

Healthy Families Massachusetts

FINAL EVALUATION REPORT



PRINCIPAL INVESTIGATORS

Francine Jacobs, Ed.D.
M. Ann Easterbrooks, Ph.D.

SENIOR RESEARCH TEAM

Anne Brady, Ph.D.
Jayanthi Mistry, Ph.D.

May 2005



Healthy Families Massachusetts Final Evaluation Report

PRINCIPAL INVESTIGATORS

Francine Jacobs, Ed.D.

Eliot-Pearson Department of Child Development and
Department of Urban and Environmental Policy and Planning,
Tufts University

M. Ann Easterbrooks, Ph.D.

Eliot-Pearson Department of Child Development,
Tufts University

SENIOR RESEARCH TEAM

Anne Brady, Ph.D.

Jayanthi Mistry, Ph.D.

RESEARCH ANALYSTS

Jessica Goldberg

Virginia Diez

Joan Driscoll

Ila Deshmukh

Shireen Boulos Riley

Jana Chaudhuri

Steinunn Gestsdottir

The Massachusetts Healthy Families Evaluation (MHFE) acknowledges the support of the Massachusetts Children's Trust Fund, which received partial funding for this project from the W.K. Kellogg Foundation and the Robert Wood Johnson Foundation. All conclusions drawn in this report are those of MHFE, and do not represent the opinions of those funders.

Massachusetts Healthy Families Evaluation

Tufts University

177 College Avenue

Medford, MA 02155

617-627-5327

617-627-5329

<http://ase.tufts.edu/mhfe/>

Table of Contents

List of Tables	ii
List of Figures	iv
Executive Summary	1
Introduction	17
Section One: The Scaffolding of the MHFE	21
Chapter 1 Review of the Literature	23
Chapter 2 MHFE Methodology: The Conduct of the Evaluation	37
Section Two: Healthy Families Massachusetts Program Operations	51
Chapter 3 HFM: Program, Staff, and Participant Profiles	53
Chapter 4 The Nature of the Home Visit	67
Chapter 5 Participants' Experience of the Program	73
Section Three: Outcomes for the HFM Participants	79
Chapter 6 The Perceived Effects of Program Participation	81
Chapter 7 Making Progress on Intermediate Objectives	87
Chapter 8 Attaining HFM Outcomes	105
Section Four: Conclusions and Recommendations	119
Chapter 9 Discussion Points and Recommendations	121
References	125
Appendices	
Appendix A: Technical Advisory Board Members	135
Appendix B: Program Evaluation: The Five-Tiered Approach	136
Appendix C: Outcome Measures	137
Appendix D: Glossary of Acronyms	143

Tables

Table 1.1:	Findings from Selected Home Visiting Program Outcome Evaluations	26
Table 1.2:	Maternal Characteristics Related to Program Participation	31
Table 2.1:	MHFE Sample Characteristics	40
Table 2.2:	Study Attrition, by Race	41
Table 2.3:	Constructs and Data Sources	42
Table 2.4:	Paper Records Supplements to PDS	43
Table 2.5:	Home Visitor Questionnaires and Observations	43
Table 2.6:	Constructs of Interest and Standardized Questionnaires and Observational Measures Used for Data Collection	45
Table 2.7:	Multivariate Method by Goal or Outcome	49
Table 3.1:	FM Budget: FY1998 through FY2004	53
Table 3.2:	Referral Rates to HFM	53
Table 3.3:	Sources of Referral to HFM, 1998–2002	54
Table 3.4:	Outcome of Initial HFM Contact	54
Table 3.5:	Reasons for Ineligibility of Mothers Referred to HFM	55
Table 3.6:	Referral to Other Programs or Services	55
Table 3.7:	Enrollments in Individual HFM Program Sites	56
Table 3.8:	Percentage Distribution of HFM and MHFE Participants by Program Type	57
Table 3.9:	Distribution of Service Levels for a Selected Three-Month Period	57
Table 3.10:	Adherence to Service Level for MHFE Sample	58
Table 3.11:	MHFE Participants Receiving 75% or More of Expected Visits	58
Table 3.12:	Length of Stay in the HFM Program for MHFE Participants	59
Table 3.13:	Percent of Overall Visits with Home Visitor/Client “Match”	60
Table 3.14:	Percent of Visits with Home Visitor/Client “Match” by Race, and Preferred Language	60
Table 3.15:	Follow-Up of Goals, by Type and Family	61
Table 3.16:	Timing of First Follow-up by Goal Type	62
Table 3.17:	Average Time Taken to Complete Goals, by Type	62
Table 3.18:	Home Visitor Race	64
Table 3.19:	Distribution of Home Visitor Languages Other than English	64
Table 3.20:	Characteristics of HFM Participants	65
Table 4.1:	Topics Addressed during HFM Home Visits	67
Table 4.2:	How Do Home Visitors Establish Rapport with Their Clients?	70
Table 4.3:	Percent of Visits with a Home Visitor/Client “Match”	71
Table 5.1:	Average Length of Stay in HFM Programs	73
Table 6.1:	Mothers’ Perceptions of Areas of Impact by Home Visitors	81
Table 6.2:	Mothers’ Perceptions of Progress toward Goals	82
Table 6.3:	Mothers’ Perceptions of Benefits of the Program	82
Table 6.4:	Mothers’ Perceptions of Effects, by Maternal Characteristics	83
Table 6.5:	Distribution of Goal Types by Family Background Variables	83

Table 6.6:	Attainment of Goals, by Type of Goal	84
Table 6.7:	Average Proportion of Each Type of Goal Achieved by Families	84
Table 6.8:	Families' Goal Attainment Status for Goals Not Achieved at Follow-up	84
Table 6.9:	Families' Goal Attainment Status for Each Type of Goal	85
Table 6.10:	Proportion of Goals Achieved, by Family Background Variables	86
Table 7.1:	Maternal Characteristics at Beginning of Evaluation	88
Table 7.2:	Intermediate Objective #1: Change Over Time in Parenting Competence and Skills	91
Table 7.3:	Intermediate Objective #1: Parenting Competence and Skills at Latest Measurement	92
Table 7.4:	Intermediate Objective #2: Change Over Time in Social Support	93
Table 7.5:	Intermediate Objective #2: Social Support at Latest Measurement	94
Table 7.6:	Intermediate Objective #3: Change Over Time in Quality of Parent-Child Relationship	95
Table 7.7:	Intermediate Objective #3: Enhancing the Parent-Child Relationship at Latest Measurement	97
Table 7.8:	Intermediate Objective #3: Predicting Maternal Emotional Availability Behavior from Client and Program Characteristics	98
Table 7.9:	Intermediate Objective #3: Predicting Child Emotional Availability Behavior from Client and Program Characteristics	98
Table 7.10:	Intermediate Objective #3: Predicting Mothers' Parenting Strategies from Client and Program Characteristics	98
Table 7.11:	MHFE Mothers with Depressive Symptoms in Clinical Range	99
Table 7.12:	Distribution of Depressive Symptoms among MHFE Mothers, by Relative Chronicity	99
Table 7.13:	Coping Strategies Used by Mothers in MHFE Sample	99
Table 7.14:	Total Health Behavior Scores Reported by Mothers in MHFE Sample	99
Table 7.15:	Intermediate Objective #4: Change Over Time in Parental Well-being	100
Table 7.16:	Intermediate Objective #4: Enhancing Parent Well-being at Latest Time Point	101
Table 7.17:	Intermediate Objective #4: Predicting Mothers' Coping From a Combination of Factors	102
Table 7.18:	Intermediate Objective #4: Predicting Mothers' Depressive Symptoms from Maternal Characteristics	102
Table 7.19:	Summary of Findings on Intermediate Objectives	103
Table 8.1:	Goal #1: Results of Significant Bivariate Statistical Tests	108
Table 8.2:	Results of Logistic Regression Analysis Predicting Education Status	109
Table 8.3:	Results of Logistic Regression Analysis Predicting TANF Receipt	109
Table 8.4:	Goal #2: Results of Significant Bivariate Statistical Tests	110
Table 8.5:	Results of Logistic Regression Analysis Predicting Mother as Perpetrator	111
Table 8.6:	Results of Logistic Regression Analysis Predicting Mother as Perpetrator More than Six Months after Program Entry	111
Table 8.7:	Goal #3: Results of Significant Bivariate Statistical Tests	112
Table 8.8:	Results of Logistic Regression Analysis Predicting Repeat Birth within Two Years	112
Table 8.9:	ASQ Average Scores and Percent of Children Below Cutoff, by Domain	115
Table 8.10:	Goal #4: Results of Significant Bivariate Statistical Tests	115
Table 8.11:	Summary of MHFE Findings, by Distal Goal	116

Figures

Figure A: MHFE Evaluation Components	2
Figure 1.1: MHFE Evaluation Components	19
Figure 2.1: MHFE's Working Conceptual Model	37
Figure 4.1: Mothers' Perceptions of Home Visitor Roles	69

Executive Summary

HFM Program and Evaluation

THIS EXECUTIVE SUMMARY HIGHLIGHTS the key findings to emerge from the Massachusetts Healthy Families Evaluation, a multi-year study — begun in 1998 — of the statewide Healthy Families Massachusetts program. Assessments of both program operations and program outcomes are summarized below. This brief document is meant primarily for a policy and program audience—readers with interest in details of this evaluation and its findings are invited to peruse the full report¹ that follows:

Healthy Families Massachusetts (HFM) Services and Goals

Launched in 1997, HFM is an ambitious, state-wide adaptation of the Healthy Families America home visiting program — the first in the country. It was designed to be available to all families in which the mother is a first-time parent under the age of 21.² The original 1997 program Request for Responses (RFR) lists the main goals of the HFM program as follows:

- prevent child abuse and neglect by supporting positive, effective parenting skills and a nurturing home environment;
- achieve optimal health, growth and development in infancy and early childhood;
- promote maximum parental educational attainment and economic self-sufficiency;
- prevent repeat teen pregnancies.

HFM services vary from site to site, though they generally include home visits, center-based groups, and referral services. The majority of the home visitors are paraprofessionals, but there is a wide range of education, experience, and expertise represented in the statewide program. In their work with families, the home visitors are meant to



model and support positive parent-child interactions; teach about child development; help the family to provide a safe and enriching environment for their child; support the parent's educational and professional development and goals; provide crisis intervention; and connect the family with other social services as needed.

Services are initiated prenatally, at birth, or within the first year of the child's life, and may continue until the child's third birthday. Families are located, referred, and recruited to HFM through a wide range of sources. The frequency, intensity, and duration of visits are determined based on each family's needs and preferences, and range from several times a week to once every few months. Currently, HFM is being delivered by catchment area, with 17 agencies, and 27 programs operating as program sites.

The Massachusetts Healthy Families Evaluation (MHFE)

Soon after the program's inception, the Massachusetts Children's Trust Fund awarded the contract for evaluating HFM to a Tufts University team, headed by Professors M. Ann Easterbrooks, Eliot-Pearson Department of Child Development;

Francine Jacobs, Departments of Child Development and Urban and Environmental Policy and Planning; and Jayanthi Mistry, of the Eliot-Pearson Department of Child Development. Anne Brady, Ph.D., has served as the Project Manager since the evaluation's inception. A technical advisory board provided guidance on the design and execution of the evaluation (see Appendix A).

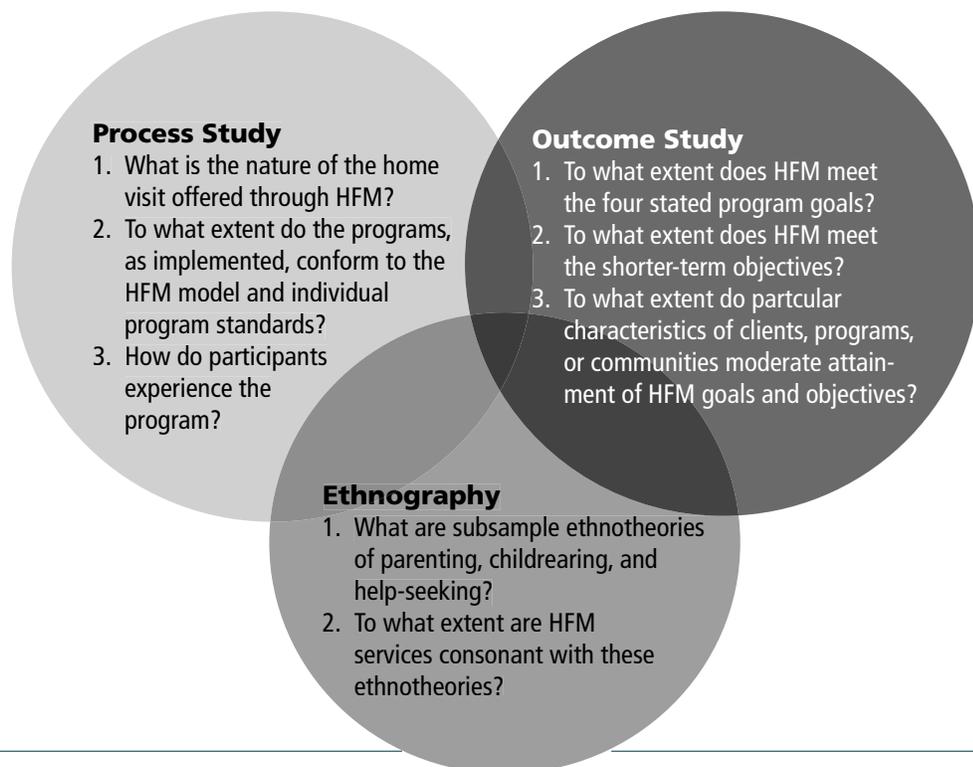
The MHFE team devoted the first year of funding to developing an evaluation plan;³ the second year was dedicated to program and participant recruitment and the commencement of data collection. In June 2002, data collection concluded, and analyses proceeded. Because of the exigencies of state budgets and administrative data systems, the project's data analysis phase was extended, concluding in September 2004.

Goals of the MHFE

The MHFE was commissioned to answer questions pertaining both to the operation of the program, as well as the outcomes achieved for its participants. The core questions relating to program operations included:

- ***What is the nature of the home visit?*** What are the critical elements of the relationship between home visitor and client? What is the range of topics covered during home visits? Who participates in home visits? To what extent is home visiting practice consonant with ethnotheories (culturally embedded sets of beliefs) of parenting and childrearing?
- ***How do participants experience the program?*** How satisfied are participants with the program and how successful do they perceive the program to be? What patterns of participation are demonstrated, and how are these patterns of service utilization related to their experiences in the program? What are the young mothers' own theories of child development and "good parenting," and the ways they feel most comfortable seeking help with parenting?
- ***To what extent, and in what ways, do sites operate with "fidelity to the model"?*** To what extent do the programs, as implemented, conform to the HFM model, and to individual program standards?

Figure A: **MHFE Evaluation Components**



The core questions related to program outcomes included:

- ***To what extent is the program meeting its stated “distal,” or long-term, goals?***
- ***To what extent are the “intermediate,” or short-term, objectives⁴ being achieved?*** These intermediate objectives include:
 - increasing the amount, types, and quality of social support used by young parents;
 - increasing parental knowledge of child development and enhancing parenting competence/parenting skills;
 - enhancing the quality of the parent-child relationship; and
 - promoting parental well-being.
- ***In what ways do characteristics of participants, programs, and communities moderate both utilization of program services and the attainment of the short- and long-term outcomes?*** Potential client-centered influences include maternal age, maternal developmental status, childhood history, child age at program entry, and patterns of service utilization. Program-related moderators include fidelity of the program to the Healthy Families model, the extent of cultural sensitivity in service provision, and program auspices. The MHFE is particularly interested in the potential moderating role of maternal age and developmental status, and the cultural “match” between client and service delivery.

The MHFE design is based on Jacobs’s Five-Tiered Approach to evaluation,⁵ which organizes evaluation activities developmentally, in five stages or tiers, “moving from generating descriptive and process-oriented information at the earlier stages [of a program’s development] to determining the effects of programs later [on]”⁶ (see Appendix B).

The MHFE was divided into three overlapping components: the *Process Study*, the *Outcome Study*, and the *Ethnography*; a member of the project’s senior research group managed each of these substudies. Each substudy team was responsible for answering a discrete set of the project’s core research questions (see Figure A).

MHFE Methods and Samples

The data collection and analysis strategies that were employed during the conduct of this evaluation are detailed in the Final Report and will not be reviewed here. In brief, the MHFE used a multi-method approach — developing, adopting, and adapting both qualitative and quantitative instruments and techniques. Client experiences were examined using a nested sample structure that included some basic descriptive information from the total HFM population of approximately 13,000 participants, in-depth information on a representative sample of participants (n = 361), and ethnographic detail on clusters of participants from three communities (n = 30). Data were also collected, using a range of instruments, from home visitors and program administrators.

HFM Program **Operations**

In the following section, key findings related to how the HFM operates are presented. The first set of findings describes basic service provision, and the extent to which the program is operating according to standards. The second set reflects the participants' experiences with HFM.

SERVICE PROVISION

Key Findings

Overall, HFM performed at least as well as, and on some indices, better than, other home visiting programs. This finding is noteworthy, given the age of the population served, and the relative youth of the program at the initiation of this evaluation.

- ▶ **Outreach and referral:** 70% of all MA teenagers, either pregnant with or parenting their first babies, were referred to HFM between 1999 and 2002. *In comparison with other universal home visiting programs, HFM appears to be quite effective at outreach and referral.*⁷
- ▶ **Enrollment:** Of those mothers who were referred, who were located and eligible, 86% accepted services. *These rates are similar to other home visiting program acceptance rates, which typically are in the 80–90% range.*⁸
- ▶ **Length and intensity of program use:** Participants stayed in the program for an average of 17 months. The majority (59%) of participants stayed for more than one year. *These retention rates compare favorably with those reported by other home visiting program evaluations.*⁹ The average number of home visits received per client was 31.
- ▶ **Service delivery:** Most families, in keeping with HFM expectations, begin the program on the most intensive service level. On average, mothers in the MHFE received 56% of their expected visits. *This figure, though low, actually compares favorably with those of other home visiting programs that target teenage populations.*¹⁰



- ▶ **Cultural consonance:** Overall, the HFM program did a very good job matching home visitors and participants along cultural lines, particularly in regard to language; almost all of the young women in the program were assigned a home visitor who could speak their preferred language.

Further Discussion

HFM uses the Healthy Families America Credentialing Site Self-Assessment Tool to make clear to individual programs the standards to which they are expected to adhere.¹¹ Those standards most pertinent to this evaluation are summarized below; for each standard we present relevant findings, and, when available, comparison data from other home visiting program evaluations. Keep in mind that HFM's performance, although not perfect, was at least as good as other, more veteran home visiting programs.

STANDARD: Services should be initiated prenatally or at birth. At enrollment, the majority of participants were pregnant (64%). Although HFM strives to enroll young women prenatally, or as close to the births as possible, the program has also made a concerted effort to provide services to young women who are already parenting.

STANDARD: Services should be offered intensively with well-defined criteria for increasing or decreasing intensity of services and over the long term. The vast majority of participants had a weekly service assignment, in keeping with HFM expectations that participants begin the program on a more intensive service level and remain at that level for a minimum of six months after the birth of the baby.

STANDARD: Participants at the various levels of services offered by the program should receive the appropriate number of visits, based upon the level of services to which they are assigned. Mothers with an assigned service level received approximately 56% of their expected visits. *These figures compare favorably with those of other home visiting programs.*¹² Further research by MHFE staff into this service slippage found:

- Both home visitors and clients attributed more than half of the visits clients missed to “reasons that may have been beyond the client’s control.” For example, many of the young mothers missed visits because of medical appointments, work, school, or other similar “positive” commitments, that is, commitments that represent responsible decisions on their part.
- According to the home visitors, 80% of the missed visits were the responsibility of the client, and 20% of the visits were missed because of home visitor circumstances.
- On average, home visitors were unable to schedule even 22% of the visits they were expected to complete.

STANDARD: Services should be culturally competent to the extent that staff understand, acknowledge, and respect differences, and be able to form relationships among participants; staff and materials used should reflect the cultural, linguistic, geographic, racial, and ethnic diversity of the population served. Overall, the HFM program did a very good job matching home visitors and participants along cultural lines, particularly in regard to language; almost all of the young women in the program were assigned a home visitor who could speak their preferred language.

Cultural competence was interpreted in a variety of ways by programs in different communities, including using a family-centered approach, having familiarity with the community, and sharing cultural and socioeconomic characteristics with the families.

STANDARD: Delivery of services should be guided by the Individualized Family Support Plan (IFSP) — a document, developed collaboratively between the family and home visitor, that sketches out the personal goals each mother sets for herself. To begin, home visitors do appear to be respectful of their clients’ goals for themselves, in that the content of home visits reflects the mothers’ interests. For example, mothers with a greater number of goals pertaining to “parenting and providing a nurturing home” received more home visits that covered child development, parent-child interaction, parent and family health, social-emotional health, and family interaction.

The most prominent goals were those related to continued education and economic attainment, and those related to the health, growth, and development of the child. Relatively few families had goals related to preventing repeat pregnancy.

Mothers for whom a higher percentage of home visits focused on education and employment achieved a greater percentage of those goals.

STANDARD: The program should use a developmental screen to monitor infant/child development at specific intervals. Completion rates for the developmental screening assessment were lower than they should have been, according to HFM standards. Even when a more lenient standard was applied (percentage of children who received *within one* Ages and Stages Questionnaire (ASQ) of their expected amount [e.g., four out of five; or three out of four]), only 57% of the participants’ children were assessed on time. These low rates may be attributable to the ASQ’s rigid guidelines for completion. Alternatively, the relatively low ASQ completion rates may reflect the high number of visits that are missed in HFM.

CLIENTS' EXPERIENCES OF THE PROGRAM

The MHFE was interested in both how clients experienced the program (their degree of satisfaction with it), and what they experienced — that is, the content of the home visit. Both of these aspects are described briefly below.

Key Findings

- Most clients were very well-satisfied with the program.
- Most clients felt that their home visitors were family centered, respectful, and caring.
- Clients who dropped out of the program most commonly reported that they were simply too busy for it.

Further Discussion

In general, families reported very positive experiences of the HFM program, believing that HFM had at least “met” their expectations.

- While most clients rated their home visitors as being family centered, this term had different meanings across cultural communities. Some mothers focused more on grandmother and extended family participation, and others on involvement by the teenagers’ partners or the babies’ fathers.
- Participants who had dropped out of the program as of the end of the evaluation reported a wide range of personal and programmatic reasons for doing so. Mothers who dropped out most commonly reported that they were too busy for the program, that they did not need the program, or had experienced home visitor turnover that made it difficult to continue. Those participants indicated that they would have stayed if they had had a different home visitor, the program had better accommodated their schedules, or their home visitor had not changed.

THE NATURE OF THE HOME VISIT

Key Findings

- The relationship between the home visitor and her client appears critical to keeping mothers engaged with HFM. Indeed, it may be as important as any particular curriculum or activity — the traditional “content” of home visits.
- When asked about their home visitor’s role, the majority of the young mothers described their home visitors as “friends.”
- About half of the home visitors considered racial match to be an important ingredient in a successful relationship with a client. On the other hand, only 20% of the mothers reported that having a home visitor of the same race was important.
- A minority of both home visitors and mothers felt that a language match between home visitor and client was important, although the vast majority of assignments were made with this consideration in mind.
- Close to half of both home visitors and clients felt that it was helpful if the home visitor was also a parent, and a quarter of the mothers believed it was important to have a home visitor who had been a teen parent.

Further Discussion

Among the hundreds of evaluations of home visiting programs, there are few reports that detail the nature of the home visit — what actually happens during that encounter. In our explorations, we have found home visits to be complexly organized and dynamic service units, comprised of a broad range of activities and information, and bounded and shaped by the relationship that develops between the home visitor and, primarily, the young mother. In the end, it appears that this relationship with a home visitor may be as important to the mothers as any other element of the program. If this is the case, then home visitor turnover, which fractures that relationship, is of real concern.

Although this relationship was defined differently among individual mothers, and according to our Ethnography, across communities, a full 75% of the MHFE mothers perceived of the home visitor as a “friend” (as opposed to a professional, or a parent/other adult figure), and therefore saw this relationship as something different from what is conventionally established between professional helpers and clients. For example, in one community, the young mothers emphasized both the vast array of instrumental support they received and the emotional connection they felt with their home visitors. In another, the teenagers believed that their home visitors’ willingness to “go the extra mile” demonstrated a special level of caring for them and their families. And in the third community, the young mothers highlighted their home visitors’ respect for differences, and provision of prompt, reliable support.

Participants in the MHFE — home visitors and mothers — did not always agree about the importance of home visitor-client matches of several sorts. About half the home visitors identified racial match as an important ingredient in a successful relationship; on the other hand, only 20% of the mothers noted that having a home visitor of the same race was important. In terms of linguistic match, about 20% of the home visitors, and 34% of the mothers, thought that being able to speak in the mother’s native language was of real value.

As to having a home visitor that was also a parent, close to half of both home visitors and mothers thought this was a helpful characteristic for home visitors. In addition, about 25% of the mothers believed that it was important to have a home visitor who had been a teen parent.

HFM Program **Outcomes**

The MHFE considered three genre of program outcomes: The first is what we call “perceived effects” in that they are outcomes that the mothers and/or their home visitors identify as having been achieved, related to the personal goals set during the IFSP development process. These outcomes are considered “perceived” and not actual because they are not verified by an objective observer or measurement. The second type of outcome is categorized here as an “intermediate objective.” These intermediate objectives, described earlier, represent steps along the way to attaining the major goals of HFM. Finally, the four distal, or more long-term, goals, as articulated by HFM, are the outcomes of most general interest. Findings related to each outcome type are included in this section.

PERCEIVED EFFECTS

Key Findings

Overall, both home visitors and clients thought the HFM program had positive effects on the mothers and their families.

- Clients emphasized most strongly the positive impact their home visitors had in the area of child development.
- When asked to describe their perceptions of the benefits of HFM, mothers highlighted the informational/educational support they received from their home visitors.
- Ninety-two percent of the mothers felt that the program had no effect on their plans to have more children.
- Most mothers felt they made progress on their individual goals, and more than one-third reported achieving their goals.
- Home visitors rated mothers as having achieved a high proportion of their IFSP goals by the first follow-up. Families tended to achieve goals in less than the six-month time frame suggested by the HFM program.



- Goals pertaining to teen education and economic attainment, however, had the lowest achievement rate likely because of their long-term nature.

Further Discussion

Information from both clients and home visitors indicate that the program was perceived as effective in a range of areas. The three areas of positive impact mentioned most frequently by mothers were *knowledge of child development*, followed, in sequence, by *education*, and then *housing*. In fact, receiving useful information in many domains was noted by mothers as the most helpful kind of support provided, with “emotional support” (i.e., someone to talk to, or the opportunity to interact with other teen moms) and then “instrumental support” (i.e., help with daily living) following in importance. When asked if they felt they had made progress on their individual goals, most mothers reported making progress, and more than one-third said they had reached their goals.

In addition, most mothers felt that the home visitor had helped them with parenting, and had enhanced their feelings about themselves. Ninety-two percent felt that the program had no effect on their plans to have more children.

According to home visitors, at the IFSP follow-up that occurred closest to the end of the MHFE, the majority of the families had achieved at least one of their personal goals.

- On average, families had achieved more than half of their goals by this point.
- Maternal education and economic attainment goals had the lowest achievement rate (presumably because they are longer-term endeavors).
- Of the families that had not achieved their goals at this point, more than half had made at least some progress on at least one goal.

ATTAINMENT OF INTERMEDIATE OBJECTIVES

Key Findings

Mothers in the MHFE sample achieved many changes, a substantial number of which were in a positive direction.

- Toward the end of the evaluation, mothers held more optimal parenting attitudes; they were increasingly more appropriate in their expectations, more empathic, and engaged in fewer role-reversing behaviors.
- On average, participants' knowledge of infant development increased during the course of the evaluation.
- Overall parenting stress did not increase over the time of the evaluation.
- Although statistically there was a decrease across time in the percentage of mothers who scored within the clinically significant range of depressive symptoms, at the end of the evaluation there was still a very high proportion of mothers (45%) who were depressed.
- Twenty-seven percent of the mothers were considered chronically depressed (depressed at three or more time points).
- Mothers with fewer symptoms of depression reported more optimal parenting beliefs and knowledge after a year in the evaluation.
- Mothers who were less depressed had children who behaved more optimally during mother-child teaching interactions later in the evaluation.
- Mothers relationships with their romantic partners were related to their parenting strategies. Mothers who engaged more in partner negotiation strategies held more optimal parenting beliefs and child development knowl-

edge, and experienced less parenting stress by the end of the evaluation. Mothers who had supportive relationships with their current partners were more confident about their parenting.

- Mothers who were enrolled in higher quality programs were more likely to have more optimal parenting knowledge/beliefs scores later in the evaluation.
- Over the course of the evaluation, mothers' total amount of informal social support increased.
- Mothers with a higher quantity and better quality of social support showed better parenting knowledge and beliefs.
- Mothers participated in significantly fewer health risk behaviors over the course of the evaluation.

Further Discussion

As noted above, mothers in the MHFE sample made progress in each of the intermediate objectives categories (increasing social support, parenting knowledge and behavior, and maternal well being) during the 18-month study period. What aspects of the HFM program appear to have been related to these changes? A number of clear links emerged: Participants enrolled in better quality programs were more likely to be better informed about child development, and hold more appropriate attitudes about parenting. Participants who received a larger number of home visits were likely to report more dependable social support at their disposal (perhaps because they had learned how to choose where to go for it). Mothers who exhibited *more* appropriate parenting behaviors on one MHFE measure used HFM *less* intensively. And mothers who used less positive coping strategies *received at least the number of home visits required* by the program. In our view, these latter two findings are positive ones, in that they suggest that home visitors correctly assess their clients' parenting knowledge and competence, and adjust program dosage accordingly. Mothers with more competence receive less service; mothers who use less positive coping strategies receive at least what they should. These findings also speak to the complexity of understanding program utilization — more service does not necessarily yield better results.

On the worrisome end are the data related to maternal depression, particularly the chronicity of depression documented for 27% of the MHFE sample. Although these rates appear no worse than those obtained in a number of studies with comparable groups, they are, in any case, unacceptably high. Maternal depression is acknowledged to compromise even the best of parenting intentions; HFM cannot do its best job in the face of this real mental health barrier.

REACHING PROGRAM GOALS

Key Findings

Mothers in the MHFE achieved positive outcomes in three of HFM's four primary program goals areas — enhanced educational and economic attainment, promoting healthy child (infant and toddler) development, and reducing child abuse and neglect. Adequate comparison standards in the other goal area — preventing repeat pregnancies (or births) — were not available, so the results cannot be judged to be positive or negative.

- Eighty-three percent of mothers were in school or had graduated/received a General Equivalency Diploma (GED) by the end of the evaluation, compared to 56% at its beginning. *This rate compares favorably to national data indicating that only 53% of women who became mothers under the age of 20 had graduated from high school or completed a GED by the age of 25.*¹³
- Almost 70% of the mothers who were not in school or a GED program at the beginning of the evaluation changed this status within the 18-month period of the MHFE.
- Mothers were more likely to progress in their educational attainment when their friends behaved in more positive ways as well.
- The better the quality of HFM program, the more likely it was that mothers would continue or complete their schooling.
- Educational attainment during the study period varied across and within the communities included in the Ethnographic substudy. Several distinct patterns emerged: “Education is necessary and possible;” “Education is necessary but impossible;” and “Education is not necessary.”
- The rate of Temporary Assistance for Needy Families (TANF) participation at the end of the MHFE was 35%. Although that rate represents an increase from the participation rate at the beginning of the evaluation (22%), it nonetheless compares favorably to rates of receipt of public assistance reported elsewhere. *The proportion of teen parents receiving welfare has ranged from 44% for all teen mothers to as much as 75% for teen mothers who remain unmarried five years after the birth of their child.*¹⁴
- Almost 12% of MHFE mothers were identified as perpetrators of maltreatment against their own children, according to DSS records. *This rate compares favorably to a small Rhode Island study for which a 33% maltreatment rate among teen mothers was reported.*¹⁵ *Other comparison data are not available.*
- The large majority (93%) of the MHFE sample's substantiated maltreatment cases involved neglect only. *Sixty percent of the maltreatment cases in the Rhode Island study represented neglect.*¹⁶
- According to DSS records, 26% of the MHFE sample were substantiated victims of maltreatment during their own childhoods; this number is likely an underestimate, as DSS records only pertain to those participants whose childhoods were spent in Massachusetts.
- Mothers who report more physical and psychological abuse in their own childhoods, and who exhibit signs of depression, engage in more risky behaviors, and live in less healthy and safe homes and neighborhoods are more likely to be perpetrators of child maltreatment.
- Just over 14% of women in the MHFE sample had repeat births within two years of the birth of their first children.
- Mothers with repeat births within two years were less likely to have completed their high school education/GED or to currently be enrolled in school.
- Community differences in second birth rates emerged within the Ethnography, suggesting that in certain communities, having a second birth as a young mother is a more accepted practice than in others.

- Sixty-three percent of all the mothers in the MHFE, and 64% of mothers under age 20, breastfed their first child. This rate for teenagers compares favorably to national data indicating that only 55% of teen mothers breastfeed.¹⁷
- Eighty-three percent of the infants and toddlers whose mothers participated in the MHFE were reported to be completely current with their immunizations. *Nationally, 76% of two-year-olds are immunized; the Massachusetts rate is 89%. There are no comparable data for children of young mothers, either nationally or in Massachusetts.*
- Children of mothers in the MHFE were generally developing well — that is, without problems — in the five developmental domains assessed with the screening instrument chosen by HFM (the ASQ).

Because we have presented an extensive array of findings above, we will not provide more detail here. Additional discussion of both outcome and process findings are included in the following summary section.

Discussion Points

Each of the following discussion points emerges from a major finding. Within the context of *generally encouraging evaluation findings*, many of these points raise provocative questions, at least in our view, about some aspect of HFM, often regarding its choice of outcome goals and/or process goals (goals for program operations/program standards). These points are discussed in detail below.

Mothers were well-satisfied with the program overall, and appreciated their home visitors particularly. Nonetheless, they participated in the program less intensively than their established service level dictated. Approximately 56% of the visits that, according to HFM standards, should have occurred over a period of time observed by the MHFE in fact occurred. Families with biweekly and monthly service levels generally received their prescribed allotment, but families with weekly plans often received about half. (This finding is in keeping with utilization figures achieved by other home visiting programs as well.) Our Ethnographic Study suggests that there are patterns to participation, and that these patterns are influenced by program-related events (e.g., home visitor turnover), client-related events (e.g., a new job, a new living arrangement), cultural and community factors, and simple disagreements between what home visitors believe a family needs and what that family actually wants.

There was also little surprise expressed among HFM program administrators at the local or state level that assigned service levels were not being fully met. The lives of young mothers are full of unexpected demands that pull them out of their scheduled activities; home visitors also experience unanticipated interruptions of their routines. The missed visits that result are often difficult or impossible to reschedule. These realities may well need to be considered more realistically in setting, and revising, individual service levels for families, and perhaps even standards for service provision statewide. In fact, HFM might achieve more intensive participation, over a longer period of time,



were it to consider alternative program modalities (e.g., drop-in centers, email listservs, etc.).

The home visitor-client relationship is likely the core element of HFM. The contours of this relationship are not fixed, and do not always conform to the role as it is defined by the statewide program; help-seeking behaviors are not universal. Nonetheless, these home visitor-client relationships are built over time and maintained. Given the challenging circumstances confronting many of these young mothers, the home visitor often provides an essential link to the adult world, and, therefore, a break in that relationship (e.g., through staff turnover) may represent more than an inconvenience or a temporary service lapse. It can be experienced by the mother as a serious breach or loss, another broken relationship that cannot be replaced.

The goal of pregnancy prevention does not appear to be a priority for most young mothers. Although this desired result ranked high among HFM program developers, it does not appear in the goals mothers generate for themselves, and over 90% of the mothers reported that their home visitors' opinions on the topic of repeat pregnancy and birth did not affect their decisions. It also seems that the extent to which home visitors attempt to "push" this message with their clients varies across programs, and even within programs.

We were not able to track the relationship of concerted home visitor efforts on this topic to the goal of preventing repeat pregnancies and births. But we suspect that the decision to have a second child is held, by most of these young mothers, as a personal or personal/familial/cultural issue — not something easily within the reach of a public program to affect.

On the other hand, when participants and the program are aligned in their choice of goals, the results appear to reflect that. For example, participants expressed the greatest interest in gaining knowledge about child development, and indeed, there was a significant increase in that knowledge across the period of the evaluation. These benefits are related to the quality of the program in which these mothers were enrolled. So here the mothers wanted what the program had to provide, and those mothers who did best were enrolled in high quality programs.

The ecology of these mothers' lives is complex, with many people, institutions, and values exerting powerful influences on them. These influences include their families of origin, the smaller family units they have created with the birth of this child, the friends they had prior to giving birth and the friends that remain afterwards, the communities in which they live, and the institutions and organizations in which they are members. In noting these ecological contributions to parenting, we are raising the obvious point that HFM, in serving youth who are also parents, operates in a particularly complicated context. Setting both process goals (e.g., cultural sensitivity, or extended family involvement) and outcome goals (e.g., preventing repeat births) that reflect that context is, likewise, a complicated but necessary matter.

HFM appears successful at enhancing the social supports on which young mothers depend. Early on we posited that social support might be viewed as the unifying construct for this program; virtually all that occurred during home visits fit into one of the categories of social support — informational, emotional, or instrumental. Our analyses, both quantitative and qualitative, have borne this out. Dependable, ample social support, of both formal and informal types, is associated with many benefits for these young women. Although social

support can be obtained in many ways, from many quarters, HFM appears to have played a substantial role here.

The level of depression among these young women is extremely high. Although the overall level of depression for mothers in the MHFE declined over the period of the evaluation, and that decline was statistically significant, we do not consider a 45% figure (mothers who were “clinically depressed”) at the end of the evaluation as a positive sign. Approximately 27% of the mothers were considered to be “chronically depressed,” meaning that they scored above the clinical cut-off on the measure we used at either three or all four of the data points in the evaluation.

Depression is related to a broad range of factors that compromise personal well-being — childhood history of maltreatment, domestic violence, and so forth. It is also, not surprisingly, implicated in a host of parenting difficulties. Apart from the concern for the crippling personal toll it takes, from a strategic perspective, dealing with depression and the factors that correlate with it is critical if HFM is to make even better progress on its goals in the future. And given how stretched community mental health resources in most communities are, addressing this concern effectively seems to us nigh impossible without substantial cooperation and collaboration from other public agencies.

HFM mothers are particularly successful at continuing their education. We appreciate that this goal is not shared by all young mothers, at least at the present time. Nonetheless, that over 83% of mothers in the MHFE were in school or had graduated by the end of the evaluation is certainly noteworthy. Numerous mothers in our sample spoke about how powerful and effective support from their home visitors was in helping them achieve this goal. Moreover, the quality of the program differentiated between mothers who were successful and those who were not; mothers enrolled in programs with less turnover, more “match” between home visitors and parents, quicker intake, and a greater likelihood that they were receiving their full complement of services, had higher completion rates.

Economic self-sufficiency is more difficult to measure, for this population, in a meaningful way, and may be immediately less relevant anyway.

Other evaluations use receipt of public assistance as a core measure of economic attainment, and we collected those data as well. Indeed, the rate of TANF receipt among HFM participants compared favorably with those achieved for other programs, although it did increase over the period of the evaluation. We do not consider that increase a negative finding, in that a percentage of the mothers electing to use TANF accepted the support so that they could return to school. In fact, since it appears to be HFM's belief (supported by a considerable amount of research) that a high school diploma is among the best hedges against extended periods of economic dependency, then one might look, instead, to providing greater public financial assistance, early on, to these new mothers so that they can attend school. The premium should probably be placed on school (or GED) completion first, then financial self-sufficiency at some later point. (And neither of these

goals takes into account advice from the Ethnographic Study — that a third trajectory, one that includes family-building first, before either educational or economic attainment, should be considered as well.)

Finally, the children of these young mothers, as a group, look to be doing quite well developmentally.

Often the concern in teen parenting programs is for the teens' children, who the research literature identifies as "at risk" for many negative consequences. By the end of our evaluation these children were generally developing adequately, with no serious red flags in any developmental domain. That positive finding is worth noting for a number of reasons, but primarily the following: It allows us to underscore the fact that, despite the challenges described above and the low expectations that many in the public hold for young parents, many of these young women have admirably met the challenges of parenting and young adulthood.

Program & Policy **Recommendations**

We sketch out below only a few of the most important recommendations for the statewide HFM and local programs to consider:

- HFM should reconsider the concept of “service level,” and reconceptualize optimal patterns of program utilization. Additional service modalities (e.g., contact via internet, or a drop-in center, etc.) should be considered.
- HFM should attempt to more closely align certain program standards with program goals: If cultural norms differ regarding particular outcomes, then cultural competence is difficult, perhaps impossible to achieve. All program standards should be assessed in this way.
- HFM should consider decoupling the goal of educational attainment from that of economic self-sufficiency. Receipt of public assistance may well facilitate educational attainment.
- HFM should focus resources (or coordinate resources with other agencies) in the service of addressing maternal depression, especially the chronic depression that was evident by the end of the evaluation.
- A more efficient and accessible management information system is critical to improving services and initiating new research.
- HFM might reconsider the goal of preventing repeat births, refocusing it on preventing those repeat births for which the proper supports are not likely to be available.



- The professional attributes that are considered critical for home visitors should be examined in light of the findings related to the range of seemingly positive home visitor-client relationships.
- With the understanding that the home visitor-client relationship may be key to participant retention, HFM should work to develop strategies to keep home visiting staff employed for longer periods of time.

We hope that these findings contribute, at least modestly, to improving the operations of HFM and thus, the possibilities of achieving its goals.

Endnotes

- 1 Jacobs, F.H., Easterbrooks, M.A., Brady, A.E., & Mistry, J. (April 2005). *Healthy Families Massachusetts Final Evaluation Report: January 1998 – June 2002*. Medford, MA: Massachusetts Healthy Families Evaluation, Tufts University.
- 2 In its first year of operation, HFM was open only to first-time parents under the age of 20 years.
- 3 See Brady, A., Easterbrooks, M.A., Jacobs, F., & Mistry, J. (1998, June). *Massachusetts Healthy Families Evaluation Plan*. Medford, MA: Massachusetts Healthy Families Evaluation, Tufts University.
- 4 The theoretical model that serves at the rationale for choosing these intermediate objectives is contained in the MHFE evaluation plan. See Brady, A., Easterbrooks, M.A., Jacobs, F., & Mistry, J. (1998, June).
- 5 Jacobs, F.H. (1988). The Five-Tiered Approach to evaluation: Context and implementation. In H.B. Weiss & F.H. Jacobs (Eds.), *Evaluating family programs* (pp.37-68). Hawthorne, NY: Aldine de Gruyter; Jacobs, F.H. (2003). Child and family program evaluation: Learning to enjoy complexity. *Applied Developmental Science*, 7(2), 62-75; Jacobs, F.H. & Kapuscik, J. (2000). *Making it count: Evaluating family preservation services*. Medford, MA: Family Preservation Evaluation Project.
- 6 Jacobs & Kapuscik, 2000, p. 37.
- 7 Katzev, A.R., Pratt, C.C., McGuigan, W.M., & Kapsch, B.M. (2002). *Oregon Healthy Start 2000–2001 status report*. Salem: Oregon Commission on Children and Families.
- 8 Black, T., Powell, J.L., Clay, M., & McDill, P. (2000). *Healthy Families Connecticut: Final outcome report of a home visitation program to enhance positive parenting and reduce child maltreatment*. Hartford, CT: Center for Social Research; Galano, J., & Huntington, L. (2001). *Healthy Families Virginia: FY 2001: Statewide evaluation report*. Williamsburg, VA: Author; Williams, Stern, & Associates. (2002). *Healthy Families Florida: Statewide evaluation: Formative report 2002*. Miami, FL: Author.
- 9 Katzev, A.R., Pratt, C.C., Henderson, M.S., McGuigan, W.M., (1999). *Oregon's Healthy Start Effort 1997–98 Status Report* (July 1, 1997–June 30, 1998). Corvallis, OR: Oregon State University; Social Policy Institute. (2002, September). *Final report—Answers Benefiting Children program evaluation*. Unpublished manuscript; Duggan, A., Fuddy, L., Burrell, L., Higman, S., McFarlane, E., Windham, A., Sia, C. (2004). Randomized trial of a statewide home visiting program to prevent child abuse: impact in reducing parental risk factors. *Child Abuse and Neglect*, 28, 623-643; Williams, Stern, & Associates. (2002); Woodson, C. (2001). Evaluation summary, Healthy Families New Jersey. New Brunswick, NJ: Prevent Child Abuse.
- 10 Kelsey, M., Johnson, A., & Maynard, R. (2001). *The potential of home visitor services to strengthen welfare-to-work programs for teenage parents on cash assistance*. Washington, DC: Administration for Children and Families, U.S. Department of Health and Human Services; Wagner, M.M., & Clayton, S.L. (1999). The Parents as Teachers Program: Results from two demonstrations. *The Future of Children*, 9 (1), 91-115.
- 11 The HFM programs currently rely on an updated tool (2003), but we report here the standards listed on an original version of the tool (1997), since it covers the time period during which we collected our program data.
- 12 This calculation does not include mothers who were on “creative outreach” for the entire period, since this service level does not carry a specific number of expected visits.
- 13 Rate calculated from data presented in: Klepinger, D.H., Lundberg, S., & Plotnick, R.D. (1995). Adolescent fertility and the educational attainment of young women. *Family Planning Perspectives*, 27, 23-28.
- 14 American Public Human Services Association (1999). *Washington Memo: “Second Chance Homes.”*
- 15 Flanagan, P., Garcia Coll, C., Andreozzi, L., & Riggs, S. (1995). Predicting maltreatment of children of teenage mothers. *Archives of Pediatrics and Adolescent Medicine*, 149, 451-455.
- 16 Flanagan, Garcia-Coll, Andreozzi, & Riggs (1995).
- 17 National Immunization Survey. *Breastfeeding practices: Results from the 2003 National Immunization Survey*. Retrieved November 1, 2004, from http://www.cdc.gov/breastfeeding/NIS_data.

Introduction

Evaluating Healthy Families Massachusetts (HFM)

Launched in 1997, HFM is an ambitious, statewide adaptation of the Healthy Families America (HFA) home visiting program — the first in the country. It was designed to be available to all families in which the mother or father is a first-time parent under the age of 21.¹ The original 1997 program Request for Responses (RFR) lists the main goals of the HFM program as follows:

- prevent child abuse and neglect by supporting positive, effective parenting skills and nurturing home environment;
- achieve optimal health, growth, and development in infancy and early childhood;
- promote maximum parental educational attainment and economic self-sufficiency; and
- prevent repeat teen pregnancies.

HFM services vary from site to site, though they generally include home visits, center-based groups, and referral services. The majority of the home visitors are paraprofessionals, but there is a wide range of education, experience, and expertise represented in the statewide program. In their work with families, home visitors are meant to model and support positive parent-child interactions, teach about child development, help the family to provide a safe and enriching environment for their child, support the parent's educational and professional development and goals, provide crisis intervention, and connect the family with other social services as needed.

Services are initiated prenatally, at birth, or within the first year of the child's life, and may continue until the child's third birthday. Families are located, referred, and recruited to HFM through a wide range of sources. The frequency, intensity, and duration of visits are determined by each family's needs and preferences, and range from several times a week to quarterly. Currently, HFM is being delivered by 17 agencies, with 27 programs operating as program sites.

HFM received \$5,000,000 in its first year of operation (FY 1998), and its budget increased each year, until it peaked in FY 2001 and FY 2002 at over \$21,000,000. Its current budget (FY 2004) stands at a little over \$12,000,000; this reduction reflects the significant decreases that virtually all

human service organizations have endured over the past two years. During its first year of operation, approximately 2,500 young mothers enrolled in HFM. In step with its funding, enrollments peaked in FY 2001, with over 4,100 participants actively involved; the numbers have dropped since then. The MCTF supports HFM, and it is to the agency's credit that it has continued to operate in these times of fiscal uncertainty.

Soon after the program's inception, the Massachusetts Children's Trust Fund (MCTF) awarded the contract for evaluating HFM to a Tufts University team, headed by Professors M. Ann Easterbrooks, Eliot-Pearson Department of Child Development; Francine Jacobs, Departments of Child Development and Urban and Environmental Policy and Planning; and Jayanthi Mistry, Eliot-Pearson Department of Child Development; Anne Brady, Ph.D., served as Project Manager of the evaluation. A small committee of research and evaluation experts was convened to provide ongoing guidance on the study's design and execution; the list of members of the Technical Advisory Board (TAB) is included as Appendix A.

The Massachusetts Healthy Families Evaluation (MHFE) team devoted its first year of funding to developing an evaluation plan;² the second year was dedicated to program and participant recruitment and the commencement of data collection. In June 2002, data collection concluded, and analyses began. Because of the exigencies of state budgets and administrative data systems, the project's data analysis phase was extended, concluding in September 2004.

