .01$

\*\*\*Statistically significant at  $p < .001$

TABLE A5:  
COMPARISON IN PARENTING STRESS INDEX SCORE CHANGE  
AMONG  
PARTICIPANTS AND COMPARISON MOTHERS

Mean Scores on...	Participants (N=19)	Comparisons (N=17)
Total PSI	-13.26	-11.82
Child Domain	+1.63	-5.94
Adaptability*	+1.00	-2.94
Acceptability	-.26	+.06
Demandingness	+.10	-.82
Mood	-.26	-.88
Distractibility	+2.30	+.64
Reinforces Parent	-1.26	-2.00
Parent Domain	-14.84	-5.88
Depression	-1.95	-.71
Attachment	-1.53	-.47
Role Restrictions	-2.00	-1.17
Sense of Competence	-1.68	-3.23
Social Isolation	-.74	+.52
Relationship with partner*	-6.53	+.29
Parent Health	-.47	-1.18

\*Statistically significant at  $p < .05$

**TABLE A6:  
CHANGE IN SCORES ON THE BRIEF SYMPTOM INVENTORY AMONG PLAINFIELD  
TEEN PARENTING PROGRAM PARTICIPANTS (N = 19)**

Scale	Baseline	Follow up
Somatization	.44	.60
Obsessive Compulsive	.63	.66
Interpersonal Sensitivity	.53	.39
Depression	.55	.44
Anxiety	.34	.33
Hostility	1.01	.95
Phobic Anxiety	.38	.25
Paranoid Ideation	.81	.60
Psychoticism	.45	.26
Positive Symptom Total	5.84	9.05
Global Severity Index	.56	.49

TABLE A7:  
CHANGE IN SCORES ON COOPERSMITH SELF-ESTEEM AMONG  
PLAINFIELD TEEN PARENTING PROGRAM PARTICIPANTS (N=20)

	Baseline	Follow up
Total	72.4	79.00
General	19.4	22.10
School	5.25	5.5
Home	5.00	5.10
Social	6.55	6.80

TABLE A8:  
CHANGE IN SCORES ON COOPERSMITH SELF-ESTEEM AMONG  
PLAINFIELD COMPARISON MOTHERS (N=16)

	Baseline	Follow up
Total	68.00	67.25
General	18.18	17.50
School	5.19	5.00
Home	4.88	4.75
Social	5.75	6.38

TABLE A9:  
CHANGE IN SCORES ON NCATS AMONG  
PLAINFIELD TEEN PARENTING PROGRAM PARTICIPANTS (N=31)

	Baseline	Follow up
Overall*	47.87	51.42
I Sensitivity to Cues*	8.39	9.03
II Response to Distress	7.65	7.52
III* Social-Emotional Growth Fostering*	6.06	6.81
IV Cognitive Growth Fostering	9.81	10.61
V Clarity of Cues*	8.39	9.03
VI Responsiveness to Parent	7.58	8.42

\*Difference between baseline and follow up statistically significant at  $p < .05$

TABLE A10:  
CHANGE IN SCORES ON NCATS AMONG  
PLAINFIELD COMPARISON MOTHERS (N=12)

	Baseline	Follow up
Overall	50.42	51.75
I Sensitivity to Cues	8.00	8.42
II Response to Distress	7.33	7.75
III* Social-Emotional Growth Fostering	8.50	8.17
IV Cognitive Growth Fostering	10.33	11.83
V Clarity of Cues	7.75	7.92
VI Responsiveness to Parent	8.50	7.67

\* Difference between participants and comparisons significant at baseline