This final report describes the conduct of the MHFE study and summarizes its major findings. During the period from January — March 2005, earlier drafts of this document were distributed to our TAB, the MCTF personnel and Advisory Committee members, and HFM program administrators, for their review and comment. We carefully considered the thoughtful feedback we received, integrating as much of it as was feasible into this present document. This report, written with a policy and program audience in mind, represents the first step in our efforts to disseminate these findings; the Tufts team plans to make this information widely available, in different formats for different audiences.

Goals of the MHFE

The MHFE was commissioned to answer questions pertaining both to the operation of the program and outcomes achieved for its participants. The core questions relating to program operations included:

- **What is the nature of the home visit?** What are the critical elements of the relationship between home visitor and client? What is the range of topics covered during home visits? Who participates in home visits? To what extent is home visiting practice consistent with ethnotheries (culturally embedded sets of beliefs) of parenting and child-rearing?
- **How do participants experience the program?** How satisfied are participants with the program, and how successful do they perceive the program to be? What patterns of participation are demonstrated, and how are these patterns of service utilization related to their experiences in the program? What are the teenage mothers' theories of child development and "good parenting," and in what ways do they feel most comfortable seeking help with parenting?
- **To what extent, and in what ways, do sites operate with "fidelity to the model?"** To what extent do the programs, as implemented, conform to HFM model and individual program standards?

The core questions related to program outcomes included:

- **To what extent is the program meeting its stated "distal," or long-term, goals?**
- **To what extent are the "intermediate," or short-term, objectives³ being achieved?** These intermediate objectives include:
 - increasing the amount, types, and quality of social support used by young parents;
 - increasing parental knowledge of child development;
 - enhancing parenting competence/parenting skills;
 - enhancing the quality of the parent-child relationship; and
 - promoting parental well-being.
- **In what ways do characteristics of participants, programs, and communities moderate both utilization of program services and the attainment of the short- and long-term outcomes?** Client-centered influences include maternal age, maternal developmental status, childhood history, child age of program entry, and patterns of service utilization. Program-related moderators include fidelity of the program to the Healthy Families (HF) model, the extent of cultural sensitivity in service provision, and program auspices. The MHFE is particularly interested in the potential moderating role of maternal age and developmental status, and the cultural "match" between client and service delivery.

The MHFE design is based on Jacobs's Five-Tiered Approach (FTA) to evaluation.⁴ The FTA is developmental in nature; it organizes research activities at five levels, "moving from generating descriptive and process-oriented information at the earlier stages [of a program's development] to determining the effects of programs later [on]."⁵ While focusing on the evaluation questions posed by clients, the FTA also responds to program-specific variations, for example, its age and developmental stage, its evaluation resources and capacity, and the context in which the program operates.⁶ The FTA then matches evaluation activities appropriately. The first three tiers are oriented to program process, or operations, and the fourth and fifth tiers are designed to measure or determine outcomes. Tier One is concerned with establishing the need for a program, and as a pre-implementation tier, has been excluded from the MHFE. (See Appendix B for a depiction of the FTA model.)

At *Tier Two*, data are collected and analyzed to satisfy basic demands for service monitoring and accountability. Activities at the second tier focus on comprehensively and accurately describing program inputs, or elements — primarily participants, services, staff, and costs. The systematic collection of information about program operations is critical to all subsequent evaluation efforts. All programs should be able to answer the questions, "How, with whom, by whom, and at what costs, is the program being implemented?" At *Tier Three*, evaluation activities are undertaken in order to develop a more in-depth picture of the program, to assess program quality with respect to performance standards, and to provide information to staff and participants for program improvement.

Tier Four activities focus on attainment of "proximal outcomes," or shorter-term objectives, and examine whether the program achieved the effects as intended. *Tier Five* activities generally involve rigorous experimental research to assess long-term program impact. Both the age of the HFM program at the start of the evaluation and the expected duration of the evaluation made research at Tier Five inappropriate in this case. The MHFE Outcome Study is, then, a Tier Four outcome evaluation, investigating overall program effects, proximal outcomes (achievement of short-term objectives), and "mediators," of those effects, or what qualities of the program and participants lead to differences in program effects. Overall, the MHFE focuses on evaluation activities at Tiers Two, Three, and Four.

The MHFE comprises three overlapping components: *Process Study*, *Outcome Study*, and *Ethnography*; a member of the project's senior research group managed each of these substudies (see Figure 1.1). Each substudy team was responsible for answering a discrete set of the project's core research questions. In addition, although project data were derived from numerous sources and were collected and analyzed

with a range of social science methods, each team was also responsible for preparing its data to support analyses undertaken by the others. For example, it was explicitly intended that the Process Study inform the Outcome Study, that the Outcome Study produce data to test hunches arising from the Ethnography, that the results of following through on those hunches suggest additional process or outcome investigations, and so forth. This iterative quality is central to the FTA model.

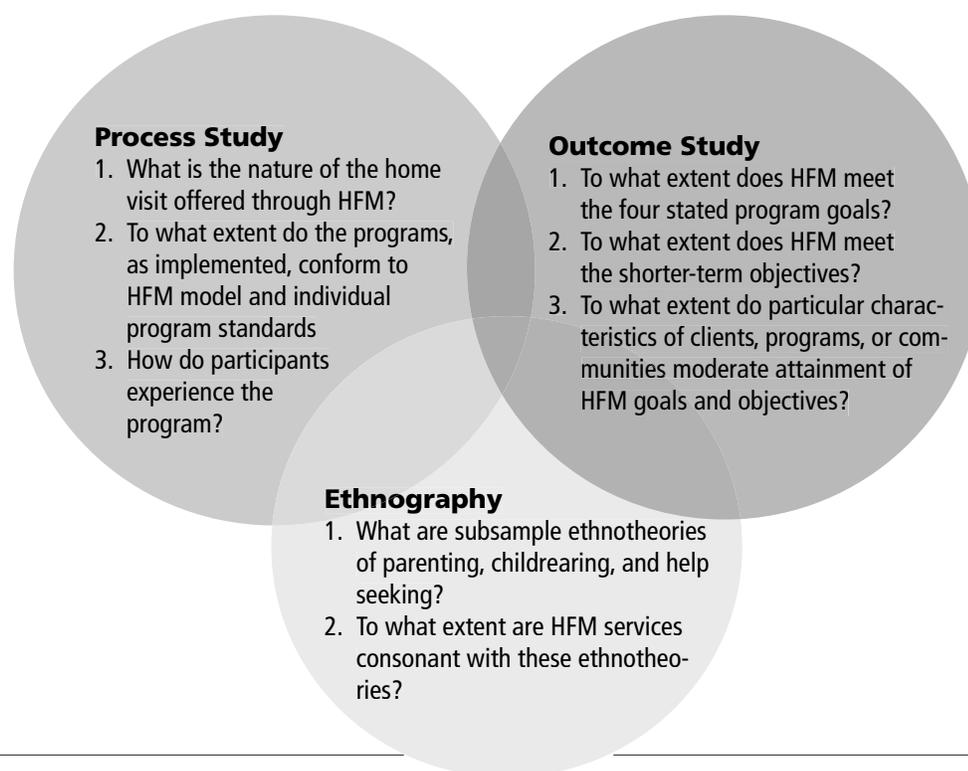
This report is organized into four sections. The first section includes a literature review (Chapter 1) and a summary of the research methods used throughout this study (Chapter 2). The second section outlines HFM program operations, including a description of programs and participants (Chapter 3), a discussion of the nature of the home visit (Chapter 4), and a summary of participants' experiences of the program

(Chapter 5). The third section summarizes program outcomes, including perceived effects (Chapter 6), and progress toward achievement of both intermediate objectives (Chapter 7) and long-term goals (Chapter 8). The final section of the report includes a summary of findings and recommendations (Chapter 9). Appendices, including a glossary of acronyms (Appendix D) follow.

Endnotes

- 1 In its first year of operation, HFM was open only to first-time parents under the age of 20 years.
- 2 See Brady, Easterbrooks, Jacobs, & Mistry, 1998.
- 3 The theoretical model that serves as the rationale for choosing these intermediate objectives is described in detail in the MHFE evaluation plan. (See Brady, Easterbrooks, Jacobs, & Mistry, 1998.)
- 4 Jacobs, 1988; Jacobs, 2003; Jacobs & Kapuscik, 2000
- 5 Jacobs & Kapuscik, 2000, p. 37
- 6 Jacobs, 1988

Figure 1.1: **MHFE Evaluation Components**



Section One

The Scaffolding of the MHFE

Evaluation is both a research activity and a service activity. The research component is obvious: although among the most emphatically *practical* applications of social scientific methods, evaluation is, nonetheless, a theoretically informed, empirically driven enterprise, with careful, systematic investigation at its core. The service component is often less evident and less acknowledged, perhaps because the term “service” implies accommodation, which in turn suggests compromise — of professional posture and scientific approach, for example. But in most cases, an evaluation plan does, indeed, represent the point of intersection and agreement between the needs and interests of the client (the person or group commissioning the study) and the knowledge, skills, and ethics of the evaluation team. Issues to be negotiated include the appropriateness of evaluation questions, the quality of data collection instruments, the availability of resources (i.e., funds, access to data) and the schedule of evaluation activities, to name a few.

Higher quality evaluations result when newly-launched efforts locate themselves within the tradition of similar investigations, explicitly identifying and building on promising approaches, seeking to answer the next generation of questions not yet adequately addressed. **Chapter 1 (*Review of the Literature*)** briefly surveys prior research on teen parenting and evaluations of home visiting programs, so that readers understand the MHFE’s intellectual provenance. With that literature as a basis, and the interests of MCTF and other stakeholders in mind, the MHFE was designed, as described in **Chapter 2 (*MHFE Methodology: The Conduct of the Evaluation*)**. Modifications to the original design, as they became necessary, are also included. These two chapters, then, offer the general framework for interpreting the subsequent results.

Chapter 1

Review of the Literature

Before initiating the data collection phase of the evaluation of the HFM program in 1998, the Tufts evaluation team reviewed a large body of relevant research and practice-based literature. That literature review¹ allowed us to feel relatively confident that we were addressing both the specific interests of our stakeholders and, to the extent possible, some of the lingering questions about home visiting posed by other researchers and practitioners in the field. Since that time, of course, much new research has emerged. The bulk of this present review, then, incorporates the most relevant new publications into a much-abbreviated version of that previous effort. In addition, this review highlights literature related to Process Study in home visiting programs, since the earlier review did not address issues of program operations or implementation.

This review is divided into three main sections: The first is a brief treatment of the causes and consequences of teen parenthood. The second presents an overview of home visiting outcome evaluation findings, and the third reviews literature on home visiting program implementation, including the range of approaches for studying it, and the results from those researchers who have investigated it.

The Causes and Consequences of Teenage Parenthood

Teen parenting has been of concern to US policymakers since the 1970s. Teenage birthrates reached a peak of 61.8 births per 1,000 in 1991, and have subsequently dropped in most states.² Nonetheless:

- teenage pregnancy rates in the US are still among the highest of all industrialized nations;³
- approximately one-fifth of teen mothers have more than one child during their adolescence.⁴

Factors Predicting Teenage Pregnancy

It is well documented that teenage mothers are more likely:

- to have come from impoverished backgrounds;⁵
- to be of minority status;⁶
- to have grown up in single parent households;⁷
- to have had parents with lower levels of education;⁸
- to have experienced less familial support and discipline; and⁹

- to have done poorly in school and demonstrated more behavior problems than older mothers.¹⁰

Outcomes for Teenage Mothers

Researchers have documented a host of negative outcomes associated with early parenthood, including a greater likelihood of being single parents¹¹ and of having more children, on average, than older mothers; both of these factors make it more difficult to transcend poverty.¹² Other negative outcomes associated with early parenting are described below.

Repeat Pregnancies

In 2002, there were approximately 89,000 repeat births to teenagers, representing 21% of all births to adolescents.¹³ Adolescent mothers who go on to have subsequent births, particularly closely-spaced repeat births, have been found to:

- be more likely to drop out of school;¹⁴
- be more likely to engage in deviant behaviors;¹⁵
- be more likely to be unemployed and become dependent on welfare when compared to adolescents who have only one child;¹⁶ and
- have children with increased health complications.¹⁷

Lower Levels of Educational Achievement

A curtailment of educational achievement is among the concerns for this population.

- Women who have babies as teenagers have lower levels of educational attainment and higher levels of high school drop-out when compared to teens who delay childbearing.¹⁸
- Fifty-two percent of women who became mothers under the age of 20 had graduated from high school or completed a general equivalency diploma (GED) by the age of 25.¹⁹

Lower Levels of Economic Self-sufficiency

This factor is a major consideration for policymakers across the country.

- Teenage mothers are less likely than older mothers to find stable employment and be self-supporting.²⁰
- Teenage mothers are less likely than older mothers

to earn incomes adequate enough to support their families.²¹

- Teenage mothers are more likely to receive welfare benefits, and typically receive those benefits for longer periods of time when compared to older mothers.²²

Poor Maternal Health and Well-being

Early childbearing can have a negative impact on young mothers' physical and mental health.

- Early childbearing can be physically harmful for mothers under the age of 15.²³
- Young teens are at greater risk of serious medical complications related to pregnancy and delivery, and have a 60% higher mortality rate than women in their 20s.²⁴
- Rates of depression for adolescent mothers are considerably higher than rates for older mothers.²⁵

Less Optimal Parenting Behaviors

Studies comparing parenting styles of adolescent mothers to older mothers have found significant deficits in adolescent parenting.²⁶

- Adolescent mothers, in general, have more punitive styles of interacting; they are less responsive, less empathetic, and tend to have less appropriate responses to their children's affect.²⁷
- Adolescent mothers experience more parenting stress, display lower self-esteem, and have higher scores on potential child abuse measures when compared to older mothers.²⁸
- Childbearing at an early age has been associated with higher infant mortality rates and higher rates of childhood accidental injuries and illnesses resulting in hospital and emergency room visits.²⁹
- Adolescent mothers have a poorer understanding of child development, have less realistic expectations for their children's behavior, and are less able to modify their behavior in response to their children's needs.³⁰

Despite these findings, it is critical to recognize that there is considerable variation in the outcomes of adolescent mothers. A number of researchers identify individual and ecological factors that are associated with positive outcomes for some young mothers.³¹

- Older teenagers have demonstrated higher child acceptance and higher commitment to parenting.³²
- Mothers with a higher level of cognitive maturity demonstrate more sensitive parenting.³³
- Teenage mothers who are able to reflect on their own life histories and hopes for the future engage in more positive parent-child interactions.³⁴

- Many researchers have found that motherhood, in itself, is a catalyst for positive life changes.³⁵
- Social support, both formal³⁶ and informal,³⁷ has been associated with positive outcomes in teenage parents.

Outcomes for Children of Teenage Mothers

According to a Kids Count Special Report, "studies show that teen parents are generally less able to give their children the kind of solid foundation, including proper nutrition, health care, cognitive and social stimulation, and old-fashioned nurturing — in short, the things all kids need — to get off to a good start."³⁸ The following are some of the key negative outcomes faced by children born to teenage mothers.

Poverty

Children born to teenage mothers are more likely to grow up in poverty than children of older mothers. Overall, the rate of poverty for children born to teenage mothers is twice as high as the rate for all children.³⁹

Poor Health

Children of teenage mothers tend to experience more health problems than do children of older mothers.

- Teenage mothers frequently delay receiving prenatal care⁴⁰ and receive poorer prenatal care.
- Teenage mothers also experience more problems during pregnancy and delivery.⁴¹
- Children of teenage mothers are more often born prematurely.⁴²
- Children of teenage mothers are one-third more likely than those of older mothers to be of low birth weight (less than 5.5 pounds).⁴³ Premature births are associated with a host of other negative outcomes for children:
 - greater susceptibility to birth defects;⁴⁴
 - greater chance of having developmental difficulties;⁴⁵
 - increased risk of developing chronic respiratory problems;⁴⁶
 - greater likelihood of experiencing serious illness, and even infant death;⁴⁷
 - greater likelihood of being later diagnosed with dyslexia, hyperactivity, or some other disability;⁴⁸
 - receipt of less medical care throughout childhood, and⁴⁹
 - fifty percent chance of a higher rate of infant mortality than children born to older mothers.⁵⁰

It is important to note, however, that many of these risks appear to be associated with greater poverty and inadequate prenatal care in addition to the age of the mother, per se.⁵¹

Victimization and Foster Care

Children of teenage mothers are more likely to be victimized, to be the subjects of child abuse and neglect reports, and to be placed in foster care.⁵²

Poor School Performance and Social Behavior

Among the concerns voiced in these domains are the following:

- Children born to teenage parents exhibit more behavior problems, including higher levels of aggression and lower impulse control.⁵³
- Children born to teenage parents are more likely to experience cognitive delays.⁵⁴
- Children of teenage mothers demonstrate lower school achievement across the board — lower grades, elevated levels of grade repetition, greater rates of high school drop out, and lower levels of college attendance.⁵⁵
- Sons of adolescent mothers are 3 times more likely than sons of older mothers to be incarcerated.⁵⁶
- Daughters of teen mothers are significantly more likely than the daughters of older mothers to give birth before the age of eighteen.⁵⁷

Conceptual Limitations to this Research

Research on young parenthood has traditionally been framed within a deficit-based conceptual model; that is, the studies have focused primarily on the negative predictors and consequences of early parenthood. The complexities of these mothers' lives also have not been adequately described, although indeed, early childbearing is nested in a series of often interrelated, systemic problems, such as poverty, unemployment, racism, and inadequate schools.⁵⁸

Increasingly, researchers in the field have suggested that a strength-based approach to understanding teenage pregnancy may deepen our appreciation of the broadly variable outcomes among teenage mothers and their children. Such a “positive youth development”⁵⁹ perspective considers the youth in her or his ecological context,⁶⁰ in part evaluating her decisions, functioning, and well-being within that framework. This more recent line of inquiry promises to enhance the research on teen pregnancy and parenting by shifting the primary focus away from measuring the host of already well-documented and expected negative outcomes toward describing the complex environments in which such parenting occurs and the successes that, nonetheless, are possible within them. Investigations of this nature may also provide further guidance to policymakers and program developers as they attempt to both build on the strengths and address the needs of this population.

Consequences of Teenage Parenthood for Society

The “cycle of unrealized potential”⁶¹ that teenage pregnancy appears to perpetuate places a significant burden on society as a whole, with direct costs of approximately seven billion dollars annually resulting from lost tax revenues and increased spending on public assistance, child health care, foster care, and the criminal justice system.⁶² In total, experts estimate gross annual costs of up to 34 billion dollars for all subsequent consequences of teenage parenting.⁶³

Outcomes of Home Visitation Programs

This review of outcome evaluations is based on the MHFE's original literature review completed in February 1998. To that review of evaluations of home visiting programs, we have added literature published or produced since early 1998; we also include information from Daro and Harding's 1999 review⁶⁴ of preliminary results of 17 unpublished HF Research Network evaluations. To be included in this review, evaluations met two criteria:

- Home visiting must be a primary service component of the program evaluated.
- The evaluation must have included measurements of similar outcomes to those of interest to HFM and the MHFE.

A great variety of constructs, or theoretical categories, were examined in the evaluations we reviewed. Only the constructs and domains relevant to the MHFE are included here. In Table 1.1 (page 26), we characterize each construct by the proportion of evaluations showing positive findings. If at least two-thirds of the evaluations showed positive findings, we place the construct in the “largely positive effects” column. If about half the evaluations demonstrated positive findings in that construct area, we place the construct in the “mixed results” column. If no more than one-third of the evaluations showed positive findings for that construct area, we placed it in the “few or no effects” column.

While there is no consistent and clear pattern of positive effects from home visiting, a number of promising findings in discrete areas of development and functioning have emerged. It is noteworthy that two key areas many home visiting programs seem to affect are the promotion of a nurturing home environment and positive parent-child interactions.

Process Evaluations of Home Visiting Programs

Process evaluations examine the ways that programs operate — the “inputs” (type and amount of services used, type of participant, quality of the program, etc.), as researchers call them. These data-based descriptions of program functions then allow researchers to establish the extent to which

Table 1.1: Findings from Selected Home Visiting Program Outcome Evaluations

Domain	Largely Positive Findings (2/3 or more evaluations addressing this construct show positive findings)	Mixed Results (about 1/2 the evaluations addressing this construct report positive findings)	Few or No Effects (1/3 or fewer evaluations addressing this construct show positive findings)
Child Health, Growth, and Development		Prenatal care ⁶⁵	Immunizations ⁶⁶
		Birth outcomes ⁶⁷	
		Linkage to primary care provider ⁶⁸	
		Child hospital admissions and use of hospital emergency departments for health care ⁶⁹	
		Cognitive/language Development ⁷⁰	
		Social-emotional ⁷¹	
Parenting and Nurturing Home Environment	Parent-child interaction ⁷²	Parenting knowledge, attitudes, expectations ⁷³	
	Nurturing home environment ⁷⁴	Child maltreatment ⁷⁵	
Parent as an Individual		Education ⁷⁶	Social support ⁷⁷
		Employment ⁷⁸	Depression ⁷⁹
		Self-sufficiency ⁸⁰	Substance use ⁸¹
		Repeat pregnancy and birth ⁸²	Life stress ⁸³
		General mental health ⁸⁴	

programs are operating as they should, according to plan. Process evaluations also collect data on satisfaction with the program as it is experienced by the full range of program participants (clients, staff, funders, etc.).

In the following section, we present an overview of the approaches home visiting evaluations have taken when examining program processes, and summarize process findings from major home visiting evaluations. We also discuss specific components of program operations as they relate to outcomes. Since evaluations of this type are relatively sparse, with little homogeneity in how constructs of interest are defined and measured, this section is more illustrative than definitive.

To begin, although home visiting programs vary broadly in their services, staff, and organizational auspices, several program characteristics are commonly documented in the literature:

- Although home visiting programs tend to focus on home visits as their primary mode of service delivery,

most offer some combination of home visits, groups, and other center-based activities.

- Services are usually targeted to some type of at-risk population (e.g., families with developmentally delayed children, teenage parents, parents with substance use issues, etc.).
- Services are delivered by home visitors who are either paraprofessionals or professionals, with varying degrees of experience and education. In recent years, there has been a push toward using paraprofessionals rather than professionals in the home visiting role.
- Home visits almost always include curricula, the exact nature of which depends on the target population, and the overall goal of the program (child abuse prevention, parenting knowledge, etc.).
- Most home visiting programs have as part of their standards some preferred entry point (e.g., prenatal vs. postnatal), and some preferred end point.

- Home visiting programs usually assign their clients some type of service level, which is usually intended to change over the course of participation depending on client need, but is typically guided by a program model (e.g., weekly at first, tapering off to monthly).

Home visiting program evaluations tend to focus on these central elements when investigating program operations. With varying degrees of depth and breadth, most evaluations include in their research some reports of:

- the types and amount of services that are offered and utilized;
- who is using the services and how much;
- who is delivering the services; and
- the nature of the services offered (what types of curricula, etc.).

At a minimum, most evaluations consider some or all of these issues on a simple descriptive level. More recently, though, there has also been a trend toward framing these investigations in terms of “fidelity to the model” — that is, in comparison with standards for operations set by the program itself.

Below, several of the core elements of program operations are described as they are addressed in home visiting evaluations.

Program Participation

Almost all process evaluations attempt to describe the way participants use the program. Here we examine three aspects of program participation: penetration and engagement (the extent to which the program reaches into the target population, succeeds in enrolling potential clients, and maintains parental interest), duration (the length of time clients are engaged actively in the program), and intensity (the amount of service participants receive). Whenever possible, we also present findings relating these process variables to program outcomes, although such work is limited.

Program Engagement

At a basic level, as the initial step in engagement, many evaluations report how many people are referred to the program and screened for eligibility.

- Overall, home visiting programs appear fairly successful at identifying and screening their targeted populations, typically reporting penetration rates (the extent to which the desired population is contacted by the program) between 70% and 80%.⁸⁵
- Those evaluations that choose to report their penetration rates in relation to the program standards generally describe rates that meet or exceed program goals.⁸⁶

While enrollment figures provide us with a basic sense of who is initially interested in the program, engagement data are meant to provide a more accurate reading of participants’ type of involvement with the program.

The term engagement is broadly conceived in this field, and is measured both quantitatively (e.g., the level of the client’s participation in the program, the amount of services used) and qualitatively (e.g., the relationship between the client and home visitor, the level of the client’s investment, or involvement in the program). According to a review of HF programs, approximately 70% — 80% of programs successfully engage their families.⁸⁷ Definitions of engagement, however, vary from program to program. For example:

- the Healthy Families Arizona evaluation stipulates that participants must receive at least four home visits to be considered “engaged,” and report engagement rates of 90%;⁸⁸
- the Healthy Families Florida (HFFL) evaluation reports lower engagement rates of 80%, but its more rigorous criteria are that the parent stay in the program for at least six months, or until the baby is born;⁸⁹
- the Oregon Healthy Start evaluators, who consider families to be engaged if they receive services for at least three months — regardless of consistency of service — and provide some outcome information, report engagement rates of 87%;⁹⁰ and
- the Healthy Families Connecticut (HFCT) evaluation reports a 48% rate of engagement. This study considers families to be engaged if they meet one of the following criteria: spending longer than 12 months in the program; being active in the program for more than three months but less than 12 months and receiving the appropriate number of home visits; terminating before 12 months, when the reason for terminating is because they met their goals and/or were accepting of services at the time of termination.⁹¹

Many home visiting program evaluations attempt to broaden the definition of engagement to incorporate more of its qualitative aspects, such as:

- the various levels and ranges of participation;⁹²
- the degree of participant involvement with and understanding of the content of the visit;⁹³
- client satisfaction scales; and⁹⁴
- the quality and strength of the client/provider relationship.⁹⁵

These types of measures tend to yield more positive results⁹⁶ than do measures of program participation, with notable exceptions.⁹⁷

Only a few studies have investigated the impacts of engagement on client outcomes. Those studies that have examined

this issue have found that higher levels of program involvement relate to:

- higher scores on the HOME Inventory;⁹⁸
- higher child IQ scores;⁹⁹
- an increase in a child's ability to affectively signal to parents; and¹⁰⁰
- an increase in parent levels of responsiveness to infant needs.¹⁰¹

Duration of Services Received

Evaluators generally measure duration in one of two ways — either by rates of attrition (the number of participants who “drop out” of the program before a particular end date) or by length of enrollment (average amount of time participants remain in the program).

Home visiting programs tend to have quite high attrition rates. In their summary report of six major home visiting program evaluations, Gomby and colleagues¹⁰² observed that between 20% and 67% of families leave their home visiting programs before the intended completion date, and many evaluations find that families tend to leave, in disproportionate numbers, during the first 6 to 12 months of the program.¹⁰³ It is important to note that these programs have different prescribed lengths; therefore, reporting the percent dropping out after one year means something quite different for a two-year program, for example, than for a four-year program.

No matter what the intended length of enrollment in the program, reports of overall duration of this genre tend to fall within the 8 to 16 month range,¹⁰⁴ with some notable outliers: for example, evaluators of the Comprehensive Child Development Program (CCDP) found that participants remained in the five-year program for an average of 3.3 years,¹⁰⁵ while Fair Start evaluators found that their participants averaged only 20 to 29 weeks of program involvement, rather than the two years that was intended. Evaluators of Early Head Start (EHS)¹⁰⁶ found that, of the families that left the program before their formal completion date, half remained for at least two years.

Understanding the relationships between service duration and program outcomes is particularly important, then, considering how few programs are able to keep families enrolled for the prescribed length of time in the program. Research in this area is sparse, and often contradictory. So, on the one hand, longer duration has been associated with:

- higher cognitive, social, and self-help gains among the children of adult parents;¹⁰⁷
- increased helpfulness of social support;¹⁰⁸
- lower rates of child abuse;¹⁰⁹
- greater likelihood of being up to date with immunizations; and¹¹⁰
- greater use of condoms.¹¹¹

On the other hand, however, several studies have found that duration is not related to:

- cognitive, social, and self-help gains among the children of teenage parents;¹¹²
- parenting stress;¹¹³
- parenting behaviors;¹¹⁴
- change in amount of social support;¹¹⁵
- school readiness; or¹¹⁶
- economic self-sufficiency.¹¹⁷

Service Intensity

Service intensity, or program dosage, is measured in a variety of ways. Most evaluations include some comparison of service level assignments — the prescribed amount of services — with the actual number of visits received. The following paragraphs present an overview of how evaluations have measured these elements of program intensity, and what they have found. Almost all programs have service levels that are meant to change over the course of the client's participation, in response to her needs and circumstances. But most programs have some ideal progression that they use to guide assignments of service level — in general, from most intense (usually weekly) to least intense (monthly, or quarterly).¹¹⁸ There are clear exceptions to this type of service level pattern — for example, the HIPPIY program, which offers biweekly visits only,¹¹⁹ and the Teenage Parent Home Visitor Services Demonstration, which began with mandatory weekly visits for the teens, but adjusted mid-project to allow some teenagers to receive biweekly visits.¹²⁰

Almost no home visiting program has succeeded in achieving and maintaining fidelity to its program model in terms of frequency of visits, and indeed, most programs report intensity levels well below the desired level.¹²¹ Notably, exceptions, including CCDP, are few.¹²²

Evaluations that note visit frequencies in relation to model standards do so in two different ways — the proportion of received visits in relation to expected visits and the proportion of families who receive the number of visits they were supposed to receive.

Gomby and colleagues observe that service implementation levels in most of the home visiting programs they reviewed hover around the 50% mark¹²³ — that is, families receive only about half the number of home visits they are supposed to receive. Other evaluations reviewed here presented a range of visit frequencies — generally from 40% to almost 70%¹²⁴ — although, as mentioned earlier, a couple of programs report completing almost all or all of their expected number of visits.¹²⁵

Overall, however, it appears that programs are delivering significantly fewer services than intended. This failure to meet model expectations is particularly striking in those programs that are attempting to deliver weekly home visits. In fact, the

evaluators of HFFL observe that there is an inverse relationship between the number of expected visits and the ratio of completed to expected home visits — the more visits expected, the less likely it is that the service goal will be achieved.¹²⁶ This phenomenon is reflected in other programs as well.¹²⁷

Not surprisingly, the proportion of families who are receiving the correct number of visits is also relatively small. For example:

- while 69% of HFFL participants received at least 75% of the expected number of visits, only 2% of families at a weekly service level received the expected number of visits;¹²⁸
- Fifty-two percent to 57% of families in EHS¹²⁹ reported receiving their intended number of visits; and
- evaluators of an early intervention program¹³⁰ found that, overall, only 34% of the families received exactly the scheduled number of visits.

Few studies empirically test the premises inherent in assignment of service levels — that better outcomes will accrue to clients enrolled at the proper level of intensity and duration, or that, as some program models assert, more is simply better.¹³¹ Of those who have related service receipt to outcomes, most have found greater service intensity to be associated with greater effects for some families, for some outcomes, including:

- higher levels of cognitive achievement for children;¹³²
- an increase in child's ability to affectively signal to parents;¹³³
- an increase in child's responsiveness to parent;¹³⁴
- an increase in likelihood of being up to date with immunizations and well-child visits;¹³⁵
- increased levels of parental self-esteem; and¹³⁶
- higher levels of family cohesion and helpfulness of social support.¹³⁷

On the other hand, many variables presumed to be susceptible to change through greater service intensity, such as parental stress¹³⁸ and depression, have not been proven to be. And the evaluators of the Parents as Teachers program (PAT) found that the relation between child developmental outcomes and service intensity was less consistent in their teen parent program than in their adult parent program.¹³⁹ Still other researchers have found negative outcomes associated with higher levels of service intensity, such as increased rates of severe physical abuse,¹⁴⁰ and higher levels of depression and less social support.¹⁴¹

Explanations for Variability in Program Participation

Calls for more exacting study of this gap between expected and actual levels of service delivery have increased in the past several years.¹⁴² Still, sophisticated analyses of why client

families do and do not use home visiting services as prescribed are relatively sparse.¹⁴³

Those evaluations that do investigate program implementation challenges tend, both explicitly and implicitly, to attribute problems with service delivery to the client, as opposed to the program.¹⁴⁴ For example, Gomby and colleagues¹⁴⁵ suggest that, given the inconsistency with which many families across programs participate in scheduled activities, one might conclude that they are unwilling and/or unable to accept the amount of service that is being offered. Similarly, Wasik notes that, “research on home visit completion suggests families do not always accept frequent visits.”¹⁴⁶ Missed visits are often characterized as “no shows,” or instances when a home visitor arrives for a scheduled appointment and does not find the mother at home.¹⁴⁷

Several studies have related specific client characteristics to various levels of program participation, particularly the kind of participation that reflects underutilization of prescribed services. These characteristics often include maternal age, maternal race/ethnicity, maternal personal functioning, social/economic status, maternal stress, risky health behaviors, social support, and life circumstances. Both positive and negative correlations have emerged (see Table 1.2).

In sum, while many client factors have been associated with engagement, the findings are inconsistent. These studies provide information about which clients have more difficulty receiving their full service dosage, but do not explain, in a satisfying way, why that might be occurring.

Instead, many evaluations have investigated the reasons program participants (i.e., program clients and program staff) report for leaving, or failing to engage with, the program. These include:

- Families move out of the catchment area, and/or cannot be located.¹⁴⁸
- Families become disinterested, or feel that they no longer need the services.¹⁴⁹
- Families tend to leave when their home visitor has left or changed — either because of a lapse in service, or because of a reluctance to engage with a new home visitor.¹⁵⁰
- Families leave because their work, school, child care demands, and so forth preclude their fulfilling the time commitment their program demands.¹⁵¹
- Some families are so noncompliant with services that the program discharges them.¹⁵²

Speculation about clients' inability to utilize services is particularly compelling when it comes to young parents, who unquestionably have unique developmental needs that may or may not intersect with the home visiting approach,¹⁵³ and it may be that the expectation that young parents will commit to frequent and regular participation in parenting

education services is an unreasonable one. Indeed, as shown in Table 1.2 (page 31), many evaluations have found that the younger of their clients are more difficult to engage in services.¹⁵⁴

In general, then, it has been posited, but not documented convincingly, that the nature of the population being served is a major contributor to the discrepancy between program service standards and service implementation, and it is assumed that young parents in particular may not be able to handle the amount of services prescribed by program models.

Program Structure Issues

Detailed descriptions of elements of the program other than the clients are considered here as components of “program structure;” they include, for example, characteristics of the staff, staff caseload, staff turnover, cultural competence within the program, and supervision. These elements, which may explain some of the observed variation in both program participation and eventual goal attainment, are often absent from home visiting evaluations, although in recent years researchers have started paying much closer attention to these issues.¹⁵⁵ We sketch out below the approaches more recent evaluations have taken to understand these issues.

Characteristics of Staff

Home visitors vary greatly in terms of education, experience, and background, but it is becoming increasingly common that most home visiting programs employ lay workers, or paraprofessionals, as their frontline staff. Researchers and program administrators use that term variably, however: some consider home visitors without a college degree, post-college education, or professional training of any kind as paraprofessionals,¹⁵⁶ while others believe that even persons with a college degree, if not in the proper disciplines, should be considered as such.

Paraprofessional home visitors are generally better educated and more experienced than the term conveys; for example, approximately 60% – 80% of paraprofessional home visitors have had at least some college education¹⁵⁷ and three to five years of related experience.¹⁵⁸ Regardless of educational level, however, paraprofessionals generally share these characteristics:

- They come from the same community as the target population.¹⁵⁹
- They are mostly women and often mothers.¹⁶⁰
- They usually mirror their target population in terms of race and ethnicity.¹⁶¹
- They possess skills that are uniquely suited to the kind of interactive and community-based work they will be doing with their clients.¹⁶²

Staff Caseloads

The number of cases each home visitor carries can affect her ability to deliver services.¹⁶³ The few studies reporting caseloads cite figures in the 10 to 15 range,¹⁶⁴ but some programs have home visitors with caseloads as high as 20 to 25.¹⁶⁵

Staff Turnover

As is the case in many human service fields, staff turnover is a serious issue in most home visiting programs.¹⁶⁶ Turnover rates vary from program to program, but most report rates in the 25%–50% range.¹⁶⁷

Cultural Competence

Although highly promoted as a central tenet of a successful home visiting program,¹⁶⁸ the issue of cultural sensitivity, or cultural competence, remains largely unexplored by researchers. Typically, when a program’s “cultural competence” is discussed at all, it is solely in terms of the home visitor/client match — that is, whether the home visitor is of the same race/ethnicity/background as her client. It is sometimes assumed that a relationship will more readily develop between home visitors and clients of the same race or ethnicity.¹⁶⁹ For the most part, programs report that the home visitors match their clients in terms of race and language.¹⁷⁰ However, other providers and researchers maintain that home visitors may profitably be of any race or ethnicity as long as they are respectful of other cultures,¹⁷¹ and many researchers and program staff promote the need for culturally competent workers.¹⁷²

Supervision

Programs generally acknowledge the importance of supervision for monitoring and supporting staff.¹⁷³ However, most evaluations have not measured and/or reported supervision quantitatively; as a result, this program element is often reported as a standard (what administrators are supposed to do) rather than as a finding (what is actually done). For example, although the EHS evaluation asserts that supervisors undertake a range of activities appropriate to that role, the report does not provide any documentation of the extent to which these tasks were indeed completed. Occasionally, an evaluation will report a supervisor-to-client ratio,¹⁷⁴ although again, it is not clear whether these ratios are observed by the evaluators themselves.

Program Structure Related to Outcomes

Few evaluations have investigated the relations between program structure elements and program outcomes, with some notable exceptions.¹⁷⁵ The HFFL evaluation, for example, found that children in programs with more experienced

Table 1.2: **Maternal Characteristics Related to Program Participation**

Participant Characteristic	More Likely to Engage in Program	Less Likely to Engage in Program
Younger (often teenagers)	Daro & Harding, 1999; Williams, Stern, & Associates, 2002a	Daro & Harding, 1999; Herzog, Cherniss, & Menzel, 1986; LeCroy & Milligan Associates, Inc., 2003; Fraser, Armstrong, Morris, & Dadds, 2000
African American and/or Hispanic	Williams, Stern, & Associates, 2002a; Daro & Harding, 1999; Navaie-Waliser, et al., 2000	LeCroy & Milligan Associates, Inc., 2003; Kazdin, Mazurick, & Bass, 1993; Orrell-Valente, Pinderhughes, Valente, & Laird, 1999
Lower Levels of Personal Functioning	Duggan et al., 1999; Duggan et al., 2000; LeCroy & Milligan Associates, Inc., 2003	Katzev, Pratt, Henderson, & McGuian, 1999; Kazdin et al., 1993; Kazdin & Wassell, 2000; Josten, Savik, Anderson, et al., 2002
Lower Socioeconomic Status	Olds & Korfmacher, 1998 ; Josten, Savik, Anderson, et al., 2002	Kazdin et al., 1993
Lower Levels of Education		Zill, Resnick, McKey, Clark, Connell, Swartz, O'Brien, & D'Elio, 1998; Warfield, Hauser-Cram, Krauss, Shonkoff & Upshur, 2000
Higher Levels of Parental Stress	Duggan et al., 2000; Fraser, Armstrong, Morris, and Dadds, 2000	Kazdin et al., 1993; Powell, 1984
Risky Health Behaviors	Duggan et al., 1999; Duggan, et al., 2000	Navaie-Waliser et al., 2000
Strong Support System	Williams, Stern, & Associates, 2002a	Powell, 1984
Married or Cohabiting Participants	Williams, Stern, & Associates, 2002a; Navaie-Waliser, et al., 2000; Josten, Savik, Anderson, et al. 2002; Zill, Resnick, McKey, Clark, Connell, Swartz, O'Brien, & D'Elio, 1998; LeCroy & Milligan Associates, Inc., 2003	
Regular Prenatal Care	Williams, Stern, & Associates, 2002a	
Employed	Williams, Stern, & Associates, 2002a	Zill, Resnick, McKey, Clark, Connell, Swartz, O'Brien, & D'Elio, 1998
Live in Shelter		Josten, Savik, Anderson, et al., 2002
Have Child with Developmental Delay/Low Birth-Weight Baby	Williams, Stern, & Associates, 2002a	LeCroy & Milligan Associates, Inc., 2003

supervisors were more likely to have up-to-date immunizations by age two, and were more likely to have their two-year well-baby check on schedule.¹⁷⁶ HFFL evaluators also found that experience as a home visitor appeared to be more valuable than educational level when it came to child abuse rates

in its clientele: lower rates of abuse were found in children in programs in which the home visitors had more home visiting experience, and, perhaps surprisingly, lower levels of education.¹⁷⁷

Program Structure Related to Client Participation

In addition to client characteristics, provider characteristics may also be implicated in service slippage; studies increasingly are paying attention to structural issues that may play a role in missed visits.¹⁷⁸ Researchers have found a number of program-related variables associated with lower levels of service delivery, including:

- larger home visitor caseloads;¹⁷⁹
- lower levels of home visitor education and training;¹⁸⁰
- less home visitor empathy;¹⁸¹
- higher rates of home visitor turnover;¹⁸²
- more scheduling difficulties;¹⁸³
- more home visitor absenteeism due to illness, bad weather, child care difficulties, etc.;¹⁸⁴
- less stability and tenure of the sponsoring agency;¹⁸⁵
- greater time lapse between assessment and first home visit;¹⁸⁶
- fewer hours of direct supervision;¹⁸⁷ and
- reluctance and/or lack of persistence on the part of the home visitors to schedule and complete visits.¹⁸⁸

Some evaluators have also speculated that the planned service intensity of these programs may be unrealistic for most families,¹⁸⁹ but others have noted that families would actually prefer to receive more visits, and would benefit from increased scheduling flexibility on the part of the program.¹⁹⁰

The Nature of the Home Visit

Home visiting programs vary widely, both in terms of the activities that are meant to occur during a visit, and the extent to which home visitors are expected to adhere to a specific protocol. In general, most home visiting programs have certain activities that are planned for a particular visit; among the most frequent are: presenting some type of curriculum, making referrals, developing and/or monitoring family service plans, and conducting assessments.

The Content of Visits

In general, evaluations address visit content in one of two ways: they describe the topics home visitors typically cover at their visits, and/or they report how closely home visitors tend to follow the program protocol.

Regarding the topics covered, home visitors tend to concentrate on child development and/or parent-child interaction,¹⁹¹ with family issues and parents' personal circumstances following in importance.¹⁹² Whether or not this practice reflects the program protocol is another matter. Overall, it appears that the degree of adherence to the program's dictates varies significantly across programs. For example, one evaluation found that "home visitors nudged the program somewhat away from its moorings through

their choice of topics to address on the home visits...."¹⁹³ Another notes that of the list of topics home visitors were given to choose from, they tended to focus on only a small subset — covering only three of the 54 postnatal curriculum topics, and focusing primarily on medical topics rather than infant development and parenting practices.¹⁹⁴ Similarly, researchers of early intervention programs in three states found that home visitors, who were supposed to be family centered in their work with families, tended to be much more child oriented during their visits.¹⁹⁵

Other evaluators, however, found that the home visitors included in their studies closely followed the program protocols.¹⁹⁶ Indeed, one team reported that both professional and paraprofessional home visitors overwhelmingly (90%) adhered to the formally proposed subject matter.¹⁹⁷

Referrals, Individualized Family Service Plans, and Developmental Assessments

In addition to providing specific curricula and subject matter, home visitors are also responsible for completing other types of activities during visits, such as making referrals, developing and following up on Individualized Family Service Plans (IFSPs), and conducting developmental screenings and assessments. How completely, and in what manner this is done, is unclear, since few evaluations document participation in these activities.

Regarding referrals, many home visiting programs have as one of their process goals connecting families with community services. When this is the case, referral rates can be an indicator of how well the program is being implemented. Among those few evaluations reporting such referral information, the results are generally positive. For example:

- HFFL reported that in a one-year period, 42% of families received at least one referral at some point. The average number for those receiving referrals was 4.3, and 24% of families received six or more referrals.¹⁹⁸
- From a different perspective, the evaluators of HFCT report that, since the program began in 1995, HFCT has made 3,899 referrals to participants for additional services and participants have complied with 65% of these referrals.¹⁹⁹
- On the other hand, the evaluators of CCDP observed that the program was not effective in linking families with non-program services.²⁰⁰

HFFL also investigated which family characteristics were related to referrals. The evaluation found that families with children whose development appeared delayed, families of triplets and quadruplets, families with extremely low birth-weight babies (less than 2 pounds), and families with

more challenges listed on the initial assessment were all more likely to be referred to outside services.²⁰¹

Although most programs are expected to develop some type of IFSP, few evaluations report rates of IFSP development and follow-up. Of those that do report this information, most describe rates that are only moderately in keeping with model standards. For example:

- HFFL reports that 75% of participating families had IFSPs developed for them within their first 90 days of enrollment (the goal is 90%), and only 57% of families had their IFSPs updated as required (again, the goal is 90%).²⁰²
- In EHS (in this case, family service plans are called Individualized Family Partnership Agreements, or IFPAs), nine programs reported that they had developed IFPAs with 100% of enrolled families, three reported a figure of 80%, and five sites reported an IFPA development rate of less than 80%.²⁰³

In the rare instances in which researchers have investigated the factors related to IFSP completion, they have found that higher levels of families' participation seem to predict greater levels of IFSP completion. For example, in HFFL, IFSP completion was related to service intensity, and in Hawaii, it was related to program duration.²⁰⁴

Most programs are required to administer developmental assessments at certain time points throughout a family's involvement in the program. In the case of most HFA programs, home visitors are expected to administer the Ages and Stages Questionnaire (ASQ) to the baby at six-month intervals,²⁰⁵ but other programs use other types of assessment tools, such as the Denver Developmental Scale,²⁰⁶ the Early Learning Accomplishment Profile,²⁰⁷ or the Hawaii Early Learning Profile.²⁰⁸ Of the evaluations that investigate completion rates for developmental screenings, most report assessment completion rates that fall somewhat short of the model standards.²⁰⁹

Extended Family Participation

It is commonly believed that participation of extended family members, particularly fathers and grandparents, can greatly influence the mother's adjustment to parenting and her child's outcomes.²¹⁰ Based on research on teenage mothers,²¹¹ it is hypothesized that such support may be even more critical in programs for young parents. While the importance of extended family involvement has been emphasized by program designers, this element of program operations is almost never investigated by evaluators. Below we present some of the few findings evaluations have cited concerning family participation:

- Evaluators of EHS (2002) found that the majority of their programs (13 of 17) make special efforts to involve fathers; for example, they hire specific staff members to work with fathers, and organize groups and recreational activities for men only.²¹²
- Evaluators of an early intervention program²¹³ describe who is present at each visit, finding that fathers are present in 15% of the visits, other adult family members are present in 2%, siblings are present 33%, and neighbors or friends of the family are present in 19% of the visits.
- A recent evaluation reported that Latino families tend to have more people present at home visits.²¹⁴
- Evaluators of HFFL make only anecdotal reference to extended family involvement, describing the wide variety of circumstances and typical cases in which extended family participate.²¹⁵

Lessons to Take from the Literature

This literature review served several purposes for the MHFE; it situated the evaluation within the tradition of home visiting research, it helped the Tufts team to hone its methodological approach, and it identified key areas in the field in which contributions might be made. The difficulty programs have demonstrated in achieving their ultimate outcomes — for example, improved child development, reduced child abuse and neglect, etc.²¹⁶ — reinforced our instinct to identify more proximal, or intermediate, objectives to measure progress. Along the same lines, the sparseness and variable quality of the process components of many home visiting evaluations also served to focus this evaluation more sharply on implementation questions than perhaps it would have otherwise. The discussion of methodology that follows in Chapter 2 reflects these lessons learned.

Endnotes

- 1 Brady, Easterbrooks, Jacobs, & Mistry, 1998
- 2 Alan Guttmacher Institute, 2004
- 3 Hamilton, Sutton, & Ventura, 2003; Singh & Darroch, 2000
- 4 Annie E. Casey Foundation, 1998
- 5 Hotz, McElroy, & Sanders, 1999
- 6 Martin, Hamilton, & Ventura, 2001
- 7 Annie E. Casey Foundation, 1998; Moore, Driscoll, & Lindberg, 1998
- 8 Annie E. Casey Foundation, 1998; Hotz et al., 1999
- 9 Walker & Kotloff, 1999
- 10 Moore & Sugland, 1999
- 11 Coley & Chase-Lansdale, 1998
- 12 Hoffman, 1998; Leadbeater & Way, 2001; National Campaign to Prevent Teen Pregnancy, 1997; Whitman, Borkowski, Keogh, & Weed, 2001
- 13 Klerman, 2004
- 14 Stevens-Simon, Kelly, Singer, & Cox, 1996
- 15 Ibid.
- 16 Ibid.
- 17 American Academy of Pediatrics, 2001

- 18 Annie E. Casey Foundation, 1998; Luster, 1998
- 19 National Longitudinal Survey of Youth, as calculated from data reported in Klepinger, Lundberg, & Plotnick, 1995
- 20 Ibid.
- 21 Brooks-Gunn & Furstenberg, 1986
- 22 Carey, Ratliff & Lyle, 1998; Coley & Chase-Lansdale, 1998; Granger & Cytron, 1999; National Campaign to Prevent Teen Pregnancy, 2002; Zaslow et al., 1999
- 23 Coley & Chase-Lansdale, 1998
- 24 Guiden, 1999
- 25 Brophy-Herb & Honig, 1999; Deal & Holt, 1998; Leadbeater & Linares, 1992; Lennson, Blome, & English, 2001; Reis, 1988
- 26 Klerman, 1993
- 27 Leadbeater & Way, 2001
- 28 Andreozzi, Flanagan, Seifer, Brunner, & Lester, 2002
- 29 Koniak-Griffin et al., 2002
- 30 Brooks-Gunn & Furstenberg, 1986; Karraker & Evans, 1996
- 31 Leadbeater & Way, 2001; Luster, 1998
- 32 East & Felice, 1996
- 33 Brady & Easterbrooks, 2001; Flanagan, 1998
- 34 Brophy-Herb & Honig, 1999; Lesser, Koniak-Griffin, & Anderson, 1999
- 35 Flanagan, 1998
- 36 See Walker, Brown, & Whittle, 1999; Zippay, 1995.
- 37 Rhodes, Ebert, & Fischer, 1992; Walker, Brown, & Whittle, 1999
- 38 Annie E. Casey Foundation, 1998, p. 13
- 39 Annie E. Casey Foundation, 1998
- 40 Trad, 1999
- 41 Levesque, 2000
- 42 Trad, 1999
- 43 Annie E. Casey Foundation, 1998; Brophy-Herb & Honig, 1999; Martin et al., 2003; Trad, 1999
- 44 Moore, Morrison & Greene, 1997
- 45 Ibid.
- 46 Ibid.
- 47 Ibid.
- 48 Koniak-Griffin & Turner-Pluta, 2001; National Campaign to Prevent Teen Pregnancy, 1997; Suner, Nakamura, & Caulfield, 2003
- 49 Walker & Kotloff, 1999
- 50 Annie E. Casey Foundation, 1998; Walker & Kotloff, 1999
- 51 Coley & Chase-Lansdale, 1998
- 52 Bolton, 1990; George & Lee, 1996; Levesque, 2000; Maynard, 1997
- 53 Annie E. Casey Foundation, 2002; Coley & Chase-Lansdale, 1998; Spieker, Larson, Lewis, Keller, & Gilchrist, 1999
- 54 Annie E. Casey Foundation, 2002; Coley & Chase-Lansdale, 1998; Moore et al., 1997
- 55 Annie E. Casey Foundation, 2003; Brophy-Herb & Honig, 1999
- 56 Grogger, 1997
- 57 Furstenberg, Levine & Brooks-Gunn, 1990
- 58 Luker, 1996; Maynard, 1996; National Campaign to Prevent Teen Pregnancy, 2002
- 59 Lerner, Sparks, & McCubbin, 1999
- 60 Scales, Benson, Leffert & Blythe, 1998; Scales & Leffert, 1999
- 61 Annie E. Casey Foundation, 1998
- 62 Annie E. Casey Foundation, 1998
- 63 Robin Hood Foundation, 1996
- 64 Daro & Harding, 1999
- 65 Daro & Harding, 1999; Galano & Huntington, 2001; Green, Mackin, Tarte, Cole, & Brekhus, 2003; Katzev & Pratt, 1999; Katzev, Pratt, McGuigan, & Kapsch, 2002; Kitzman, Olds et al., 1997
- 66 Black, Powell, Clay, & McDill, 2000; Black Hawk et al., 2002; Greene et al., 2001; Daro & Harding, 1999; Daro, McCurdy, & Harding, 1998; Davenport, 2001; Duggan et al., 1999; Edwards, Tripp, Purcell, Danda, & Evans, 2001; Flynn, 1999; Galano & Huntington, 2001; Green et al., 2003; Kitzman, Olds et al., 1997; Klagholz & Associates, LLC, 2001; Koniak-Griffin et al., 2002; LeCroy & Milligan Associates, 2001; Norr, et al., 2003; Olds et al., 1998; Williams, Stern & Associates, 2002
- 67 Barrett evaluation of HF Virginia summarized in Daro & Harding, 1999; Edwards et al., 2001; Flynn, 1999; Galano and Huntington evaluation of HF Virginia summarized in Daro & Harding, 1999; Galano & Huntington, 2001; Klagholz & Associates, LLC, 2001; Olds et al., 1998; Williams, Stern, & Associates, 2003
- 68 Four are summarized in Daro & Harding, 1999; Daro & Harding, 1999; Davenport, 2001; Duggan et al., 1999; Edwards et al., 2001; Galano & Huntington, 2001; Green et al., 2003; Greene et al., 2001; Katzev et al., 2002; Klagholz & Associates, LLC, 2001; LeCroy & Milligan Associates, 2001
- 69 Black et al., 2000; Daro & Harding, 1999; Duggan et al., 1999; Koniak-Griffin et al., 2002; LeCroy & Milligan Associates, 2003; Olds, Henderson, Chamberlin, & Tatelbaum, 1986
- 70 Berlin, Brooks-Gunn, McCarton, & McCormick, 1998; Center for Family Research at the University of GA, 2002; Daro & Harding, 1999; Daro et al., 1998; Duggan et al., 1999; Edwards et al., 2001; Field, Widmayer, Stringer, Ignatoff, 1980; Field, Widmayer, Greenberg, & Stoller, 1982; Gray & Ruttle, 1980; Gutelius, Kirsch, McDonald, Brooks, & McErlean, 1977; Heinicke et al., 1999; Heinicke, Fineman, Ponce, & Guthrie, 2001; Honig & Lally, 1982; Honig, Lally, & Mathieson, 1982; Jester & Guinagh, 1983; Klagholz & Associates, LLC, 2001; Lally & Honig, 1977; Lally, Mangione, & Honig., 1988; Love et al., 2002b; Nauta, Brush, et al., 1980; Nauta, Johnson, et al., 1980; Olds et al., 1998; Olds et al., 2004; Rescorla, Provence, & Naylor, 1982; Ross, 1984; Seitz, Rosenbaum, & Apfel, 1985; Stone, Bendell, & Field, 1988; Travers et al., 1982; Trickett, Apfel, Rosenbaum, & Zigler, 1982
- 71 Barth, 1991; Berlin, Brooks-Gunn et al., 1998; Edwards et al., 2001; Epstein & Weikart, 1979; Field et al., 1980; Field, Widmayer, Greenberg, et al., 1982; Field, Widmayer, Stringer, & Ignatoff, 1982; Gutelius et al., 1977; Honig & Lally, 1982; Honig et al., 1982; Lally & Honig, 1977; Lally, et al., 1988; Lambie, Bond, & Weikart, 1974; Nauta, Brush, et al., 1980; Nauta, Johnson, et al., 1980; Olds et al., 1998; Rescorla et al., 1982; Ross, 1984; Seitz et al., 1985; Stone et al., 1988; Travers et al., 1982; Trickett et al., 1982
- 72 Black et al., 2000; Culp, et al., 2001; Daro & Harding, 1999; Daro et al., 1998; Dawson, van Doorninck, & Robinson, 1989; Dawson et al., 1990; Duggan et al., 1999; Epstein & Weikart, 1979; Field et al., 1980; Field, Widmayer, Stringer, et al., 1982; Field, Widmayer, Greenberg, et al., 1982; Gray & Ruttle, 1980; Heinicke et al., 2000; Heinicke et al., 1999; Katzev & Pratt, 1999; Katzev et al., 2002; Koniak-Griffin et al., 2002; Lambie et al., 1974; Larson, 1980; Love et al., 2002b; NPC Research Inc., 2003; Nauta, Brush, et al., 1980; Nauta, Johnson, et al., 1980; Olds et al., 1986; Olds et al., 1998; Stone et al., 1988; Travers et al., 1982; van Doorninck et al., 1980
- 73 Berlin et al., 1998; Black Hawk et al., 2002; Center for Family Research at the University of Georgia, 2002; Culp, Culp, Blankmeyer, & Passmark, 1998; Culp et al., 2001; Daro & Harding, 1999; Daro et al., 1998; Davenport, 2001; Dawson et al., 1990; Dawson et al., 1989; Duggan et al., 1999; Epstein & Weikart, 1979; Field et al., 1980; Field, Widmayer, Stringer, et al., 1982; Greene et al., 2001; Gutelius et al., 1977; Hammond-Ratzlaff & Fulton, 2001; Honig & Lally, 1982; Honig et al., 1982; Kitzman, Olds, et al, 1997; Klagholz & Associates, LLC, 2001; Lally & Honig, 1977; Lally et al., 1988; Lambie et al., 1974; LeCroy & Milligan Associates, 2001; Nauta, Brush, et al., 1980; Nauta, Johnson, et al., 1980; Olds et al., 1998; Rescorla et al., 1982; Ross, 1984; Seitz et al., 1985; Stone et al., 1988; Travers et al., 1982; Trickett et al., 1982; van Doorninck et al., 1980
- 74 Berlin et al., 1998; Black et al., 2000; Black Hawk et al., 2002; Center for Family Research at the University of Georgia, 2002; Culp et al., 1998; Culp et al., 2001; Daro & Harding, 1999; Daro et al., 1998; Davenport, 2001; Duggan et al., 1999; Field et al., 1980; Field, Widmayer, Stringer, et al., 1982; Galano & Huntington, 2001; Gray & Ruttle, 1980; Gutelius et al., 1977; Heinicke et al., 1999; Heinicke, et al., 2001; Jester & Guinagh, 1983; Katzev & Pratt, 1999; Katzev et al., 2001; Klagholz & Associates, LLC, 2001; Larson, 1980; LeCroy & Milligan Associates, 2001; Love et al., 2002b; NPC Research Inc., 2003; Olds et al., 1998; Ross, 1984

- 75 Barth, 1991; Black et al., 2000; Black Hawk et al., 2002; Daro & Harding, 1999; Daro et al., 1998; Davenport, 2001; Dawson et al., 1989; Dawson et al., 1990; Duggan et al., 1999; Edwards et al., 2001; Flynn, 1999; Galano & Huntington, 2001; Gray et al., 1979; Hardy & Streett, 1989; Honig & Morin, 1996; Katzev & Pratt, 1999; Katzev et al., 2001; Kitzman, Olds, et al., 1997; Klagholz & Associates, LLC, 2001; LeCroy & Milligan, Associates, 2001; NPC Research Inc., 2003; Olds et al., 1986; van Doorninck et al., 1980; Williams, Stern & Associates, 2002
- 76 Berlin et al., 1998; Black et al., 2000; Daro & Harding, 1999; Daro et al., 1998; Dawson et al., 1990; Dawson et al., 1989; Duggan et al., 1999; Field, Widmayer, Greenberg, et al., 1982; Gutelius et al., 1977; Kelsey, Johnson, & Maynard, 2001; Klagholz & Associates, LLC, 2001; Koniak-Griffin et al., 2002; LeCroy & Milligan Associates, 2001; Love et al., 2002b; Nauta, Brush et al., 1980; Nauta, Johnson et al., 1980; Olds, et al., 1986; Stone et al., 1988; Travers et al., 1982; van Doorninck et al., 1980
- 77 Barth, 1991; Black et al., 2000; Greene, et al., 2001; Daro & Harding, 1999; Daro et al., 1998; Drummond et al., 2002; Duggan et al., 1999; Heinicke et al., 2001; Heinicke et al., 1999; Klagholz & Associates, LLC, 2001; Nauta, Brush et al., 1980; Nauta, Johnson et al., 1980; Olds et al., 2004; Prevent Child Abuse Iowa, 2002; Prevent Child Abuse New Jersey, 1988; Travers et al., 1982
- 78 Black et al., 2000; Daro & Harding, 1999; Duggan et al., 1999; Field, Widmayer, Greenberg, et al., 1982; Kelsey, et al., 2001; Klagholz & Associates, LLC, 2001; LeCroy & Milligan Associates, 2001; Love et al., 2002b; Nauta, Brush et al., 1980; Nauta, Johnson et al., 1980; Olds et al., 1986, 1998; Stone et al., 1988; Travers et al., 1982
- 79 Barth, 1991; Duggan et al., 1999; Edwards et al., 2001; Heinicke et al., 1999; Heinicke et al., 2001; Klagholz & Associates, LLC, 2001; Koniak-Griffin et al., 2002; Love et al., 2002b; Navaie-Waliser, et al., 2000; Olds, et al., 2004
- 80 Berlin et al., 1998; Black et al., 2000; Black Hawk, et al., 2002; Daro & Harding, 1999; Gutelius et al., 1977; Kelsey et al., 2001; Kitzman et al., 2000; Klagholz & Associates, LLC, 2001; Love et al., 2002b; Nauta, Brush, et al., 1980; Nauta, Johnson et al., 1980; Olds et al., 2004; Travers et al., 1982
- 81 Greene et al., 2001; Daro & Harding, 1999; Duggan et al., 1999; Edwards et al., 2001; Koniak-Griffin et al., 2002; Olds et al., 2004
- 82 Black et al., 2000; Culp et al., 2001; Daro & Harding, 1999; Daro et al., 1998; Edwards et al., 2001; Flynn, 1999; Galano & Huntington, 2001; Kelsey et al., 2001; Kitzman et al., 2000; Klagholz & Associates, LLC, 2001; Koniak-Griffin et al., 2002; Love et al., 2002b; Luckey, Bondy, Cole, & Glazner, 2000; Olds et al., 1998; Olds et al., 2004; Ventura, Matthews, & Hamilton, 2001; Williams, Stern & Associates, 2002
- 83 Daro & Harding, 1999; Koniak-Griffin et al., 2002; Love et al., 2002b; Navaie-Waliser et al., 2000
- 84 Barth, 1991; Dawson et al., 1989; Dawson et al., 1990; Duggan et al., 1999; Field, Widmayer, Greenberg, et al., 1982; Jester & Guinagh, 1983; Love et al., 2002b; Nauta, Brush, et al., 1980; Nauta, Johnson, et al., 1980; Olds et al., 2004; Rescorla et al., 1982; Seitz et al., 1985; Stone et al., 1988; Travers et al., 1982; Trickett et al., 1982; van Doorninck et al., 1980
- 85 Katzev et al., 2002; LeCroy & Milligan, 2001; Williams, Stern, & Associates, 2002a
- 86 Galano & Huntington, 2001; Klagholz & Associates, LLC, 2001; Williams, Stern, & Associates, 2002a
- 87 Daro & Harding, 1999
- 88 LeCroy & Milligan Associates, 2003
- 89 Williams, Stern and Associates, 2002a
- 90 Katzev et al., 2002
- 91 Galano & Huntington, 2001
- 92 Love et al., 2002a; Wagner, Spiker, Gerlach-Dowrie, & Hernandez, 2000
- 93 Culp & Culp, 2002; Korfmacher, Kitzman, & Olds, 1998; Kisker, Paulsell, Love, & Raikes, 2002
- 94 Kochanek & Brady, 1994
- 95 Culp & Culp, 2002; Gomby, Larson, Lewit, & Behrman, 1993; Hebbeler & Gerlach-Downie, 2002; Heinicke, et al., 2000; Korfmacher, et al., 1998; Roberts, 1997; Wasik, 1993
- 96 See, for example, Culp & Culp, 2002; Kochanek & Brady, 1994; Korfmacher, et al., 1998.
- 97 Kisker et al., 2002, reports that only 39% of families were consistently highly engaged.
- 98 Berlin, Brooks-Gunn, et al., 1998.; Berlin, O'Neal, & Brooks-Gunn, 1998
- 99 Berlin et al., 1998
- 100 Korfmacher et al., 1998
- 101 Heinicke et al., 2000
- 102 Gomby et al., 1999
- 103 Galano & Huntington, 2001; Williams, Stern, & Associates, 2002a
- 104 Black & Markson, 2001; Duggan, et al., 2004; Katzev, Pratt, Henderson, & McGuigan, 1999; Social Policy Institute, 2002; Williams, Stern, & Associates, 2002a; Woodson, 2001
- 105 Goodson, Layzer, St. Pierre, Bernstein, & Lopez, 2000; St. Pierre & Layzer, 1999; St. Pierre, Layzer, Goodson, & Bernstein, 1999
- 106 Kisker et al., 2002
- 107 Wagner & Clayton, 1999
- 108 Warfield, Hauser-Cram, Krauss, Shonkoff, & Upshur, 2000
- 109 Williams, Stern, & Associates, 2002a
- 110 Williams, Stern, & Associates, 2002a
- 111 Kelsey et al., 2001
- 112 Wagner & Clayton, 1999
- 113 Warfield et al., 2000
- 114 Wagner, & Clayton, 1999
- 115 Warfield et al., 2000
- 116 Goodson et al., 2000
- 117 Goodson et al., 2000
- 118 Duggan et al., 1999; Green, 2003; Greene, et al., 2001; Olds et al., 1986; Williams, Stern, & Associates, 2002a
- 119 For details, see Baker, Piotrkowski, & Brooks-Gunn, 1999.
- 120 For details, see Kelsey, et al., 2001.
- 121 Arocena, Adams, and Davis, 1992; Culp & Culp, 2002; Greene et al., 2001; Heinicke et al., 2000; Kelsey et al., 2001; Kochanek and Buka, 1995; Love et al., 2002a; Nagy et al., 1988; Williams, Stern, & Associates, 2002a; Wagner & Clayton, 1999; Duggan et al., 1999
- 122 For details about CCDP, see Goodson et al., 2000; for details of HFM, see Klagholz, & Associates, 2001.
- 123 Gomby et al., 1999
- 124 Arocena et al., 1992; Berlin et al., 1998; Culp & Culp, 2002; Duggan et al., 1999; Greene et al., 2001; Heinicke et al., 2000; Kelsey et al., 2001; Nagy et al., 1992; Wagner & Clayton, 1999; Williams, Stern, & Associates, 2002a
- 125 Goodson et al., 2000; Klagholz, & Associates, 2001
- 126 Williams, Stern, & Associates, 2002a
- 127 Greene et al., 2001; Love et al., 2002a
- 128 Williams, Stern, & Associates, 2002a
- 129 Kisker et al., 2002
- 130 Kochanek & Buka, 1995
- 131 Gomby et al., 1993; Gomby, Culross, & Behrman, 1999; Roberts, Wasik, Casto, & Ramey, 1991
- 132 Brooks-Gunn, Burchinal, & Lopez, 2000; Heinicke et al., 2000; Powell & Grantham-MacGregor, 1989; Erickson, 1991; Wagner & Clayton, 1999
- 133 Korfmacher et al., 1998
- 134 Korfmacher et al., 1998
- 135 Williams, Stern, & Associates, 2002a
- 136 Navaie-Waliser, et al., 2000.
- 137 Warfield et al., 2000
- 138 Navaie-Waliser, et al., 2000; Warfield et al., 2000
- 139 Wagner & Clayton, 1999
- 140 Duggan et al. 2004
- 141 Stevens, Ammerman, Putnam, & Van Ginkel, 2002
- 142 Gomby, 1999; Wasik, Bryant, & Lyons, 1990

- 143 Gomby et al., 1993; McCurdy, 1995; Olds & Kitzman, 1993
- 144 Josten et al., 2002
- 145 Gomby et al., 1999
- 146 Wasik, 1993, p.119
- 147 Wagner & Clayton, 1999
- 148 Baker et al., 1999; Black & Markson, 2001; Clinton, 1990; Green et al., 2003; Love et al., 2002a; Klagholz, & Associates, 2001
- 149 Black & Markson, 2001; Clinton 1990; Green et al., 2003
- 150 Baker et al., 1999; Green et al., 2003; Love et al., 2002a; Klagholz, & Associates, 2001
- 151 Black & Markson, 2001; Green et al., 2003; Zill et al., 1998; Klagholz, & Associates, 2001
- 152 Black & Markson, 2001; Clinton 1990
- 153 Brady, Easterbrooks, Jacobs, & Mistry, 1998; Wagner & Clayton, 1999
- 154 Daro & Harding, 1999; Fraser, Armstrong, Morris, & Dadds, 2000; Herzog, Cherniss, & Menzel, 1986; LeCroy & Milligan Associates, Inc., 2003
- 155 See, for example, Olds & Korfmacher, 1998; Korfmacher, O'Brien, Hiatt, & Olds, 1999; Kitzman, Yoos, Cole, Korfmacher, & Hanks, 1997; Kitzman, Cole, Yoos, & Olds, 1997.
- 156 Musick & Stott, 2000; Hiatt, Sampson, & Baird, 1997
- 157 Black & Markson, 2001; Culp & Culp, 2002; Kelsey et al., 2001; Love et al., 2002a; Williams, Stern, & Associates, 2002a
- 158 Culp & Culp, 2002; for a counter-example, see Williams, Stern, & Associates, 2002a, who had only 17% with at least some college education.
- 159 Hiatt, et al., 1997; Love et al., 2002a
- 160 Culp & Culp, 2002; Hans & Korfmacher, 2002; Kelsey et al, 2001; Love et al., 2002a
- 161 Culp & Culp, 2002; Hiatt et al., 1997; Kelsey et al, 2001; Love et al., 2002a; Williams, Stern, & Associates, 2002a
- 162 Kelsey et al., 2001; Love et al., 2002a
- 163 Margie & Phillips, 1999
- 164 Goodson et al., 2000; Love et al., 2002a; Roberts & Wasik, 1990; Wasik & Roberts, 1994; Williams, Stern, & Associates, 2002a
- 165 Baker et al., 1999; Love et al., 2002a; Roberts & Wasik, 1990
- 166 Margie & Phillips, 1999
- 167 Duggan et al., 1999; Hiatt et al., 1997; Gill, Greenberg, & Vazquez, 2002; Korfmacher & Hans, 2002; Love et al., 2002a; Williams, Stern, & Associates, 2002a
- 168 Hernandez, Isaacs, Nesman, & Burns, 1998; Mason, Benjamin, & Lewis, 1996
- 169 Lowenthal, 1996; Torralba-Romero, 1998; Wasik, 1993
- 170 Culp & Culp, 2002; Kelsey et al, 2001; Love et al., 2002a; Williams, Stern, & Associates, 2002a
- 171 Klass, 1996; Proctor & Davis, 1994; Wasik 1993
- 172 Edens, 1997
- 173 See, for example, Green et al., 2003.
- 174 Williams, Stern, & Associates, 2002a
- 175 See, for example, Kitzman, Cole, et al., 1997; Kitzman, Yoos, et al., 1997; Korfmacher et al., 1999; Olds & Korfmacher, 1998; Williams, Stern, & Associates, 2002a
- 176 Williams, Stern, & Associates, 2002a
- 177 Ibid.
- 178 Josten et al., 2002
- 179 Kochanek & Buka, 1995
- 180 Korfmacher et al., 1999; for counter examples, see Hiatt et al., 1997 and Williams, Stern, & Associates, 2002a.
- 181 Korfmacher et al., 1998
- 182 Baker et al., 1999; Green et al., 2003; Kelsey et al., 2001; Klagholz, & Associates, 2001; Love et al., 2002a
- 183 Greene et al., 2001; Kelsey et al., 2001
- 184 Greene et al., 2001; Kelsey et al., 2001; Kochanek & Buka, 1995a; Paulsell, Kisker, Love, & Raikes, 2000
- 185 Daro & Harding, 1999; Williams, Stern, & Associates, 2002a
- 186 Williams, Stern, & Associates, 2002a
- 187 Green et al., 2003
- 188 Kelsey et al., 2001
- 189 Gomby, 1999; Korfmacher, et al., 1998
- 190 Williams, Stern, & Associates, 2002a
- 191 Arocena et al., 1992; Greene et al., 2001; Hebbeler & Gerlach-Downey, 2002; LeCroy & Milligan Associates, Inc., 2003; McBride & Peterson, 1997; Korfmacher et al., 1998 Williams, Stern, & Associates, 2002a
- 192 Greene et al., 2001; McBride & Peterson 1997; Williams, Stern, & Associates, 2002a
- 193 Nagy et al., 1988, p.104
- 194 Ibid.
- 195 McWilliam, Tocci, & Harbin, 1995
- 196 Culp & Culp, 2002; Hebbeler & Gerlach-Downey, 2002
- 197 Hiatt et al., 1997
- 198 Williams, Stern, & Associates, 2002a
- 199 Black & Markson, 2001
- 200 Goodson et al., 2000
- 201 Williams, Stern, & Associates, 2002a
- 202 Williams, Stern, & Associates, 2002a
- 203 Love et al., 2002a
- 204 Williams, Stern, & Associates, 2002a
- 205 See, for example, LeCroy & Milligan Associates, Inc., 2003; Love et al., 2002a; Williams, Stern, & Associates, 2002a.
- 206 Williams, Stern, & Associates, 2002a
- 207 Love et al., 2002a
- 208 Love et al., 2002a
- 209 See, for example, Duggan et al., 2000; LeCroy & Milligan Associates, Inc., 2003, Williams, Stern, & Associates, 2002a.
- 210 Allen, Petr, Brown, 1995; Crockenberg, 1987; Samuels, Stockdale, & Crase, 1994
- 211 Mulsoy & Murry, 1996; Wakschlag, Chase-Lansdale, & Brooks-Gunn, 1996; Way & Leadbeater, 1999
- 212 Love et al., 2002a
- 213 McBride & Peterson, 1997
- 214 Hebbeler & Gerlach-Downie, 2002
- 215 Williams, Stern, & Associates, 2002a
- 216 Black & Markson, 2001; Duggan et al., 2004; Katzev et al., 1999; Williams, Stern, & Associates, 2002a; Social Policy Institute, 2002; Woodson, 2001

Chapter 2

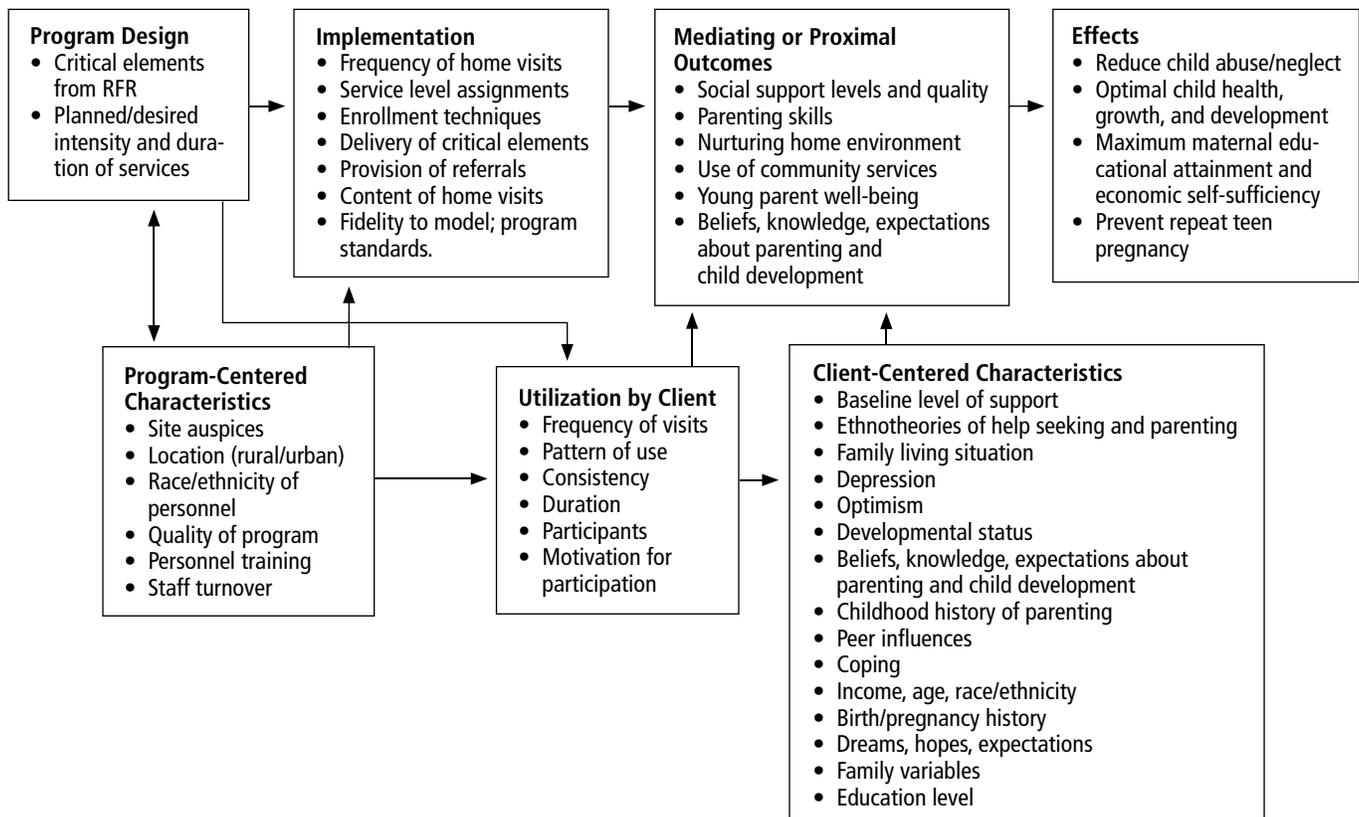
The MHFE Methodology: The Conduct of the Evaluation

The Tufts research team consulted with a wide range of evaluation stakeholders — representatives of the MCTF and the Massachusetts Department of Public Health (MDPH), local HFM program administrators, state legislators, child advocates, child development researchers, extra-governmental funders, and young parents themselves — during the development of the MHFE research design. In addition to this extensive feedback, collected through interviews, focus groups, and surveys, the team also used the research literature reviewed earlier in this report to guide its conceptual and methodological decisions. Finally, the MHFE’s Technical Advisory Board (TAB) provided valuable guidance, both in the initial phases of the project, and then throughout the evaluation period. Although

it proved challenging at several points to attempt to accommodate the many excellent requests and recommendations of these MHFE constituencies, we believe that the ultimate design profited from this inclusive process.

This chapter presents the core of the research methodology on which the MHFE is based, including the evaluation’s conceptual model (see Figure 2.1).¹ After a brief review of the central evaluation questions, it describes the foci of the three evaluation substudies. The various samples from which data were collected, data collection sources, and instruments are then briefly detailed. A note on the comparison data follows, and the chapter concludes with a discussion of the study’s general approach to data analysis. (A more detailed write up of the study’s methodology is available on request.)

Figure 2.1: **MHFE’s Working Conceptual Model**



Evaluation Questions

All evaluations begin with a set of questions that their investigations are meant to answer. In this case, the questions are both process oriented (focused on program operations) and outcome oriented (focused on the possible effects of the program). Because the Five-Tiered Approach evaluation model assumes that process study precedes outcome study, the questions below are also listed in that order; the first three pertain to the way the statewide program is being offered, and the last three relate to what the program has potentially achieved. They include:

- What is the nature of the home visit?
- How do participants utilize and otherwise experience the program?
- To what extent, and in what ways, is the program being implemented as it was designed — how well does it operate with “fidelity to the model”?
- To what extent is the program meeting its stated long-term, or “distal,” goals?
- To what extent are shorter-term goals, or “intermediate objectives,” being achieved?
- In what ways do characteristics of participants, local programs, and communities moderate both utilization of program services and the attainment of the short- and long-term outcomes?

MHFE Substudies

The MHFE is composed of three primary components: the Process Study, the Outcome Study, and Ethnographic Studies; while each of these components can be viewed separately, they are complementary and overlapping.

The Process Study examines HFM program operations from several perspectives. At Tier Two, evaluation activities are focused on monitoring program “inputs” — clients, services, and personnel; we provide basic descriptive information on the young mothers enrolled in HFM, and document the services they are receiving. Tier Three activities are meant to assess the quality and consistency of current program operations, compared to performance standards. MHFE questions at Tier Three focus on three areas:

- an investigation of what actually occurs during a home visit;
- the extent to which programs are operating in accordance with HFM-generated standards in key program areas; and
- the ways in which the young mothers enrolled in HFM experience the program.

Process Study activities have been ongoing throughout the duration of the evaluation.

The objective of the Ethnographic Studies is to understand ethnotheories of parenting and childrearing and help-seeking behaviors in three of the geographically-bounded communities to which HFM clients belong. Strictly speaking, the Ethnography is a process investigation, and is devoted to building on, or answering through its own methods, many of the Tier Three questions listed earlier. In addition, however, the Ethnography provides the Outcome Study with a better grasp of possible culture-related moderators of program effects. This understanding, in turn, may contribute to the refinement of program standards and practices. And again, given the paucity of data in the general literature about how families from minority communities define “good parenting” and preferred modes of help-seeking among minority communities, this evaluation component may help develop cultural or developmental theory on these issues. Ethnographic data collection was conducted between January 1999 and August 2002. It followed a multi-phase plan with two components looking at ethnotheories (of the local HFM programs, and of families), preceded by community studies.

The aim of the Outcome Study is to address Tier Four questions, which are designed to determine program effects or outputs. MHFE Tier Four activities focus on:

- establishing the extent to which HFM has been successful at achieving its four long-term goals — reducing rates of child maltreatment and repeat teen births, promoting optimal child development, and increasing parental levels of education and economic self-sufficiency;
- investigating potential program benefits on shorter-term outcomes — parental knowledge, family functioning, parent-child interactions, social supports, etc.; and
- examining the extent to which particular characteristics of clients, programs, or communities moderate the attainment of these goals and objectives.

Outcome Study data collection took place between January 1999 and June 2002. Each family in the Tufts subsample was visited four times in eighteen months.

Institutional Review Procedure

The Tufts teams submitted the necessary protocol to the MDPH Institutional Review Board. The protocol was initially approved in 1998, and was renewed every year subsequently.

MHFE Samples

The MHFE has collected data from a variety of people involved with the HFM program, including clients, home visitors, supervisors, statewide program administrators, and other stakeholders in the program (e.g., legislators, advocates, etc.). Here we report on data collected from our client

and home visitor samples. See Chapter 3 for a description of the complete program sample.

Characteristics of the MHFE Client Samples

For the examination of client experiences, the MHFE design uses a nested sample structure that includes basic descriptive data on the total program population (HFM 100% sample, $N \sim 13,000$), in-depth information on a representative sample of program participants (MHFE sample, $n=361$), and ethnographic detail on clusters of participants from three communities (Ethnography sample, $n=30$).

MHFE SAMPLE

This sample was drawn from 22 of the 31 HFM sites in operation at the start of the evaluation. These programs operated in all the Health and Human Service regions of Massachusetts. Participating programs were selected for study based on recommendations from MDPH and MCTF, and selection standards developed by the Tufts team. These standards included fidelity to the HFM model (to the extent that such documentation existed) and demonstrated efficiency of program administration. Program records and site visit information from MDPH were reviewed to determine the degree to which these standards were met. Only programs that were experiencing implementation or enrollment problems at the start of enrollment were excluded from sampling.

We invited all mothers who were new to the program between November 1998 and August 2000, and who had a weekly or biweekly service level designation to enroll in the evaluation to make up the “Tufts subsample.” A sample of 366 program participants resulted. Of the 366 mothers, five were later determined to be ineligible for participation in the evaluation either because of undisclosed prior involvement with another HFM site, or a substantiated case of child maltreatment; the final sample size was 361.

Upon program enrollment, permission was obtained from families for Tufts researchers to contact them for recruitment purposes. We sent recruitment letters to 921 mothers.

Sample characteristics. Table 2.1 (page 40) details selected characteristics of the MHFE sample. This Tufts sample represents the total HF population in terms of basic demographics, with a few minor differences: the evaluation sample is slightly younger than the overall program sample and a higher proportion of evaluation families than program families were pregnant at enrollment.

Attrition in the MHFE sample. Of the 361 eligible mothers who completed a Time 1 visit, approximately 79% (286) completed the final (Time 4) research interview, and 21% (75) left the evaluation at some point. The sample sizes for each data collection time point are as follows:

- Time 1 (T1): 361 mothers were interviewed within two months of program enrollment.
- Time 2 (T2): 282 mothers were interviewed approximately six months post-enrollment.
- Time 3 (T3): 264 mothers were interviewed approximately one year post-enrollment.
- Time 4 (T4): 286 mothers were interviewed approximately eighteen months post-enrollment.

We examined the relations between mothers’ rates of leaving the MHFE before the evaluation ended and several demographic and program variables, including age of child, maternal age and education, pregnancy status at enrollment, race, and program auspices. We found slight, but statistically significant, differences in the age and education level of mothers who left the evaluation prematurely. Mothers who remained in the evaluation were older, on average, than mothers who dropped out. Mothers who completed the study had significantly more education than mothers who dropped out of the study.

Mothers’ race was significantly related to attrition in the MHFE study. Mothers who are White most often remained in the study, and mothers who are Black more commonly dropped out of the study (see Table 2.2, page 41).

ETHNOGRAPHIC SAMPLE

We recruited ten families from each of three relatively homogenous communities to participate in the Ethnography; most of these families were part of the overall Tufts MHFE sample (24 of 30 Ethnography families; six families were recruited from outside the Tufts sample). We defined “community” as a group of people having some common local organization, values, and practices.² For example, each community represented a different combination of socioeconomic background, ethnic heritage, immigrant history, urbanization, and other features of the sociocultural context. By selecting subsamples to represent “cultural communities” rather than “ethnic groups,” we avoided the danger of generalizing to all members of different ethnic groups based on the study of a few families in a single community.

The following three communities were selected for the Ethnographic Study:

- Community A: Puerto Rican families from urban, primarily working class towns with many recent immigrant ethnic minority communities;
- Community B: African-American families from urban towns with long-established ethnic minority communities; and
- Community C: European-American families from an ex-urban, former mill-town outside the Greater Boston area.

Table 2.1: **MHFE Sample Characteristics**[‡]

Participant Characteristics: MHFE Sample		Frequency or Mean	Percent of Participants
Maternal Age	Average age	17.7 years	
	Less than 17	104	30
	17 or over	248	70
Parenting Status at Enrollment**	Pregnant	224	64
	Parenting	125	36
Child Age at Beginning of Evaluation	Average age	-1.6 months	
Breakdown of Child Age at Beginning of Evaluation	Not born**	171	49
	0 to 3 months	98	28
	3–6 months	52	15
	6–9 months	16	5
	9–12 months	8	2
	Older than 12 months	7	2
Maternal Race	White	147	42.2
	Hispanic	123	35.3
	Black	40	11.5
	Other	38	10.5
Education Status	In school/GED or graduated/holds GED	202	56
	Not in school/GED	159	44
Employment	Not employed	353	77.6

‡ Data sources: RI and PDS, n = 361; missing data create some variability in sample size per variable

** Discrepancy between child age and pregnancy status due to different measurement time points

Home Visitor Samples

We collected data from home visitors at various points during the evaluation. We have some basic demographic information of varying detail on 859 home visitors who were employed at some point between December 1997 and June 2002. For a complete description of the home visitor sample, see Chapter 3.

Data Sources

In this section we describe the data sources used in the MHFE. As Table 2.3 indicates, we used a mixed-methods

data collection approach to examine a wide variety of constructs (page 42). Here, each of the eight data source categories used in the evaluation are described in greater detail.

Participant Data System (PDS) and Paper Records

Data on the full complement of mothers and children enrolled in the HFM program were to be available through the program's management information system, the Participant Data System (PDS). The PDS has had a complicated history since the HFM program's inception. Under the auspices of MDPH, a private technology consulting group developed

Table 2.2: **Study Attrition, by Race**[‡]

Race	Completed Time 4		Dropped out before Time 4		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
White	116	86.6	18	13.4	134	100
Hispanic	85	75.2	28	24.8	113	100
Black	26	66.7	13	33.3	39	100
Other	22	78.6	6	21.4	28	100

$\chi^2 (3, n=314) = 9.257, p = 0.026$

[‡] Data sources: RI and PDS, n = 361

the first iteration of this management information system. After implementing the system in June 1998 (six months after the projected start-up date), MCTF discovered problems with the electronic transmission functionality, and the consulting group launched an upgraded version in August 1999, which fixed most, but not all, of the problems. In March 2000, the group released another upgraded version of the PDS, in which some substantive revisions were made; the transfer functionality of this version began to fail shortly after implementation, which resulted in some data loss. (We did not realize the extent of the data loss until we began our analysis phase in 2003.) At this point, because of the lack of resolution on these ongoing technical issues, MCTF hired a different consulting group to create patches to fix the transfer functionality problems and investigate and mitigate the data loss issues; this group released yet another version of the PDS in June 2001. MCTF hired an additional consultant to continue the investigation and reparation of data problems, and to consult with the Tufts team on extracting and organizing the necessary data from this unwieldy system. In 2002, a software development company launched a web-based version of the PDS.

The PDS has eight main data groups, related to HF families, into which home visitors enter information via computer. These include:

- referral source information (outside HFM);
- service level information;
- enrollment and family information;
- pregnancy and birth information;
- service encounter records (with detailed information on the frequency of home visits, who participated in home visits, and the content of home visits);
- status reports (completed at six-month intervals);
- IFSP goal-setting and goal-attainment records; and
- discharge records.

Late in 2003, when we were immersed in the analysis of PDS data for Process Study purposes, we discovered that the PDS was missing a large proportion of the data we had been counting on for service monitoring and accountability activities as well as for assessment of child outcomes. In order to salvage the portions of the project relying on PDS data, on the advice of TAB members, and with the help of MCTF, we requested paper records from all programs to make as complete as possible encounter, service level, immunization, ASQ, and IFSP data. We received paper records from almost all of the programs with MHFE participants and added data from these records for 190 mothers. It is on the combination of PDS data and data from the paper records that many of our process analyses and analyses of child outcomes are now based. The total records added from paper records are detailed in Table 2.4 (see page 43).

The magnitude of the missing data problem in the PDS, and of the subsequent task of culling the necessary data from paper records, meant that there was no way to reliably report most data for the entire program population. Therefore, most process analyses and all PDS-dependent outcome analyses are limited to the MHFE sample. Any statistics reported for the entire program population were drawn from PDS sources that we were reasonably certain were complete.

From these PDS data groups and the paper records, we describe the families and the services they are receiving; program refusal/acceptance and retention rates; delivery of central components of the programs (e.g., regular developmental screenings, IFSPs, referrals, visit content, and home visits based on curricula); the degree to which programs are complying with the intended schedule of services; and perceived program effects.

In addition, we rely on the data in the PDS, supplemented by paper records, to be the primary data source for the measurement of one of the main goals of the program: the

health, growth, and development of children. Some proximal outcomes and moderators of the long-term program goals, such as family living situation and birth/pregnancy history, are assessed through the PDS as well.

Home Visitor Questionnaires and Observations

As Table 2.5 shows, we designed and administered several different instruments to the HFM program staff personnel. Each instrument is described briefly below.

HOME VISITOR DEMOGRAPHIC SURVEY (HVDS)

The MHFE team designed the HVDS to collect information from home visitors about the following: age, gender, parenting status, languages spoken, education, race and ethnicity, caseload, work schedule, and work experience.³ Surveys were sent to program coordinators at HFM program sites in June 2000. Coordinators were asked to distribute the surveys to their staff and to complete a survey themselves. In total, 194 surveys were completed and returned to MHFE, for a response rate of approximately 78%.

HOME VISITOR STAFFING INVENTORY (HVSI)

The HVSI was designed to investigate the staffing patterns of the HFM program. We used the PDS to obtain the names, hire dates, and termination dates of HFM program staff (n=873). We then matched these records with MCTF training records, resulting in a list of 859 program staff. From this list, we created an inventory form, to be completed by program supervisors, listing employees' characteristics: name, race, ethnicity, language, and history of employment (including date started, position when first hired, current position or termination date, and reason for termination). Supervisors were asked to add employees not accounted for by the PDS, and to make corrections to the records. Every supervisor returned the completed inventory, for a response rate of 100%.

MISSED VISITS SURVEY (MVS)

The MVS⁴ provided information about the scheduling of visits, and the number of and reasons for missed visits. The survey consisted of 15 open-ended and closed questions.

Table 2.4: **Paper Records Supplements to PDS[†]**

Data Category	Records in PDS	Entries from Paper Records	Total Percentage of Final Data from Paper Records
IFSP	1,067	268	20
Immunizations	361	159	44
ASQ	758	236	24
Encounters	12,708	1,131	8.2

† Data sources: PDS and paper records, n = 361

Table 2.5: **Home Visitor Questionnaires and Observations**

	Measure	Sample Size	Data Collection Time-Frame
Home Visitor Questionnaires and Observations	Participant Data System (PDS)	N ~ 13000	Ongoing
	Home Visitor Demographic Survey (HVDS)	n = 194	June/July 2000
	Home Visitor Staffing Inventory (HVSI)	n = 618	January 2002
	Missed Visits Survey (MVS)	n = 97	April/May 2000
	Home Visit Observation Scale (HVOS)	n = 54 visits, with 26 home visitor/client pairs	March – July 2002
Home Visitor Interview (HVI)		n = 62	February 2000

The questions asked home visitors about their caseloads, their methods for scheduling visits, the number of visits they were expected to conduct in a two-week period, the number of visits they were actually able to schedule, and the number of visits that were missed or cancelled during that two-week period. It also asked the home visitors to document, for each of the visits that was scheduled but did not happen, who was responsible for missing that visit, and why the visit was missed.

In April 2000, we mailed the surveys to every home visitor working in HFM at that time (N=215). We received 97 completed surveys, for a response rate of 45%. Since the surveys were returned anonymously,⁵ there is no way to describe those home visitors who responded. However, the home visitor demographics described in an earlier section included the pool from which those respondents were derived.

Coding. Answers on the MVS provided two types of data: quantitative data on caseload information, and the frequency and distribution of visits for the individual home visitors; and qualitative explanations given by the home visitors for why visits did not occur.

HOME VISIT OBSERVATION SCALE (HVOS)

MHFE developed the two-part HVOS to code videotapes of home visits. In an attempt to capture the home visitor-client relationship, the HVOS was designed to evaluate the home visitor's behaviors during the home visit, and the mother's responses to and involvement in the home visitor's discussion and/or activities.

The evaluation team recruited home visitors from the HFM program who met the following two criteria: (a) the home visitor must have completed a demographics survey as part of another MHFE Process Study activity (n=197); and (b) the home visitor must have had at least one participant who was participating in the MHFE Outcome Study. This criterion was used in order to have data from several sources to triangulate with results from the home visit observations. Home visitors who met these criteria were asked to tape all their visits during a one-month period with one or two participants who were enrolled at the time in the HFM program and the evaluation.

For this phase of the project, the research team sent out recruitment letters to 67 home visitors, asking them to videotape their home visits with 117 mothers. The home visit videotaping project was voluntary for both home visitors and mothers, and some home visitors and mothers refused to participate. In addition, a significant number of mothers had dropped out of the program and, due to high staff turnover, many home visitors were no longer working for the program. As a result, this study relied on a small sample: 26 home visitor/mother pairs, for a total of 54 videotaped home visits (some home visitors recorded multiple visits

with the same participants).

Recorded visits varied in length, ranging from 15 to 90 minutes, although the majority of visits were approximately 35 minutes long. Ten home visits were conducted in Spanish.

Observation tool. The first part of the two-part HVOS is a *Home Visitor Observation Tool* adapted from the *Home Visit Assessment Scale*, developed by Wasik and Sparling,⁶ which assesses the home visitor's behaviors during the home visit using a 4-point Likert scale. This tool was simplified to a 3-point Likert scale and modified to fit the goals and expectations of the HFM home visiting program. The second part of the HVOS is a *Participant Observation Tool*, which assesses the behaviors of the mother during the home visit. Each home visit received a home visitor score from 0 to 1.0, and a *participant score* from 0 to 1.0, and a *combined score* calculated as an average of the home visitor and participant scores. Using the two components of the scale together allows for a more complete understanding of the nature of a home visit, how home visitors develop relationships with their families, and how home visitors and participants interact with each other.⁷

Trained raters did the coding of each home visit using the HVOS. One-third of the videotapes were rated by a second coder for interrater reliability ($\rho = 0.95$). Disagreements were reviewed and discussed until agreement was reached.

Home Visitor Interview (HVI)

The HVI was designed to cover three broad topics: the parent/provider relationship, missed visits, and grandparent participation in visits. The interview consists of 30 open-ended questions. The interview was tested in focus groups with program supervisors and coordinators, piloted with three Early Intervention home visitors, and revised accordingly. Interviews were conducted either in person or over the phone.

In February 2000, all HFM home visitors (N=197) were invited to participate in an interview covering several topics, including the parent/provider relationship. In total, 85 home visitors expressed interest in the interviews, and 62 home visitors completed interviews.⁸

HVIs were coded in a manner that would allow quantitative analysis of response frequencies without losing the qualitative descriptions, anecdotes, and examples that home visitors shared. We transcribed six of the interviews in order to develop our coding system. These six transcripts were reviewed, and general categories were developed. Specific codes were developed within each of these categories. After transcribing the first six interviews and developing the coding system, the rest of the HVIs were coded by listening to audiotapes of the interviews. When necessary, we added additional codes to accommodate new material that emerged from these interviews.

Standardized Parent Questionnaires and Parent Observations

Written questionnaires, interviews, and observations were used to collect data relevant to several research questions. Data collection proceeded from January 1999 through June 2002. Each data collection visit lasted approximately two hours and involved the administration of an interview and several questionnaires, and observations of mother-child interaction and family/home environment.

Twenty different standardized measures and two observational measures were part of the evaluation protocol. Table 2.6 outlines the standardized questionnaires and observational measures we used across the four data collection points, and the constructs they are intended to measure. (See Appendix C for complete information on each measure.)

Table 2.6: **Constructs of Interest and Standardized Questionnaires and Observational Measures Used for Data Collection**

Construct	Measure
Standardized Questionnaires	
Parenting Attitudes	Adult-Adolescent Parenting Inventory (AAPI)
	Parenting Self-Confidence Scale (PSCS)
Parenting Stress	Parenting Stress Index (PSI)
Parent Knowledge of Child Development	Knowledge of Infant Development Inventory (KIDI; administered in two sections due to length)
Family Functioning (in family of origin)	Conflict Tactics Scale-Parent/Child (CTS)
	Parental Bonding Instrument (PBI)
Family Risk	Youth Risk Behavior Survey (YRBS)
	Neighborhood Conditions
Social Support	"My Friends" (peer networks)
	Personal Network Matrix
Personal Functioning/Identity	Center for Epidemiological Studies Depression Scale (CES-D; "Feelings Questionnaire")
	Hopelessness Scale ("My Future")
	A-COPE ("Coping Questionnaire")
	Organizing/Planning
	The Pie ("My Self")
Life Stress	Community Life Skills Scale (CLS)
	Multicultural Events Scale for Adolescents (MESA; "Life Events")
Current Relationship with Partner	Conflict Tactics Scale (partner version) (CTS)
Perceptions of Services	Home Visitor-Client Relationship Inventory (HVCI)
	Family-Centered Behavior Scale (FCBS)
Observational Measures	
Parent-Child Relationship	Emotional Availability Scales (EA)
Family Living Conditions and Provision of Developmental Stimulation in Home	Family Assessment Form (FAF)

Client Research Interview (RI)

A family interview, developed by the Tufts team, was used at each of the four data collection visits. This wide-ranging instrument provided complementary qualitative data and assessed areas for which adequate standardized measures do not exist. The interview varied slightly from one data collection point to another, but always covered topics such as:

- degree of program participation;
- satisfaction with the services;
- perceived effects;
- help seeking;
- parenting;
- maternal functioning/status;
- childrearing history;
- family functioning;
- the roles of the baby's grandmother and father;
- family interactions; and
- additional demographic information.

Public Agency Administrative Sources

We relied on data from public agencies for assessment of two of the program goals for HFM participants: preventing child abuse and neglect and repeat births. Through a cooperative arrangement with the Massachusetts Department of Social Services (DSS), we gained access to records of substantiated child abuse and neglect involving families enrolled in the MHFE; these data were current through to the end of the MHFE (June 30, 2002). Vital statistics data from MDPH were used to determine which mothers in our sample had repeat births; data relating to MHFE sample participants were collected through March 2003 (nine months from the end of MHFE's data collection). We also relied on selected MCTF documentation to supplement some of our program monitoring activities (e.g., Staff Change Forms, budget information, etc.).

Ethnographic Program Profile

After conducting a study of the three communities in which each ethnographic subsample was situated (i.e., document reviews, visits to local institutions, etc.), we undertook an ethnographic study of the individual HF program from each community. Our main purpose was to examine the intervention approach and the integration of cultural issues in program planning and implementation. Data collection methods included:

- reviews of program documents and curricula guidelines;
- semi-structured interviews and informal conversations with service providers;
- attendance at selected group meetings; and
- observations of home visits.

Ethnographic Family Profile

The Ethnographic Family Profiles were designed to determine families' culturally based beliefs and practices. Ethnographers focused on several domains of interest:

- family background and neighborhood context;
- dimensions of parenting;
- dimensions of help-seeking; and
- perceptions about program.

We recruited families who were already participating in HFM. Recruitment and retention of families presented some challenges. Our recruitment strategy had several requirements (i.e., participants were to be selected from specific communities, from among those already recruited for the evaluation study). Since there were fewer evaluation sample participants available for recruitment in Communities B and C, we had to recruit participants who were not in the evaluation sample, though they were participants in the HFM program. Four of the families in Community C and two in Community B fit that description. We also faced scheduling difficulties with two families in Community B, resulting in fewer data-gathering visits for these families.

Data were collected through a series of four to 12 visits over the course of 12 to 36 months. Information on the topics listed above was gathered through a variety of methods including:

- semi-structured interviews;
- informal conversations;
- scrapbook activities;
- personal narratives; and
- naturalistic observations.

Data were gathered from all family members present during the visits. Documentation for each visit consisted of:

- contextual field-notes;
- informal observations of ongoing activities and interactions;
- transcripts of informal interviews and conversations;
- the ethnographer's reflective notes; and
- a summary sheet with a brief overview of the visit.

One or more ethnographers were responsible for data collection in each community. A Spanish speaker worked in the Puerto Rican community; an African-American and two European-Americans worked in the other two communities, respectively.

Comparison Data Sources

At the suggestion of our TAB, we decided to pursue several sources of comparison data to examine the effectiveness of the program. This recommendation allowed us to devote

data collection funds to recruiting the largest program participant sample possible, in order to boost the statistical power in data analysis. Analyses of PDS data were conducted at regular intervals during data collection to compare the MHFE subsample to the entire HFM population, establishing the extent to which the two groups were comparable.

Historical data from Massachusetts, and nationwide, on key indicators such as child immunization rates, rates of high school completion, and rates of TANF receipt, allowed us to assess across-time changes in these effects. We acquired extant data from large-scale studies of adolescents and adolescent parents and youth risk behavior that allowed for historical and between-group comparisons on both “proximal outcome” variables proposed in the Tufts Outcome Study (e.g., child development knowledge, parenting attitudes, family functioning), and distal goals. In addition, the structure imposed by sampling from programs across the state facilitated comparisons between program types, a classic within-cohort comparison.

To be selected, a comparison source had to meet several standards: the comparison data had to be drawn from a relevant or comparable population to that served by HFM, such as teen mothers or children under three years of age; the data had to have been collected after 1990; and for state statistics, data had to derive from a state that was demographically similar to Massachusetts.

Analysis Methods

In keeping with the FTA, analyses were planned with several purposes in mind: (1) to describe HFM program operations and participants; (2) to assess the range of program outcomes; and (3) to provide possible explanations for particular results. The analysis plan was organized into sections based upon the research questions of the MHFE and parallels the organization of the remainder of this report.

Analysis Step 1: Description of Participants

As the first step in our analysis, we characterized participants in the HFM program and in the MHFE using descriptives (i.e., means, standard deviations, range, frequencies) for the program population, the Tufts sample, and the Ethnography sample. We were interested in status markers such as maternal and child age at program entry, race/ethnicity, living situation (who lives in the mother’s household, residential status of partner), pregnancy status at enrollment, and educational status. As applicable, the analyses were conducted for each data collection time point. At the same time, we examined the Tufts sample for selective attrition by assessing whether those who continued to participate differed from those who dropped out in terms of program site (not reported here)⁹

and auspices, mother and child age, educational status, residential status, and race/ethnicity.

We also compared the Tufts and program sample on these status markers using chi-square, t-test, and ANOVA.

Analysis Step 2: Description of Program

Our next step was to describe the program as a whole in terms of the extent of cultural sensitivity in service provision, program auspices (agency type), personnel characteristics, staff turnover, the nature of the home visit, and conformity to model and program standards. In addition, we constructed a variable to represent program “quality.” This variable combined elements from HFM program standards and additional characteristics that researchers have suggested relate to positive outcomes for families.¹⁰ These elements were: participant’s adherence to service level; the number of days between participant’s referral to the program and first contact by the home visitor; racial match between home visitor and each client; participant’s adherence to assessment schedules; and turnover rates for each program. Because each of these elements was measured on different scales, we generated a composite variable from the standardized scores of each.

Descriptive statistics were generated at this step.

Analysis Step 3: Participant Use of Program

Here we described the way in which individual participants used the program. The constructs of interest in this step were service utilization, service level pattern, and staff turnover. We generated descriptive statistics and made between-program comparisons based on program auspices using the chi-square test and ANOVAs, as applicable.

Analysis Step 4: Participant Experience of Program

This step in the analysis involved examining the participant’s experience of the HFM program. The constructs of interest here were family centeredness, participant satisfaction, and perceived effects from the perspective of the clients and the home visitors (the section on perceived effects is a separate chapter in this report). We generated descriptive statistics and made between program comparisons by program auspices using the chi-square test and ANOVAs, as applicable.

Analysis Step 5: Client-Centered Characteristics:

Moderators

We generated descriptives of all of the outcome measures at all time points (see Table 2.6, page 45, for a listing of these measures). We also examined the extent to which relevant sets of variables such as physical punishment and nurturance, and coping and depression were related to one another.¹¹

Analysis Step 6: Examination of Outcomes

These analyses were conducted for each research question. We used the same series of steps to examine each question: descriptive statistics, subgroup analyses, comparison data, change over time, bivariate analyses, data reduction, multivariate analyses (including moderator and mediator analyses). All of the analyses pertained to the assessment of distal goals and intermediate outcomes. Many of the constructs assessed by the measures were considered intermediate outcomes. In our model, each was a “step” toward the achievement of the more distal goals and an outcome of interest in its own right.

DESCRIPTIVE STATISTICS

Means and frequencies were generated for all distal outcomes and intermediate outcomes. These means and frequencies were generated for the Tufts sample as a whole and by race, maternal age at program entry, program characteristics, living situation, age of child at program entry, and parenting status at enrollment (pregnant or parenting). We also examined the distribution of all variables (using box plots, skewness, kurtosis, etc.). When possible, comparisons were made between the results for the MHFE sample and other populations, as well as to defined cut-off scores.

SUB-GROUP ANALYSES

ANOVAs, t-tests, and chi-square tests were conducted to identify any significant differences between subgroups as defined by race, maternal age at program entry, program characteristics, living situation, age of child at program entry, parenting status at enrollment (pregnant or parenting), and mother’s educational status.

COMPARISON

When available, we compared existing statistics to our rates and results for all outcomes and indicators. We also compared program auspices on all goals and indicators.

CHANGE OVER TIME

Examining change across time was of interest as it gave us the first look at the ways in which the clients changed during the course of their enrollment in the program evaluation. Repeated measures ANOVAs and HLM have allowed us to determine whether change was evident and to identify the direction of change.

BIVARIATE ANALYSES

Here we examined the relations among intermediate outcomes for data reduction purposes (pearson correlations and partial correlations), as well as the relations among individual intermediate outcomes and distal goals.

DATA REDUCTION

For intermediate outcomes with intercorrelations of .4 or above, we converted the original scores to standardized scores and added them together to make composite variables (see Table 2.7, page 49) for a listing of the resulting composites). We then examined the relations between these new composites and distal goals. For measures with multiple subscales, we examined the bivariate relations among the subscales and other ways of combining multiple individual variables into fewer composite variables. This reduction of the data is also reflected in Table 2.7 (see page 49).

MULTIVARIATE ANALYSIS

In this final analysis step, we predicted distal goals and intermediate outcomes. Intermediate outcomes (individual and composite) that demonstrated bivariate relations in earlier steps or for which there were strong theoretical/conceptual reasons for inclusion were used to predict distal outcomes. (See Appendix C for information on which predictors were relevant to which goals/outcomes.) Our indicators of distal goals were most often dichotomous, so logistic regression was the most appropriate technique for prediction of these. For our measures of intermediate outcomes, traditional multiple regression and hierarchical linear modeling techniques were employed.

Ethnographic Analysis

In general, analysis of ethnographic data was inductive or data driven; for example, coding categories were derived from the data rather than a priori. Analysis proceeded by first summarizing data for each case, followed by across-case analysis to examine common patterns among cases within a community (ten cases in each community). This was typically followed by across-community comparisons to determine the nature of similarities and differences. Miles and Huberman’s¹² technique of using charts and networks to conduct pattern analysis was useful here. In addition, we employed narrative analysis methods proposed by Mishler¹³ and Reissman¹⁴ to analyze data organized around chronological case histories of interest (e.g., the chronological account of their involvement and engagement with the program) or those that represented participants’ constructions of their life stories around pregnancy and parenthood or their own childhood. Narrative analysis sometimes focused on abstracting the plot structure underlying the constructed stories of their experiences, or focused on identifying and documenting themes and motifs (e.g., those representing personal values, sense of agency, and perceptions about intervention’s integration, or lack thereof, into family life).

Table 2.7: **Data Reduction**

Construct	Measures Included in Composite Variable*
Beliefs and Knowledge of Parenting	A-API (Time 3); empathy, corporal punishment, role reversal subscales only
	KIDI
Overall Level of Social Support	Personal Network Matrix Part A (T1 & T4)
	Personal Network Matrix Part B (T1 & T4)
Coping	A-COPE subscales recoded into problem-focused, emotion-focused, and seeking of social support variables (T1 & T4). Ratio of problem-focused to emotion-focused coping calculated.
Quality of Home Environment	FAF indoor conditions (T1 - T4)
	FAF outdoor conditions (T1 - T4)
Quality of Play Area Environment	FAF safety of play area (T2 - T4)
	FAF appropriateness of play area (T2 - T4)
Parent-Child Interaction	Emotional availability subscales collapsed into one variable for free play and teaching task
Parenting Skills/Behavior	Vignette responses factor analyzed to create four subscales
Quality of Childhood History of Parenting: Conflict Tactics Scale/Parent-Child Version	Mother and father scores combined into one variable for overall quality of discipline (T2)
Quality of Childhood History of Parenting: Parental Bonding Instrument	Caring of mother as person A or person B
	Overprotection of mother as person A or person B
Parenting Stress	Subscales of PSI (T2 & T4) added to calculate total parenting stress

*Note. A-API = Adult-Adolescent Parenting Inventory; KIDI = Knowledge of Infant Development Inventory; A-COPE = Coping Questionnaire; FAF = The Family Assessment Form; PSI = Parenting Stress Index

A Note on Statistical Significance

Given the large number of data analyses that were conducted for any particular variable, in order to minimize the likelihood that chance findings would be reported, we adopted a more stringent standard for statistical significance than is usually chosen. Most results in this report would not occur by chance 99% of the time ($p \leq .01$). Because the number of analyses pertaining to perceived effects and the prediction

of program utilization was smaller, we relied on the traditional level of significance, $p \leq .05$. This latter significance level also applied to all multivariate analyses.

Following the FTA, the following section offers basic descriptive information about HFM's clients, programs, and staff (Chapter 3); the nature of the home visit (Chapter 4); and participants' experience of the program (Chapter 5).

Endnotes

- 1 See Brady, Easterbrooks, Jacobs, & Mistry, 1998.
- 2 Rogoff, 2003, p. 80.
- 3 More information on this instrument is available on request).
- 4 More information on this instrument is available upon request)
- 5 We chose to make the surveys anonymous because program coordinators (whom we consulted in focus groups) felt that the home visitors would be more honest about their experiences with service delivery if their names were not associated with their documentation.
- 6 Wasik & Sparling, 1995
- 7 More information on this instrument is available upon request)
- 8 While this technically constitutes a low response rate, it is our contention that these data represent a valid first step in understanding the perceptions of home visitors, although it is acknowledged that further work in this area is necessary.
- 9 We do not include program-specific data in this report in order to protect individual programs' anonymity.
- 10 For details about the statistical formulation of this variable, refer to Chapter 3.
- 11 We examined change via repeated measures ANOVAs (for measures used at two time points) and Hierarchical Linear Modeling (HLM) for measures administered at three or more time points.
- 12 Miles & Huberman, 1994
- 13 Mishler, 1986
- 14 Reissman, 1993

Section Two

HFM Program Operations

Virtually all programs and policies set both outcome goals and process goals for themselves: Outcome goals are the familiar kind — they pertain to the benefits to be derived for participants. Process goals, on the other hand, represent how program developers, participants, or funders expect the program to behave; they are statements of desired program operations. According to the Five-Tiered Approach (FTA), documenting how programs are operating currently, and then comparing that to how they were meant to operate (those process goals), is a necessary precursor to outcome evaluation. Therefore, the chapters in this section report process-related findings.

Chapter 3 (*HFM: Program, Staff, and Participant Profiles*) offers basic descriptive data on participants, home visitors, individual local programs, and HFM as a statewide program. It then presents several key HFM program standards, or process goals, and makes the comparison between them and current operations noted above.

Chapter 4 (*The Nature of the Home Visit*) addresses one of the core MHFE interests: What actually happens during a home visit? What is it about home visiting that makes it attractive to young mothers? Data from the ethnographic substudy make a significant contribution to increasing our understanding of this service.

Chapter 5 (*Participants' Experience of the Program*) addresses a second genre of program standards — those set by participants. To what extent is HFM meeting their expectations? Documenting program utilization is one way to answer this question, since it partly represents the degree to which participants find the program worthwhile. In addition, however, the chapter reports data that are explicitly focused on client satisfaction.

These process-oriented findings are useful both in considering improvements to the program, and in interpreting the outcome results that follow in Section Three.

Chapter 3

HFM: Program, Staff, and Participant Profiles

In keeping with the FTA, this chapter describes the fundamental elements of HFM — its state operations and local programs, its staff, and its clients — principally during the period of the MHFE. This information is critical to keep in mind as the report of evaluation findings proceeds. In addition to these basic data, however, this chapter also includes a comparison of current operations to the standards for HFM programs; these standards have either been proposed locally (by the state agencies involved with supporting them) or are acknowledged more generally as standards for quality home visiting programs.

HFM Program Operations

HFM began with considerable support from the state legislature. Table 3.1 presents the budget for each year from the program's inception in 1998 to the present. In Fiscal Year 1998 (FY98), HFM was funded at \$5,000,000. The budget increased each year, and peaked at \$21,353,848 in FY01 and FY02. It then decreased to \$12,238,703 in FY04, reflecting the significant reductions to human services budgets in Massachusetts that have been applied in the past two years. Although the political and fiscal climate for programs such as HFM has been quite hostile at times, MCTF has succeeded in keeping it solvent and operating.¹

Table 3.1: **HFM Budget: FY1998 through FY2004**

Year	Budget
FY 1998	\$ 5,000,000
FY 1999	\$ 7,800,000
FY 2000	\$ 16,000,000
FY 2001	\$ 21,353,848
FY 2002	\$ 21,353,848
FY 2003	\$ 13,212,630
FY 2004	\$ 12,238,703

Referrals

Between January 1, 1998 and December 31, 2002, more than 17,870 people were referred to HFM. Table 3.2 compares the total number of teenage births in Massachusetts for each of these years with the number of referrals HF received. As Table 3.2 indicates, HFM received referrals for more than half of the total teen births in MA in 1998. The program increased its reach in subsequent years, with at least 70% of these births referred from 1999 through 2002.

Table 3.2: **Referral Rates to HFM**

Year	Total Teen 1st Births by Year [†]	Total HFM Referrals by Year ^{††}	Percent of Total Teen 1st Births Referred
1998	4,630	2,584	56
1999	4,675	3,256	70
2000	5,933	4,021	68
2001	5,449	4,156	76
2002	5,308	3,856	73

[†] Data source: Massachusetts Community Health Information Profile

^{††} Data source: PDS (N=17,874)

HFM referral rates compare quite favorably to those of other home visiting programs. Overall, home visiting programs appear to be fairly successful at identifying and screening their targeted populations, typically reporting penetration rates in the 70% and 80% ranges,² and those evaluations that choose to report their penetration rates in relation to the program standards generally describe rates that meet or exceed program goals.³ It is worth noting, however, that most of these programs target high-risk populations. Programs that are meant to be offered universally often report lower penetration and referral rates.⁴ In this respect, then, as a universal program, HFM appears to be quite effective at outreach and referral.

Referral Sources

According to the PDS (N=17,410), referrals came from a wide range of sources, the most common of which were hospitals/clinics/prenatal care providers (6,770, or 38%). A little more than 10% of the young women were described as self-referred, with approximately 6% of the women referred by their schools or GED programs, and 6% specifically by WIC. (See Table 3.3 for a complete list of referral sources.)

Table 3.3: **Sources of Referral to HFM, 1998–2002[‡]**

Referral Source	Frequency	Percent
Hospital/Clinic/ Prenatal Care Provider	6,770	38
Self	1,827	10
School/GED	1,104	6
WIC (Women, Infants, and Children — federal nutrition program)	1,030	6
Transfer from other HF	843	5
Friend/Relative	802	5
FirstLink	817	5
VNA/Public Health Nursing	742	4
DSS	370	2
Unknown	202	1
Teen Living Program	191	1
Pediatric Care Provider	175	1
DTA (Department of Transitional Assistance)	168	1
Early Intervention	152	1
MCTF	103	1
Healthy Start	110	1
TV/Media	33	<1
Substance Abuse Program	10	<1
Other	1951	11
Total	17,410	100

[‡] Data source: PDS, N=17,410

Time Between Referral and First Contact with the Program

For the MHFE sample of mothers (n=345), the number of days between referral date and the date of first contact ranged from no days to 191 days, with an average of 20 days.

Outcome of Contact

Of the almost 17,300 people for whom information regarding outcome of contact was provided in the PDS, 75% accepted services and were assigned a service level; around 12% declined any services; 7% were not located; 6% were deemed ineligible for services; and less than one percent said “yes” to services but had to be waitlisted due to funding constraints. (See Table 3.4 for detail.)

Of those referees who were located and eligible, 86% accepted services. These rates compare favorably with other home visiting program acceptance rates, which typically are in the 80%–90% range.⁵

Table 3.4: **Outcome of Initial HFM Contact[‡]**

Outcome of Contact	Frequency	Percent
Accepted Services/Were Assigned Service Level	12,881	74.5
Declined Services	2,094	12.1
Were not Located	1,127	6.5
Were Determined Ineligible	1,103	6.4
Accepted Services, but Had to be Waitlisted	91	0.5
Total	17,296	100

[‡] Data source: PDS, N=17,296

Reasons for Ineligibility

Of the 1,103 families who were found ineligible for services, reasons were provided for 948; almost 45% (426) of the mothers were outside the particular agency’s service area, and nearly 20% (181) of the mothers were over 20 years old. More than 15% (150) were referred with a pregnancy or baby that was not their first, or with a baby who was more than one year old (146). Relatively few were ineligible because they had miscarried or aborted their pregnancies, had an open DSS case, or a major psychological disorder. (See Table 3.5 for detail.)

Referrals to Programs or Services other than HFM

Home visitors often referred families who refused or were found ineligible for that particular program to other programs or services. Of the 1,062 referrals of that nature recorded by

Table 3.5: **Reasons for Ineligibility of Mothers Referred to HFM[‡]**

Reasons Ineligible	Frequency	Percent
Outside Agency Service Area	426	45
Over 20 Years Old	181	19
Not First Pregnancy/Child	150	16
Baby over One Year Old	146	15
Miscarried/Terminated Pregnancy	37	4
Open DSS Case	8	1
Had Major Psychological Disorder	1	0
Total	948	100

‡ Data source: PDS, n=948

home visitors in the PDS, the most common were to other HFM programs (for those who were ineligible because they were outside the service agency area only), or to some other type of parent education/support program (e.g., GoodStart). Home visitors also referred families to a wide variety of other services, including counseling, Early Intervention, nutrition programs (e.g., WIC) and housing/shelter services. (See Table 3.6 for a complete list of referrals.)

Enrollment

Program-specific enrollment figures for 1998 through 2002 are presented in Table 3.7 (see page 56). As indicated, enrollment was highest overall in 2001, when the budget for the program was at its peak. It should be noted that these numbers refer to *enrollments*, and not individual participants. Data are recorded in the PDS enrollment table for each enrollment, rather than for each individual. Because many people had multiple enrollment records, then, this number is higher than the actual number of people participating in the program. It is impossible to determine from the PDS data which cases represent second or third enrollments; however, based on our knowledge of multiple enrollments within the MHFE sample (~19%), we can estimate that approximately 4,000 of the cases in the PDS enrollment data represent second or third enrollments.

Program Auspices

Of the 31 HFM programs across the state, nine are housed in health-related agencies. Seven operate under the auspices of early intervention agencies, and six are sponsored by either child welfare or human services agencies. Finally, three of the

Table 3.6: **Referral to Other Programs or Services[‡]**

Programs and Services	Frequency	Percent
Other Healthy Families/First Steps Program	329	31
Parenting Education/Support	309	29
Counseling/Mental Health	41	4
Housing /Shelters	37	4
Early Intervention	36	3
Food/Nutrition	29	3
Child Care/Respite	26	2
Education	25	2
PCP (primary care physician) — Adult	22	2
VNA Home Care Health	20	2
Family Planning	19	2
Clothing/Other Material Needs	15	2
Economic Assistance	15	1
Health Insurance	15	1
Employment/Job Training	10	1
Legal Assistance/Advocacy	9	1
Smoking Cessation	6	1
Pediatrician	5	1
Family Violence/Abuse	3	<.1
Medical Specialist	3	<.1
Transportation	1	<.1
Other	102	10
Total	1,062	100

‡ Data source: PDS, n=1,062

HFM programs are situated in community action agencies.⁶

Table 3.8 shows the percentage of HFM and MHFE participants in each type of program (see page 57).

Table 3.7: Enrollments in Individual HFM Program Sites[‡]

Program	Year					Total
	1998	1999	2000	2001	2002	
Blue Hills	62	68	139	183	137	589
Brighton/Brookline/Boston	63	91	108	93	61	416
Brockton	138	253	284	273	203	1,151
Cambridge/Somerville	37	68	80	85	75	345
Cape Cod	58	66	89	135	118	466
Chelsea/East Boston	121	131	141	180	144	717
Fall River	38	124	136	136	124	558
Fitchburg	99	162	247	226	215	949
Framingham	73	85	92	84	110	444
Franklin Community Action Corp.	68	56	75	86	82	367
Haverhill	103	100	98	111	122	534
Holyoke	88	98	129	133	97	545
Jamaica Plain/Roxbury	83	103	140	70	106	502
Lawrence	164	113	178	192	180	827
Lowell	128	109	185	159	126	707
Lynn	101	157	198	205	198	859
Malden/Medford/Melrose	37	64	65	65	97	328
Milford	68	50	61	63	67	309
New Bedford	125	216	216	187	187	931
Newton/Waltham/Woburn/Concord/Littleton	33	36	65	60	44	238
North Adams	29	46	43	41	58	217
North Dorchester	82	135	119	166	154	656
Northampton	57	46	66	47	56	272
Pittsfield	58	37	60	72	65	292
Plymouth	64	53	60	77	62	316
South Boston	88	122	126	133	164	633
Southbridge	86	79	164	158	145	632
Springfield	179	263	378	431	362	1,613
Taunton	91	106	94	100	98	489
Webster	74	69	86	86	97	412
Worcester	89	150	99	120	102	560
All Programs	2,584	3,256	4,021	4,157	3,856	17,874

‡ Data source: PDS, N=17,874

Table 3.8: **Percentage Distribution of HFM and MHFE Participants, by Program Type[‡]**

Program Type	Program Sample	MHFE Sample
Health-Related	30	31
Child Welfare	24	31
Early Intervention	20	26
Human Services	18	12
Community Action	9	N/A

‡ Data source: MCTF records

Program Review in Relation to Program Standards

In addition to describing program operations, we examine them in relation to selected HFM program standards. HFM uses the Healthy Families America Credentialing Site Self-Assessment Tool to make clear to individual programs the standards to which they are expected to adhere.⁷ Those standards that are most pertinent to our evaluation are summarized below; for each standard we present relevant findings, and, when available, comparison data from other home visiting program evaluations.

In this section data are reported for the MHFE sample only.

Standard: Pregnancy Status at Enrollment

Initiate services prenatally or at birth. Program ensures it identifies families in the target population for services either while mother is pregnant (prenatally) and/or at the birth of baby.

At enrollment, the majority of participants were pregnant (64%). Although HFM strives to enroll young women prenatally, or as close to the births as possible, the program has also made a concerted effort to provide services to young women who are already parenting.

Standard: Adherence to Service Level

Offer services intensively with well-defined criteria for increasing or decreasing intensity of services and over the long term.

- *The program has a well-thought-out system for managing the intensity of home visitor services.*
- *Participants at the various levels of services offered by the program receive the appropriate number of visits, based upon the level of services to which they are assigned.*

Upon enrollment, each participant is assigned a service level that dictates the number of visits that participant should receive. These service levels range from once a week to quarterly, and the frequency, intensity, and duration of visits are determined by each family's needs and preferences.

The encounter and service level information presented here derives from both the PDS and the auxiliary paper records. In order to capture a snapshot of program participation for the mothers, we examined service usage for each mother for a three-month period. We selected the time that began three months into her program tenure and ended six months into her program involvement. We focused on this period because it was far enough into the program that the mothers could be expected to have established a rhythm of service usage, but not so far into the program that we would begin to lose high numbers of participants from our sample as they discontinued program services.

For each mother, we determined, based on her service level(s) during the three-month period, how many visits she was *supposed* to receive, and how many visits she *actually* received.

Table 3.9 presents the distribution of participants' service levels for that three-month time period. The vast majority of participants had a weekly service assignment, in keeping with HFM expectations that participants begin the program on a more intensive service level and remain at that level for a minimum of six months after the birth of the baby.

Table 3.9: **Distribution of Service Levels for a Selected Three-Month Period[‡]**

Service Level	Number	Percent
Creative Outreach	19	6
Weekly	203	62
Biweekly	56	17
Monthly	5	2
Other	1	<1
Mixed	42	13

‡ Data source: PDS and paper records, n=326

On average, mothers in the MHFE sample with an assigned service level received approximately 56% of their expected visits, with a range of none to 150% (SD = .29).⁸ Table 3.10 (see page 58) presents the proportion of received-to-expected visits, by service level. Mothers with more than one service level during the three-month time period appear to have completed the highest proportion of their expected visits; this number may be inflated because some of these mothers spent part of the time on "creative outreach," a service level for which no visits are expected but some are often delivered.

Table 3.10: **Adherence to Service Level for MHFE Sample[‡]**

	Mean Percentage of Expected Visits Completed	Standard Deviation
Weekly	51	.27
Biweekly	62	.34
Monthly	67	.41
Combined Weekly, Biweekly, Monthly	54	.28
Mixed Service Levels (changed service levels at least once during three-month period)	89	1.32
All Service Levels (except Creative Outreach)	56	.29

‡ Data sources: PDS and paper records; n=3,326 visits

Table 3.10 shows one way to report adherence to service level — to focus on the *visits*, by calculating the proportion of visits families received. A second way is to focus on the *participant* — to calculate the proportion of participants who received the number of visits they were supposed to receive. Since nationally virtually no home visiting program has been able to deliver services at the intended frequency, HFA suggests that programs complete 75% or more of their expected visits. Of the 308 participants with assigned service levels, 30% received at least 75% of their expected visits. Table 3.11 shows this information by service level.

While these statistics are somewhat discouraging, it is important to consider them in this context: Almost no home visiting program has succeeded in maintaining fidelity to its program model in terms of frequency of visits. As we reported in the literature review, of the home visiting program evaluations we reviewed, almost none was able to deliver the amount of services intended by the program model.⁹ The evaluators of HFFL observe that there is an inverse relationship between the number of expected visits and the number of completed visits — the more visits expected, the less likely it is that the goal will be achieved,¹⁰ and this seems to be a phenomenon in other programs as well.¹¹

In the programs that target teenagers, rates of visit completion are particularly low. Kelsey and colleagues (2001)¹² report that the teenage mothers in the program they evaluated received, on average, only 33% of their expected visits, and the teenagers participating in the Parents as Teachers pro-

Table 3.11: **MHFE Participants Receiving 75% or More of Expected Visits[‡]**

	Number of MHFE Participants Receiving at Least 75% or Visits	Percent
Weekly (n=203)	47	23
Biweekly (n=56)	23	41
Monthly (n=5)	1	20
Combined Weekly, Biweekly, Monthly (n=264)	71	27
Mixed Service Levels (changed service levels at least once during three-month period) (n=42)	20	48
All Service Levels (except Creative Outreach) (n=306)	91	30

‡ Data sources: PDS and paper records, n=306

gram received 42% of their visits.¹³ Compared with these rates, the HFM visit completion rate of 56% appears to be reasonably good.

In addition, the age of the HFM clients may have also affected these rates. Other home visiting programs that do not specifically target teenagers report more success with visit completion. For example, 52% to 57% of families in EHS¹⁴ report receiving their intended number of visits, and in HFFL, 69% received at least 75% of the expected number of visits.¹⁵

Clearly, the assertion that implementing a home visiting program according to its model standards is challenging would be putting it mildly. Few studies, however, have examined programs' difficulties with service delivery. In an attempt to begin to understand this phenomenon, the MHFE used quantitative and qualitative methods to explore the circumstances and reasons for the gap between the expected number of visits and the number of visits that were actually delivered. We asked home visitors and HFM participants who was responsible for visits that were missed, and *why* those visits were missed.

This detailed investigation of the program participants' documentation and understanding of service delivery in HFM may illuminate some of the daily implementation challenges faced by a home visiting program. It is our hope that an exploratory study of this nature may raise a new generation of questions related to program implementation, thereby providing a useful framework for further process evaluations.

Our research showed the following:

- On average, home visitors were unable to schedule 22% of the visits they were expected to complete.
- According to the home visitors, 80% of the missed visits were the responsibility of the client, and 20% of the visits were missed because of home visitor circumstances.
- Home visitors provided the reasons that they were unable to schedule 22% of expected visits:
 - about one-third of the visits could not be scheduled because of program-related demands (e.g., trainings, meetings);
 - about one-third of the visits could not be scheduled because of personal reasons on the part of the client (e.g., sick, doctor’s appointment, school demands); and
 - one-third of the visits could not be scheduled because the home visitor’s working hours did not coincide with the hours clients were available for their visits.
- Both home visitors and clients attributed more than half of the visits home visitors missed to personal reasons (e.g., sick, car problems), and about a third of their missed visits to program-related reasons (e.g., HFM trainings, data entry).
- Both home visitors and clients attributed more than half of the visits clients missed to what the MHFE described as “reasons that may have been beyond the client’s control” (e.g., baby was sick, mom had to work or go to school).

In sum, these findings suggest that service slippage in HFM cannot be explained simply by reluctance or irresponsibility on the part of the young mother. First, these participants are not solely responsible for missing visits, and even when they are responsible, it is often for reasons that are beyond their control. Second, it would appear that barriers to successful service delivery can also be found in program- and staff-related factors; many of the visits were missed, it seems, by the home visitors, and often this was because of reasons inherent to the operation of the HFM program itself.

The fact that many of the young mothers missed visits because of medical appointments, work, school, or other similar commitments, appears to fly in the face of the common assumption that teenagers are too irresponsible to maintain scheduled visits. Rather, it may be that the teenagers are missing visits because they are choosing, to some extent, to act “responsibly” — that is, that they are prioritizing certain obligations over others in a reasonable, and, perhaps laudable manner. In some ways, this creates an interesting paradox: on the one hand, the goal of the HFM program is to empower the young mothers to take charge of their lives, and prioritize activities in an ‘adult’ manner, and on the other hand, mothers who are learning to prioritize in this way may find this to be at odds with the home visiting schedule. One of

the home visitors expressed this paradox most eloquently: “They start going to school...and at the same time they’re having absent visits; that’s like a victory to me, because we’re hooking them up with all these services and everything, and now they’re lifting up the ladder, so there’s going to be absent visits.”

Standard: Duration of Services

Offer services intensively with well-defined criteria for increasing or decreasing intensity of services over the long term.

- *The program ensures that it offers home visitation services to participant families for a minimum of three years after the birth of the baby (for those families who wish to continue participating).*

The average number of months participants stayed in the program was approximately 17, with a range of less than one to 43 months. The majority of participants stayed for more than one year (see Table 3.12). These retention rates compare favorably with those reported by other home visiting program evaluations. No matter what the intended length of the program, reports of overall length of enrollment tend to fall within the 8- to 16-month range.¹⁶

Table 3.12: **Length of Stay in the HFM Program for MHFE Participants[‡]**

Duration of Program Involvement	Percent of Participants
<3 months	6
3 months – <6 months	14
6 months – <1 year	21
1 year – <2 years	27
2 years – <3 years	28
3 years or more	4

[‡] Data sources: PDS and paper records, n=361

Standard: Cultural Competence

Services should be culturally competent to the extent that staff understand, acknowledge, and respect differences, and be able to form relationships among participants; staff and materials used should reflect the cultural, linguistic, geographic, racial, and ethnic diversity of the population served.

There is much debate in the literature about what constitutes cultural competence, and how it might be accurately measured. Parenting programs have taken different approaches to ensure that program policies, practices, and professionals

are culturally competent; one oft-used approach in programs with a therapeutic model is to attempt to match program providers and clients on race, linguistic, or ethnic backgrounds. The assumption is that racial, linguistic, or ethnic match may facilitate program participation, which in turn is theorized to influence program effects. Based on assumptions in the literature and the field that racial match may be desirable, we have chosen to examine this construct in the HFM program, despite the fact that match is not *explicitly* stated by HFM as a goal.

Overall, the HFM program did a very good job matching home visitors and participants along cultural lines, particularly in regard to language; almost all of the young women in the program were assigned a home visitor who could speak their preferred language (see Table 3.13).

Table 3.13: **Percent of Overall Visits with Home Visitor/Client “Match”[‡]**

Type of Match	Percentage of Visits in which Client “Matched” Home Visitor	Standard Deviation
Overall Racial Match (n=298)	57	.47
Overall Language Match (n=352)	94	.23

[‡] Data sources: PDS and RI

More specifically, of the visits conducted with the 42 young mothers who preferred to speak a language *other than English* with their home visitors, 65% were matched. Of the visits conducted with the 171 young mothers who were *not White*, 46% were matched. Of the visits conducted with the 126 young mothers who were *White*, 71% were matched (see Table 3.14).

These data represent only one way to describe the program’s cultural competence. The Ethnographic Study examined this issue as well, and found that there were a variety of interpretations of the meaning of cultural competence within the HFM programs. Although cultural awareness on the part of the service providers is acknowledged as essential in all three programs the Ethnography studied, there is variation in the emphasis on cultural awareness on the part of the service provider. In Community A, program documents specify that home visitors be “community-based people” with cultural competence. The emphasis is placed on the home visitor’s cultural knowledge. Her familiarity with community resources, ability to provide service in the home language of the participant, and familiarity with the cultural community are

Table 3.14: **Percent of Visits with Home Visitor/Client “Match” by Race, and Preferred Language[‡]**

Type of Match	Percent of Visits in which Client “Matched” Home Visitor	Standard Deviation
Racial Match between Home Visitors and White Mothers (n=126)	71	.43
Racial Match between Home Visitors and Non-White Mothers (n=171)	46	.48
Language Match between Home Visitors and Non-English Speaking Mothers (n=42)	65	.46

[‡] Data sources: PDS and RI

considered essential characteristics that help her build the relationship. This view of the home visitor is consistent with the program theory that home visitors are community people addressing multiple needs of the entire family.

In Community B, program documents specifically mention the practice of recruiting bicultural and bilingual home visitors who will be knowledgeable of community resources and respectful of individual differences. The home visitor’s life experience is seen as important in establishing and building a relationship with the participant. The fact that most of the home visitors are not parents themselves and none have been teen parents, suggests that beliefs about the importance of compatibility of life experiences between home visitors and clients refers to aspects of life experiences other than parenting. The emphasis is likely to be on the home visitor’s experience of similar socio-cultural and ecological circumstances. The home visitor’s openness of personality, receptivity to training, as well as belief in program goals (or program “buy-in”) are seen as being as important as education in a related field. Furthermore, the set of home visitor qualities seen as essential to the relationship is consistent with the program theory of providing respectful, nondisruptive intervention that is cognizant of existing relationships and services. At the same time, home visitors are cautioned to not disrupt existing supports and are reminded that they are “invited guests in the home.”

In Community C, home visitors are encouraged to respect diverse perspectives, cultures, and values. Home visitors are expected to have “innate” skills that may be interpreted to be a set of intuitive strengths that will aid them in building relationships with participants. These personal attributes

are viewed as independent of education and training. The perception of personal attributes as facilitating home visitor/client relationships is consistent with the program's overall focus on the theme of individual empowerment of the teen. A focus on the "individual" is a common assumption underlying both sets of beliefs (i.e., beliefs about the personal attributes of the home visitor as essential, and the theme of individual empowerment of the teen).

The relative importance each program puts on cultural relevance is evident in how staff members address the importance of cultural match of home visitor to client. In Community A, cultural issues are central in statements about building the relationship between provider and participant, and a complex view of culture and cultural difference is presented. It is acknowledged that there are similarities and differences among cultural groups as well as individual variation within groups. Language match is seen as essential in reaching participants. Understanding one's own cultural background is also viewed as a possible influence on the home visitor/client relationship. Cultural understanding is important not only in initial engagement "to get in the door," but in ongoing service delivery. The primacy of cultural knowledge supports the program theme that the young mother is an integral part of her family and community.

Although the term "culture" is not mentioned explicitly in the program serving Community B, there is explicit mention of the importance of respecting different "ways" of caretaking. Respect for difference goes as far as acknowledging that conflict in ways of caretaking between home visitor and participant is not problematic as long as safety of the mother or the baby is not at issue. This absorption of the construct of culture into life experience is again consistent with the overall program theme of respectful, non-disruptive service provision.

In Community C, the supervisor reported repeated attempts to reach out to Spanish and Portuguese language communities through the means of hiring a trilingual home visitor. There appears to be an underlying assumption that cultural relevance is addressed by ensuring language compatibility. However, lack of success in initial outreach efforts to Spanish and Portuguese language communities led to increasing awareness that "outreach efforts failed because there was no cultural fit." Awareness of cultural issues may be overshadowed in this community by program concerns with the individual and individual empowerment.

Standard: The Individualized Family Service Plan (IFSP)

Services should focus on supporting the parents as well as supporting parent-child interaction and child development.

- *The IFSP guides delivery of services to families, and the process of developing the plan uses family support practices.*

In order to describe the HFM programs' adherence to this requirement, we report the extent to which home visitors established individual goals, and then followed-up on them at scheduled intervals. Types of goals, completion rates, and the timing of goal completion are also reported below.

GOALS IDENTIFIED AND FOLLOWED-UP

As of June 30, 2002, there were 1,250 goals identified for the 223 MHFE families for whom records were available; families were still enrolled in the program at follow-up time for 1,148 of these goals (188 families). Almost 75% of these goals (850) had been followed-up among about 91% of the active families. Follow-up had not occurred for the remaining goals (~25% of them), more than 76% of which had passed the time at which they should have been reconsidered. Approximately 24% of the goals that lacked note of follow-up were not yet due for review.

FOLLOW-UP BY GOAL TYPE PER FAMILY

Table 3.15 presents data on the follow-up of goals by type. The table shows the number of families that had follow-up on at least one goal of each type and the average number of goals of each type followed-up per family. Relatively few families had follow-up for goals relating to preventing repeat pregnancy. The most prominent goal categories followed-up were teen education and economic attainment, and health, growth, and development of the child.

Table 3.15: **Follow-Up of Goals, by Type and Family**[‡]

Goal Type	Number of Families	Ave. # of Goals of this Type
Health, Growth, and Development of Child	129	2.3
Maternal Education and Economic Attainment	129	2.5
Supporting Parenting and a Nurturing Home Environment	59	1.3
Preventing Repeat Pregnancy	14	1.1
Other	82	1.8

[‡] Data source: PDS and paper records, n= 172 families

AVERAGE DATE OF FIRST FOLLOW-UP

Overall, goals were first followed-up at 6.3 months from their development date. The time of first follow-up did not differ greatly by goal type. The program requires that goals are

followed-up within six months of their development, and all goal types were followed-up close to six months from their identification. HFM, then, performs well on this index. The average timing for final follow-up was comparable (6.6 months); approximately 76% of these goals had been achieved (see Table 3.16).

Table 3.16: **Timing of First Follow-up, by Goal Type[‡]**

Goal Type	Avg. First Follow-up Time
Health, Growth, and Development of Child	6.2 months
Maternal Education and Economic Attainment	6.4 months
Supporting Parenting and a Nurturing Home Environment	7 months
Preventing Repeat Pregnancy	7 months
Other	5.5 months

‡ Data source: PDS and paper records, n= 850 goals

AVERAGE TIME ELAPSED BETWEEN GOAL IDENTIFICATION AND COMPLETION OF ACHIEVED GOALS

Overall, goals were achieved in slightly less time than the six-month time frame allowed by the program guidelines — 5.6 months on average for all goal types taken together (see Table 3.17).

Table 3.17: **Average Time Taken to Complete Goals, by Type[‡]**

Goal Type	Average Time Elapsed between Goal Identification and Completion
Health, Growth, and Development of Child	5.6 months
Maternal Education and Economic Attainment	5.4 months
Supporting Parenting and a Nurturing Home Environment	7.3 months
Preventing Repeat Pregnancy	3.7 months
Other	5.1 months

‡ Data source: PDS and paper records, n= 850 goals

It took mothers significantly longer to complete “supporting parenting and nurturing home environment” goals than the others, suggesting that those goals were more difficult, or more future oriented than the others.

Regarding the topics covered in home visits, there were statistically significant differences there as well. Mothers with more “parenting and nurturing home” goals had more home visits that covered child development, parent-child interaction, parent and family health, social-emotional health, and family interaction. In addition, the proportion of “education and employment” goals achieved related to the percentage of home visits that addressed topics relevant to education and employment. Mothers for whom a higher percentage of home visits focused on education and employment achieved a greater percentage of those goals. These results may indicate that, in keeping with the HFM model standards, home visitors are tailoring the content of their visits to respond to mothers’ goals.

Standard: The Ages and Stages Questionnaire (ASQ)

Services should focus on supporting the parents as well as supporting parent-child interaction and child development.

- *The program monitors the development of participating infants and children.*
 - *The program has a developmental screen to monitor infant/child development.*
 - *The program uses the screen to monitor child development at specific intervals.*

The HFM program used the ASQ to assess children at regularly scheduled intervals. Here we report the extent to which home visitors appeared to adhere to these scheduled assessments.

On average, of the 299 babies in the HFM program who were expected to receive ASQs, and for whom we had ASQ information, 121, or 41%, received at least the number of assessments they were supposed to receive during their program tenure. One hundred sixty-nine babies, or 57%, received within one ASQ of their expected amount (e.g., four out of five; or three out of four).

While there are no comparison data on the use of the ASQ by HFM programs, per se, some evaluations do report on the completion of “developmental screenings.” Generally, programs report high rates of completion, but it should be noted that these rates seem to describe the number of children who have had at least one assessment within a particular time period.¹⁷ The ASQ, in comparison, has extremely rigid guidelines for completion, perhaps more stringent than many of the other instruments. For example, with the ASQ as used by HFM, if the home visitor conducts the assessment two weeks before or after the target date, she is not allowed

by the PDS to record the assessment as complete. Alternatively, the relatively low ASQ completion rates may reflect the high number of visits that are missed in HFM.

Quality Review

The preceding section presents a review of program operations in relation to specifically stated “model” (HFA or HFM) standards. Comparing programs to published standards is one way to assess program operations; a second route is to derive, from previous research, the factors in home visiting program operations that appear to define a high quality program, and to describe home visiting programs and their effects with respect to these factors. Clearly, there is some overlap between the two groups — model standards and research findings — since agencies develop program standards based on what is considered to be “best practice,” and we expect that research informs practice, at least modestly.

To help describe programs more fully, and to allow for analyses that consider program quality as a moderator in achieving outcomes, the MHFE created a “quality” variable. This variable combines elements from the HFM program standards and additional characteristics that researchers have suggested relate to positive outcomes for families.¹⁸ These elements are:

- participant’s adherence to service level;
- number of days between participant’s referral to the program and first contact by the home visitor;
- racial match between home visitor and each client;
- participant’s adherence to assessment schedules; and
- turnover rates, by program.

This quality score was calculated for *each individual program*, but only for those programs with ten or more participants from our MHFE sample (n=17 programs, with 333 participants). Then we assigned each participant a program quality score, based on the program from which she began receiving HFM. (For the vast majority, this was the program from which they received services for the majority of their program tenure.)

The method for calculating this program level score for each variable is presented below.

Participant’s Adherence to Service Level

For each program, we determined the percentage of participants receiving at least 75% of their expected visits during the three-month period we examined (see Table 3.11, page 58). Overall, the average was 32%, with a range of 8% to 69% (SD=18).

Number of Days Between Participant’s Referral to the Program and First Contact by the Home Visitor

We averaged individual participant values on the number of

days lapsed between referral and first contact by home visitor to arrive at a program value for the average span between the two dates. Overall, among programs, the average number of days between referral and first contact was 21, with a range of 3 to 78 (SD=20).

Racial Match Between Home Visitor and Client

By averaging individual participants’ rates, we calculated, by program, the proportion of visits in which there was a racial match between home visitor and participant. Overall, programs racially matched their home visitor and participants for an average of 57% of visits, with a range of 21% to 89% (SD=18).

Participant’s Adherence to Assessment Schedules

For each program, we determined what percentage of participants received within one of their expected number of ASQs (e.g., four out of five; or three out of four). Overall, the average was 64%, with a range of 38% to 100%.

Turnover Rates for Each Program

Over a four-year period (1998–2002), programs experienced average turnover rates of 17% per year, with a range of 8% to 27%.

Quality Variable

According to this variable, there appeared to be considerable variation in the quality of HFM programs. The mean quality score for programs is 0.0, with a range of -3.7 and 6.3, (SD = 2.6).

HFM Staff Characteristics

The next profile of interest in this chapter is that of the staff working in HFM programs. We obtained data on home visiting staff through three basic methods: the Home Visitor Demographics Survey (HVDS), the Home Visiting Staff Inventory (HVSII), and the MCTF Staff Change Forms. By triangulating these sources, we were able to obtain information on 767 home visitors.

Race and Linguistic Characteristics

Table 3.18 presents the racial composition of home visitors across the state (see page 64).

Almost half of the home visitors reported being able to speak a language other than English. Of those second-language speakers, the distribution of languages is presented in Table 3.19 (see page 64).

Education Level

The HFM program is intended to be a paraprofessional home visiting program, which typically means that home visitors

Table 3.18: **Home Visitor Race**[‡]

Race	Frequency	Percent
White	381	52
Hispanic	197	27
Black	103	14
Asian/Pacific Islander	20	3
American Indian/Alaskan Native	3	<1
Multiracial	18	3
Other	5	1
Total	727	100

‡ Data source: PDS, n=767

Table 3.19: **Distribution of Home Visitor Languages other than English**[‡]

Language	Frequency	Percent
Spanish	253	69
Portuguese	38	10
Haitian Creole	15	4
Khmer	14	4
Crioulo (Cape Verdean)	13	4
Other	35	10
Total	368	100

‡ Data source: PDS, n=767

are not required to have college or other post-secondary training. However, the majority of home visitors (81%) actually had at least some college education, and 42% had a college degree (although this may or may not have been in a related field). Thirty-nine percent had some college education, and 19% of home visitors had a high school degree only (HVDS).

Experience with Home Visiting

Home visitors working for the HFM program had, on average, two years of experience as a home visitor. Overall, 44% had been working as a home visitor for less than one year, 17% had been working for one to two years, 29% for two to five years, 7% for five to ten years, and 3% had been working as a home visitor for more than ten years (HVDS).

Duration of Employment

The average length of home visitor employment over a five-year period (1997–2001), ranged from 14 to 33 months within individual programs, with an overall average of 22 months (HVSI).

HFM Participant Characteristics

The characteristics of the MHFE sample (the Tufts sample) were presented in the previous chapter. Here we provide the essentials for a profile of all HFM participants, drawn from PDS data (see Table 3.20, page 65).

The profiles presented in this chapter offer an initial look into the heart of the HFM program. The next chapter deepens the portrait of the program with an examination of its central service component — the home visit.

Table 3.20: **Characteristics of HFM Participants**[‡]

Characteristic		HFM Population	
		Frequency/Mean	Percent of Participants
Maternal Age	Average age	18.0 years	
	Less than 17	3,102	26
	17 or over	8,955	74
Parenting Status at Enrollment	Pregnant	4,817	52
	Parenting	4,524	48
Child Age	Average age	.04 months	
Maternal Race	White	4,490	42
	Hispanic	3,359	32
	Black	1,500	14
	Other	1,021	10
Education	In school/GED or graduated/holds GED	6,104	57
	Not in school/GED	4,636	43
Employment	Not employed	8,669	82

[‡] Data source: PDS, N= 13,000

Endnotes

- According to HFM program administrators, both the annual budget threats that began in FY03, and the actual budget reductions the program has experienced since FY02, have had negative consequences for staff retention. Data for this study, however, were collected prior to this period.
- Katzev, Pratt, McGuigan, & Kapsch, 2002; LeCroy & Milligan, 2001; Williams, Stern, & Associates, 2002a
- Galano & Huntington, 2001; Klagholz & Associates, LLC, 2001; Williams, Stern, & Associates, 2002a
- For example, evaluators of Oregon Healthy Start report that only 37% of all first-birth families were reached for screening (Katzev, Pratt, McGuigan, & Kapsch, 2002).
- Black, Powell, Clay, & McDill, 2000; Galano & Huntington, 2001; Williams, Stern, & Associates, 2002a
- No Community Action Agencies participated in the MHFE.
- The HFM programs currently rely on an updated tool (2003), but we report here the standards listed on an original version of the tool (1997), since it covers the time period during which we collected our program data.
- This calculation does not include mothers who were on “creative outreach” for the entire period, since this service level does not carry a specific number of expected visits.
- See Arocena, Adams, & Davis, 1992; Culp & Culp, 2002; Duggan, McFarlane, Windham, et al., 1999; Duggan, Windham, McFarlane, et al., 2000; Greene, Heck, Lee, Griffith, Mitchell-Herzfeld, & Senkulics, 2001; Heinicke et al. 2000; Kelsey, Johnson, & Maynard, 2001; Kochanek & Buka, 1995; Nagy, Leeper, Hullett, Northrup, & Newell, 1988; Paulsell, Kisker, Love, & Raikes, 2002; Wagner & Clayton, 1999; Williams, Stern & Associates, 2002a.
- Williams, Stern & Associates, 2002a
- Greene et al, 2001; Paulsell, Kisker, Love, & Raikes, 2002
- Kelsey et al., 2001
- Wagner & Clayton, 1999
- Paulsell, Kisker, Love, & Raikes, 2002
- Williams, Stern, & Associates, 2002a
- Black & Markson, 2001; Duggan, et al., 2000; Katzev, Pratt, Henderson, & McGuigan, 1999; Social Policy Institute, 2002; Williams, Stern, & Associates, 2002a
- Duggan et al., 1999; Williams, Stern, & Associates, 2003
- For details about the statistical formulation of this variable, refer to Chapter 2.

Chapter 4

The Nature of the Home Visit

Although there are hundreds of evaluations of home visiting programs, few reports detail the nature of the home visit — what actually happens during that encounter. In our explorations, we have found home visits to be complexly organized and dynamic service units, comprising a broad range of activities and information, and bounded and shaped by the relationship that develops between the home visitor and, primarily, the young mother. In the end, it appears that this relationship with a home visitor may be as important as any particular curriculum or intervention in keeping mothers engaged in the program.

Researchers interested in family processes and in the effects of family-oriented programs often conceptualize the contributions of those outside the mother-child dyad as “social support.”²¹ This concept is generally parceled out into three types:

- **Instrumental support:** the provision of goods and services (e.g., clothing, food, transportation, referrals, advocacy, etc.);
- **Informational support:** the provision of childrearing and parenting information (e.g., child development stages, infant feeding and bathing advice, appropriate techniques of discipline, etc.);
- **Emotional or appraisal support:** the provision of encouragement and personal validation (e.g., appreciation

for the efforts that parents make, bearing witness to difficulties, celebrating successes, etc.).

This categorization of social support has helped with MHFE’s initial efforts to examine the program’s home visit. Home visiting is intended to provide some of each type of support, and our data suggest that this is surely the case in all programs across the state. On the other hand, the *distribution* of types of support, and the particular help offered within these support categories, differ — often program to program, and home visitor to home visitor.

This chapter draws on data collected from multiple sources, including the PDS, home visitor interviews and home visit observations, and ethnographic interviews and observations. It first explores the content of home visits and participants in it, and then moves to a description of the home visitor-client relationship. It also discusses the home visit with reference to the social support categories noted above.

Home Visiting Content and Participants

The largest proportion of topics covered during home visits concerned parent/family health and family relations, closely followed by topics concerning child development, and basic needs/services (see Table 4.1).

Table 4.1: **Topics Addressed during HFM Home Visits[‡]**

Topic	Average Percent of Visits in which Topic Was Addressed
Parent/Family Health	51
Family Relations	46
Child Development	45
Basic Needs/Services	45
Child Health/Growth	43
Maternal Well-Being	35
Parent-Child Interactions	30
Education/Employment	27

[‡] Data source: PDS, n=361

Home visitors used educational materials they had brought to the visit in 44% of visits. These materials addressed the range of topics noted above.

Regarding visit participation, on average the mother was present for the majority (83%) of home visits; the child was present for over half (58%). A grandparent was present for 18% of the visits, and the father participated in about 10%.

Home Visitor-Client Relationship

As an introduction to the range of relationships that were established between young mothers and their home visitors, we offer, first, descriptions from the Ethnographic Study that typify the perceptions of young mothers in those communities:

Community A: Laughter, instrumental support and emotional connection.

Developing relationships with clients in this community required that home visitors establish good rapport with the young women's families. This included "hanging out" or "bugging out," (a colloquial term, similar to "hanging out") and laughing with the entire family, while volunteering casual advice on health matters, given the high incidence of illnesses, especially among grandmothers. Instrumental advice, especially about education and housing, was also significant to mothers in this community. About education, some moms claimed that had it not been for their home visitors' interventions on their behalf they could not have completed high school. In regard to housing assistance, home visitors' trips to the public housing office with the mothers not only helped the moms negotiate their way through Section 8 paperwork, but also facilitated a closer personal connection between the two. Mothers enjoyed the closeness that developed in the course of these trips, including extended one-on-one conversations with their home visitors about "e-v-e-r-y-t-h-i-n-g", as one put it.

Indeed, mothers valued close personal connections with home visitors highly, to the point that they interpreted home visitors' actions in this light. For example, mothers saw the gifts home visitors brought for their children, or their interest in playing with them, as signs of "love." All of this contributed to a sense of trust and closeness that contributed directly to the intensity and duration of program use. What remains unclear is whether program use resulted in actual changes in parenting practices. When talking about informational support in regard to feeding, mothers tried to comply with their home visitors' promptings — e.g., to nurse, to delay the introduction of solids — for a brief period of time, but then reverted to practices similar to those of their mothers or other women in their communities. Perhaps the most effective aspect of support in this community was instrumental, since

receiving Section 8 was central to the fulfillment of the mothers' aspirations to live with their new families independently in their homes, without moving far away from their own parents' homes. Emotional support from a family outsider was also important for these mothers who did not have close peers and otherwise relied largely on their husbands for this.

Community B: Cool big sisters, available when needed, and willing to go the extra mile.

In this community, mothers liked home visitors who would take a personal approach to helping them, either by going on the Internet and finding job listings themselves, or by driving them to the housing office. They believed that the home visitor's willingness to go the "extra mile" was a sign of special care for them and their families. However, these personal relationships were short-lived, mostly due to the mothers' extremely busy schedules, which included studying and working in addition to parenting. It was not unusual for these mothers to resort to phone calls as an alternative to actual home visits. In this way, they could stay in touch with, and seek help from, their providers without having the burden of setting up and keeping appointments. In addition to housing and education, instrumental support finding jobs and child care arrangements was important to these mothers who were in the process of seeking employment after completing their high school or GED programs.

Their favorite home visitor characteristics were similar to those cited by Community A: "cool," "real nice," "really caring," and "family friendly." However, unlike mothers in Community A, their favorite visitors reminded them of "big sisters" or "godmothers" — loving in an advisory role without the authority of a parental figure. Furthermore, the most trusted visitors were those who spoke from experience, and who happened to have similar life experiences to those of the mothers.

Community C: Respect for differences, and prompt, reliable support, as needed.

Participants in this community read and remembered the parenting literature their home visitors gave them. In general, their childrearing practices were more consistent with those promoted by HFM. One informational area that stood out in their minds was safety. Home visitors brought with them a range of information and materials, from tips for childproofing the house, to actual safety devices or catalogues detailing where to buy them.

In terms of instrumental support, most participants valued assistance with welfare/legal matters (i.e., alimony and child custody) over other areas, followed by childcare. Appreciation for these two areas of support was not surprising, given that many of these young mothers were parenting alone, without

significant help from other family members or friends. These mothers were well-connected to their community's resources, and generally knew how to take advantage of them. For them, the "program" per se (HFM) was more valuable than the relationship established with the home visitor. Indeed, a couple of mothers stayed in the program even after their own home visitors reported them to DSS for child maltreatment. By being in the program, mothers had direct access to the entire program staff — not just their own home visitors; mothers called these other staff members with questions, and expected prompt answers from the person considered the program expert on the topic. Rather than valuing closeness, mothers in this community valued home visitors with "open minds" — visitors who would be respectful of their ways and would not impose standard program prescriptions.

The MHFE attempted to describe this relationship from several vantage points: the "role" of the home visitor, strategies home visitors used to establish and maintain good rapport, contributions to interactions by both home visitors and mothers during home visits, and factors that contribute to positive or difficult relationships.

Role of the Home Visitor

HFM training details the role it prescribes for home visitors — one of a helpful and supportive adult who maintains a proper professional distance. Certainly many home visitors behave in this fashion. However, early in the evaluation, when mothers were asked about the role their home visitors played (the choices were confined to professional, friend, or parent/other adult figure), fully 75% perceived her as a friend (see Figure 4.1). Home visitors also frequently used that term to describe their role, though they qualified it to emphasize

a special kind of friend — one with professional status. Data from the Ethnography, as reflected in the vignettes above, also support this more complex view of the home visitor's role; across the three communities, the moms spoke of their home visitors as being, for example, like a "friend," "big sister," and "mother." It is not clear precisely what "friend" means to these young mothers; some informants appear to use it in a conventional way — meaning a close relationship with a peer. But others, perhaps, have relied on the term because it is the most accurate one available to portray the unique quality of the parent-provider relationship. In fact, it is difficult to discuss the role of the home visitor independent of the relationship that is established, since that relationship is shaped both by the home visitor (contributing the dictates of the official role, as well as many other characteristics), and the mother (contributing her expectations, needs, and experiences).

Strategies for Engaging Young Mothers in Home Visiting

Home visitors noted a range of interpersonal strategies toward this end (see Table 4.2, page 70). Among the most common were using informal conversation, disclosing information about themselves and their own circumstances, and soliciting information from the mothers and listening well to what they were told. Being respectful was a critical element to many, especially given the fact that this population is often not accorded respect. As one home visitor explained, "it's very important to respect people and not talk down to them."

In addition to these interpersonal techniques, many home visitors noted personality traits that made this process successful. For example, being easygoing, down-to-earth, relaxed, and understanding proved helpful. Being honest and straightforward, and having a sense of humor were also seen as assets. Having salient characteristics in common with the young mother (e.g., being of the same race or ethnicity, having also been a teen parent, etc.) that enabled them to easily "connect" with the moms was also seen by the home visitors as helpful. One home visitor told her clients, "I'm a mother and I know how hard it is." Speaking the teen's native language could also be helpful. One home visitor spoke Portuguese during visits with some clients, which "[helped] everyone relax and feel more comfortable."

Many home visitors believed that the program was a good product, and would be attractive if introduced properly. Some focused on the flexibility of the program (about one-quarter of home visitors noted that they tailored sessions to the specific needs and interests of the mothers), and others highlighted its strengths-based philosophy. Several noted that the visits should be fun — appreciating their clients' youth. Additionally, several home visitors reported that

Figure 4.1: **Mothers' Perceptions of Home Visitor Roles**

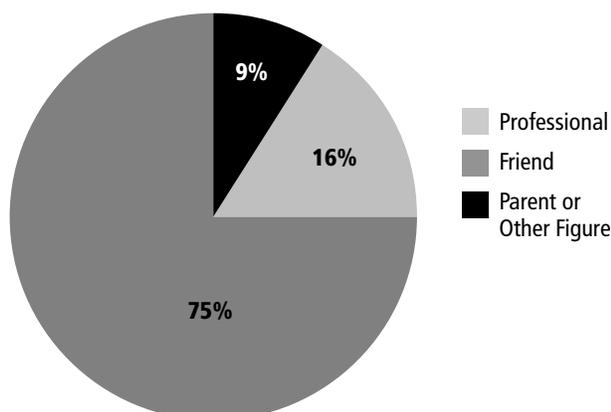


Table 4.2: **How Do Home Visitors Establish Rapport with Their Clients?†**

Home Visitor Activity	Response Frequency (Percent)**
Make Conversation with Mom	47
Disclose Information about Themselves	24
Find Out What Mom Needs or is Interested in and Try to Address It	24
Describe the Program to the Moms	21
Demonstrate Respect for the Moms	18
Use Curriculum Creatively and Try to Make Visits Fun	16
People Skills/ Personality/ Sense of Humor	16
Share Characteristics with Moms (e.g., race/ethnicity, similar background or experience, also a parent)	15
Engage Baby	15
Follow the Mom's Lead or Try to Relate on Mom's Level	13
Start Slow	13
Flexible with Mom's Schedules, Always Call if have to Cancel or Reschedule, Always Show Up on Time	10
Use Strength-based Approach	8
Explain That the Home Visitor is There for Mom and Her Child	8
Be Honest and Straightforward	7

† Data source: HVI, n=62

** Responses are not mutually exclusive

focusing on the baby helped in the initial phases, when presumably the mothers were shy or wary. As one home visitor noted, "Once you get to talking about their babies and you're interested, then nine times out of ten, you are building a good relationship with them." Another strategy was to bring toys for the baby — "that always [worked]."

Contributions by Both Young Mothers and Home Visitors to Interactions during the Home Visit

Relationships between home visitors and mothers are composed of thousands of individual interactions, gathered over time across the varieties of experiences they share. These interactions shape the character of home visiting sessions, which, in turn, presumably affect mothers' decisions about program participation and their overall satisfaction with the program. Because these interactions had not been studied systematically before this evaluation was initiated, the MHFE

made an initial attempt through the use of a project-developed observational instrument — the Home Visit Observation Scale (HVOS).

This instrument provided interesting preliminary descriptive data on the home visitor's behaviors during the home visit, and the mother's responses to and involvement with the home visitor's discussions and/or proposed activities. For example, because the home visitor had the primary responsibility of establishing the parameters of the session, the HVOS highlighted the extent to which she explained the purposes of the visit, made the necessary transitions between activities, and so forth. The HVOS also focused on the extent to which the mother initiated conversation, and/or volunteered information about herself, engaged in the topic, etc. Observers attempted to define the degree and type of reciprocity that was evident during these visit periods.

The observers obtained a score for each member of the

home visitor/mother dyad individually, and then compared the scores to each other within the dyad. Scores for mothers and their home visitors were highly correlated ($r=.68$), although the scores for home visitors as a group compared to mothers (as a group) were significantly different from each other. Home visitors scored higher, suggesting that they were the more active members of these dyads. This is not surprising, since it was the home visitor's role to initiate and sustain activities and conversation. The wide range of scores was interesting to note.

Additionally, the scores of home visitors with multiple clients were not consistent across visits — that is, the same home visitor behaved differently with different clients. This suggests that the mother's contribution to these interactions was significant, and that assumptions that any given home visitor provided a more or less standard service may be incorrect. Finally, dyads that were observed for more than one visit demonstrated some consistency across visits, although home visitors' scores were more consistent than those of participants. Because the overall sample of home visitor/client pairs was a small one, and the subsample of home visitors with multiple participants, or pairs with multiple visits observed was even smaller, these findings are only preliminary. But they offer a way to begin to understand the home visit, starting at the “micro” level (the individual interactions), and moving to the “macro” level (the relationship), that is worth pursuing.

The Importance of “Matches” Between Mothers and Home Visitors

There are several kinds of “matches” that programs consider when hiring staff and determining caseloads. Matches along racial and ethnic, and home language lines are among the most often mentioned; other popular considerations are the home visitor being a parent or, even better, having been a teen parent. These matches are thought to facilitate the establishment of solid relationships, and the provision and acceptance of all types of social support — instrumental, informational, and emotional. Both researchers and practitioners, in home visiting and in other family support programs, assume that these “matched” arrangements are superior to others. As mentioned in Chapter 3, HFM is doing a good job of matching participants and home visitors on several traits. Table 4.3 reports the data on home visitor/client match.

Participants in the MHFE — home visitors and mothers — did not always agree about the importance of these arrangements. About half the home visitors identified racial match as an important ingredient in a successful relationship; on the other hand, 80% of the mothers noted that having a home visitor of the same race was simply not all that important. In terms of linguistic match, about 20% of the home visitors, and 34% of the mothers, thought that being able to

Table 4.3: **Percent of Visits with a Home Visitor/Client “Match”[‡]**

Type of Match	Percentage of Visits with “Match”	Standard Deviation
Racial Match (n=298)	57	.47
Ethnic Match (n=279)	33	.45
Language Match (n=352)	94	.23

[‡] Data sources: PDS and RI

speak in the mother's native language was of real value.

As to having a home visitor that was also a parent, close to half of both home visitors and mothers thought this was a helpful characteristic for home visitors to have. In addition, about 25% of the mothers believed that it was important to have a home visitor who had been a teen parent.

Difficult Moments in the Home Visitor-Client Relationship

Although home visitors report relatively few negative interactions with clients, no doubt they occur. At one end of the spectrum, mothers can, and do, leave the program if the relationship turns negative or unpleasant; clients can also be transferred and home visitors exchanged. The data presented in Chapter 5 on mothers' overall satisfaction with the program, and reasons for ceasing to participate, suggest that these extreme situations do not happen often. But this relationship can certainly hit bumps in the road.

How do they occur, and what strategies do home visitors use to get past them? To begin, difficult interactions reported by home visitors are generally attributed to the clients — the young mothers are not interested in services, are unwilling to “open up,” have mental health problems, have had a difficult past, or exhibit other behaviors or characteristics that interfere with their relationship with their home visitors. Very few home visitors report difficulties due to a personality clash, a disagreement with the mom on a childrearing issue, needs that are beyond the home visitor's capabilities, or limitations in the program's structure or content. While home visitors' perceptions may accurately portray the general case, the situation is surely more complicated than that. Contributions by both individual home visitors, and by the program itself, are likely significant for some young families.

A range of strategies to solve these problems have been offered. Home visitors most often turn to others for support and advice, typically to supervisors and coworkers: “I have mostly learned from discussions around the office.” A few home visitors talk to the young mother's teachers or other

service providers for additional insight. Home visitors also report being persistent and trying different strategies to engage a disinterested client. For example, about one quarter of the home visitors try fun and creative things with the client, similar to the strategies for establishing rapport mentioned above, such as taking the client out to lunch or meeting the client at the beach rather than in the home. Other home visitors call the mom and send cards or letters to try to pique her interest. Several home visitors try to take things slowly, following the mom's lead and trying not to push her. Others report that they focus on the baby, which seems to take some of the pressure off the young mother.

Mothers' Overall Perceptions of Home Visitors as Caring and Respectful

Mothers' scores derived from Outcome Study data (HVICI) indicated that participants perceived their home visitors as respectful and caring. On a scale from 1 to 5, where higher scores indicate greater respect and caring, scores at the beginning of the evaluation (soon after the mothers enrolled in HFM) and at its end (18 months later) remained consistently high. At the first data collection point, the average score was 4.5, and at the final data collection point it was 4.6, essentially the same, and a very positive result.

Several tentative conclusions can be drawn from the variety of data used to describe the nature or character of the HFM home visit. The relationship that develops between the home visitor and the client is central to the experience; indeed, it appears at least as important as whatever information or instrumental assistance is received (which is also, of course, valued and appreciated). This relationship is built on hundreds of discrete interactions that occur within and across visit sessions. Although MCTF and the individual HFM programs train home visitors prescriptively — to adopt a professional posture with certain attributes and boundaries — the extent to which home visitors internalize that role is unclear. For example, the Ethnographic Studies suggest that the home visitor-client relationships differ quite significantly across communities, perhaps reflecting cultural preferences in how one seeks help and support for parenting.

The next chapter builds on this chapter, further exploring the mothers' experiences with the program. In what ways do these young women make use of the program, and how satisfied are they with its various components? Again, all three of the MHFE substudies contribute to that discussion.

Endnotes

- 1 Unger & Wandersman, 1985

Chapter 5

Participants' Experience of the Program

The home visitor-client relationship, it turns out, sits at the core of the HFM intervention. It appears to exert a powerful, though certainly not exclusive, effect on the mothers' overall assessment of the program. Other factors pertain, of course, and in this chapter several of them are discussed under the broad rubric of "parental satisfaction." This phenomenon is approached here from two directions: The first describes participant utilization of HFM, assuming that young mothers, at least to some degree, vote with their feet — continuing to participate when they enjoy the service and believe that it is helping them. The second route to understanding the mothers' satisfaction with the program is more direct: MHFE pursued this issue in a variety of ways, across several data points, using several data collection strategies. A summary of those analyses is included as well.

Participant Utilization of Program Services

In this section, we describe how participants used the HFM program services from two broad perspectives: the length of time young mothers remained in the program (duration) and the amount of services they received (intensity).

Length of Stay in Program and Frequency of Visits

Participants stayed in the program for an average of 17 months, with a range of less than one month to 43 months.¹ The majority (59%) of participants stayed for more than one year (see Table 5.1). These retention rates compare favorably with those reported by other home visiting program evaluations. No matter what the intended length of the program, reports of overall length of enrollment tend to fall within the 8- to 16-month range.²

During their tenure in the program, participants received an average of 31 visits, with a range of none to 120. For those who received any visits, service intensity was calculated by dividing the total number of visits received by the number of months spent in the program; on average, participants received two visits per month, with a range of .3 to 5.

Ethnographic Investigation of Patterns of Participation

Our ethnographic team conducted two sets of analyses to document participants' experience of the HFM program.

Table 5.1: **Average Length of Stay in HFM Programs**[‡]

Duration of Program Involvement	Percent of Participants
Less than 3 Months	6
3 Months – 5 Months, 30 Days	14
6 Months – 11 Months, 30 Days	21
1 Year – 1 Year, 11 Months, 30 Days	27
2 Years – 2 Years, 11 Months, 30 Days	28
3 Years or More	4

[‡] Data source: PDS, n=361

First, we documented participants' use of the program — duration of participation, patterns of utilization, participation in groups, number of home visitors, patterns of termination — and compared it across the three communities. Second, we looked for modal patterns in participation and engagement within and across communities. These investigations suggested interpretations of the findings noted above.

The key elements of program utilization common to all three communities were:

- **Initiation of program participation:** Women were generally referred while pregnant or at birth.
- **Service context and background:** A service routine was eventually established, usually at three months.
- **Problems with home visiting services:** The more frequent of these were related to interruptions in service — the missed visits and transitions between home visitors that resulted.
- **Consequences of changes and/or attempts to resolve situation:** Young mothers identified the ultimate participation consequences of the aforementioned problems, as well as how they attempted to resolve the situations.
- **Resolution/Termination:** Participation patterns reflected either the resolution of difficulties or the termination of engagement, often as a result of the difficulties.

We identified three modalities of participation across communities, and have characterized them as follows: *Pattern A: Initial Engagement, but Discontinued Participation*; *Pattern B: Continued Participation, Despite Interruptions*; and *Pattern C: Ambivalent, Inconsistent Participation*. These patterns, or modalities, played out differently within the three study communities. Below we briefly describe their distribution within those communities; as is evident, not all patterns were present in each community. Across communities, the most common patterns of participation were Patterns A and B, with Pattern C describing slightly over 20% of the young mothers.

COMMUNITY A

Participants in this community generally appreciated the program, though they described a range of experiences. Most stayed in the program for more than a year despite interruptions and other challenges in program delivery. They particularly valued services in the early phases of parenting, soon after the baby was born. We observed three patterns of participation in this community:

Pattern A: Initial Engagement, but Discontinued Participation (two cases). Two of the young mothers in Community A enrolled in the program while pregnant or upon giving birth, respectively. In the first few months, they received intensive service (three to four monthly visits) due to health and family difficulties. They quickly developed a strong program buy-in, but it was tied primarily to the close relationship the home visitor established with the mom and her family. Before the end of the first year of participation, the home visitor left her job, and these two moms refused a replacement, claiming that it was too much work to start a new relationship with a new home visitor. Thus, home visitor turnover resulted in the teens' decision to end participation in the program.

Pattern B: Continued Participation, Despite Interruptions (five cases). This pattern reflected persistence of participation because there was continued engagement despite interruptions and decreasing frequency of visits. These young mothers enrolled during pregnancy (n=3) or at birth (n=2), and service level was high (three to four monthly visits) for the first three to six months, and accompanied by strong program buy-in. There were interruptions in service, either because home visitors left (n=2) and the moms had to transition to a new home visitor, or because of scheduling difficulties (n=3) on both parts. Also, in two cases, home visitors recommended lower service levels when they determined that the moms had established appropriate parenting skills. Program buy-in decreased temporarily (n=3) or permanently

(n=2) during transitions between home visitors and between service levels. However, participants stayed in the program for over two years (25 to 28 months).

Pattern C: Ambivalent, Inconsistent Participation (three cases). Participants who evidenced this pattern of service use also enrolled in the program early during pregnancy (n=1) or at birth (n=2). However, already in the first three months, service intensity was low (one to two visits per month in two cases), coupled with ambivalent or modest program buy-in. Duration of participation ranged from two months to two years. One mother moved to a neighboring town where she initially resisted establishing rapport with a new home visitor, but eventually did, and stayed in the program longer than the others in her cohort. The two other cases claimed that missed visits were due to miscommunication. One case was closed by a home visitor who, in a letter to the mother, said the reason was the mom's failure to be home for visits. The other mom continued receiving visits, though at decreasing frequencies and with continued ambivalent program buy-in.

COMMUNITY B

The HFM program was not particularly well-received by the participants in the Ethnographic Study in Community B. Participants in this community typically stayed in the program for less than a year (only three stayed for more than a year). Difficulties in scheduling visits were typical and often quoted as the reason for discontinuing the program. Although participants in this community were most explicit in connecting program quality with their relationship with the home visitor, they were also most explicit in their criticisms of the program. Changes in home visitors were seen as indications of lack of commitment on the part of the program, coupled with a sense of loss and wasted time. In this community we observed two patterns of participation:

Pattern A: Initial Engagement, but Discontinued Participation (five cases). Women who exhibited this pattern discontinued participation because they were unwilling to start new relationships with second home visitors. The typical sequence of events included program initiation at birth or during pregnancy, followed by variable service levels (ranging from weekly to monthly visits). Initial program buy-in was strong in many cases (n=4). However, after interruptions in service, several moms (n=4) decided they did not want to continue in the program. One mother, whose program buy-in was weak to begin with, was shifted to a different home visitor; she still terminated participation, claiming that she was too busy for the program.

Pattern C: Ambivalent, Inconsistent Participation (three cases). Mothers started participation in the program during pregnancy or at birth, but service delivery became inconsistent at an early point in their enrollment, and levels of program buy-in were low. After interruptions, the mothers discontinued participation in the program. The home visitor closed one case when she went on maternity leave because the mom had missed visits and did not show interest in receiving the program. Another mother moved out of the service area and continued to consult with the first home visitor instead of taking a new one. For these two, participation lasted less than four months. For one, however, participation lasted over a year, which shows that she successfully transitioned to a second home visitor after the first went on maternity leave.

COMMUNITY C

In many ways, participants in this community experienced the program as it was meant to be experienced. They tended to stay in the program for longer durations; in fact, several stayed the full three years. Interestingly, although participants from this community did not believe they needed the program (because they had access to parenting and developmental information through school courses, the advice of family members or pediatricians, and from other community resources), they participated until “graduation.” This included negotiating interruptions or transitions in service, and staying with home visitors even when they did not view the relationship as ideal. Eventually, the frequency of visits decreased as part of gradual program tapering, but the moms remained engaged and satisfied.

Pattern A: Initial Engagement, but Discontinued Participation (three cases). In this community, this pattern was slightly different from the other two because program buy-in was not particularly strong at the beginning. Typically, after early program initiation during pregnancy (n=1) or at birth (n=2), mothers received three to four monthly visits for the first six to seven months. Then, in two cases, there was an interruption within the first years because the home visitor went on maternity leave. These two did not make the transition well to a second home visitor, and decided to drop the program, claiming that they did not need it. Another terminated participation when she moved out of the service area. Overall, participation ranged from seven months to more than two years, with a decrease in service level after seven to eight months.

Pattern B: Continued Participation, Despite Interruptions (seven cases). This was the most common pattern in Community C and, again, represented persistence in

participation, as the young mothers negotiated interruptions or transitions and remained in the program until “graduation.” In the typical sequence of events, young mothers enrolled in the program during pregnancy or at birth. Service level ranged from weekly (n=1) to biweekly (n=2) to monthly. Most mothers (n=5) had strong program buy-in from the outset. One mom who initially felt ambivalent about the program became more enthusiastic after changing home visitors. There were several service interruptions — two due to child maltreatment reported filed with DSS — and four due to a home visitor’s maternity leave. Although two mothers did not make the transition well to the substitute home visitor, they decided to stay with the program because they thought they needed it. Once participants concluded that the program, as an entity, was “good for” them, they accepted their home visitors even if they did not feel that the relationship was ideal. Eventually, though the frequency of visits decreased as part of gradual program tapering, most remained engaged and satisfied. Three mothers remained in the program for between 16 to 24 months, and two continued their participation for over 30 months.

Meeting Participant Standards

Using data from the Tufts sample, we examined participants’ perceptions of the character of the program, focusing on its relative “family centeredness” — one of the model standards discussed in Chapter 3. In addition, data detailing the mothers’ overall satisfaction with the program, reasons for dissatisfaction, and consequences of that dissatisfaction, including withdrawal from the program, are presented. Standardized questionnaires, the research interview, and the range of ethnographic methods were used to investigate these issues.

Family Centeredness of the HFM Program

Quantitative data suggest that mothers perceived their home visitors as behaving in a family-centered manner — for example, showing concern for other family members and being inviting to them — from early in their tenure with the program (at the beginning of the evaluation), through to its end. On a scale of one to five, where higher scores indicate greater family centeredness, mothers consistently rated their home visitors highly, with an average score of 4.7 (n=359) at the earliest point, and an average score of 4.6 (n=160) at the final data collection point (18 months later).³

The attributes of the home visitor, or the program itself, that lead to this perception are not clearly delineated by data collected through the Outcome Study or Process Study. And indeed, looking at the extent to which extended family members are included in HFM home visits, one might not come to the same conclusion. As is noted in Chapter 4, grandparents were present in only 18% of the home visits, and

fathers in about 10%. Ethnographic data are illuminating, however, and present a fuller and more complex view of the program on this index.

Ethnographic Findings about Client Perceptions of the Family Centeredness of Home Visitors

Mothers in the three cultural communities examined by the Ethnography highlighted ways in which providers included family members in the visits. Which family members were included in visits, and the types of relationships home visitors formed with extended family members varied across communities. In Communities A and B, grandmothers were the family member mentioned most often as participating in visits, and in Community C, fathers were the most frequently mentioned visit participants.

Grandmothers in Community A were likely to be at home during visits, and were also the main sources of child care support for the young mothers. Thus, the grandmothers saw home visits as beneficial to themselves as well. Furthermore, moms in this community particularly valued occasions during which their home visitor had “bugged out” (or spent time) with the entire family, as a close family friend or relative would.

In Community B, although grandmothers were more likely to be at work during visits, their approval of the home visitors was still important to the young mothers. For young mothers in Community C, the most salient participation was by the baby’s father or their current partner. These women gave examples of how home visitors included these men in visits, encouraged them to attend group events, or gave them instrumental support (e.g., helped them find employment). Grandmothers in this community were typically employed and out of the house during visit hours. Even when they were home and available, they generally refrained from participating on the grounds that visits were primarily for their daughters.

Participant Satisfaction with the HFM Program

In addition to using standardized questionnaires, the Outcome Study Research Interview contained questions about participant satisfaction. At evaluation enrollment, mothers were asked what they liked and disliked about the program, and what program changes they would like to see.

WHAT DID PARTICIPANTS LIKE ABOUT THEIR HFM PROGRAM?

The most common response was simply that mothers liked their home visitors; 50% of the respondents indicated as much. Approximately 25% liked the information provided by the program, and the remainder liked some other aspect of the program. Although not surprising, these findings

reinforce the notion that the relationship with the home visitor drives much of participants’ commitment to HFM.

Ethnographic analyses suggest that HFM was perceived as a “good” program — a program with concrete benefits to offer. In Community A, participants claimed that the program was particularly useful in the beginning — that is, immediately after the baby was born. They valued the program’s family focus greatly, and group meetings to a lesser extent. The relationship with home visitors was very important to Community A participants. This was also the case in Community B, where participants were the most explicit in connecting program quality with their relationship with the home visitor. In contrast, Community C participants explicitly attributed the program’s effectiveness or value to the provision of informational, emotional, and instrumental support, even though they could tap this support themselves from other sources.

Group events were valued differently across communities. Women in Community C participated in more group events, both in frequency and types, than did mothers in the other two communities. Eight moms reported attending various “socials” (e.g., at Christmas or Halloween); five reported Minnesota Early Learning Design (MELD) meetings and playgroups; and four went on field trips. In addition, several Community C participants saw group events as the most attractive program feature. They talked extensively about having “fun” at the socials, liked MELD and the fact that children were cared for while parents socialized, enjoyed the opportunity to meet all program staff, and appreciated the sense of community that developed from various activities such as field trips. One other young woman in Community C commented, “I was always there [at the] socials; MELD was every Thursday, stuff like that...was really helpful and you just meet everybody there. I love all the girls that go there and all their kids and they all love my daughter.” In contrast, in Communities A and B only four or fewer participants reported attending social events — such as the annual Christmas party — or parenting meetings, which they considered social gatherings, essentially.

WHAT DID PARTICIPANTS DISLIKE ABOUT THEIR HFM PROGRAM?

According to the Research Interview, the great majority of participants (84%) had nothing to report here — nothing to dislike. Approximately 6% disliked particular characteristics of the program, 5% disliked their home visitor, and less than 1% disliked the information provided.

Women in different communities highlighted different problems with the program. Community B participants had difficulty finding mutually convenient times in their very busy schedules. Almost half of the mothers in Community

C thought home visitors could sometimes be judgmental, particularly when they had different opinions about parenting. Interestingly, even though almost half of Community A participants also noticed differences of opinion on parenting, they appeared to shrug it off with comments about the fact that people in this community “have their own ways” and that it was not always necessary to follow the home visitors' advice. Instead, these participants complained most often about lack of closure and explanations about decreases in services.

The Ethnography provides a slightly different, more detailed picture. Participants in Community A expressed dissatisfaction with the ways in which the home visitor handled closure, unlike those in Communities B and C, who did not voice concerns over termination. Six Community A participants stated they had had difficulties over lack of closure. One mother said, “She [the home visitor] said she didn't want to say good-bye 'cause it made her sad. She didn't want to leave us.” Another said, “She [the home visitor] said, ‘I have to come back for something’ and I was like, okay, and she never came back.... I haven't heard from her and I don't think I ever will.... It kind of upset me at first just because I'd had her for three years. It was just a simple 'bye' like nothing and was kind of dry.”

On the other hand, some mothers gave examples of how they maintained contact even after their case was closed, having been encouraged by their home visitors, who left their own home phone numbers before departing.

WHAT ASPECTS OF HFM DID PARTICIPANTS WANT CHANGED?

According to Outcome Study data, the overwhelming majority of participants (89%) did not want to see any changes at all. Among the modest number of changes identified were requests for more services, for example, longer home visits, more frequent groups, and so forth.

WHY DID PARTICIPANTS DROP OUT OF THEIR PROGRAMS?

Of the 131 participants who had dropped out of the program but remained in the Tufts Outcome Study until its conclusion (18 months later), approximately half reported discontinuing services for program-related reasons; these included, for example, the fact that their home visitor had changed or had stopped visiting, and that the program's hours had never been convenient, or had become inconvenient. About one-third dropped out because they were too busy and did not have time for the program, and about 25% did not feel they needed the services.

WOULD PARTICIPANTS HAVE REMAINED IN THEIR PROGRAMS IF THINGS HAD BEEN DONE DIFFERENTLY?

Over half of the mothers who dropped out but remained in the Tufts sample at the evaluation's conclusion indicated that, yes, they would have remained if certain aspects of the program had been different. For example, approximately 14% would have remained had they had a different home visitor, while 12% claimed that they would have stayed had their home visitor not changed. Almost one-third of these mothers would have continued in HFM had its structure or content been different, for example, a more flexible schedule or location for home visits (20%), different activities during the home visit (7%), or more group activities outside the home visit (5%).

Summary and Conclusions

The majority of mothers in the MHFE sample stayed in the program for more than a year and received an average of 31 visits over the course of their involvement with HFM. From a cultural perspective, the three communities examined by the Ethnography displayed patterns consistent with those obtained in the Outcome Study sample: The pattern entitled *Continued Participation, Despite Interruptions* was the most frequently observed.

In general, families reported positive experiences of the HFM program:

- Most clients rated their home visitors as being family centered, respectful, and caring. According to ethnographic data, “family centeredness” had different meanings across cultural communities, with some mothers focusing on involvement by their partners or the babies' fathers, and others more on grandmother and extended family participation.
- Most participants were well-satisfied with their HFM program, and found that it met their expectations.
- Participants who had dropped out of HFM as of the end of the evaluation reported a wide range of personal and programmatic reasons for doing so. Mothers who dropped out most commonly reported that they were too busy for the program, did not need the program, or had experienced a home visitor change. Participants who had dropped out most often indicated they would have stayed if they had had a different home visitor, the program had better accommodated their schedules, or their home visitor had not changed.
- Ethnographic records showed participants' concerns over the need for closure as the baby turned three, and with the manner of closure in cases where it had been hard for home visitors to formally terminate their engagement with the families.

Overall, then, across a wide range of measures, at different points in their careers as HFM participants, mothers reported satisfying experiences with their home visitors and with the program in general. On the other hand, mothers remained with the program for longer durations on average than participants in other home visiting programs. Nonetheless, few mothers remained actively engaged until their children “aged out” of the program at three years of age. The juxtaposition of these findings — a high degree of satisfaction with an earlier-than-intended program termination —

raises interesting questions about how the program is structured and delivered, and whether it would be worthwhile to create opportunities to keep mothers involved using other service modalities.

Endnotes

- 1 These findings are based on the MHFE client sample, n=361.
- 2 Katzev et al, 1999; Social Policy Institute, 2002, September; Duggan et al., 2004; Williams, Stem, & Associates, 2002; Woodson, 2001.
- 3 Respondents at Time 3 were only those mothers still enrolled in the HFM program.

Section Three

Outcomes for HFM Participants

Since 1997, HFM has been guided by the four outcome goals it set at that time. These include enhancing educational and economic attainment, preventing repeat teen pregnancies, preventing child abuse and neglect, and enhancing child development. Each of these goals reflects concerns for young mothers and their children that were broadly articulated then, both in Massachusetts and across the country, and continued to be in 2005. Young parents encounter all the usual challenges of raising children in contemporary society, and then some — their youth, combined with other life circumstances, sometimes put them and their children at considerable additional risk for compromised development and functioning. Given the parameters of the home visiting model, the uncertainties of funding that have threatened the program for several years, and the characteristics of the population HFM is meant to serve, these were, and are, very ambitious goals indeed. They are referred to in this report as “long-term,” or “distal,” goals, terms that credit their ambitious nature.

To the extent possible, the MHFE has documented the progress HFM clients have made in achieving the goals noted above. Those results are reported in *Chapter 8 (Attaining HFM Outcomes)*. Early on in the process of designing this evaluation, however, the MHFE team decided to investigate, based on the research literature and discussions with program stakeholders, what are called here “intermediate objectives.” These objectives represent steps along the way to attaining the major goals. Intermediate objectives are likely to occur in the short term (or at least the shorter term), and are directly linked to specific program activities. Changes to HFM participants along the dimensions of these intermediate objectives are presented in *Chapter 7 (Making Progress on Intermediate Objectives)*.

A third way to conceive of program outcomes begins with the participants themselves, eliciting their personal goals for the program and their assessments of the extent to which those goals were met. In HFM, this process occurs through the development of an Individualized Family Service Plan (IFSP), in which both home visitors and parents are involved. Because these assessments are not verified by an objective observer, they are referred to here as “perceived effects,” and are reported in *Chapter 6: The Perceived Effects of Program Participation*.

Taken together, then, these three chapters summarize what has been learned to date through the MHFE on the progress that HFM participants have made. As a technical note, although as in earlier chapters, tables generally follow immediately after their first mention in the text, in Chapters 6, 7, and 8, tables that present results of statistical tests often appear, instead, at the end of chapter sections. Only findings with statistically significant relationships are reported in these latter tables. A “statistically significant” relationship is one in which the numerical values for two (or more) variables, achieved through quantitative analyses, are considered to be appreciably or truly different. Other terms used to denote this statistically significant relationship are “associated with,” or “related to.” Many times, statistical significance overlaps with what is often called “real-world significance” — the extent to which the different scores attained are likely to truly matter in the day-to-day lives of these families. Sometimes, however, it does not. We have included here those statistically significant relationships that appear to have at least some real-world significance to policymakers and program participants.

Chapter 6

The Perceived Effects of Program Participation

Evaluators often distinguish between two types of program effects: *perceived effects* — results from program participation that the participants themselves identify, and *observed effects* — results that emerge through the use of objective measures, or neutral data collection strategies. Observed effects are considered the more reliable, primarily since individuals may report changes that have not actually occurred. The Five-Tiered Approach (FTA) values objective measurement, but it also appreciates the limitations inherent in relying solely on these measures; for example, standardized instruments often do not capture precisely enough the phenomena of interest as they are defined “locally” — in that particular program or community. In addition, there is value in understanding what the program might well have produced, in the language of the people it is designed to serve. For this reason, we include the study of perceived effects in the MHFE, as an adjunct, not a replacement, for studying observed effects. (See Chapters 7 and 8 for findings related to observed effects.)

This chapter presents data on perceived effects from

both the clients' and the home visitors' perspectives.¹ As will be evident, both groups believe that the program is having truly positive effects, in a broad range of areas.

Perceived Effects from the Client's Perspective

Evaluation participants were asked a series of questions relating to perceived effects. Six months after evaluation enrollment, mothers talked about how they felt the home visitor had helped them, and whether the program had affected both the way they parented their baby and their feelings about themselves. Twelve months afterwards, mothers were asked to rate themselves on the progress they had made toward the goals they had been working on through HFM, to describe their perceptions of the benefits of the program, and to talk about any program effects on their plans to have more children. Responses to all of these questions then were examined in relation to maternal, child, and program background variables, including maternal age at enrollment, maternal race, child age at enrollment, parenting status at enrollment, program region, and program auspices.

Table 6.1: **Mothers' Perceptions of Areas of Impact by Home Visitors[‡]**

Areas of Perceived Impact by Home Visitors	Number of Mothers in MHFE Sample	Percent of Mothers in MHFE Sample**
Child Development Information	125	44
Education	51	18
Housing	47	17
Child Care	27	10
Obtaining Public Assistance	22	8
Employment	18	7
Pregnancy Information	16	6
Home Living Skills	9	3

[‡] Data source: RI, n=279

** Responses are not mutually exclusive

Areas of Perceived Impact by Home Visitors

Participants generated a list of child development and parenting areas in which they perceived their home visitors to have made a positive impact (see Table 6.1, page 81). As is evident in Table 6.1, obtaining child development information was, by far, the most frequent response.

For the most part, background variables did not relate to mothers' perceptions of program effects in these areas; exceptions are noted here. Mothers' perceptions that the program had helped in obtaining public assistance related to parenting status: a higher proportion of mothers who were pregnant at the start of the evaluation felt that the program had helped in this way. Maternal age at enrollment in the program related to mothers' perceptions that the program had helped with housing, with slightly older mothers expressing that view more often. This may be the case because publicly supported housing services are not available to mothers younger than age 18. (See Table 6.4, page 83, for statistical results.)

Six months into the evaluation, mothers (n=273) were asked whether they felt their home visitor had played a role in their parenting. About 75% did see positive effects in this domain. At that same time, when asked about their home visitors' impact on their feelings about themselves, again, a large percentage (62%) believed that their home visitor had had a positive effect. The only background variable related here was the baby's age at enrollment: mothers with this view had slightly older babies. (See Table 6.4, page 83, for statistical results.)

Progress toward Personal Goals

Twelve months into their participation in the evaluation, mothers (n=178) were asked to rate, on a 5-point scale, how much progress they felt they had made toward the goals they had been working on with HFM (see Table 6.2). The overwhelming majority (95%) answered positively; about one-third felt that they had not only made progress but, indeed, had achieved their goals. No background characteristic related here (because, primarily, with a 95% rate, there was no room to see effects).

Table 6.2: **Mothers' Perceptions of Progress toward Goals**[‡]

Progress Rating	Frequency	Percent
No Progress	7	4
Little Progress	2	1
Some Progress	50	28
Substantial Progress	58	33
Goals Reached	61	34

[‡] Data source: RI, n=178

Benefits of the Program

After a year in the evaluation, mothers (n=185) were asked about the benefits they saw to being in the program (see Table 6.3). A large percentage of respondents noted the information provided as key. Another way to interpret these results is to categorize them by type of social support — informational, instrumental, or emotional. By those categories, informational support is still the most common; emotional support (“someone to talk to” and “met other teens”) is next (24%); and instrumental support (“assisted with daily living necessities” and “resources and services”) is third (18%). Mothers of older babies were less likely to perceive the emotional support benefit (“someone to talk to”) than mothers with younger babies. (See Table 6.4, page 83, for statistical results.)

Table 6.3: **Mothers' Perceptions of Benefits of the Program**[‡]

Category	Frequency	Percent
Provided Information	105	57
Assisted with Daily Living Necessities	26	14
Met other Teen Mothers	23	12
Someone to Talk to; Emotional Support	23	12
Resources and Services	8	4

[‡] Data source: RI, n=185

Perceived Program Effect on Plans for More Children

The vast majority of mothers (92%) who completed the data collection visit at 12 months (n=232) felt that the program had had no effect on their plans to have more children. This is a surprising, and likely concerning, finding, since a major program goal is to reduce subsequent pregnancies among participants while they are still young. Mothers who said that the program *had* affected their plans were older on average than the mothers who did not hold that view. (See Table 6.4, page 83, for statistical results.)

Perceived Effects from the Home Visitor's Perspective

Since March 2000, home visitors have documented each family's progress in attaining the goals they set for themselves in their IFSP goals. As part of these data, they enter information on the attainment of goals set by the family. Because there is no independent measure of whether or not these goals have actually been achieved (e.g., has the mother actually stopped smoking, or is she simply reporting having done so to the home visitor?), these data represent home visitor perceptions of families' progress toward their goals.

Table 6.4: **Mothers' Perceptions of Effects, by Maternal Characteristics[‡]**

Perceived Effect	Predictor	Statistical Test			Effect Size	Interpretation of Effect Size based on Conventions [†]
		Test value (t or X ²)	df	p		
HV has Helped with Housing	Maternal age	t=-2.785	275	.01	-.44	Small/Medium
HV has Helped with Pregnancy Information	Parenting status	X ² =13.76	1,279	.001	.22	Small/Medium
HV has Helped Obtain Public Assistance	Parenting status	X ² =5.49	1,279	.05	.14	Small
HV has Affected Feelings about Self	Baby age	t=2.214	121.99	.05	.35	Small
HV has Affected Plans for More Children	Maternal age	t=2.15	250	.05	.48	Medium
Benefit of Program is Having "Someone to Talk to"	Baby age	t=3.512	36.5	.001	.64	Medium

‡ Data source: RI and PDS; sample sizes vary

† Convention for interpretation of effect size for t test statistic (Cohen's d): .20=small; .50=medium; .80=large; Convention for interpretation of effect size for X² statistic (Cramer's phi): .10=small; .30=medium; .50=large.

Distribution of Goal Types by Family

It is interesting to consider the distribution of goal types set within IFSPs in relation to the four core goals of HFM: prevention of child abuse and neglect, prevention of repeat pregnancies, promotion of education and employment, and enhancement of child development. On average, the greatest proportion of goals that families set for themselves (40%) pertained to continued education and economic attainment. Nearly one-third related to the health, growth, and development of the child. Only 11% were related to parenting and a nurturing home environment. A scant 1% pertained to prevention of repeat pregnancy. Almost 16% were characterized as "other," meaning they did not relate to the four broad goals of the program.

Few demographic and background characteristics of mothers related to the distribution of goal types identified. Mothers who were pregnant at enrollment in the evaluation had a higher proportion of health, growth, and development of the child goals than did mothers who entered postpartum. Mothers who lived in relatives' or friends' homes, or in foster homes, had a lower proportion of repeat pregnancy goals than did mothers in other living situations (e.g., living with their parents or on their own). (See Table 6.5.)

Goal Achievement by Goal Type

Of those goals with achievement data entered for first follow-up (618 goals), almost 76% (457 goals) had been achieved at that time. Table 6.6 contains data on the attainment of goals

Table 6.5: **Distribution of Goal Types by Family Background Variables[‡]**

Goal Type	Predictor	Statistical Test			Effect Size	Interpretation of Effect Size Based on Conventions [†]
		Test value (t or F)	df	p		
Health, Growth, Devel. of Child	Parenting status	t=2.49	221	.05	.32	Small
Repeat Pregnancy	Living situation	F=2.23	6,202	.05	.06	Small

‡ Data sources: PDS and paper records, RI; sample sizes vary:

† Convention for interpretation of effect size for t test statistic (Cohen's d): .20=small; .50=medium; .80=large; Convention for interpretation of effect size for F statistic (eta-squared): .01=small; .15=medium; .35=large

by goal type. While there were no significant differences on attainment by goal type, continued education and economic attainment goals had the lowest attainment rate, even though a majority of these goals were attained as well.

Table 6.6: **Attainment of Goals, by Type of Goal**[‡]

Goal Type	Percent Goals Attained	Number of Goals
Health, Growth, and Development of Child	81	178
Continued Education and Economic Attainment	72	158
Supporting Parenting and a Nurturing Home Environment	75	45
Preventing Repeat Pregnancy	93	14
Other	76	83

[‡] Data source: PDS and paper records, n=618 goals

Goal Achievement per Family

By the end of June 2002, 133 families had achieved at least one IFSP goal; this represents 77% of families with goals that had been followed-up, and 60% of families with goals identified. Nearly 39% (67) of families with IFSP follow-ups had not achieved one or more of their goals. Only 14 families (8%) with goals followed-up had at least one goal of unknown achievement status.

On average, families had achieved 53% of their goals at their final follow-up. Just over 22% (39) of families had achieved no goals. Almost one quarter (42) of families had achieved all of their goals. Nearly half (81) of families had attained at least 75% of their goals.

Table 6.7 shows the average proportion of goals achieved *per family* by goal type. This proportion did not differ greatly across goal types. Continued education and employment goals had a lower attainment rate than all other goals; this may be due to the long-term nature of many of these goals, which tend to include aspirations for good careers and high school or college degrees. These goals are unlikely to be attained in the six-month period that generally corresponded to final follow-up times (see Chapter 3).

Goals that were not achieved by final follow-up were given ratings by home visitors as to how much progress had been made toward their attainment. All of the 172 families with goals that had been followed-up had at least one goal that had not been fully achieved. Table 6.8 shows the breakdown of attainment status.

Table 6.7: **Average Proportion of Each Type of Goal Achieved by Families**[‡]

Goal Type	Average Percent Achieved by Families at Final Follow-up
Health, Growth, and Development of Child	86
Continued Education and Economic Attainment	76
Supporting Parenting and a Nurturing Home Environment	96
Preventing Repeat Pregnancy	96
Other	85

[‡] Data source: PDS and paper records, n=133 families

Table 6.8: **Families' Goal Attainment Status for Goals Not Achieved at Final Follow-Up**[‡]

Goal Status	Number of Families	Percent of Families with Goals	Average Number of Goals at this Status
Little or No Progress	40	23	1.13
Some Progress	69	40	1.17
Substantial Progress	32	19	1.13
Almost Fully Achieved	5	6	1.00

[‡] Data source: PDS and paper records, n=172 families

Goals of different types had different status levels. Table 6.9 (page 85) outlines the distribution of status levels for each goal type. For most goal types, home visitors most commonly rated families as having made some progress.

Average Goal Completion Time per Family, by Participant Characteristics

As reported in Chapter 3, goals were completed or achieved, overall, in less than the six month time frame allowed by the program guidelines — 5.6 months on average for all goal types taken together. There was a statistically significant difference in the time in which goals of different types were achieved. Goals related to supporting parenting and a nurturing home environment took significantly longer to be completed than goals of all other types.

Table 6.9: **Families' Goal Attainment Status for Each Type of Goal**[‡]

Goal Type	Status Level	Number of Families	Percent of Families with this Goal Type at this Status Level	Average Number of Goals at this Status Level
Health, Growth, Development of Child	Little or no progress	8	6	1.13
	Some progress	18	14	1.28
	Substantial progress	10	8	1.20
	Almost fully achieved	2	2	1.00
Continued Education and Economic Attainment	Little or no progress	17	13	1.24
	Some progress	29	23	1.17
	Substantial progress	15	12	1.13
	Almost fully achieved	2	2	1.00
Parenting	Little or no progress	5	9	1.00
	Some progress	7	12	1.00
	Substantial progress	6	10	1.00
	Almost fully achieved	0	0	-
Prevent Repeat Pregnancy	Little or no progress	0	-	-
	Some progress	1	7	-
	Substantial progress	0	-	-
	Almost fully achieved	0	-	-
Other	Little or no progress	10	12	1.00
	Some progress	14	17	1.14
	Substantial progress	1	1	1.00
	Almost fully achieved	1	1	1.00

[‡] Data source: PDS and paper records, n=172 families

No family characteristics at enrollment related to the time it took families to attain goals: When we related average goal completion time per family to race, education, housing arrangement, living arrangement, child age, maternal age (continuous and grouped by under 17 or 17 and over), parenting status, program auspices, and employment, no significant differences emerged.

Proportion of Goals Achieved per Family, by Participant Characteristics

When we examined the relation of the percentage of goals achieved per family to background variables, a similar pattern emerged. For background variables as assessed at enrollment, no significant differences were apparent.

The proportion of goals achieved *of specific types* varied little according to different family background variables.

Interestingly, and perhaps expectedly, however, the proportion of education and economic attainment (or employment) goals achieved related to the percent of home visits that addressed topics relevant to those goal areas. Mothers for whom a higher percentage of home visits focused on education and economic attainment or employment achieved a greater percentage of these goals. The length of time a mother remained in the program also related to the attainment of education and employment goals. Mothers who were in the program longer achieved a *lower* percentage of these goals. One plausible explanation for this finding is that the mothers who remained in the program longer set more ambitious, long-term goals for themselves in the education and employment arena. (See Table 6.10 for statistical results.)

HFM mothers overwhelmingly believed that they had profited in a variety of ways from the services provided them through the program; home visitors also noted a range of goals on which significant progress had been made, including achieving goals with some regularity. Indeed, per family, across the range of types of goals, at least 75% of the goals

were reported as ultimately achieved. Several provocative findings have emerged from these data, perhaps the most interesting of which pertains to the place that the goal of reducing repeat pregnancies holds for HFM mothers. Very few of them mentioned this issue as one about which they sought information; it was virtually absent as a participant-generated goal, and over 90% of participants asserted that their home visitors had had no impact on their decisions to have another child.

Although *perceived effects* often are not verified by other means, data collected through the Outcome Study allow us to compare these assessments of benefit by mothers and home visitors with actual *observed effects* in a number of these goal areas. In Chapters 7 and 8, progress toward achieving both intermediate objectives and distal goals is reported.

Endnotes

- 1 Tables that present results of statistical tests generally appear at the end of chapter sections. Only findings with statistically significant relationships are reported in these tables.

Table 6.10: **Proportion of Goals Achieved, by Family Background Variables[‡]**

Goal Type	Predictor	Correlation Coefficient	n	p-value	Interpretation of Effect Size Based on Convention [†]
Education/Economic Attainment	Duration of program involvement	-.307	84	≤.01	Medium
	% visits covering ed/employment topics	.279	84	≤.01	Small/Medium

‡ Data sources: RI, PDS and paper records; sample sizes vary

† Convention for interpretation of r as effect size: .10=small; .30=medium; .50=large

Chapter 7

Making Progress on Intermediate Objectives

HFM was designed to achieve four primary goals: reducing rates of child abuse and neglect within the young parent population; promoting optimal infant and toddler health, growth, and development; increasing parental levels of education and economic self-sufficiency; and reducing repeat teen birth rates. In the evaluation, these desired effects are described as “distal,” or long-term, outcomes. While the evaluation gathered data to answer these impact questions, we also recognized that the attainment of these distal goals might exceed the 18-month time frame of the evaluation; therefore, the MHFE also focused on a set of “proximal,” or intermediate, objectives that might mark progress toward the more long-term goals. The selection of these “markers” was based on child, adolescent, and family development theory, and supported by previous research on the effectiveness of home visiting and other parent education and family support programs.

These intermediate objectives are as follows:

- enhancing parenting competence/parenting skills;
- increasing the amount, types, and quality of social support used by young mothers;
- enhancing the quality of the parent-child relationship; and
- promoting parental well-being.

This chapter begins with a summary of the maternal status variables used throughout these analyses. Then, for each of these intermediate objectives, we present descriptive information on the individual measures that particular objective comprises, in order to understand where the participants stand on these assessments. We also describe composite variables that were created to represent more complex combinations of measures. We describe changes in these measures over the course of the evaluation. Finally, we present how factors such as demographic characteristics (i.e., race, age, education); individual characteristics of clients (i.e., developmental status, childhood history); and program-related characteristics (i.e., staff turnover, cultural sensitivity), relate to these outcomes.¹

Maternal Characteristics at Beginning of Evaluation

In Chapter 2, we provide basic demographic information about the mothers in the MHFE sample. In addition to those maternal characteristics, the MHFE established maternal status on a number of variables (to be defined later in this chapter) that were to be used in future analyses. Table 7.1 presents these additional maternal descriptors (see page 88).

Intermediate Objective #1: Enhancing Parenting Competence and Skills

The overall construct of “parenting competence and skills” has four primary components: *Parenting Attitudes*, *Parenting Knowledge*, *Parenting Stress*, and *Parenting Confidence*. These components were measured using the following self-report questionnaire instruments (see Appendix C for full citations for the instruments noted throughout this chapter):

1. **Parenting Attitudes were assessed using the Adult Adolescent Parenting Inventory (AAPI)**, a 32-item inventory designed to assess the parenting and childrearing attitudes of adult and adolescent parents. The instrument is based on the four known parenting attitudes of abusive parents: inappropriate parental expectations, lack of empathy, strong belief in corporal punishment, and parent-child role reversal.
2. **Parenting Knowledge was assessed using the Knowledge of Infant Development Inventory (KIDI)**, designed to measure knowledge of parental practices, developmental processes, and infant behavior norms. Respondents answered 48 questions selected from a 100-item inventory.
3. **Parenting Self-Confidence was measured by the Parenting Self-Confidence Scale (PSCS)**, which assesses the extent to which parents feel confident in their knowledge and performance of day-to-day tasks of parenting.
4. **Parenting Stress was assessed by the Parenting Stress Index/Short Form (PSI)**, designed to identify dysfunctional parenting as well as estimate the potential for parental behavior problems and child adjustment difficulties.

Table 7.1: **Maternal Characteristics at Beginning of Evaluation**[‡]

Characteristics		Percent of MHFE Participants
Parenting Stress Levels Early in Evaluation	Above clinical cut-off	15
	Below clinical cut-off	85
Depressive Symptoms at Beginning of Evaluation	Above clinical cut-off	50
	Below clinical cut-off	50
Levels of Cognitive Maturity at Beginning of Evaluation	Young adolescence	35
	Middle adolescence	58
	Late adolescence	7
Financial Stress Early in Evaluation	No difficulty	24
	Some difficulty	63
	Major difficulty	13
Mother as Childhood Victim of DSS Substantiated Case of Child Abuse**	_____	26
Mother as Childhood Victim of Very Severe Physical Abuse: Self-Report	_____	43
Partner Violence: Self-Report	At least one incident of psychological aggression	97
	At least one incident of physical assault	57
	At least one incident of sexual coercion	37
	At least once incident of physical injury	19
Father Involvement	With mother and baby	72
	With baby only	8
	Not involved	20
Amount of Father Involvement	Not at all	25
	1-2x per week	13
	3-4x per week	11
	5-7x per week	52
Maternal Grandmother Regular Caregiver?	Yes	72
	No	28
Paternal Grandmother Regular Caregiver?	Yes	30
	No	70

[‡] Data source: RI; sample sizes vary

** Percentage reflects only those young mothers who lived in Massachusetts throughout their childhoods. As such it likely under-represents the true figure.

Tables 7.2 (see page 91) and 7.3 (see page 92) present results of statistical tests for the findings related to this intermediate objective.

Parenting Attitudes

Based on the normative data for the questionnaire we used to measure parenting attitudes, the responses of MHFE young mothers could be compared with abused and nonabused adolescents (similar in age to MHFE mothers), as well as to abusive and nonabusive adults.

When compared to adolescents, either those who have been abused or those without a childhood history of abuse, attitudes of MHFE mothers fall within the average to high range. Higher scores indicate more positive parenting attitudes. Therefore, when compared to others similar in age, the mothers in the evaluation sample hold attitudes about parenting that are at least appropriate, and largely above average.

Though the young mothers in the evaluation sample display parenting attitudes that are as appropriate as, or better than, those of other adolescents, it is also important to compare the HFM mothers with the normative data for adults, given the substantial amount of research documenting the risks of adolescent parenting. When compared to normative data for nonabusive adults and abusive adults, the attitudes of the MHFE mothers fall within the low to slightly better than average range. The primary concern with the low-average comparison to other adults is that these adolescent mothers will carry these beliefs into adulthood as they, and their children, develop. However, as we discuss below, there was significant positive change during the 18 months of the evaluation.

Examining change across time is of interest as it gives the first look at the ways in which the clients have changed during the course of their enrollment in the program. Scores on three of the four parenting attitude subscales show that on average, participants held more optimal parenting attitudes at later time points. Mothers were increasingly more appropriate in their expectations, more empathic, and engaged in fewer role-reversing behaviors.

Parenting Knowledge

In terms of knowledge of infant development, MHFE mothers scored only slightly below the scores of the comparison groups of adult mothers and of college students. These comparisons indicate that MHFE mothers appear to have somewhat less knowledge about child development than the comparison groups; however, we were not able to test this statistically.

We measured mothers' knowledge of infant growth and development at the beginning of the evaluation, and again one year later. On average, participants increased their knowledge of infant development during the course of the evaluation.

Parenting Stress

We collected information about parenting stress to estimate the potential for parental behavior problems and child adjustment difficulties. Mothers reported increased parenting stress from the beginning to the end of the evaluation in two areas: perceiving their children as more difficult, and in dysfunctional parent-child interactions. Overall parenting stress, however, did not increase, perhaps suggesting that there were other strengths in the relationship over time.

Very high scores for parenting stress (e.g., scores in the 90th percentile and above) are considered clinically significant scores, and indicate potential for serious adjustment difficulties. The majority of MHFE mothers (79% on any of the parenting stress indicators) did not report clinically high levels of parenting stress. Rates of clinically significant parental distress scores decreased from 21% to 16% during the course of the evaluation. Rates of clinically significant scores due to difficult child behavior increased, however, from 4% to 6%. This increase in *difficult child* scores could be interpreted in two ways: 1) the increase in *difficult child* scores may represent a group of children with more challenging temperamental styles, or 2) the increase in *difficult child* scores may be "normal" given that when a child makes the developmental transition to toddlerhood s/he generally becomes more mobile and independent.

Parenting Self-Confidence

Mothers were asked how confident they felt in their knowledge and performance of day-to-day tasks of parenting, including knowing how to care for their child's cognitive, physical, emotional, and health needs. In general, mothers reported that they were quite confident about their parenting. On average, parenting self-confidence did not change over time. No normative comparison data are available.

Composite Indicators of Parenting Competence or Skills

In order to understand parenting attitudes and parenting knowledge together, we combined them into a single composite variable: Parenting Beliefs and Knowledge.

The parenting beliefs and knowledge composite variable showed significant change over time, from the beginning to the end of the evaluation. Scores decreased significantly over time indicating that participants' overall beliefs and parenting knowledge declined from beginning to later in the evaluation. As discussed above, since parenting stress is one of the variables in this composite, this change may be due to increases in parenting stress perhaps related to the more challenging behaviors toddlers exhibit.

Links Between Parenting Competence or Skills and Characteristics of Clients and Programs

It is possible that characteristics of clients (e.g., their age, individual well-being, childhood history, quality of the home environment) and characteristics of HFM programs (e.g., staff turnover rates, program quality) might influence program outcomes in complex ways. For example, depression might influence younger, but not older, mothers' attitudes about parenting. The staff turnover rate might affect the link between social support and reduction in rates of repeat teen births. We examined whether several client characteristics and program characteristics might influence achievement of program objectives. The client characteristics included age of mother and child; whether mother was pregnant or parenting at program enrollment; quality of the home; maternal health risk behaviors; mother's childhood history; domestic violence history; residential status; race/ethnicity; financial status; education; and social support. The program characteristics included service level pattern; staff turnover; cultural sensitivity; program auspices; and overall program quality.

Parenting Competence and Skills Related to Parental Well-being

DEPRESSION, HEALTH RISKS, AND COPING BEHAVIORS

Aspects of parental well-being (maternal depression, engaging in health risk behaviors) were related to parenting competence and skills. Mothers with fewer symptoms of depression reported more optimal parenting beliefs and knowledge after a year in the evaluation. Similarly, mothers with high depressive symptoms and mothers who engaged in a higher number of risky behaviors were less confident about their parenting, while mothers who employed more adaptive coping styles displayed greater levels of parenting self-confidence.

PARENTING COMPETENCE AND SKILLS RELATED TO SOCIAL SUPPORT

The social support composite was related to mothers' parenting competence and skills. Mothers who reported high social support at the beginning of the evaluation had more favorable parenting knowledge and beliefs at both the beginning and end of the evaluation. Mothers who reported high social support at the end of the evaluation also had lower parenting stress at the end of the evaluation.

Parenting Competence/Skills Related to Client Characteristics

MATERNAL DEVELOPMENTAL STATUS

Mothers with greater cognitive maturity (e.g., being able to think abstractly, discuss feelings, develop insight into self and situation, and respond to varying developmental needs of

child) held more optimal parenting beliefs and knowledge. Mothers with greater organizing and planning behaviors (e.g., more likely to set goals, to have a household budget or to make a list of things to do) held more optimal parenting beliefs and knowledge and reported less parenting stress. In addition, mothers who reported higher personal organizational and planning skills at the end of the evaluation were less confident as parents, possibly indicating that these parents used organizing and planning as a strategy to help them in their parenting.

QUALITY AND SAFETY OF HOME AND NEIGHBORHOOD

Mothers with more optimal parenting beliefs and knowledge also had better housing conditions (e.g., consistently clean, orderly or well maintained) later on in the program and better indoor play area conditions (e.g., availability of age-appropriate toys, play areas that are childproof — that is, made safe with covered outlets, child safety gates, etc.). Mothers who lived in more positive, cohesive neighborhoods (e.g., neighborhoods with a park or playground and neighborhoods in which people feel safe walking around by themselves) were more confident as parents. This may reflect how community or family resources can influence or bolster an individual's sense of competence.

DOMESTIC VIOLENCE

Mothers reported on the ways in which they resolved conflict with their domestic partners. Mothers who engaged more in partner negotiation strategies held more optimal parenting beliefs and child development knowledge, and reported less parenting stress at the end of the evaluation. Mothers with greater stress reported more negative partner interaction (more physical assault and injury, sexual coercion, and psychological aggression, and less use of negotiation). In general, mothers who have supportive relationships with their current partners are more confident about their parenting.

RACE/ETHNICITY

Mothers' self-reported race was related to their parenting beliefs and knowledge about infant development at the beginning of, and later in, the evaluation. When compared by race, most often the scores of White mothers differed significantly from mothers who were Black, Hispanic, or who reported "Other" as their racial background, with White mothers generally indicating more optimal parenting beliefs and knowledge. The meaning of these results is unclear. The instruments used to measure parenting attitudes and knowledge are informed by, and constructed with, middle-class European-American assumptions about parenting. Thus, mothers from minority groups embracing different cultural norms and traditions may automatically not fare as well on the measure. An alter-

native explanation is that the minority groups in our sample also have fewer resources and more stressors in their lives than many of the White mothers, which could also explain the lower scores.

Parenting Competence/Skills Related to Program

Characteristics

Parenting competence and skills was related to *program quality* and *program auspices*.

PROGRAM QUALITY

Mothers who were enrolled in higher quality programs had more optimal parenting knowledge and beliefs scores later in the evaluation.

PROGRAM AUSPICES

Mothers who received service from programs housed in agencies with a child welfare focus had significantly higher scores on parenting knowledge and beliefs than mothers enrolled in programs located in agencies with either an early intervention or health services focus. Results also showed that mothers who received services from programs within human service agencies had significantly higher scores on parenting knowledge and beliefs than mothers from programs within early intervention or health-focused agencies.

PRESENTATION OF STATISTICALLY SIGNIFICANT RESULTS

Table 7.2 presents statistically significant findings related to change over time for parenting competence and skills measures.

Table 7.3 presents statistically significant findings of parenting competence and skills measures related to client and program characteristics (see page 92).

Intermediate Objective #2: Enhancing Social Support

The HFM program is based, in part, on theory and research that hold that increasing the levels of social support in the lives of young mothers indirectly encourages and supports more positive parenting. The MHFE, then, attempted to assess participant social support networks. Social support may be provided by informal (e.g., family, friends) and formal (e.g., institutions or programs) sources. Social support is a multifaceted construct that has several components: instrumental or tangible support (e.g., financial or child care assistance); emotional support (e.g., a “listening ear,” a “shoulder to cry on”); and educational or informational support (e.g., advice about community resources, advice about parenting).

We measured social support in two ways, assessing general support, and more specifically, peer networks (due to the importance of peers during the teenage years).

1. **General social support** was measured using the *Personal Network Matrix (PNM)*, which assesses a) the frequency and extent of social contact as well as b) quality of support. The PNM, for example, allows the young mother to indicate the frequency with which she has had contact with the people who are involved in her life and on whom she depends for help or assistance when she needs it.

All of the subscales of the PNM were moderately related to each other and, accordingly, a composite variable was created reflecting general social support. This composite consists of total scores for quantity of support and quality of support. The composite variable replaces use of the PNM subscales (formal and informal support) in the bivariate analyses.

2. **Peer social networks** were assessed using the “*My Friends*” instrument, which measures peer support and peer involve-

Table 7.2: **Intermediate Objective #1: Change Over Time in Parenting Competence and Skills**[‡]

Measure	Statistical Test	df	p	Effect Size	Interpretation Based on Conventions**
Parenting Attitudes	F = 28.40	(1, 284)	.01	$\eta^2 = .09$	Small
• Lack of Empathy	F = 239.78	(1, 284)	.01	$\eta^2 = .46$	Large
Parenting Knowledge	F = 131.73	(1, 263)	.01	$\eta^2 = .33$	Medium/Large
Parenting Stress Index	F = 37.59	(1, 225)	.01	$\eta^2 = .14$	Small/Medium
• Difficult Child					

‡ Data sources: Outcome measures

** Effect size conventions for η^2 are as follows: Small = .01, Medium = .15, Large = .35

Table 7.3: **Intermediate Objective #1: Parenting Competence and Skills at Latest Measurement[‡]**

Outcome	Predictor	Statistical Test				Effect Size	Interpretation Based on Convention**
		F or r	n	df	p		
Parenting Beliefs and Knowledge	Symptoms of depression	r = -.18	253		.00	r = -.20	Small
	Cognitive maturity	F = 5.41		(2, 237)	.01	$\eta^2 = .04$	Small
	Social support	r = .19	263		.00	r = .19	Small
	Organizing and planning behaviors	r = -.21	263		.00	r = -.21	Small
	Housing conditions	r = -.32	248		.00	r = -.32	Medium
	Play area conditions	r = -.27	223		.00	r = -.27	Small/Medium
	Partner negotiation	r = .26	255		.00	r = .26	Small/Medium
	Program quality	r = .22	243		.00	r = .22	Small
	Program auspices	F = 7.50		(3, 262)	.00	$\eta^2 = .08$	Small**
Parenting Stress	Organizing and planning behaviors	r = .40	261		.00	r = .40	Medium/Large
	Partner negotiation	r = -.20	233		.00	r = -.20	Small
	Physical assault	r = .24	233		.00	r = .24	Small/Medium
	Injury	r = .17	233		.00	r = .17	Small
	Sexual coercion (T3)	r = .30	165		.00	r = .17	Small
	Psychological aggression	r = .25	233		.00	r = .25	Small/Medium
Parenting Self-Confidence	Symptoms of depression	r = -.17	254		.01	r = -.20	Small
	Risky behavior	r = -.21	233		.00	r = .21	Small
	Adaptive coping styles	r = .19	285		.00	r = .19	Small
	Organizing and planning behaviors	r = -.32	285		.00	r = -.32	Medium
	Neighborhood conditions	r = .16	256		.01	r = .16	Small
	Physical assault	r = -.19	240		.00	r = -.19	Small
	Injury	r = -.21	240		.00	r = -.21	Small
	Sexual coercion	r = -.19	239		.00	r = -.19	Small
	Psychological aggression	r = -.19	240		.00	r = -.19	Small

‡ Data sources: Outcome measures

** Effect size conventions for r^2 are as follows: Small = .10, Medium = .30, Large = .50; Effect size conventions for η^2 are as follows: Small = .01, Medium = .15, Large = .35

ment with risky and positive behaviors such as dropping out of school, stealing, violence, working, volunteering, and involvement with religion. Higher scores indicate more positive peer networks.

Tables 7.4 and 7.5 (page 94) present results of statistical tests for the findings related to this intermediate objective.

Amount and Quality of Social Support

In line with program expectations, HFM participants' total amount of informal social support increased significantly between the beginning and end of the evaluation. More specifically, mothers indicated that the amount of informal support (family, friends) increased during the time of the evaluation. Quality of informal support remained stable over time, while quality of formal support declined, indicating that formal support sources were seen as less reliable over time. There was no change in peer social networks over time.

Composite Variable of Social Support

In these analyses, a single measure of social support was created, combining quality and quantity of social support, which were moderately related to each other. That is, mothers who reported more social support also reported better quality of support.

Social Support and Client Characteristics

SOCIAL SUPPORT AND PARENTAL WELL-BEING

The level of social support reported was also related to parental well-being. Mothers with more positive peer networks at the beginning of the evaluation engaged in fewer health risk behaviors (e.g., drinking alcohol, carrying weapons, or getting in physical fights) later on in the evaluation. In addition, mothers with more positive peer social networks had lower depression scores and, at the start of the evaluation, used more positive coping strategies when feeling tense or facing difficult situations (e.g., talking to a counselor at school/work or talking to friends and family about problems and concerns).

SOCIAL SUPPORT AND FAMILY RISK

Mothers who were embedded in more positive friendship networks at both the beginning and twelve months into the evaluation reported better neighborhood conditions.

MOTHERS' CHILDHOOD HISTORY

When mothers reported greater care from their mothers in their own childhoods, they also reported greater social support at the end of the evaluation.

Social Support and Program Characteristics

Social support was related to one program characteristic: total number of visits received through the program.

NUMBER OF VISITS

Mothers with a higher total number of visits reported greater dependability of social support at the end of the evaluation.

PRESENTATION OF STATISTICALLY SIGNIFICANT RESULTS

Table 7.4 presents statistically significant findings related to change over time for social support measures. Table 7.5 (page 94) presents statistically significant findings of social support measures related to client and program characteristics.

Intermediate Objective #3: Enhancing the Parent-Child Relationship

Program theory suggests that supporting and increasing the quality of the parent-child relationship will facilitate more optimal infant/toddler health, growth, and development. The construct of parent-child relationship was assessed in two ways, 1) by asking mothers to reflect on recent interactions with their children and to describe their own parenting behaviors, and 2) by observing parent-child interactions in play and teaching interactions in the home.

Tables 7.6 (page 95) and 7.7 (page 97) present results of statistical tests for the findings related to this intermediate objective.

Table 7.4: **Intermediate Objective #2: Change Over Time in Social Support Change[‡]**

Measure	Statistical Test	df	p	Effect Size	Interpretation Based on Convention**
Social Support: (Frequency of Contact)					
• Overall Score	F = 12.41	(1, 283)	<.01	$\eta^2 = .04$	Small
• Informal Support	F = 25.23	(1, 283)	<.01	$\eta^2 = .08$	Small

‡ Data sources: Outcome database and Research Interview

** Effect size conventions for r^2 are as follows: Small = .10, Medium = .30, Large = .50

Parenting Behavior Strategies

Of four general parenting behavioral strategies assessed — 1) attend to child; 2) punish or restrict child; 3) involve someone else; and 4) use reason — the primary parenting strategy reported by mothers, both at the beginning and end of the evaluation, was “attending to the child’s needs” (reported approximately 60% of the time). Mothers reported using punishment or restriction only 5% of the time at the beginning of the evaluation, increasing to 11% of the time 18 months later. The increase in maternal restriction or punishment methods may be explained by the increase in child age over the course of the evaluation. The developmental transition from infancy to toddlerhood is marked by an increase in autonomous behavior. The toddlers’ ability to walk, for example, significantly increases and usually results in more independent exploration. This ability to move about more freely may, in turn, increase the frequency with which mothers must intervene to ensure the safety of their children. Mothers also increasingly used reasoning with their children, a behavior that reflects the children’s increasing age and cognitive skills.

Parent-Child Interactions: Emotional Availability

Mother-child interaction was observed in the families’ homes, while mothers and children played together, and while the mothers attempted to teach the children something that was difficult for children of their age to accomplish. Observations were short in length, but provided the opportunity to observe parent-child interaction in both relaxed play and slightly challenging situations.

Parent-Child Relationship related to Parental Well-Being

Developmental theory suggests that mothers who are depressed or highly stressed will be less skilled and sensitive in interactions with their children, and that their children will also show different patterns of interaction. We asked whether mothers who showed greater signs of personal functioning and well-being (fewer symptoms of depression, fewer health risk behaviors, better coping behaviors) would exhibit more positive parenting. Depression was associated with mother-child interaction. Mothers who were less depressed had children who behaved more optimally during mother-child teaching interactions later in the evaluation (e.g., children were more involved and responsive).

Parent-Child Relationship related to Client Characteristics

Several characteristics of MHFE participants were significantly related to the parent-child relationship: a) child age; b) maternal developmental status; c) the quality and safety of the home environment; d) mother’s childhood history; and e) domestic violence.

CHILD AGE

Children who were older were more responsive and involving of their mothers in both free play and teaching interactions.

MATERNAL DEVELOPMENTAL STATUS

Mothers who were considered more cognitively mature also displayed more optimal parenting behaviors (e.g., were more sensitive, better at structuring, and less intrusive and hostile) in teaching interactions with their children.

Table 7.5: **Intermediate Objective #2: Social Support at Latest Measurement[‡]**

Outcome	Predictor	Statistical Test			Effect Size Interpretation Based on Convention**
		r	n	p	
Overall Social Support	Parenting stress	r = -.20	259	.00	Small
	Mother’s childhood history parental care	r = .34	283	.00	Medium
Dependability of Support	Number of visits	r = .21	282	.00	Small
Peer Social Networks	Health risk behaviors	r = -.18	239	.01	Small
	Depression	r = -.24	253	.00	Small/Medium
	Coping strategies	r = .15	284	.01	Small
	Neighborhood conditions	r = .43	254	.00	Medium/Large

‡ Data sources: Outcome measures

* Effect size conventions for r^2 are as follows: Small = .10, Medium = .30, Large = .50

QUALITY AND SAFETY OF HOME

Mothers who had better housing conditions at the end of the evaluation also showed more optimal behaviors in teaching task interactions. Mothers who had better play area conditions showed more optimal behaviors in teaching task and free play interactions at the end of the evaluation. Children who lived in homes with more appropriate play areas at the end of the evaluation were more responsive and involving in free play and teaching task interactions. It may be that the same things that enable mothers (or others in their environments) to create safe, developmentally appropriate play conditions in their homes for their infants also enable them to interact with their infants in a more sensitive fashion. For example, mothers who are more attuned to the developmental needs of infants may understand what makes for a safer, more developmentally appropriate play environment, and they are able to translate this into more optimal behavioral interactions as well.

MOTHERS' CHILDHOOD HISTORY

Mothers who reported higher levels of childhood abuse from their mothers used an overall higher percentage of negative parenting strategies in difficult situations with their children early on in the program.

DOMESTIC VIOLENCE

There were links between mothers' reports of partner relationships and their parenting. Mothers with lower rates of partner physical assault and injury showed more optimal behavior in later teaching interactions. Mothers with higher rates of partner injury were more likely to involve someone else when faced with a difficult situation with their child.

Parent-Child Relationship Related to Program Characteristics

The parent-child relationship was related to one program characteristic: intensity of visits. Mothers who had a higher ratio of visits per month used reason less often in difficult situations with their children at the end of the evaluation. It may be that mothers who used less reasoning were perceived by home visitors to need more intensive services.

Predicting Parent-Child Relationships Using Combinations of Predictors

In addition to the analyses discussed above, which represent individual associations with each intermediate outcome, we conducted analyses that combined predictors of intermediate outcomes.

Predicting Maternal Emotional Availability Behavior from Client Characteristics

Analyses were conducted to determine which of the previous client and program characteristics (parenting skills and competence, and program quality) best explain mothers' behaviors in a teaching task situation.

Results suggest that mothers' parenting beliefs and knowledge and cognitive maturity predicted their parenting in teaching situations. Mothers showed more optimal behavior in teaching tasks when they had more optimal parenting knowledge, beliefs, and parenting strategies and were more cognitively mature.

Predicting Child Emotional Availability Behavior from Client Characteristics

Similar analyses were conducted to determine which factors

Table 7.6: **Intermediate Objective #3: Change Over time in the Quality of Parent-Child Relationship**[‡]

Measure	Statistical test	df	p	Effect Size	Interpretation Based on Conventions**
Parenting Vignettes					
• Attend to child	F = 30.58	(1, 210)	<.01	$\eta^2 = .13$	Small/Medium
• Punishment	F = 53.93	(1, 210)	<.01	$\eta^2 = .20$	Medium
• Involve someone else	F = 9.72	(1, 210)	<.01	$\eta^2 = .04$	Small
• Use of reasoning	F = 70.14	(1, 210)	<.01	$\eta^2 = .25$	Medium

[‡] Data sources: Outcome measures

** Effect size conventions for η^2 are as follows: Small = .01, Medium = .15, Large = .35

best explained the variation in children's emotional availability in a teaching task situation. Maternal depressive symptoms at the start of the evaluation and their birth status at evaluation entry predicted children's responsiveness and involvement with their mothers. When mothers were more depressed, and had not yet given birth at evaluation enrollment, their infants showed less optimal interactions with their mothers.

Predicting Mothers' Parenting Strategies from Client and Program Characteristics

Mothers' reported parenting strategies were combined into four major groups: 1) attending to the child's needs; 2) involving another person; 3) punishment and restriction; and 4) reasoning with the child. Analyses were conducted to examine characteristics of clients and programs that together might predict each of the parenting strategies at the end of the evaluation. Only the use of reasoning could be predicted by such characteristics.

The use of reasoning as a parenting strategy was associated with the program characteristic of visit intensity. Mothers with fewer home visits per month used reasoning at higher rates. In addition, family background variables (baby age at enrollment, cognitive maturity) predicted use of reasoning. Mothers whose babies had been born by the time of program entry, and mothers with higher cognitive maturity scores were more likely to use reasoning. The strongest predictor in this set of family characteristics was cognitive maturity.

PRESENTATION OF STATISTICALLY SIGNIFICANT RESULTS

Table 7.6 presents statistically significant findings related to change over time for parent-child relationship measures (see page 95).

Table 7.7 presents statistically significant findings of parent-child relationship measures related to client and program characteristics (see page 97).

Tables 7.8 and 7.9 present statistically significant findings related to the prediction of maternal (Table 7.8) and child (Table 7.9) emotional availability; Table 7.10 presents findings related to the prediction of mothers' parenting strategies (see page 98).

Intermediate Objective #4: Enhancing Parental Well-Being

In this evaluation, parental well-being is defined as a lack of mental health problems, positive coping strategies, and participation in healthy lifestyle behaviors. The literature on parenting demonstrates strong connections between mothers' well-being and their capacity to foster healthy parent-child relationships through sensitive parenting. We assessed three aspects of parental well-being: depression, coping strategies, and health risk behaviors, and detail findings below.

Tables 7.14 (page 99) and 7.15 (page 100) present results of statistical tests for the finding related to this intermediate objective.

Depression

Mothers' symptoms of depression were assessed at all four time points in the evaluation. In addition to providing a score for depressive symptoms, the instrument that we used, the Center for Epidemiological Studies Depression questionnaire, yields an index of symptoms associated with clinical levels of depression. At the beginning of the evaluation, the average depressive symptoms score was in the "clinical" range; while the average score fell slightly over time; this was not a significant change.

Table 7.11 presents the number and percent of MHFE mothers who had depressive symptoms in the clinical range (see page 99). At the beginning of the evaluation, half of the young mothers scored in the clinical range; six months later, 48% of mothers had scores that were indicative of clinical levels of depression; at Time 3, 44% of mothers had scores that were indicative of clinical depression; and at the end of the evaluation, 45% of mothers had scores that were indicative of depression. Statistically, there was a decrease across time in the percentage of mothers who scored within the clinically significant range of depressive symptoms, but at the end of the evaluation there was still a very high proportion of mothers who were depressed.

Chronicity of Depression

While half of MHFE mothers had high depression scores at any point in time, it was important also to assess the extent to which mothers were depressed at multiple time points, indicating chronicity of depression. Mothers who had no scores in the clinical range across the four time points were counted in the "no depression" category. Mothers who at one or two different time points had high depressive symptoms were counted in the "transient depression" category. Mothers who had three or more scores in the clinical range were counted in the "chronic depression" category. Table 7.12 (page 99) presents the distribution of mothers in each of the groups. As can be seen, almost half of MHFE mothers displayed chronic depressive symptoms.

Comparative Data for Rates of Adolescent Depression

The rates of depressive symptoms in this population of young mothers are high, yet these rates are at least comparable to rates reported in the literature on adolescent mothers. Researchers report, for example, that 30% to 59% of adolescent mothers claim moderate to severe depressive symptoms.² Other small surveys have found depression rates in adolescent mothers to be as high as 53% to 67%.³

Table 7.7: **Intermediate Objective #3: Enhancing the Parent-Child Relationship at Latest Measurement[‡]**

Outcome	Predictor		Statistical Test				Effect Size	Interpretation Based on Conventions**
			F or r	n	df	p		
Maternal EA Free Play	Parenting knowledge and beliefs (beginning of evaluation)		r = .21	172		.01	r = .21	Small
	Parenting knowledge and beliefs (+ 18 months)		r = .21	161		.01	r = .21	Small
	Appropriate play areas		r = -.22	167		.01	r = -.22	Small
Maternal EA Teaching	Parenting knowledge and beliefs (beginning of evaluation)		r = .33	174		.00	r = .33	Medium
	Parenting knowledge and beliefs (+ 18 months)		r = .31	160		.00	r = .31	Medium
	Cognitive maturity		F = 5.11		(2, 159)	.01	$\eta^2 = .06$	Small
	Appropriate play areas		r = -.28	170		.00	r = -.28	Small/Medium
	Safe play areas		r = -.21	171		.01	r = -.21	Small
	Domestic violence	Partner physical assault	r = -.31	160		.00	r = -.31	Medium
	Partner physical injury	r = -.27	160		.00	r = -.27	Small/Medium	
Child EA Teaching	Appropriate play areas		r = -.21	166		.01	r = -.21	Small
	Child age		F = 6.46		(2, 170)	.00	$\eta^2 = .07$	Small
Child EA Free Play	Appropriate play areas		r = -.22	166		.01	r = -.22	Small
	Child age		F = 6.47		(2, 171)	.00	$\eta^2 = .07$	Small
Parenting Vignette Subscales: Use of Reasoning	Program intensity		r = -.16	248		.01	r = -.16	Small
Parenting Vignette Subscales: Involve Someone Else	CTS partner injury		r = .17	219		.01	r = .17	Small
Percent Negative Parenting Strategies	Mothers' childhood history		r = .19	231		.00	r = .19	Small

‡ Data sources: Outcome measures

** Effect size conventions for r^2 are as follows: Small = .10, Medium = .30, Large = .50; Effect size conventions for η^2 are as follows: Small = .01, Medium = .15, Large = .35

Table 7.8: **Intermediate Objective #3: Predicting Maternal Emotional Availability Behavior from Client and Program Characteristics[‡]**

Variable	B	SEB	β	R ²	ΔR ²
Step 1				.10	
Beliefs, Knowledge, Expectations of Parenting	.31	.08	.31**		
Step 2				.14	.04
Cognitive Maturity: Middle Adolescence	.49	.52	.08		
Cognitive Maturity: Late Adolescence	1.90	.90	.18*		
Mother Age	.77	.58	.10		

‡ Data sources: Outcome measures

* p < .05, **p < .01

Table 7.9: **Intermediate Objective #3: Predicting Child Emotional Availability Behavior from Client and Program Characteristics[‡]**

Variable	B	SEB	β	R ²	ΔR ²
Step 1				.07*	
Vignette: Involve Another	-1.73	1.05	-.14		
Depressive Symptoms Time 1	-.05	.02	-.22*		
Step 2				.15	.08
Play Area Conditions	-.12	.10	-.10		
Maternal Age	.14	.11	.11		
Pregnancy Status	.77	.31	.20*		

‡ Data sources: Outcome measures

* p < .05, **p < .01

Coping Strategies

At both the beginning and end of the evaluation, we assessed mothers’ coping strategies: the behaviors they used for coping when feeling tense or facing difficulties; these include, for example, listening to music — stereo, radio, etc.; talking to a teacher or counselor at school about problems; eating;

Table 7.10: **Intermediate Objective #3: Predicting Mothers’ Parenting Strategies from Client and Program Characteristics[‡]**

Variable	B	SEB	β	R ²	ΔR ²
Step 1				.03*	
Intensity	-.04	.01	-.18*		
Step 2					.07
Cognitive Maturity	.02	.01	.18*		
Baby Age 0–6 months	.04	.02	.13		
Baby Age > 6 months	.09	.04	.16*		

‡ Data sources: Outcome measures

* p < .05, **p < .01

or sleeping. The literature on coping suggests that adaptive coping strategies focus more on the problem (e.g., organizing your life and what you have to do, or trying to see the good in a difficult situation) rather than focusing on the emotions associated with the problem (e.g., crying or getting angry and yelling at people). The use of social support was considered separately, given the HFM emphasis on social support. Table 7.13 presents scores obtained by mothers in the MHFE sample reflecting their coping strategies (see page 99).

The most common form of coping behaviors was problem-focused behaviors. Both emotion-focused coping and social support decreased significantly over time. There was no significant change in the level of problem-focused coping or in the ratio of problem-focused to emotion-focused coping.

Health Risk Behaviors

The Youth Risk Behavior Survey⁴ was used to assess mothers’ health risk behaviors. For example, mothers were asked, “During the past 30 days, how many times did you ride in a car or other vehicle driven by you or someone else who had been drinking alcohol?” or “During the past 30 days, how many times were you in a physical fight?” Questions focused on several areas, including use of substances, sexual risk behaviors, eating behaviors, and violence risks.

A composite variable was created of those risk behaviors; scores obtained by mothers in the MHFE sample are presented in Table 7.14. Mothers participated in significantly fewer health risk behaviors over the course of the evaluation.

Table 7.11: **MHFE Mothers with Depressive Symptoms in Clinical Range[‡]**

	Time 1 Beginning of Evaluation		Time 2 (Time 1 + 6 mo)		Time 3 (Time 1 + 12 mo)		Time 4 (Time 1 + 18 mo)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Depression within the Clinical Range	181	50.4	135	47.9	117	44.3	127	44.6

‡ Data source: Outcome measures

Table 7.12: **Distribution of Depressive Symptoms among MHFE Mothers, by Relative Chronicity[‡]**

Depression	Frequency	Percent
No Depression	109	30.2
Transient Depression	155	42.9
Chronic Depression	97	26.9

‡ Data source: Outcome measures

Table 7.13: **Coping Strategies Used by Mothers in MHFE Sample[‡]**

	Beginning of Evaluation		End of Evaluation	
	Mean/Range	n	Mean/Range	n
Problem-Focused Coping	3.35/ 1.78–5.00	360	3.26/ 1.56–5.00	285
Emotion-Focused Coping	2.55/ 1.67–3.70	360	2.46/ 1.26–3.56	285
Social Support	2.74/ 1.43–4.79	360	2.56/ 1.14–3.92	285

‡ Data sources: Outcome measures

Maternal Well-Being and Client Characteristics
Maternal Developmental Status

There were strong links between mothers' well-being and her developmental status (cognitive maturity and organizing and planning skills). Mothers with high depression scores also reported fewer organizing and planning behaviors at

Table 7.14: **Total Health Behavior Scores Reported by Mothers in MHFE Sample[‡]**

	Six Months After Beginning of Evaluation		End of Evaluation	
	Mean/Range	n	Mean/Range	n
Total Health Behavior Score	13.45/ 2–52	255	10.83/ 2–53	239

‡ Data source: Outcome measures

both the beginning and end of the evaluation. Mothers who engaged in more risky behaviors also reported using more organizing and planning, and, for risky behaviors early in the evaluation, had higher cognitive maturity scores.

Family Risk

Both neighborhood conditions and financial stress were associated with maternal well-being. Poorer neighborhood conditions were associated with higher maternal symptoms of depression. Greater financial stress (difficulty managing expenses) later on in the evaluation was related to greater depressive symptoms, less positive coping, and greater health risk behaviors (e.g., drinking alcohol, carrying weapons, or getting in physical fights) early in the evaluation.

Mothers' Childhood History

The quality of the mothers' childhood relationships with their parents was associated with their current well-being. Mothers with high depression scores at the end of the evaluation reported greater maltreatment by their mothers when they were children, as well as greater parental overprotection. Parental overprotection in these cases may reflect overly controlling parental behavior. Mothers who reported more health risk behaviors six months into the evaluation reported greater maltreatment in childhood relationships with parents.

Domestic Violence

Mothers who reported more psychological aggression and injury in partner conflict situations had greater depressive symptoms at the end of the evaluation. Mothers with less positive coping strategies at the end of the evaluation reported more psychological aggression, physical aggression, and injury in conflict situations with their partners.

Maternal Well-Being and Program Characteristics

Two program characteristics were related to maternal coping strategies at the end of the evaluation: adherence to service level and program auspices. Mothers who were more likely to use less positive coping strategies received at least the number of home visits required by the program, and were more likely to be enrolled in programs housed within a child welfare agency than those within a health services-focused agency.

Predicting Mothers' Coping from a Combination of Factors

We were interested in combinations of factors (maternal background characteristics and domestic violence) that might predict mothers' coping, since characteristics of mothers and their social context do not operate in isolation. When these characteristics were considered together, both maternal background characteristics (their organizing and planning skills, their financial stress) and domestic violence predicted coping. Mothers who reported less financial stress, who had better organization and planning skills and who experienced less physical assault in partner relations reported more positive, or problem-focused, coping.

Predicting Mothers' Depressive Symptoms from Maternal Characteristics

Analyses were conducted to determine which of the following client characteristics (range of maternal background characteristics and organization and planning behavior) best explain mothers' depressive symptoms. When these characteristics were considered together, both organization and planning

and financial stress predicted depressive symptoms. Mothers who had poorer organization and planning behavior and more financial stress had more depressive symptoms. When background characteristics were taken into account (in other words, controlled for), the mothers' exposure to partner psychological aggression predicted depressive symptoms. Mothers who experienced greater psychological aggression from their partners had more depressive symptoms.

PRESENTATION OF STATISTICALLY SIGNIFICANT RESULTS

Table 7.15 presents statistically significant findings related to change over time for parental well-being measures.

Table 7.16 presents statistically significant findings of parental well-being measures related to client and program characteristics (see page 101).

Tables 7.17 presents findings that predict mothers' coping ability, and Table 7.18 predicts mothers' depressive symptoms (see page 102).

Summary of Findings on Progress Toward Attaining Intermediate Objectives

Table 7.19 (page 103) summarizes the progress made on the program's four intermediate objectives. We note the specific constructs within each objective for which data have been presented in this chapter, and then characterize the findings as positive, negative, or no change. In this context, positive means that the rate for the MHFE sample is either better than the comparison standard, or change among the participants is in positive direction. Negative suggests that the rate for the MHFE sample is either worse than the comparison standard, or change among the participants is in the negative direction. Neutral indicates that the MHFE sample rate is roughly equivalent to the comparison standard, or that no appreciable change, in either direction, was documented. The final column notes the particular aspect of the program (e.g., adherence to service level, service intensity or duration, etc.), if any, that affected the results, and the direction of that effect.

As the findings here indicate, mothers in the MHFE

Table 7.15: **Intermediate Objective #4: Parental Well-being Change Over Time[‡]**

Measure	Statistical Test	df	p	Effect Size	Interpretation Based on Convention**
Depression					
• CES-D summary score	F = 5.18	(1, 283)	.05	$\eta^2 = .02$	Small
Youth Risk Behavior Survey	F = 33.18	(1, 194)	.01	$\eta^2 = .15$	Medium

[‡] Data Source: Outcome measures

** Effect size conventions for η^2 are as follows: Small = .01, Medium = .15, Large = .35

Table 7.16: **Intermediate Objective #4: Enhancing Parent well-being at Latest Time Point**[‡]

Outcome	Predictor		Statistical Test				Effect Size	Interpretation Based on Convention**
			F or r or t	n	df	p		
Depression	Organizing and planning skills (T1)		r = .27	284		.00	r = .27	Small/Medium
	Organizing and planning skills (T4)		r = .36	284		.00	r = .36	Medium
	Mothers' childhood history	Childhood history of abuse	r = .20	248		.00	r = .20	Medium
		Parental overprotection	r = .19	242		.00	r = .19	Small
	Domestic violence	Partner physical injury	r = .19	252		.00	r = .19	Small
		Psychological aggression	r = .31	252		.00	r = .31	Medium
	Neighborhood conditions		r = -.24	284		.00	r = .24	Small
	Financial stress		r = .33	280		.00	r = .33	Medium
Coping	Domestic violence	Partner physical assault	r = .21	253		.00	r = .21	Small
		Psychological aggression	r = .23	253		.00	r = .23	Small
		Partner physical injury	r = .17	253		.01	r = .17	Small
	Adherence to service level		t = 2.71		63.18	.01	d = .40	Small/Medium
	Program auspices		F = 4.09		(3, 283)	.01	$\eta^2 = .04$	Small
	Financial stress		r = -.22	280		.00	r = -.22	Medium
	Health Risk	Childhood history of abuse		r = .29	103		.00	r = .29
Organizing and planning skills		r = .25	238		.00	r = .25	Small/Medium	
Cognitive maturity		F = 4.96		(2, 234)	.01	$\eta^2 = .04$	Small	
Financial stress		r = .20	212		.00	r = .20	Small	

[‡] Data source: Outcome measures

** Effect size conventions for r^2 are as follows: Small = .10, Medium = .30, Large = .50; Effect size conventions for η^2 are as follows: Small = .01, Medium = .15, Large = .35; Effect size conventions for Cohen's d are as follows: Small = .20, Medium = .50, Large = .80

Table 7.17: **Intermediate Objective #4:
Predicting Mothers' Coping from a
Combination of Factors[‡]**

Variable	B	SEB	β	R ²
Step 1				.17**
Organization and Planning t4	-.30	.07	-.28**	
Some Financial Stress	-.10	.04	-.20*	
Financial Stress	-.07	.04	-.12	
Financial Stress	-.12	.06	-.13*	
Major Financial Stress	-.01	.07	-.01	
Domestic Violence: Physical Assault	-.00	.00	-.15*	

‡ Data source: Outcome measures

* $p < .05$, ** $p < .01$

Table 7.18: **Intermediate Objective #4:
Predicting Mothers' Depressive Symptoms
from Maternal Characteristics[‡]**

Variable	B	SEB	β	R ²	ΔR^2
Step 1				.22**	
Organization and Planning	11.27	2.47	.28**		
Neighborhood Conditions	-.41	.16	-.16*		
Some Financial Stress	4.55	1.41	.24**		
Financial Stress	2.85	1.62	.12		
Financial Stress	7.01	2.11	.21**		
Major Difficulty Managing Expenses	7.53	2.54	.19**		
Step 2				.25**	.03
Domestic Violence: Psychological Aggression	.04	.01	.19**		

‡ Data source: Outcome measures

* $p < .05$, ** $p < .01$

sample made progress in each of the intermediate objective categories during the 18-month study period. Because little comparison data is available for teen parents per se, much of that progress is represented by positive change over time. On the positive side of the ledger, regarding the relationship of program variables to positive change, several clear links emerged: for example, program quality was related to an increase in child development knowledge, and total number of visits was related to enhanced social support. Data presented in earlier chapters document the extent to which these areas are the foci of both home visitor activity and participant interest; in that sense, then, these findings are expected, and suggest an integrity or alignment with the HFM approach.

On the worrisome end are the data related to maternal depression, particularly the chronic depressive symptoms documented for 27% of the MHFE sample. Although these rates appear no worse than those obtained in a number of studies with comparable groups, they are, in any case, unacceptably high; insofar as maternal depression is acknowledged to compromise even the best of parenting intentions, HFM cannot do its best job in the face of this real mental health barrier.

In Chapter 8, progress in distal outcome areas is detailed.

Endnotes

- 1 Tables that present results of statistical tests generally appear at the end of the chapter section addressing that particular intermediate objective. Only findings with statistically significant relationships are reported in these tables.
- 2 Leadbeater & Linares, 1992
- 3 Reis, 1988
- 4 CDC, 1997

Table 7.19: **Summary of Findings on Intermediate Objectives**

Intermediate Objective	Construct	Finding	Final Status of Goal Linked to Program Moderators on a Bivariate Level
Enhancing Parenting Competence and Skills	Parenting attitudes	Positive	
	Child development knowledge	Positive	
	Parenting stress	Neutral	
	Parenting self-confidence	Neutral	
	Composite variable: Parenting knowledge and beliefs	Negative	Greater child development knowledge is related to better program quality
Enhancing Social Support		Positive	Greater dependability of social support is related to greater total number of home visits
Enhancing Parent-Child Relations	Parenting strategies: Reasoning	Positive	Greater use of reasoning in difficult situations with child is related to lesser program intensity
	Parenting strategies: Punishment	Positive	
Enhancing Parental Well-Being	Depression	Positive	
	Coping	Neutral	More optimal coping was related to certain agency types
			More optimal coping was related to greater adherence to service level
Health risk behaviors	Positive		

Chapter 8

Attaining HFM Outcomes

In the end, however compelling a case has been made for attending to program operations information, or even to findings on intermediate objectives, policymakers generally remain most interested in the results of outcome study. The investigation of outcomes answers the “yes, but did it work?” questions, the ultimate “so what?” questions. We would phrase this interest as follows: To what extent did participants change in ways consonant with the program’s intentions, and for which groups, under which conditions, was it more or less likely that progress in a particular goal area occurred?¹

In this chapter, we review significant findings that pertain to each of the outcome goals: enhancing education and economic attainment; preventing child abuse and neglect; forestalling repeat pregnancies; and promoting healthy child growth and development.² As will be evident, although these results have much of importance to tell us, they represent only an initial sweep through the data; they raise almost as many critical questions as they answer. If one accepts the Five-Tiered Approach (FTA) evaluation model, this is as it should be: evaluation is an iterative process. Because the social and political contexts in which programs are operating are constantly in flux, and the programs themselves are changing in response to both these external influences and to internal ones as well, any single evaluation can never be the final one. Nonetheless, we expect the results reported below to be useful to the MCTF and to the HFM programs in understanding the types of progress that *have and have not been achieved*, and perhaps more importantly, also the types that *can and cannot reasonably be expected to be achieved*. The implications of these findings for research, programming, and policy are discussed in Chapter 9.

Goal #1: Enhanced Educational and Economic Attainment

The measurement of progress in the domain of educational achievement is relatively straightforward: The Outcome Study collected data on mothers’ enrollment in high school or a GED program; it also investigated possible moderators of these results, looking for client- or program-centered factors that might explain differential results among the mothers — that is, which mothers continued their education and

which did not. The Ethnographic Studies offered more texture to these explanations, delineating three common patterns that represent young mothers’ responses to this goal within the three substudy communities.

Results of tests of statistical significance are presented in Tables 8.1, 8.2, and 8.3 (see pages 108 and 109).

Maternal Participation in Secondary Education

At the beginning of the evaluation, 56% (202) of MHFE mothers were in school or had graduated from high school or a GED program. By its end, 83% (234) of mothers were in school or had graduated. This rate compares favorably with data from the National Longitudinal Survey of Youth. In that nationwide study, 52% (520/1009) of women who became mothers under the age of 20 had graduated from high school or completed a GED by the age of 25.³

The majority of mothers improved their educational status during the course of the evaluation. Almost 70% (80) of mothers who were not in school at the start of the evaluation (117) were in school or had graduated by the end of the evaluation. Of the 164 mothers who were in school or had graduated as of the start of the evaluation, only 6% (10) of mothers had dropped out during the period of the evaluation.

EDUCATION AND SOCIAL SUPPORT

In general, mothers who were in school or had graduated by the end of the evaluation had more people in their lives on whom they could consistently rely for good quality social support at that point as well. These mothers also entered the evaluation with friends who behaved more positively (e.g., friends who were more likely to volunteer, be supportive, and stay in school). (See Table 8.1, page 108.)

EDUCATION AND MATERNAL WELL-BEING

The only aspect of mothers’ personal well-being that was related to their educational attainment was their ability to organize and plan (a measure of developmental maturity). Mothers who were in school or had graduated by the end of the evaluation were more likely to have started off with better organizational skills than mothers who were not in school and had not graduated. (See Table 8.1, page 108.)

EDUCATION AND CLIENT CHARACTERISTICS

Mothers who had graduated or were enrolled in school at the end of the evaluation:

- were more mature in their thinking, and
- lived in better quality neighborhoods at the end of the evaluation. (See Table 8.1.)

EDUCATION AND PROGRAM CHARACTERISTICS

Maternal education at the end of the evaluation related only to program quality. Mothers in programs with higher quality scores tended to be in school or to have graduated or received a GED by the end of the evaluation (see Table 8.1).

PREDICTION OF EDUCATIONAL ATTAINMENT

Mothers' chances of having graduated or being in school increase when:

- their friends behave in more positive ways, and
- they are in programs with higher quality scores.

(See Table 8.2, page 109.)

Possible Explanations of Maternal Education Choices derived from the Ethnography

In the ethnographic analysis of educational and employment outcomes, our primary goal was to understand how intervention processes and approaches intersect with familial cultural scripts (shared belief systems and their behavioral expression) and thereby influence the achievement of both proximal objectives and outcomes. Therefore, our first task was to examine whether there were differences among communities in their attainment of educational goals, and our analysis revealed that, indeed, there were differences. In Communities B and C, all the young mothers had completed or were in the process of completing high school or a GED program. In contrast, young mothers in Community A were not as successful in meeting educational goals as were the participants in the other two communities: Five mothers out of ten had dropped out of high school by the end of the Ethnography.

While analysis of the entire Tufts sample tells us what works in general (e.g., social support predicts educational attainment), the Ethnography's focus on selected communities for in-depth study enables us to understand why a particular approach might not work for a particular sample, and what types of obstacles participants might face. Therefore, upon realizing that Community A was not as successful as the other two communities in meeting educational goals, our subsequent analyses were aimed at understanding the reasons for this pattern. Our approach was to describe the configuration of routine practices in Community A that were relevant to a different level of educational attainment in this community. We drew on data reflecting participants'

ethnotheories (culturally embedded sets of beliefs) of child-rearing, parenting, informal/formal social supports, and help seeking in order to understand participants' perceptions of how their own parenting roles or desires to establish a family intersected with other aspects of their lives (e.g., educational and career goals).

We constructed case history charts to document and understand various pathways taken by participants in their educational journeys. In constructing these charts, we included all relevant data, especially those reflecting participants' ethnotheories of parenting, family life, and help seeking (e.g., their support system). Three modal patterns emerged. Common to all the mothers in this sample was the belief that establishing and ensuring the stability of their own nuclear families was a path to maturity and heightened social status. Mothers seemed to value education to the degree that they saw it as compatible with, and enhancing, the future well-being of their family. These three patterns are described below.

The first pattern, *education is necessary and possible*, represents the typical trajectory for participants who completed high school (three cases). These participants had an educational goal beyond high school before they became pregnant, and they did not let pregnancy deter them from pursuing their original dreams, or a subsequently revised version. Their statements about the importance of education reflected a belief in the connection between education and well-paying jobs. They tended to maintain good academic standing as students. If absences became a problem, they knew how to advocate for themselves, as reflected in this teen's statement: "So I go in today and they call me and tell me that I might not graduate and they have to call a board meeting before the end of the school year. That ain't happening. If you think I have a chance of not graduating from this school, you let me know by Friday, so Monday morning I'm already scheduled to go into [the other public high school in town]." These participants also spoke about having mentors and other formal support, as well as friends who sustained them when faced with peer hostility and other challenges.

The second pattern, *education is necessary but impossible*, represents the typical trajectory for participants (four cases) who intended to finish high school but faced obstacles that eventually became insurmountable. These participants started off committed to completing high school. However, after having their babies, their academic performance suffered, their absences increased due to parenting-related issues, and they had to respond to school administrators about their lackluster performance. Unlike the women in the first group, these students reported hostile exchanges with counselors who did not let parenting responsibilities become an excuse for a poor school record. For instance, one student said, "They told me that nobody told me to have that kid. 'It's not

my fault you have all those problems.’... and sometimes I want to kill them.” The parents of these moms were less involved and less able to stand up and advocate for their daughters. These explanations of the difficulties faced by the participants suggest that lack of institutional supports and outreach became real obstacles in achieving desired educational attainment.

Eventually, these moms were encouraged to enroll in GED programs, even though they knew that these would be more challenging, given the limited guidance and support offered in these programs. Indeed, participants (four mothers) seemed to linger in GED programs for one or two years until, towards the end of the Ethnography, someone in a counseling role (maybe their welfare case manager) encouraged them to give up preparing for the GED, or to take the exam with minimal preparation. “I don’t know. You keep sitting in a chair half the day. What you have inside your head is tiring. I just want to get a job.... If you don’t get to finish the GED, she still gives you a good job.” Instead, the moms were counseled to take skills-training courses and find low-skilled jobs, and they were told they could make between \$10 and \$11 per hour. The women saw this as a good opportunity and switched to skills training.

The third pattern, *education is not necessary*, represents the trajectory for those participants who did not seem to have strong educational goals right from the beginning (three cases). Their narratives revealed a lack of confidence in high school as a useful endeavor. Motherhood was their desired trajectory, along with staying in long-term relationships with their babies’ fathers. By the time they gave birth, they had already decided to drop out of school. Only one mom attempted to complete the GED, at the urgings of her home visitor. Apparently, lack of support, added to her lack of motivation, conspired against GED completion.

Eventually, these mothers found jobs, although they were unsatisfactory, low-wage ones. At this point, one mother, whose husband had two jobs and could make ends meet, decided that it was better to stay home with her baby, although this had an effect on her general feelings about, and satisfaction with, her circumstances. Another young mother was content with a job that provided enough income to pay the bills, and was considering a second pregnancy to complete her family at the end of the Ethnography — despite her home visitor’s urging to delay the second child. A third mother, however, was not doing well. Dissatisfied with her low wages, and upset by the discrimination and poor treatment she received from her supervisors, she began to act out her anger at home, negatively affecting her family relationships.

These three patterns reveal how the mutually constitutive nature of cultural practices and institutional policies and

programs can make it difficult to examine educational and economic outcomes separately from parenting beliefs and values. Should failure to complete high school be considered a negative outcome when the mother’s reason for this decision was to stay home and parent her child?

We also need to better understand institutional forces over which the HFM program had very limited control, and that posed serious obstacles to the achievement of program goals. For example, there were stark differences across communities in the level of support provided to pregnant teens and to their babies at their community high schools. In Community C, several moms reported that they joined a program specifically designed for young parents, and used a child care facility located next to one high school. In contrast, Community A mothers had to take school buses with their babies to distant child care centers, which added considerable commuting time to their tight schedules. In addition, these young mothers did not report sympathetic interactions either with their children’s child care providers or with their own school counselors. From the outset, therefore, the odds appear to have been stacked against them.

However, defying the odds, three moms in Community A managed to complete high school, and two moved on to community college. Their stories seem to demonstrate the advantage of having formal support outside the family; these include an understanding counselor, a mentor, and informal support from friends. Why was formal, institutional support available only to such a small number of students? Did students who performed well academically receive more support when they became pregnant? Did they just happen to have more understanding counselors? Did they have better help-seeking skills? These important questions need to be examined more fully.

Maternal Economic Self-Sufficiency

Given that the MHFE proceeded over only an 18-month period beginning soon after the mothers enrolled in the program, we were concerned that we would not be able to capture the movement toward economic self-sufficiency, because it would primarily be occurring after we concluded data collection. Indeed, the encouraging, positive results on maternal education reported above support our hunches that the majority of these mothers have put diligent effort into the completion of their education, as the first step to the financial security and self-reliance that many desire, as noted in their own personal goal statements. If, as we contend, these moms are working sequentially to attain these economic results, we would not expect to see them, at the point that our evaluation ended, as more financially independent than they were as pregnant or newly-parenting young women.

How, then, might we measure this goal of economic self-sufficiency? The simplest indicator is the percentage of mothers receiving Temporary Assistance for Needy Families (TANF), and we present those data, tracking their change over the period of the evaluation, and identifying client and program moderators, below. We also present comparison data for this population. The interpretation of these findings, however, remains ambiguous, and is discussed in Chapter 9.

Maternal Receipt of Public Assistance through TANF

At the start of the evaluation, 22% of mothers (76 of 353) were receiving TANF. At the end of their participation in the evaluation, the rate of TANF receipt rose to 35% (99 of 286). Although this rate of public assistance receipt demonstrates an increase over the period of the evaluation, it nonetheless falls at the lower end of statistics reported for teen mothers, married and unmarried. The proportion of teen parents receiving welfare has ranged historically from 44% for all teen mothers to as much as 75% for teen mothers who remain unmarried five years after the birth of their child.⁴

Of the mothers who were on TANF at the start of the evaluation, 44% (28 of 63) left the TANF rolls by the end of the evaluation. Almost 30% of mothers (62 of 217) who were not on TANF at the start of the evaluation were receiving this benefit by the end of the evaluation.

TANF and social support. In general, mothers receiving TANF had

- lower average levels of support from family and friends, and
- friends who behaved less optimally. (See Table 8.1.)

TANF and client characteristics. Maternal well-being related to receipt of TANF at the end of the evaluation. Mothers on TANF reported using more emotional than problem-solving responses to problems (a less optimal pattern) at the end of the evaluation (see Table 8.1).

PREDICTION OF TANF RECEIPT

Finally, mothers' coping styles and the behavior of their friends are the strongest predictors of TANF receipt. Mothers have a lower likelihood of receiving TANF when they use more problem-solving responses to problems (relative to emotional responses) and when the behavior of their friends is more positive. In other words, mothers who are more mature along this problem-solving dimension, and have friends who live more positive lifestyles, are less likely to receive TANF. (See Table 8.3, page 109.)

PRESENTATION OF STATISTICALLY SIGNIFICANT RESULTS

Table 8.1 presents data related to the relationship of education and economic goals related to maternal and program characteristics. Tables 8.2 and 8.3 contain data that predict these outcomes (see page 109).

Table 8.1: **Goal #1: Results of Significant Bivariate Statistical Tests[‡]**

Outcome	Predictor	Statistical Test			Effect Size	Interpretation Based on Convention**
		t-value	df	p		
Education	Social support at end of evaluation	-3.35	277	.001	-.53	Medium
	Behavior of friends	-3.04	278	.01	-.48	Medium
	Organizing and planning	3.05	278	.01	.48	Medium
	Maturity of thinking	-2.62	253	.01	-.37	Small/Medium
	Quality of neighborhood at end of evaluation	-2.92	278	.01	-.47	Medium
	Program quality	-2.91	89.499	.01	-.37	Small/Medium
TANF Receipt	Behavior of friends	3.18	252	.01	.42	Small/Medium
	Quantity of social support from family	2.67	283	.01	.34	Small/Medium
	Quality of formal social supports	-2.61	162.95	.01	-.35	Small/Medium
	Coping styles	3.05	283	.01	.38	Small/Medium

[‡] Data sources: Outcome measures, sample size varies

** Convention for interpretation of this effect size statistic (Cohen's d): .20=small; .50=medium; .80=large

Table 8.2: **Results of Logistic Regression Analysis Predicting Education Status[‡]**

Predictor	B	SE	Odds Ratio	Wald Statistic
Behavior of Friends	1.11	.50	3.04	5.01*
Program Quality	.28	.11	1.33	6.43*

‡ Data source: Outcome measures

* $p < .05$

Table 8.3: **Results of Logistic Regression Analysis Predicting TANF Receipt[‡]**

Predictor	B	SE	Odds Ratio	Wald Statistic
Behavior of Friends	-.85	.32	.43	6.88**
Coping	-1.24	.59	.29	4.37*

‡ Data source: Outcome measures

* $p < .05$, ** $p < .01$

Goal #2: Preventing Child Abuse and Neglect

Through a cooperative arrangement with DSS, we gained access to records of substantiated child maltreatment involving families enrolled in the MHFE; these records involved both physical abuse and neglect. We assessed rates of child abuse and neglect in the MHFE sample in several ways, including a) mother as perpetrator, b) someone other than mother as perpetrator, and c) child as victim (combining mother and other perpetrators).⁵

In the sections below we present the rates of child abuse and neglect for *mother as perpetrator*, for *another as perpetrator*, and for *child as victim* (the unduplicated combined rate).⁶ We then report analyses presenting characteristics of clients and programs related to *mother as perpetrator of child maltreatment*. We selected this variable as the most appropriate of the maltreatment variables to use in subsequent analyses because HFM is an intervention focused primarily on the young parents.

Rates of Child Abuse and Neglect

MOTHER AS PERPETRATOR

Mothers were identified as perpetrators of maltreatment against their own children in 42 cases, or 11.6% of the evaluation sample. The large majority (93%) of these cases involved neglect only, 3.3% (2) involved physical abuse only, one case (1.7%) involved a first incidence of neglect and failure to thrive, and one case (1.7%) involved a first incidence of neglect resulting in death.

REPORTS OF CHILD ABUSE AND NEGLECT BY PERPETRATOR OTHER THAN MOTHER

Substantiated reports of maltreatment by a perpetrator other than the mother were documented for 8.6% of children in the evaluation sample (31 children). Several children had more than one substantiated report; six children had two substantiated reports, and three children had three substantiated reports. In 28 of the 40 reports (70%), the perpetrator was either the biological father or the mother's partner. As in the case of maltreatment cases where the mother was the identified perpetrator, the majority (90%) were cases of neglect; 5% (2 of 40 cases) involved physical abuse, and another 5% were cases of both neglect and physical abuse.

CHILD AS VICTIM: MALTREATMENT BY ALL PERPETRATORS

Out of the evaluation sample of 361 target children, 15.5% (56) had substantiated cases of abuse by mother or another perpetrator; as stated earlier, these cases were overwhelmingly child neglect.

Comparison Data on Rates of Child Abuse and Neglect

There are very few data that allow us to directly compare rates of child abuse and neglect in the MHFE with other state or national statistics, or other scientific studies. Data are rarely collected that represent the appropriate comparison group of young mothers. The US Department of Health and Human Services reports a 2002 rate of maltreatment in the US population of children ages zero to three of 1.6%.⁷ National data from 1999 on the distribution of maltreatment types for children ages zero to three reflect the rates found in the MHFE population (over 90% of the substantiated cases were neglect).⁸ These data do not report separate statistics by agent of maltreatment, nor age of perpetrator. One empirical study represents more appropriate comparison data. A small study of 45 teenage mothers in Rhode Island (48% African American, 30% Hispanic, 22% Non-Hispanic White) reported a maltreatment rate of 33% (mother as perpetrator) during their children's first two years. MHFE incidence rates compare favorably to this rate. Sixty percent of the Rhode Island maltreatment cases represented neglect, compared to 93% in the MHFE sample.

Mothers as Victims of Maltreatment During Their Own Childhoods

The "cycle of abuse," in which a person who is abused in turn becomes a perpetrator of maltreatment, is well-documented. While it is the case that the likelihood of perpetrating maltreatment is higher among those who have been abused themselves, most maltreated children do not go on to become agents of maltreatment. In the MHFE, we were able to ex-

amine DSS records for the presence of substantiated cases of abuse and neglect with the mothers as victims of maltreatment during childhood. Of the 361 MHFE mothers, 94 of them were known victims of maltreatment during their own childhoods, having substantiated DSS records in Massachusetts. This represents 26% of the MHFE sample — a number that is likely an underestimate, as not all mothers spent their entire childhoods in Massachusetts.

Client Characteristics Related to Maltreatment with Mother as Perpetrator

We examined characteristics of clients (e.g., maternal age, race, education) to provide greater understanding of which mothers were more likely to have substantiated cases as perpetrators of child abuse and neglect. No client characteristics related to substantiated cases.

Other Predictors of Child Abuse and Neglect with Mother as Perpetrator

In order to understand what factors in mothers' lives might *predict* substantiated cases of child abuse and neglect with mother as perpetrator, we looked at several characteristics of mothers and their contexts prior to the substantiated incidents.

PREDICTION OF ALL CASES WITH MOTHER AS PERPETRATOR

Mothers' friendship networks emerged as the most important factor in mother-perpetrated maltreatment. The measurement of positive friendship networks was a 5-point scale; for every 1-point increase in positive friendship networks (indicating increasingly positive behavior on the part of friends) the odds of child victimization decreased by approximately 70% (see Tables 8.4, below, and 8.5, page 111).

PREDICTION OF CASES OF MOTHER AS PERPETRATOR MORE THAN SIX MONTHS AFTER PROGRAM ENTRY

Another way of looking at the data is to examine only those cases of child maltreatment after families had the chance to benefit from the program; that is, to consider cases of maltreatment that occurred six or more months after program entry. The most important factors that related to these cases were mothers' reports of psychological abuse (by a secondary caregiver) during childhood and the quality of friendship networks. As the quality of friendship networks decreases and the level of reported psychological abuse in childhood increases, the chances increase that a mother will be a perpetrator in a substantiated case of child maltreatment. (See Tables 8.4, below, and 8.6, page 111.)

PRESENTATION OF STATISTICALLY SIGNIFICANT RESULTS

Tables 8.4 (below), 8.5, and 8.6 (page 111) present significant findings related to the goal of preventing child maltreatment.

Interpreting Child Maltreatment Findings

It has become virtually axiomatic that child maltreatment — particularly child neglect — is highly correlated with family poverty and maternal depression; a childhood history of maltreatment is also related to increased risk of becoming a perpetrator. For example, one analysis of national data suggests that children living in poor homes are approximately 22 times more likely to be victims in a substantiated maltreatment case than are children in families in other economic brackets.⁹ Therefore, the premise of HFM is that young mothers are at particularly high risk for maltreating their children.

How much of a benefit might be reasonably expected from a child abuse and neglect prevention program for young

Table 8.4: **Goal #2: Results of Significant Bivariate Statistical Tests[†]**

Outcome	Predictor	Statistical Test			Effect Size	Interpretation Based on Convention**
		t-value	df	p		
Supported Case of Mother as Perpetrator — All Cases	Behavior of friends	2.975	356	.01	.47	Medium
Supported Case of Mother as Perpetrator — Only Cases Occurring More than 6 Months after Program Entry	Behavior of friends	2.91	344	.01	.54	Medium
	Psychological abuse by secondary caregiver	-3.55	166	.01	-1.00	Large

[†] Data source: DSS and outcome measures

** Convention for interpretation of this effect size statistic (Cohen's d): .20=small; .50=medium; .80=large

Table 8.5: Results of Logistic Regression Analysis Predicting Mother as Perpetrator[‡]

Predictor	B	SE	Odds ratio	Wald Statistic
Behavior of Friends	-1.217	.416	.296	8.56**

[‡] Data source: DSS and Outcome Measures

** $p < .01$

Table 8.6: Results of Logistic Regression Analysis Predicting Mother as Perpetrator More than Six Months after Program Entry[‡]

Predictor	B	SE	Odds ratio	Wald Statistic
Behavior of Friends	-2.018	1.005	.133	4.03*
Psychological Abuse by Caregiver	.414	.194	1.513	4.539*

[‡] Data source: DSS and Outcome Measures

* $p < .05$

mothers such as HFM? On the one hand, one could surely not expect a 0% maltreatment rate, given the profile of this population, and on the other, home visitors gain entry into these young women's homes with regularity, and therefore have greater opportunity to observe suboptimal parenting than is usually the case. Although surely every substantiated case of maltreatment represents a real failure of parenting and a danger to the child that should not be minimized, identifying those young families that are struggling early on also provides opportunities to intervene that may promote significantly better functioning in the long run. These rates now present a baseline from which future prevention efforts might be measured.

Goal #3: Preventing Repeat Pregnancies

Preventing repeat pregnancies and births is among the most obvious goals for virtually all teen parenting and family support programs, including HFM. If one birth as a teen creates a whole range of risks for both teen mother and baby, surely two or more compound those risks for the average young family. The research literature reviewed earlier supports this view.

As with the goal to prevent child maltreatment, however, one of the challenges of evaluating HFM on this index is that there is no obvious standard to propose as a comparison. On the one hand, we must consider the negative life circumstances of some of these young women, for example, poor school options, unsafe neighborhoods, child histories

of maltreatment, and current histories of domestic violence. On the other hand, some young mothers are good parents, living in supportive extended families and communities, and *choose* to have a second child. Given these two sets of conditions, it may be unreasonable to set “none” as the expected, or perhaps even desired, repeat birth rate.

A second measurement problem pertains to the focus of HFM's goal — reducing repeat teen *pregnancies*, rather than *births*. From a research perspective, it is difficult to obtain reliable information on repeat pregnancies, because of the dependence on self-report; for example, a young woman may be pregnant at the time of the interview without knowing, or may know, but choose not to disclose the information. We chose, instead, to use *repeat births* as our indicator. These data were made available to us through a cooperative agreement with the Vital Statistics Unit of the Massachusetts Department of Public Health.

Researchers interested in teen parenting have measured repeat births in a variety of ways, for example, for as long a period as the mother is a teen, or within a certain time period after the first birth. The MHFE decided to use the variable *repeat birth within two years*. Mothers' having a repeat birth within two years of the first “may have implications for parents' progress toward self-sufficiency and mental health, as shorter intervals between births can negatively affect parents' well-being and make it more difficult for them to engage in self-sufficiency activities.”¹⁰ Spacing of children also has implications for childbirth outcomes.¹¹

In this section we report the MHFE repeat birth rate, and then present maternal and program characteristics, intermediate objectives, and client and program moderators that are significantly related to repeat births. Finally, we use ethnographic analyses to explore differences among the three communities on the meaning and consequences of this decision.

See Tables 8.7 and 8.8 (page 112) for results of tests of statistical significance.

MHFE Repeat Birth Rate within Two Years

Just over 14% (14.4%; 52 of 361) of women in the MHFE sample had a repeat birth within two years of the first. Comparison standards for this second birth rate are not available.

Repeat Births by Maternal and Child Characteristics

When compared to mothers who did not have a repeat birth, a lower proportion of mothers who had a repeat birth within two years of the first were in school or had completed high school at the end of the evaluation. While 87% of mothers with no repeat birth had completed high school or were in high school, only 60% of mothers with repeat births were in school or had graduated (see Table 8.7). Maternal age, parenting status, and child age were not related to repeat births.

There were no statistically significant differences by maternal race/ethnicity in the rate of repeat births within two years for the evaluation sample. However, such differences between communities were apparent in the Ethnographic Study. Half of the Ethnography participants from Community A (five of ten) had repeat births within two years, and all of them were teens at the birth of their second child; only two participants from Community B had a repeat birth within two years. In Community C, none of the participants had repeat births within two years of the first. The differences between the ethnographic sample communities, one of which consisted of participants with Puerto Rican heritage, led us to examine differences between Hispanic and non-Hispanic women in the larger MHFE sample. Although rates of a second birth within two years did not differ by maternal race/ethnicity, rates of a second birth within two years of the first while mother was still a teen did reveal a trend in differences between Hispanic and non-Hispanic teens ($p = .018$). Of the 52 mothers with a repeat birth within two years of the first, 20 were Hispanic and 32 were non-Hispanic. Seventeen of the 20 (85%) Hispanic moms had the second birth while still a teen, while only three (15%) had the second birth when older than 20. In contrast, 17 of the 32 (53%) non-Hispanic moms had the second birth while still a teen, while 15 of the 32 (46.9%) had the second birth when older than 20. These data are consistent with data reported recently by Child Trends (based on data from 2002) which indicate that almost one in four Hispanic teen mothers gave birth to more than one child while still in her teens.¹²

Mothers' reports of maltreatment by a parent or parent figure other than their mothers is related to repeat births as well; mothers with repeat births (within the two-year period) reported higher levels of maltreatment.

Repeat Births related to Client-Centered and Program-Centered Moderators

The quality of the home was related to the incidence of repeat births, with mothers who had repeat births scoring lower on the Family Assessment Form on quality of the home environment (inside and outside). Stability of living arrangements also is linked with incidence of repeat births. Living arrangements were more stable in the case of mothers without repeat births than they were for mothers with repeat births within two years. Program-related moderators, such as program duration, adherence to service level, program auspices, etc., did not relate to repeat birth rates (see Table 8.7).

Prediction of Repeat Birth within Two Years

When all the variables that related to repeat birth on the bivariate level were entered into one analysis, only the quality of the home environment at the start of the evaluation was a significant predictor. Mothers who lived in higher quality homes had a greater chance of having a repeat birth within two years (see Table 8.8).

PRESENTATION OF STATISTICALLY SIGNIFICANT RESULTS

Tables 8.7 and 8.8 present data related to prevention of second births.

Table 8.8: **Results of Logistic Regression Analysis Predicting Repeat Birth within Two Years[‡]**

Predictor	B	SE	Odds Ratio	Wald Statistic
Quality of Home Environment	.335	.149	1.398	5.022*

[‡] Data source: DPH Vital Statistics data and outcome measures

* $p < .05$

Table 8.7: **Goal #3: Results of Significant Bivariate Statistical Tests[‡]**

Predictor	Statistical Test			Effect Size	Interpretation Based on Conventions**
	Test value (t or X ²)	df	p		
Educational Status at end of Evaluation	X ² =18.14	1	.001	.254	Small/Medium
Quality of Neighborhood	t=3.1	283	.01	.52	Medium
Home Conditions	t=-2.837	313	.01	-.44	Small/Medium
Abuse by Secondary Caregiver	t=-2.68	173	.01	-.59	Medium
Stability of Living Arrangement	t=2.989	58.32	.01	.54	Medium

[‡] Data source: DPH Vital Statistics, PDS, and Outcome Measures

** Convention for interpretation of effect size for X² statistic (Cramer's phi): .10=small; .30=medium; .50=large; convention for interpretation of effect size for t statistic (Cohen's d): .20=small; .50=medium; .80=large

Reasons for Differences among Communities:

Ethnographic Analyses

The primary objective of this analysis was to determine if there were differences between the selected communities in the rate of repeat births and, if so, to examine possible reasons for the differences. Our results document a clear pattern of differences among communities; the rate of repeat births was clearly higher in Community A, compared to the rate found in the other two communities. Seven of ten participants had a repeat birth (five of these had a repeat birth within two years of the first, while still a teen), while only two participants each in Communities B and C had repeat births (the two mothers in Community B had repeat births within two years of the first, while the two mothers in Community C had repeat births more than two years after the first).

Our next step was to examine the ethnographic data to interpret and understand why the rate of repeat births was high in Community A. Towards this objective, we used narrative analysis to document aspects of families' case histories relevant to understanding their beliefs and practices about establishing a family. The first step in this process was to identify categories of relevant practices that emerged from the coding process. These were as follows:

- history of teen motherhood among extended family;
- friends and support network comprising other teen mothers;
- balancing education and family responsibilities as competing priorities;
- residence pattern; and
- relationships maintained with extended family.

The particular configuration of these practices was constructed for each young mother in Community C who had a second birth (seven cases). These seven case histories were compared to identify modal patterns, if they existed. Two modal patterns clearly emerged; they are described below.

PATTERN A: "ESTABLISHING A FAMILY" TRAJECTORY (FIVE CASES)

These young mothers appeared to have made a commitment to establishing a family. Their residence pattern consisted of always living within a family configuration — either an extended family or a nuclear family. Three of the five lived initially with the maternal or paternal family, and eventually moved into a separate apartment for the new nuclear family, consisting of the young mother, the boyfriend (typically the father of at least one child), and the child. Two of the five families were already living as a nuclear family with the father of the child. In all cases, regardless of whether the young

mother was married or not, she referred to the boyfriend/father of the child as her "husband" — reflecting the commitment to/desire for a stable relationship with the male partner and the commitment to establishing a family. None of the young mothers lived as a single parent. In all cases, there was an easy acceptance of motherhood, regardless of the age of the young mother. In most cases, there was a history of teen motherhood among their extended family, and in all cases, mothers mentioned that many members of their network and support group of friends included teen mothers. Further, in all but one case, even when the young mothers were living as a nuclear family with their partners, members of the extended family were easily available for child care and child-rearing support. Finally, in most cases, establishing a family was set as a priority even at the expense of education; indeed, three of the young mothers had dropped out of high school.

PATTERN B: "DIFFICULTIES IN ESTABLISHING A FAMILY" TRAJECTORY (TWO CASES)

In this category as well, the young mothers appeared to have made a commitment to establishing a family. In both cases, the young mothers eventually moved out of the maternal home to live with the male partner. However, troubled relationships with the male partner led to instability. In one case, the young mother was able to return to her maternal home with the two children, while in the other case, the young mother continued to remain in the troubled relationship. Both young mothers were not able to stay in school, and chose to drop out and attempt to take the GED. These young mothers also did not experience widely available emotional and instrumental support and child care assistance to support their parenting efforts. In one case, the woman's mother did not approve of the second birth, even though she remained available for child care support. In the other case, the young mother did not feel she had enough support in her maternal home to warrant removing herself from the unstable relationship with her partner.

Comparison of the two patterns suggests a common underlying trajectory — built on a commitment to establishing a family — by which the second birth is rationalized. The primary difference between the two patterns consists of the extent of support from family and friends that is available. When there is support from extended family and friends, and an easy acceptance, along with role models of young motherhood, then the family trajectory seems to be on track (as in Pattern A). However, when there is limited support, and the relationship with the partner is tenuous at best, then the situation is fraught with difficulties for the young mother (as in Pattern B).

Implications of these Findings on Repeat Births

Because of the paucity of comparison rates, it is impossible to evaluate the observed 14.4% rate among MHFE participants (repeat births within two years), and to conclude whether it represents a positive trend or not.¹³ This said, there does not appear to be much enthusiasm among participants (and perhaps even among some home visitors) for this goal. As we learned in Chapter 6, over 90% of the mothers did not believe that their home visitor had influenced them on this issue, and only 4% identified prevention of a second pregnancy as a personal goal through the IFSP process, a joint venture between young mother and home visitor. Furthermore, in at least one of the cultural communities included in the Ethnography — the one in which seven of the ten families had a second child while the MHFE was in operation — having another baby once mothers have started down the “family-building” path seems virtually normative. On an issue as central to young parents as this one — when to have children and how many to have — it does not appear likely that home visiting itself will have a substantial impact; community values and personal preferences simply appear more powerful. This being the case, then, although HFM as a statewide program appears receptive to, even appreciative of, community adaptations, in this particular situation it is less so.

To what extent are these second births planned events? In this period of changing public mores regarding premarital sex and the provision of public education on “safe sex,” it is difficult to gauge how much access to information about contraception and to contraceptive devices exists. Certainly a number of the *first* births in the MHFE population were planned, but many were not. Second pregnancies and births, however, appear less likely to be “accidental.” In either case, these decisions, planned or not, good or bad, seem to be largely outside the influence of programs such as HFM.

Goal #4: Promoting Optimal Child Growth and Development

Much of the intervention focus of HFM is on young mothers, yet it is obvious from program material and conversations with statewide and local staff that the children’s well-being is of paramount importance. Nonetheless, having to make choices about how to apportion our time and resources, we focused least concertedly and directly on this goal area.¹⁴ MHFE staff did not collect independent data on the developmental status of children whose families were enrolled in the program; rather, we relied on PDS data, and their paper records supplements, for the assessments that were conducted. Child development outcomes included here are breastfeeding, immunizations, and developmental status as assessed

with the screening instrument, the Ages and Stages Questionnaire (ASQ).

In this section we review the findings in each outcome area, including noteworthy significant relationships between the outcome of interest and client and program characteristics.

Table 8.10 presents the results of statistical tests in this goal area.

Breastfeeding

The majority (63%) of the 199 mothers in the evaluation who were pregnant at program entry breastfed their babies at some point; approximately this same percentage (64%) held true for women 19 and younger. Nationally and within Massachusetts, the rate of mothers of all ages who ever breastfed was 71%. For women 19 and under, however, this rate was 55%.¹⁵ Thus, the HFM mothers were more likely to breastfeed at some point than teen mothers in general.

BREASTFEEDING RELATED TO CLIENT AND PROGRAM CHARACTERISTICS

When compared to mothers who did not breastfeed, mothers in the MHFE sample who breastfed were older. At the start of the program, mothers who breastfed were, on average, about eight months older than were mothers who did not breastfeed (see Table 8.9, page 115).

Immunizations

About 83% of the 235 children included in the MHFE, and for whom we had data on immunizations,¹⁶ were reported to be up to date on their immunizations as of age two or their last HFM home visit, whichever came first. Nationally, in 2003, about 76% of children 24 months old had received the complete series of immunizations appropriate for their age.¹⁷ In Massachusetts, however, the rate was 89%. Thus, the HFM children appear slightly less likely to be immunized as other similarly aged children in Massachusetts, and slightly more likely than children nationwide. The comparison rates reported here do not pertain to teenage mothers; comparable data for that population were not available.¹⁸

Developmental Status on the ASQ

As part of their program involvement, mothers in the HFM program completed the ASQ at regular intervals throughout their involvement in the program.¹⁹ The ASQ is a screening tool that uses parental self-report to assess children’s developmental achievements in five areas: communication, gross motor, fine motor, problem solving, and personal-social.

On average, at the time of the administration of the last ASQ, children in the MHFE sample were developing without problems in each of the five areas assessed. A very small

percentage of children in the MHFE sample had ASQ scores, in any of the domains assessed, which fell below the cutoff for expected functioning. Table 8.9 contains the average ASQ score in each domain as of the final ASQ and the percent of children falling below the cutoff for the expected level of functioning.

Table 8.9: **ASQ Average Scores and Percent of Children below Cutoff, by Domain[‡]**

ASQ Domain	Average Score	Percent of Children Below Cutoff Score
Communication	52.53	5.4
Gross Motor	55.72	2.1
Fine Motor	54.08	1.7
Problem Solving	52.93	2.5
Personal-social	53.89	4.1

[‡] Data source: PDS and paper records, n = 242

COMMUNICATION

Mothers who reported better care from their own mothers in childhood had children with higher scores on the communication scale of the ASQ. It may be that the mothers who had better parent-child relations with their own parents talk more with their children. This could be seen as a reflection of the intergenerational transmission of the parent-child relationship (see Table 8.10).

PROBLEM-SOLVING ABILITIES AND PERSONAL-SOCIAL DEVELOPMENT

The children of mothers who entered the evaluation prenatally had higher problem-solving ASQ scores (see Table 8.10).

CHANGES IN ASQ SCORES OVER TIME

The scoring of the ASQ is such that no change or an increase in the score is a favorable outcome. Children in the MHFE showed significant change in one of the five ASQ domains — communication — between the four- and twelve-month administrations.²⁰ Their scores here dropped, although on average they still remained in the range of normal, expected development. In all other domains, at 12 months, children remained within the range at which they started at the four-month assessment.

Implications of Child Development Findings

The literature suggests that children of teen mothers are at risk for developmental and health problems, so it is noteworthy that on most of these indices MHFE children seem to be doing fine. Indeed, the rate of breastfeeding among HFM mothers compares favorably with national rates for mothers 19 years of age and younger, and on average the children demonstrate no problem areas in development, as measured by the ASQ. The only outcome that is somewhat concerning is the immunization rate of 83%, which is lower than the state average of 89%. There are no national comparison data for teen mothers, and one would expect those statistics to be somewhat lower, perhaps in keeping with the rate achieved by MHFE mothers. Nonetheless, helping teen mothers remember to bring their children to health clinics or doctors' offices for their immunizations — or actually transporting the family to the site — is the kind of instrumental support that home visitors appear adept at providing. Immunization rates are an outcome that, with concerted effort, HFM programs could likely improve.

Summary of Findings on Distal Goals

At its inception in 1997, HFM adopted an ambitious set of goals for itself. Having now spent over six years observing the program, it is the impression of the MHFE staff that both

Table 8.10: **Goal #4: Results of Significant Bivariate Statistical Tests[‡]**

Outcome	Predictor	Statistical Test			Effect Size	Interpretation Based on Conventions**
		Value	df	p		
Breastfeeding	Maternal age	t=-2.688	1.44	.01	.45	Small/Medium
Child Communication Score	Caring score	r=.222 (n=176)		.01	.22	Small/Medium
Child Problem Solving Score	Pregnancy status	t=3.099	226.46	.01	.38	Small/Medium

[‡] Data sources: PDS and Outcome Measures

** Convention for interpretation of effect size for t statistic (Cohen's d): .20=small; .50=medium; .80=large:

Convention for interpretation of r as effect size: .10=small; .30=medium; .50=large

Table 8.11: Summary of MHFE Findings, by Distal Goal

Goal	Subgoal	Findings	Final Status on Goal Linked to Program Moderators on the Bivariate Level
Maternal Educational and Economic Attainment	In school or graduated/GED	Positive change	The better the quality of the program, the more likely participants are to be in school or to have graduated/GED.
		Positive relative to national standard	
	TANF	Neutral ²¹ re. change in MHFE population; Positive renational comparison standard	
Reduced Rate of Child Abuse and Neglect	Mothers as perpetrators	Positive	
Reduced Rate of Repeat Teen Births/Pregnancy	NA	No comparison standards	
Optimal Child Development	Breastfeeding	Positive relative to national standard	
	Immunization	Neutral ²²	
	Developmental Screening Results	Positive	

local and state program personnel have worked diligently to achieve them.

Table 8.11 summarizes the progress made on the program's four distal, or ultimate, goals. We note the specific dimensions of each goal for which data have been presented in this chapter (subgoals), and then characterize the findings as *positive*, *negative*, or *neutral*. In this context, *positive* means that the rate for MHFE sample is either better than the comparison standard, or change among the participants is in the positive direction. *Negative* suggests that the rate for the MHFE sample is either worse than the comparison standard, or change among the participants is in the negative direction. *Neutral* indicates that the MHFE sample rate is roughly equivalent to the comparison standard, or that no appreciable change in either direction was documented. The final column notes whether or not particular aspects of the program (e.g., adherence to service level, service intensity or duration, etc.) appear to have affected the results.

Chapter 9 highlights a number of the major findings from all three substudies, and makes recommendations for program improvement and future research.

Endnotes

- 1 The research design employed by MHFE does not allow for the unequivocal attribution of these changes or effects to HFM; nonetheless, given available comparison standards, in our view it is plausible to conclude that HFM played a positive role in much of the progress observed.
- 2 As in the two earlier chapters, for results subjected to tests of statistical significance, only those meeting that statistical criterion are included here. Tables presenting results of these statistical tests generally are placed at the end of the relevant section — in this case, at the end of the discussion of each outcome goal.
- 3 Rate calculated from data presented in Klepinger, Lundberg, & Plotnick (1995).
- 4 American Public Human Services Association, 1999
- 5 In some cases, particularly those of neglect, it is difficult to identify the specific agent of maltreatment; for example, the mother, by virtue of her status as primary caregiver, is generally identified as the perpetrator in instances of neglect, although the neglect may have occurred primarily at the hands of someone else [e.g., maternal grandmother.
- 6 (A number of the cases for which the mother was the perpetrator are duplicated in the second category [another as perpetrator], so these figures cannot simply be added to each other.)
- 7 US Department of Health and Human Services, Administration on Children, Youth and Families, 2004
- 8 US Department of Health and Human Services, Administration on Children, Youth and Families, 2001b; these data are broken down by maltreatment type and age for more recent years.
- 9 Sedlak & Broadhurst, 1996

- 10 Love, Kisker, Ross, Schochet, Brooks-Gunn, Paulsell, et al., 2002b, p. 234 citing Furstenberg, 1987
- 11 Kallan, 1997; Rawlings, Rawlings, & Read, 1995
- 12 Ryan, Franzetta, & Manlove, 2005
- 13 Planned secondary analyses of these data may provide the opportunity to use a number of the few extant comparison standards.
- 14 See original evaluation plan (citation) for justification of this decision. The project's TAB, and its funders, concurred with this approach.
- 15 National Immunization Survey, 2003
- 16 Immunization data derived from the PDS and paper records.
- 17 National Immunization Survey, 2003
- 18 The immunization rates documented in the PDS were reported to home visitors by their clients, and were not validated independently. This process may have accounted for some underreporting of completed immunizations, since mothers who did not see their home visitors on a regular basis may have forgotten about the immunization their children had received.
- 19 ASQ data are derived from the PDS and paper records.
- 20 $F(1,89)=14.35, p<.001, \eta^2=.139$ (small/medium effect size)
- 21 The TANF rate rose during this period from 22% at the beginning of the evaluation's data collection to 35% at its conclusion (18 months later). Receipt of TANF by teen mothers at this stage in their development as parents is viewed by different constituencies as both a positive and a negative sign, hence the "neutral" designation.
- 22 There is no comparison standard available for teen mothers; 83% is lower than the state's rate for children in all families (89%).

Section Four

Conclusions and Recommendations

This section includes a single chapter — *Chapter 9* — that represents a first attempt at summarizing the report’s findings and making recommendations to HFM program personnel and researchers alike. It is the MHFE’s intention that the recommendations section of this chapter be considered more a springboard for discussion than the “last word;” this posture is surely in keeping with the FTA model, which views evaluation as a continuous, iterative process.

Chapter 9

Discussion Points and Recommendations

At its inception in 1997, HFM adopted an ambitious set of goals for itself. The MHFE was designed not only to document the extent to which progress had been made toward these ends, but also to contextualize these findings — with comparison data, a review of extant literature, and ethnographic and process-focused information. This context, we hoped, would help HFM interpret the “so, did it work?” results and apply them wisely — to experiment with alternative service modalities, to modify program goals, to consider other research opportunities, and so forth.

Throughout this report, major findings in each chapter have been identified. The Executive Summary also presents these findings in a single document for easy distribution. In this chapter, then, we highlight selected key findings and make recommendations for program and policy revision. The chapter is divided into three sections: the first offers a set of discussion points that are based in major findings from the evaluation; the second contains issues that are ripe for future research and evaluation; and the third provides several recommendations for policy and program personnel to consider.¹

Discussion Points

Each of the following discussion points emerges from a major finding. Within the context of *generally encouraging evaluation findings*, many of these points raise provocative questions, at least in our view, about some aspect of HFM, often regarding its choice of outcome goals and/or process goals (goals for program operations/program standards). These points are discussed in detail below.

Mothers were well-satisfied with the program. Overwhelmingly, they found their home visitors to be caring and friendly, and felt that the program, in its orientation, was family centered and respectful. They also “voted with their feet:” MHFE participants remained in the program on average for about 17 months — a longer duration than many home visiting programs are able to achieve. Even so, their careers with HFM were generally substantially less intense than what was prescribed for them, and in theory, what they had agreed to receive.

The home visitor-client relationship appears to be at the core of the program. Because there is supposed to be, and often is, specific content to each home visit — with materials, curricula, and a particular purpose in mind — the more subtle elements of the home visit have generally been overlooked in past research. Our preliminary research in this area suggests that it may well be the connection with the home visitor, the *relationship*, which keeps young mothers involved. That is, it seems that these mothers would not be inclined to wade through a mediocre relationship to get to the valuable information the home visitor might possess. We also acknowledge the challenge to this relationship inherent in the fact that the home visitor role includes a monitoring dimension (e.g., as mandated reporters of suspected child maltreatment); that some are able to maintain their connections to these families speaks both to the complex nature of this relationship and the skills of the home visitors.

Indeed, the contours of that relationship, as the Ethnography demonstrates, are not fixed, and do not always conform to the role as it is defined by the statewide program; help-seeking and helping behaviors are not universal. So, for example, sometimes what occurs within HFM looks more like a friendship, or a sibling relationship, than one between a professional and a client. These are young mothers, after all, over one-quarter of whom had substantiated maltreatment cases against their own parents; others come from supportive families who are, nonetheless, displeased with this pregnancy. Given these particular circumstances, the home visitor often provides an essential link to the adult world, and, therefore, a break in that relationship (e.g., through staff turnover) may represent more than an inconvenience or a temporary service lapse. It may be experienced by the mother as a serious breach or loss, another broken relationship that cannot be replaced.

Families generally are not receiving the number of home visits they are meant to receive. Approximately 56% of the visits that, according to HFM standards, should have occurred (during a period of MHFE observation) in fact occurred. Families with biweekly and monthly service levels generally received their prescribed allotment, but families with weekly plans often received about half. (This finding is

in keeping with utilization figures achieved by other home visiting programs as well.) Furthermore, ethnographic study suggests that there are patterns to participation, and that these patterns are influenced by program-related events (e.g., home visitor turnover); client-related events (e.g., a new job, a new living arrangement); cultural and community factors; and simple disagreements between what home visitors believe a family needs and what that family actually wants.

There was also little surprise expressed among HFM program administrators at the local or state level that assigned service levels were not being fully met. The lives of young mothers are full of unexpected demands that pull them out of their scheduled activities; home visitors also experience unanticipated interruptions of their routines. The missed visits that ensue are often difficult or impossible to reschedule. These realities may well need to be considered more realistically in setting, and revising, individual service levels for families, and perhaps even standards for service provision statewide.

It is also likely that these young families are, indeed, receiving far more direct, individual service than is represented by this narrow definition — that is, the number of home visits per month. Home visitors and their clients also maintain contact through phone calls, email messages, and written notes and printed materials sent through the mail. If the home visitor-client relationship is as critical as we suspect it is, then even though these contacts do not occur at home, or in a designated alternative physical location, they may act as critical supports for these mothers, and might legitimately be considered part of the official HFM service package. In fact, as long as the relationship is maintained, young mothers might well prefer program modalities (e.g., drop-in centers) other than, or in addition to, home visits, at particular points in their busy lives. Might HFM achieve more intensive participant involvement, over a longer period of time, if a broader range of program modalities (e.g., drop-in centers), was available?

For at least one of the four distal goals, there appears to be somewhat of a mismatch between what the young mothers want for themselves and what the program wants for them. For most of these mothers, pregnancy prevention simply does not seem to be a priority — it does not appear in the goals mothers generate for themselves, and over 90% of the mothers reported that their home visitors' opinions on the topic of repeat pregnancy and birth did not affect their decisions. It also seems that the extent to which home visitors attempt to “push” this message with their clients varies across programs, and even within programs. We were not able to track the relationship of concerted home visitor efforts on this topic to the goal of preventing repeat pregnan-

cies and births. But we suspect that the decision to have a second child is held, by most of these young mothers, as a personal or personal/familial/cultural issue — not something easily within the reach of a public program to affect.

On the other hand, when participants and the program are aligned in their choice of goals, the results reflect that. For example, participants expressed the greatest interest in gaining knowledge about child development, and indeed, there was a significant increase in that knowledge across the period of the evaluation. The quality of the program was implicated in this outcome. So here the mothers wanted what the program had to provide, and those mothers who did best were enrolled in good programs from which they were more likely to use the amount of service that was considered necessary to yield progress.

The ecology of these mothers' lives is complex, with many people and values exerting powerful influences on them. These influences include their families of origin, the smaller family units they have created with the birth of this child, the friends they had prior to giving birth and the friends that remain afterwards, the communities in which they live, and the institutions and organizations in which they are members.

Mothers' histories in their families of origin are important to consider. Mothers who reported higher levels of childhood maltreatment from their principal caregivers were poised to begin a “negative cycle.” For example, these mothers reported using a higher percentage of negative parenting strategies. These mothers were also more likely to be depressed, and to have a second child within two years of the first.

The extent to which the baby's father is involved in parenting is also a factor here, and is also experienced in a complex way. MHFE data collectors heard many descriptions of both supportive relationships and of relationships that were not supportive, and even dangerous. The complexity of these women's relationships with both their own mothers and the fathers of their babies, in our view, calls for sensitivity in the application of the HFM standard for involving extended family members.

Then there is the community context to consider. As the Ethnography suggests, in some cultural communities, having a child as a teen is not unusual; many teens' mothers were themselves teen mothers, and the cultural expectation is that the grandmothers will help with child care and childrearing. Furthermore, in some communities, completing a new family once one has been begun is valued, whereas completing school, and certainly preventing subsequent pregnancies, are sometimes simply not priorities for some young mothers. In these cases, the cultural ethos may run counter to the program's goals, yet the program maintains a standard of cultural competence. Whose culture is to be valued, and how?

Finally, community institutions also exert influence on these young mothers. The quality of the schools and their receptivity to the needs of teen mothers, the availability of other community resources, including adequate child care and housing (when necessary), all pertain as well. We imagine that when public institutions behave, energetically and nonjudgmentally, as formal supports for young mothers, there is a greater likelihood that progress on HFM goals will result; poorer quality situations likely prevent the program from having its maximum effect.

In noting these ecological contributions to parenting, we are raising the obvious point that HFM, in serving youth who are also parents, operates in a particularly complicated context. Setting both process goals (e.g., cultural sensitivity, or extended family involvement) and outcome goals (e.g., preventing repeat births) that reflect that context is, likewise, a complicated but necessary matter.

HFM appears to have been successful in developing, sustaining, and enhancing mothers' social support. Early on we posited that social support might be viewed as the unifying construct for this program; virtually all that occurred during home visits fit into one of the categories of social support — informational, emotional, or instrumental. Our analyses, both quantitative and qualitative, have borne this out. High quality, ample social support, of both formal and informal types, is associated with many benefits for these young women. For example, mothers who reported high social support also had more favorable parenting knowledge and beliefs and lower parenting stress. Although social support can be obtained in many ways, from many quarters, HFM appears to have played a significant role here: Mothers who received a higher number of HFM home visits were more likely to have experienced enhanced social support networks.

The level of depression among these young women is unacceptably high. Although the overall level of depression for mothers in the MHFE declined over the period of the evaluation, and that decline was statistically significant, we do not consider a 45% figure (mothers who were “clinically depressed”) at the end of the evaluation as a positive sign. Approximately 27% of the mothers were considered to be “chronically depressed,” meaning that they scored above the clinical cut-off on the measure we used at either three or all four of the data points in the evaluation.

Depression is related to a broad range of other factors that compromise personal well-being — childhood history of maltreatment, domestic violence, and so forth. It is also, not surprisingly, implicated in a host of parenting difficulties. Apart from the concern for the crippling personal toll it takes, from a strategic perspective, dealing with depression and the factors that correlate with it is critical if HFM is to

make even better progress on its goals in the future. And given how stretched community mental health resources in most communities are, addressing this concern effectively seems to us nigh impossible without substantial cooperation and collaboration from other public agencies.

HFM program involvement appears to have yielded a range of positive intermediate outcomes. Benefits in the area of social support have already been noted. Various aspects of program implementation were related to increased knowledge of child development, and positive coping, for example. No doubt program developers included these short-term objectives in their “theory of change,” since the program operationalizes them quite directly. Perhaps making them more explicit would now be appropriate; they may be markers of longer-term success in parenting.

HFM mothers were particularly successful at continuing their education. We appreciate that this goal is not shared by all young mothers, at least at the present time. Nonetheless, that over 83% of mothers in the MHFE were in school or had graduated by the end of the evaluation is certainly noteworthy. Numerous mothers in our sample spoke about how powerful and effective support from their home visitors was in helping them achieve this goal. Moreover, the quality of the program differentiated between mothers who were successful and those who were not; mothers enrolled in programs with less turnover, more “match” between home visitors and parents, quicker intake, and a greater likelihood that they were receiving their full complement of services, had higher completion rates.

The second part of this HFM goal, economic self-sufficiency, is more difficult to measure, and may be immediately less relevant anyway. Other evaluations use receipt of public assistance as a core measure of economic attainment, and we collected those data as well. Indeed, the rate of TANF receipt among HFM compared favorably with those achieved for other programs, although it did increase over the period of the evaluation. We do not consider that increase a negative finding, in that a percentage of the mothers electing to use TANF accepted the support so that they could return to school. In fact, since it appears to be HFM's belief (supported by a considerable amount of research) that a high school diploma is among the best hedges against extended periods of economic dependency, then one might look, instead, to providing greater public financial assistance, early on, to these new mothers so that they can attend school. The premium should probably be placed on school (or GED) completion first, then financial self-sufficiency at some later point. (And neither of these goals takes into account advice from the ethnographic studies — that a third trajectory, one that includes family building first, before either educational or economic attainment, should be considered as well.)

Finally, the children of these young mothers, as a group, look to be doing quite well developmentally. Often the concern in teen parenting programs is for the teens' children, who the research literature identifies as "at risk" for many negative consequences. By the end of our evaluation these children were generally developing adequately, with no serious red flags in any developmental domain. That positive finding is worth noting for a number of reasons, but primarily the following: It allows us to underscore the fact that, despite the challenges described above and the low expectations that many in the public hold for teen parents, many of these young women have admirably met the challenges of parenting and young adulthood.

Issues for Future Research

Policymakers and program personnel likely consider the points listed above, and those contained elsewhere in the report, as prime fodder for action — at least that is our hope. As researchers, of course, we see innumerable, exciting possible directions for future research, some of which pertain specifically to HFM, and others to the home visiting field more generally. A select few, in no particular order, are as follows:

- Patterns of engagement, including attempting to identify critical periods when mothers are likely to drop out; patterns of engagement by different cultural communities and other subgroups of participants; full understanding of the "adherence to service level" phenomenon.
- Documenting and understanding the nature of family participation in HFM, particularly that of fathers (husbands, boyfriends), grandparents, and those family members who share residences with the mother and baby.
- The home visitor-client relationship, including the consequences of cultural "match;" reconsideration of the boundaries of the professional role of home visitor; a deeper look at the role that reciprocal interactions play in establishing a positive relationship; the distribution of types of social support during the home visit; the role that secondary activities, including groups, play in understanding utilization patterns and attainment of short-term and longer-term goals; the impact of home visitor turnover on the relationship.
- "Cultural competence," including its definition, its relevance to practice, its relationship to outcomes of interest.
- Supervision, as a component of quality programming that has not yet been studied systematically in home visiting.
- Refining the program quality measure, including other variables derived, in part, with participant input.
- The cultural validity of measures, including standardized instruments and, more broadly, approaches to data collection.

- The extent to which other public policies and programs (e.g., TANF, housing, child protection, child care) intersect with, and/or reinforce the orientation and goals of HFM.

Program and Policy Recommendations

It is here that input from the full range of stakeholders, including participants, is critical. We sketch out below only a few of the issues we consider most salient:

- HFM should reconsider the concept of "service level," and reconceptualize optimal patterns of program utilization. Additional service modalities (e.g., contact via internet, or a drop-in center, etc.) should be considered.
- HFM should attempt to more closely align certain program standards with program goals. For example, if cultural norms differ regarding particular outcomes, then cultural competence is problematic. All program standards should be assessed in this way.
- HFM should consider decoupling the goal of educational attainment from that of economic self-sufficiency. Receipt of public assistance may well facilitate educational attainment.
- HFM should focus resources (or coordinate resources with other agencies) in the service of addressing maternal depression, especially the chronic depression that was evident by the end of the evaluation.
- A more efficient and accessible management information system is critical to improving services and initiating new research.
- HFM might reconsider the goal of preventing repeat births, refocusing it on preventing repeat births for which the proper supports are not likely to be available.
- The professional attributes that are considered critical for home visitors should be examined in light of the findings related to the range of seemingly positive home visitor-client relationships.
- With the understanding that the home visitor-client relationship may be key to participant retention, HFM should work to develop strategies to keep home visiting staff employed for longer periods of time.

We hope that these findings contribute, at least modestly, to improving the operations of HFM and thus, the possibilities of achieving its goals.

Endnotes

- 1 This final chapter has profited from the thoughtful and comprehensive feedback on earlier drafts that was offered by many individuals and organizations.

References

- Abidin, R. R. (1995). *The Parenting Stress Index Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Alan Guttmacher Institute. (1994). *Sex and America's teenagers*. New York: Author.
- Alan Guttmacher Institute. (2004). *U.S. teenage pregnancy statistics: Overall trends, trends by race and ethnicity and state-by-state information*. New York: Author.
- Allen, R.I., Petr, C.G., & Brown, B.F.C. (1995). *Family-centered behavior scale and user's manual*. Lawrence: The Beach Center on Families and Disability, University of Kansas.
- American Academy of Pediatrics. (2001). Committee on adolescence and committee on early childhood and adoption, and dependent care: Care of adolescent parents and their children. *Pediatrics*, 107(2), 429-434.
- Andreozzi, L., Flanagan, P., Seifer, R., Brunner, S., & Lester, B. (2002). Attachment classifications among 18-month-old children of adolescent mothers. *Archives of Pediatrics and Adolescent Medicine*, 156, 20-26.
- Annie E. Casey Foundation. (1998). When teens have sex: Issues and trends. *Kids Count Special Report*. Baltimore, MD: Author.
- Annie E. Casey Foundation. (2002). *Children at risk: State trends 1990-2000: A first look at Census 2000 supplementary survey data, PRB/Kids Count Special Report*, 1-107. Baltimore, MD: Author.
- Annie E. Casey Foundation. (2003). *2003 Kids count data book online*. Baltimore, MD: Author.
- Arocena, M., Adams, E.V. & Davis, P.F. (1992). CEDEN's Parent-Child Program: A fair start for Mexican-origin children in Texas. In M.Larner & R. Halpern (Eds). *Fair Start for children: Lessons learned from seven demonstration projects*. (pp. 68-90). New Haven, CT, US: Yale University Press.
- Baker, A.J., Piotrkowski, C.S., & Brooks-Gunn, J. (1999). The Home Instruction Program for Preschool Youngsters (HIPPPY). *The Future of Children*, 9(1), 116-133.
- Barnard, K.E. (1991). *Community Life Skills Scale (CLSS): A resource manual for professionals using the Community Life Skills Scale*. Developed for Clinical Nursing Models Project N.I.M.H. Seattle, WA: NCAST Publications.
- Barnard, K.E. (1998). Developing, implementing, and documenting interventions with parents and young children. *Zero to Three*, 18(4), 23-29.
- Barth, R.P. (1991). An experimental evaluation of in-home child abuse prevention services. *Child Abuse & Neglect*, 15, 363-375.
- Bavolek, S. J. (1984). *Adult-Adolescent Parenting Inventory*. Eau Claire, WI: Family Development Association.
- Benson, P.R., Fisher, G.A., Diana, A., Simon, L., Gamache, G., Tessler, R.C., et al. (1996). A state network of family support services: The Massachusetts Family Support Demonstration Project. *Evaluation and Program Planning*, 19(1), 27-39.
- Berlin, L.J., Brooks-Gunn, J., McCarton, C., & McCormick, M.C. (1998). The effectiveness of early intervention: Examining risk factors and pathways to enhanced development. *Preventative Medicine*, 27(2), 238-245.
- Berlin, L.J., O'Neal, C. R., & Brooks-Gunn, J. (1998). What makes early intervention programs work? The program, its participants, and their interaction. *Zero to Three: National Center for Infants, Toddlers, and Families*, 18(4), 4-15.
- Biringen, Z., Robinson, J., & Emde, R. N. (1993). *Emotional Availability Scales* 2nd ed. Fort Collins, CO: Unpublished manual, Department of Human Development and Family Studies, Colorado State University.
- Black, T., & Markson, S.L. (2001). *Healthy Families Connecticut: Process evaluation of a home visitation program to enhance positive parenting and reduce child maltreatment*. Hartford, CT: Center for Social Research.
- Black, T., Powell, J.L., Clay, M., & McDill, P. (2000). *Healthy Families Connecticut: Final outcome report of a home visitation program to enhance positive parenting and reduce child maltreatment*. Hartford, CT: Center for Social Research.
- Black Hawk, Buchanan, Clinton, Hamilton, Lee, Muscatine, et al. (2002). *HOPES/Healthy Families Iowa FY2002 services report: Healthy opportunities for parents to experience success Healthy Families Iowa: Evaluation report for Fiscal Year 2002*. Des Moines, Iowa: Prevent Child Abuse Iowa, Iowa Department of Public Health.
- Blunk, E.M., & Williams, S.W. (1999). A comparison of adolescent and adult mothers' maternal separation anxiety. *Social Behavior and Personality*, 27(3), 281-288.
- Bolton, F. G., Jr. (1990). The risk of child maltreatment in adolescent parenting. In A.R. Stiffman & R.A. Feldman (Eds.) *Contraception, pregnancy, and parenting. Advances in adolescent mental health*, (pp. 223-237). Oxford, England, Jessica Kingsley Publishers.

- Brady, A.E., & Easterbrooks, M.A. (2001, April). Supporting Ophelia: Determinants of parenting in home-visited, teenage mothers. In A. Easterbrooks & A. Brady (Chairs), *Elements of program implementation and outcome in home visiting programs for at-risk mothers and their infants*. Symposium conducted at the meeting of the Society for Research in Child Development, Minneapolis, MN.
- Brady, A.E., Easterbrooks, M.A., Jacobs, F.H., Mistry, J. (1998). *Evaluating Healthy Families Massachusetts: Building on the past and charting the future*. Medford, MA: Massachusetts Healthy Families Evaluation, Tufts University.
- Brady, A.E., Easterbrooks, M.A., Jacobs, F., & Mistry, J. (2000, June). *Massachusetts Healthy Families Evaluation Plan*. Medford, MA: Massachusetts Healthy Families Evaluation, Tufts University.
- Brady, S.J., Gamel-McCormick, M., Peters, D.L., & Venutro, N. (2004). Types and patterns of professional-family talk in home-based early intervention. *Journal of Early Intervention, 26*(2), 146-159.
- Brekke, J.S., & Test, M.A. (1992). A model for measuring the implementation of community support programs: Results from three sites. *Community Mental Health Journal, 28*(3), 227-247.
- Brooks-Gunn, J. (2004). Don't throw out the baby with the bathwater: Incorporating behavioral research into evaluations. *Social Policy Report, 18*(2), 14-15.
- Brooks-Gunn, J., Burchinal, M., & Lopez, M. (2000). *Enhancing the cognitive and social development of young children via parent education in the Comprehensive Child Development Program*. Unpublished manuscript.
- Brooks-Gunn, J., & Furstenberg, F.F. (1986). The children of adolescent mothers: Physical, academic, and psychological outcomes. *Developmental Review, 6*(3), 224-251.
- Brophy-Herb, H.E., & Honig, A.S. (1999). Reflectivity: Key ingredient in positive adolescent parenting. *The Journal of Primary Prevention, 19*(3), 241-250.
- Carey, G., Ratliff, D., & Lyle, R.R. (1998). Resilient adolescent mothers: Ethnographic interviews. *Families, Systems, and Health, 16*(4), 347-364.
- Carter, A.S., Garrity-Rokous, F.E., Chazan-Cohen, R., Little, C., & Briggs-Gowan, M. (2001). Maternal depression and comorbidity: Predicting early parenting, attachment security, and toddler social-emotional problems and competencies. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*(1), 18-26.
- Center for Family Research at the University of Georgia. (2002). *Healthy Families Georgia Evaluation Report: July 2000-December 31, 2002* (No. 7).
- Center for Disease Control (1992). *Youth Risk Behavior Surveillance-United States*. Washington DC: U.S. Dept of Health and Human Services
- Chaffin, M. (2004). Is it time to rethink Healthy Start/Healthy Families? *Child Abuse & Neglect, 28*, 589-595.
- Child Trends. (2001). *Facts at a glance*. Washington, DC: Author.
- Clinton, B. (1990). *Against the odds: Parenting in disadvantaged communities*. Unpublished manuscript.
- Coley, R.L., & Chase-Lansdale, P.L. (1998). Adolescent pregnancy and parenthood: Recent evidence and future directions. *The American Psychologist, 53*(2), 152-166.
- Conduct Problems Research Group. (2002). Evaluation of the first 3 years of the Fast Track Prevention Trial with Children at High Risk for Adolescent Conduct Problems. *Journal of Abnormal Child Psychology, 30*(1), 19-35.
- Cook, T.D. (2004). Beyond Advocacy: Putting history and research on research into debates about the merits of social experiments. *Social Policy Report, 18* (2), 5-6.
- Cooper, R.T. (1997, May 24). Contrary message on teenage pregnancy. *L.A. Times*, p. A-1.
- Cottingham, P. (2004). Why we need more, not fewer, gold standard evaluations. *Social Policy Report, 18*(2), 13.
- Cowan, C. P., Cowan, P. A., Coie, L., & Coie, J. D. (1978). Becoming a family: The impact of the first child's birth on the couple's relationship. In W. B. Miller & L. F. Newman (Eds.), *The first child and family formation*. Chapel Hill, NC: Carolina Population Center.
- Crockenberg, S. (1987). Support for adolescent mothers during the postnatal period: Theory and practice. In Zachariah Boukydis (Ed.), *Research on support for parents and infants in the postnatal period*, (pp. 3-24). Westport, CT: Ablex.
- Culp, A.M. & Culp, R.E. (2002 July). Results of a process evaluation of a home visitation program. Poster session presented at WAIMH, Amsterdam, Netherlands.
- Culp, A.M., Culp, R.E., Blankmeyer, M. & Passmark, L. (1998). Parent education home visitation program: Adolescent and non-adolescent mother comparison after six months of Intervention. *Infant Mental Health Journal, 19*(2), 111-123.
- Culp, A.M., Culp, R.E., Howell, C.S., Saathoff-Wells, T.S., Hechtner-Galvin, T., & Carter, S. (2001). *12-month Positive Outcome Effects with First-Time Mothers in Home Visitation Services*. SRCD, Minneapolis, MN.
- Daro, D.A., & Harding, K.A. (1999). Healthy Families America: Using research to enhance practice. *The Future of Children, 9*(1), 152-176.
- Daro, D. D., McCurdy, K., & Harding, K. (1998). *The role of home visiting in preventing child abuse: An evaluation of the Hawaii Healthy Start Program*. Chicago, IL: National Committee to Reduce Child Abuse.
- Davenport, D. K. (2001). *State of Arizona Office of the Auditor General performance audit: Healthy Families Program*. Phoenix, AZ: State of Arizona, Office of the Auditor General. Unpublished manuscript.
- Dawson, P.M., Robinson, J.L., Butterfield, P.M., van Doornick, W.J., Gaensbauer, T.J., & Harmon, R.J. (1990). Supporting new parents through home visits: Effects on mother-infant interaction. *Topics in Early Childhood Special Education, 10*(4), 29-44.

- Dawson, P., van Doorninck, W.J., & Robinson, J.L. (1989). Effects of home-based, informal social support on child health. *Developmental and Behavior Pediatrics, 10*, 63-67.
- Deal, L.W., & Holt, V.L. (1998). Young maternal age and depressive symptoms: Results from the 1988 National Maternal and Infant Health Survey. *American Journal of Public Health, 88*(2), 266-270.
- Dodson, L. (1996). *"We could be your daughters": Girls, sexuality, and pregnancy in low-income America*. Cambridge, MA: Radcliffe Public Policy Institute.
- Duggan, A., Fuddy, L., Burrell, L., Higman, S., McFarlane, E., Windham, A., et al. (2004). Randomized trial of a statewide home visiting program to prevent child abuse: Impact in reducing parental risk factors. *Child Abuse and Neglect, 28*, 623-643.
- Duggan, A.K., McFarlane, E.C., Windham, A.M., Rohde, C.A., Salkevar, D.S., Fuddy, L., et al. (1999). Evaluation of Hawaii's Healthy Start Program. *The Future of Children, 9*(1), 66-90.
- Duggan, A.K., Windham, A., McFarlane, E., Burrell, L., Windham, A., Higman, S., et al. (2000). Hawaii's Healthy Start Program of home visiting for at-risk families: Evaluation of family identification, family engagement, and service delivery. *Pediatrics, 105*(1), 250-259.
- East, P.L., & Felice, M.E. (1996). *Adolescent pregnancy and parenting: Findings from a racially diverse sample*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Edens, J.F. (1997). Home visitation programs with ethnic minority families: Cultural issues in parent consultation. *Journal of Educational and Psychological Consultation, 8* (40), 373-383.
- Edwards, C.D., Tripp, L., Purcell, L., Danda, C., & Evans, G.D. (2001). *Healthy Families Jacksonville Final Evaluation Report*. Gainesville, FL: Institute for Food and Agricultural Sciences at the University of Florida. Unpublished manuscript.
- Epstein, A.S., & Weikart, D.P. (1979). *The Ypsilanti-Carnegie Infant Education Project: Longitudinal follow-up* (High/Scope Educational Research Foundation Monograph No. 6). Ypsilanti, MI: High/Scope Press.
- Erickson, M.E. (1991). Evaluating early intervention services: A cost-effectiveness analysis. *Dissertation Abstracts International, Vol 52*(5-A). US: Univ Microfilms International.
- Evans, G.W., Maxwell, L.E., & Hart, B. (1999). Parental language and verbal responsiveness to children in crowded homes. *Developmental Psychology, 35*(4), 1020-1023.
- Evans, G.W., Palsane, M.N., Lepore, S.J., & Martin, J. (1989). Residential density and psychological health: The mediating effects of social support. *Journal of Personality and Social Psychology, 57*(6), 994-999.
- Feiler, A. (2003). Early literacy and home visiting during the reception year: Supporting "difficult to reach" families. *The European Journal of Special Needs Education, 18*(2), 251-261.
- Field, T.M., Widmayer, S.M., Greenberg, R., & Stoller, W. (1982). Effects of parent training on teenage mothers and their infants. *Pediatrics, 69*(6), 703-707.
- Field, T.M., Widmayer, S.M., Stringer, S., & Ignatoff, E. (1980). Teenage, lower class, black mothers and their preterm infants: An intervention and developmental follow-up. *Child Development, 51*, 426-436.
- Flanagan, P. (1998). Teen mothers: Countering the myths of dysfunction and developmental disruption. In C. Garcia Coll, J.L. Surrey, & K. Weingarten (Eds.), *Mothering against the odds: Diverse voices of contemporary mothers* (pp. 238-254). New York: The Guilford Press.
- Flynn, L. (1999). The adolescent parenting program: Improving outcomes through mentorship. *Public Health Nursing, 16*, 182-189.
- Frankel, H. (1988). Family-centered, home-based services in child protection: A review of the research. *Social Service Review, pp.* 137-157.
- Fraser, J.A., Armstrong, K.L., Morris, J.P., & Dadds, M.R. (2000). Home visiting intervention for vulnerable families with newborns: Follow-up results of a randomized controlled trial. *Child Abuse & Neglect, 24*(11), 1399-1429.
- Furstenberg, F.F., Levine, J.A., & Brooks-Gunn, J. (1990). The children of teenage mothers: Patterns of early childbearing in two generations. *Family Planning Perspectives, 22*, 54-61.
- Galano, J., & Huntington, L. (2001). *Healthy Families Virginia: FY 2001: Statewide evaluation report*. Williamsburg, VA.
- George, R.M., & Lee, B.J. (1996). Abuse and neglect of the children. In R.A. Maynard (Ed.), *Kids having kids: Economic costs and social consequences of teen pregnancy* (pp. 205-230). Washington, DC: The Urban Institute Press.
- Gill, S., Greenberg, M.T., & Vazquez, A. (2002). Changes in the service delivery model and home visitors' job satisfaction and turnover in an Early Head Start Program. *Infant Mental Health Journal, 23* (1-2), 182-196.
- Gomby, D.S. (1999). Understanding evaluations of home visitation programs. *The Future of Children, 9*(1), 27-43.
- Gomby, D.S. (2003). *Building school readiness through home visitation*. Unpublished manuscript.
- Gomby, D.S., Culross, P.L., & Behrman, R.E. (1999). Home visiting: Recent program evaluations—analysis and recommendations. *The Future of Children, 9*, 4-26.
- Gomby, D.S., Larson, C.S., Lewit, E.M., & Behrman, R.E. (1993). Home visiting: Analysis and recommendations. *The Future of Children, 3*, 6-22.
- Gonzales, N.A., Gunnoe, M.L., Jackson, K.M. & Samaniego, R.Y. (in press). Validation of a multicultural events scale for urban adolescents. *Journal of Community Psychology*.
- Goodson, B.D., Layzer, J.I., St. Pierre, R.G., Bernstein, L.S., & Lopez, M. (2000). Effectiveness of a comprehensive, five-year family support program for low-income children and their families: Findings from the Comprehensive Child Development Program. *Early Childhood Research Quarterly, 15*(1), 5-39.
- Granger, R.C., & Cytron, R. (1999). Teenage parent programs: A synthesis of the long-term effects of the New Chance Demonstration, Ohio's Learning, Earning and Parenting Program, and the Teenage Parent Demonstration. *Evaluation Review, 23*(2), 107-145.

- Grant, T.M., Ernst, C.C., & Streissguth, A.P. (1999). Intervention with high-risk alcohol and drug-abusing mothers: I. Administrative strategies of the Seattle model of paraprofessional advocacy. *Journal of Community Psychology, 27*(1), 1-18.
- Gray, S.W., & Ruttle, K. (1980). The family-oriented home visiting program: A longitudinal study. *Genetic Psychology Monographs, 102*, 299-316.
- Green, B.L., Mackin, J.R., Tarte, J., Cole, R.T.M., & Brekhus, J. (2003, January). *Healthy Start of Oregon 2001-2002 status report: Executive summary, July 1, 2001-June 30, 2002*. Portland, OR: NPC Research.
- Greene, R., Heck, J., Lee, E., Griffith, J., Mitchell-Herzfeld, S., & Senkulics, D. (2001, June). *Evaluation findings of the Healthy Families New York Home Visiting Program: A report submitted to Governor George E. Pataki and the New York State Legislature*. New York: Center for Human Services Research, University at Albany State University of New York.
- Grogger, J. (1997). Incarceration-related costs of early childbearing. In R. Maynard (Ed.), *Kids having kids: Economic costs and social consequences of teen pregnancy*. Washington, DC: Urban Institute Press.
- Guiden, M. (1999). Teen pregnancy prevention: A legislator's guide. Denver, CO: National Conference of State Legislatures.
- Gutelius, M.F., Kirsch, A.D., McDonald, S., Brooks, M.R., & McErlean, T. (1977). Controlled study of child health supervision: Behavioural results. *Pediatrics, 60* (3), 294-304.
- Hamilton, B.E., Sutton, P.D., & Ventura, S.J. (2003). Revised birth and fertility rates for the 1990s: United States, and new rates for Hispanic populations, 2000 and 2001. (National Vital Statistics Rep. No. 51 in preparation). Hyattsville, MD: National Center for Health Statistics.
- Hammond-Ratzlaff, A., & Fulton, A. (2001). Knowledge gained by mothers enrolled in a home visitation program. *Adolescence, 36*(143), 435-442.
- Hans, S., & Korfmacher, J. (2002). The professional development of paraprofessionals. *Zero to Three, 23*(2), 4-8.
- Hardy, J.B., & Streett, R. (1989). Family support and parenting education in the home: an effective extension of clinic-based preventive health care services for poor children. *The Journal of Pediatrics, 115*(6), 927-931.
- Harkavy, O., & Bond, J.T. (1992). Program operations: Time allocations and cost analysis. In M. Lerner, R. Halpern, & O. Harkavy (Eds.), *Fair Start for Children*. New Haven, CT: Yale University Press.
- Hebbeler, K.M., & Gerlach-Downie, S.G. (2002). Inside the black box of home visiting: A quantitative analysis of why intended outcomes were not achieved. *Early Childhood Research Quarterly, 17*(1), 28-51.
- Heinicke, C.M., Fineman, N.R., Ponce, V.A., & Guthrie, D. (2001). Relationship-based intervention with at-risk mothers: Outcome in the second year of life. *Infant Mental Health Journal, 22*(4), 431-462.
- Heinicke, C.M., Fineman, N.R., Ruth, G., Becchia, S.L., Guthrie, D., & Rodning, C. (1999). Relationship-based intervention with at-risk mothers: Outcome in the first year of life. *Infant Mental Health Journal, 20*(4), 349-374.
- Heinicke, C.M., Goorsky, M., Moscov, S., Dudley, K., Gordon, J., Schneider, C., & Guthrie, G. (2000). Relationship-based intervention with at-risk mothers: Factors affecting variations in outcome. *Infant Mental Health Journal, 21*(3), 133-155.
- Hernandez, M., Isaacs, M.R., Nesman, T., & Burns, D. (1998). Perspectives on culturally competent systems of care. In M. Hernandez & M.R. Isaacs (Eds.), *Promoting cultural competence in children's mental health services* (pp. 1-25). Baltimore: Paul H. Brookes.
- Herzog, E.P., Cherniss, B.S., & Menzel, D.J. (1986). Issues in engaging high-risk adolescent mothers in supportive work. *Infant Mental Health Journal, 7*, 59-68.
- Hiatt, S.W., Sampson, D., & Baird, D. (1997). Paraprofessional home visitation: conceptual and pragmatic considerations. *Journal of Community Psychology, 25*, 77-92.
- Hoffman, Saul D. (1998). Teenage childbearing is not so bad after all...or is it? A review of the new literature. *Family Planning Perspectives, 30*(5), 236-239.
- Honig, A.S. & Lally, J.R. (1982). The Family Development Research Program: Retrospective review. *Early Child Development & Care, 10*, 41-62.
- Honig, A. S., Lally, J. R., & Mathieson, D. (1982). Personal-social adjustment of school children after five years in a family enrichment program. *Child Care Quarterly, 11*, 138-146.
- Honig, A.S., & Morin, C. (1996, December). When should programs for teen parents and babies begin? Longitudinal evaluation of a teen parents and baby program. In A.S. Honig (Chair), *Longitudinal research with high-risk families*. Symposium conducted at the biennial Head Start Research Conference, Syracuse, NY.
- Hotz, V.J., McElroy, S.W., & Sanders, S.G. (1996). The impact of teenage childbearing on the mothers and the consequences of those impacts for government. In R.A. Maynard (Ed.), *Kids having kids: Economic costs and social consequences of teen pregnancy* (pp. 55-94). Washington, DC: The Urban Institute Press.
- Hotz, V.J., McElroy, S.W., & Sanders, S.G. (1999). Teenage childbearing and its life cycle consequences: Exploiting a natural experiment. Unpublished manuscript.
- Jacobs, F.H. (2003). Child and Family Program Evaluation: Learning to Enjoy Complexity. *Applied Developmental Science, 7*(2), 62-75.
- Jester, R.E., & Guinagh, B.J. (1983). The Gordon Parent Education Infant and Toddler Program. In Consortium for Longitudinal Studies (Ed.), *As the twig is bent . . . lasting effects of preschool programs* (pp. 103-32). Hillsdale, NJ: Erlbaum.
- Josten, L.E., Mullett, S.E., Savik, K., Campbell, R., & Vincent, P. (1995). Client characteristics associated with not keeping appointments for public health nursing home visits. *Public Health Nursing, 12*(5), 305-311.

- Josten, L.E., Savik, K., Anderson, M.R., Benedetto, L.L., Chabot, C.R., Gifford, M.J., et al. (2002). Dropping out of maternal and child home visits. *Public Health Nursing, 19*(1), 3-10.
- Kallan, J.E. (1997). Reexamination of interpregnancy intervals and subsequent birth outcomes: evidence from U.S. linked birth/infant death records. *Social Biology, 44*, (3-4), 205-212.
- Karraker, K.H., Evans, S.L. (1996). Adolescent mothers' knowledge of child development and expectations for their own infants. *Journal of Youth and Adolescence, 25*(5), 651-665.
- Katzev, A.R., Pratt, C.C., Henderson, M.S., McGuigan, W.M., (1999). *Oregon's Healthy Start Effort 1997-98 Status Report*. Corvallis, OR: Oregon State University.
- Katzev, A. R., Pratt, C. C., & McGuigan, W. (2001). *Oregon Healthy Start 1999-2000 status report*. Corvallis, OR: Oregon State University.
- Katzev, A.R., Pratt, C.C., McGuigan, W.M., & Kapsch, B.M. (2002). *Oregon Healthy Start 2000-2001 status report*. Salem: Oregon Commission on Children and Families.
- Kazdin, A.E., French, N.H., Unis, A.S., Esveldts-Dawson, K., & Sherick, R.B. (1983). Hopelessness, depression, and suicidal intent among psychiatrically disturbed children, *Journal of Consulting and Clinical Psychology, 51*, 504-510.
- Kelsey, M., Johnson, A., & Maynard, R. (2001). *The potential of home visitor services to strengthen welfare-to-work programs for teenage parents on cash assistance*. Washington, DC: Administration for Children and Families, U.S. Department of Health and Human Services.
- Kenney, J.W., Reinholtz, C., & Angelini, P.J. (1997). Ethnic differences in childhood and adolescent sexual abuse and teenage pregnancy. *Journal of Adolescent Health, 21*(1), 3-10.
- Kirby, D. (1999). *Looking for reasons why: The antecedents of adolescent sexual risk-taking, pregnancy, and childbearing*. Washington, DC: The National Campaign to Prevent Teen Pregnancy.
- Kisker, E.E., Paulsell, D., Love, J.M., & Raikes, H. (2002). *Pathways to quality and full implementation in Early Head Start programs*. Princeton, NJ: Mathematica Policy Research.
- Kitzman, H.J., Cole, R., & Yoos, L. (1997). Challenges experienced by home visitors: A qualitative study of program implementation. *Journal of Community Psychology, 25*(1), 95-109.
- Kitzman, H.J., Cole, R., Yoos, H.L., & Olds, D. (1997). Challenges experienced by home visitors: A qualitative study of program implementation. *Journal of Community Psychology, 25*(1), 95-109.
- Kitzman, H., Olds, D.L., Henderson, C.R., Hanks, C., Cole, R., Tatelbaum, R., McConnochie, K.M., Sidora, K., Lucky, D.W., Shaver, D., Engelhardt, K., James, D., & Barnard, K. (1997). Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing. *The Journal of the American Medical Association, 278*(8), 644-652.
- Kitzman, H., Olds, D.L., Sidora, K., Henderson, C.R., Hanks, C., Cole, R., et al. (2000). Enduring effects of nurse home visitation on maternal life course: A 3-year follow-up of a randomized trial. *The Journal of the American Medical Association, 283*(15), 1983-1989.
- Kitzman, H.J., Yoos, L.H., Cole, R., Korfmacher, J., & Hanks, C. (1997). Prenatal and early childhood home-visitation program processes: A case illustration. *Journal of Community Psychology, 25*(1), 27-45.
- Klagholz, D.D. & Associates, LLC. (2001). *Healthy Families Montgomery: Evaluation report—Year V, July 1, 2000 through June 30, 2001*. Great Falls, VA: Author.
- Klass, C.S. (1996). *Home visiting: Promoting healthy parent and child development*. Baltimore: Paul H. Brookes.
- Klepinge, D.H., Lundberg, S., & Plotnick, R.D. (1995). Adolescent fertility and the educational attainment of young women. *Family Planning Perspectives, 27*, 23-28.
- Klerman, L.V. (1993, March). *Adolescent pregnancy and parenting: Controversies of the past and lessons for the future*. Gallagher Lecture presented at the Annual Meeting of the Society for Adolescent Medicine, Chicago, IL.
- Klerman, L.V. (2004). *Another chance: Preventing additional births to teen mothers*. Washington, DC: National Campaign to Prevent Teen Pregnancy.
- Kochanek, T.T., & Brady, A.E. (1995). *Maternal satisfaction with infant/toddler and preschool services: Components, outcomes, and correlates*. Chapel Hill: University of North Carolina, FPG Child Development Center, Early Childhood Research Institute: Service Utilization.
- Kochanek, T.T., & Buka, S.L. (1995). *The Early Childhood Research Institute on Service Utilization: Socio-demographic influences of services used by infants with disabilities and their families*. Providence: Early Childhood Research Institute, Rhode Island College.
- Koniak-Griffin, D., Anderson, N. L. R., Brecht, M., Verzemnieks, I., Lesser, J., & Kim, S. (2002). Public health nursing care for adolescent mothers: Impact on infant health and selected maternal outcomes at 1 year postbirth. *Journal of Adolescent Health, 30*(1), 44-54.
- Koniak-Griffin, D., & Turner-Pluta, C. (2001). Health risks and psychosocial outcomes of early childbearing: A review of the literature. *Journal of Perinatal and Neonatal Nursing, 15*, 1-17.
- Korfmacher, J., Kitman, H., & Olds, D. (1998). Intervention processes as predictors of outcomes in a preventive home-visitation program. *Journal of Community Psychology, 26*(1), 49-64.
- Korfmacher, J., O'Brien, R., Hiatt, S., & Olds, D. (1999). Differences in program implementation between nurses and paraprofessionals providing home visits during pregnancy and infancy: A randomized trial. *American Journal of Public Health, 89*(12), 1847-1851.
- Lally, R., & Honig, A. (1977). *The Family Development Research Program: A program for prenatal, infant, and early childhood enrichment*. Final Report to the Office of Child Development, H.E.W. Syracuse University.
- Lally, J., Mangione, P., & Honig, A. (1988). The Syracuse University Family Development Research Program: Long-range impact of an early intervention with low-income children and their families. In D. Powell (Ed.), *Parent education in early childhood intervention; Emerging directions in theory, research and practice*. Norwood, NJ: Ablex.

- Lambie, D. Z., Bond, J. T., & Weikart, D. P. (1974). *Home teaching with mothers and infants—The Ypsilanti—Carnegie Infant Education Project: An experiment* (Monographs of the High/Scope Educational Research Foundation, No. 6). Ypsilanti, MI: The High/Scope Press.
- Larson, C.P. (1980). Efficacy of prenatal and postpartum home visits on child health and development. *Pediatrics*, 66, 191-197.
- Leadbeater, B. & Way, N. (2001). *Growing up fast: Transitions to adulthood among adolescent mothers*. New York: Guilford Press.
- Leadbeater, B. J., & Linares, O. (1992). Depressive symptoms in Black and Puerto Rican adolescent mothers in the first 3 years postpartum. *Development and Psychopathology*, 4, 451-468.
- LeCroy & Milligan Associates, Inc. (2001). *Healthy Families Arizona evaluation report*. Tucson, AZ: Author.
- LeCroy & Milligan Associates, Inc. (2003). *Healthy Families Arizona evaluation report*. Tucson, AZ: Author.
- Lennon, M., Blome, J., & English, K. (2001 September 30). *Depression and low-income women: Challenges for TANF and welfare-to-work policies and programs*. Retrieved from Columbia University, Research Forum on Children, Families, and the New Federalism website: <http://www.researchforum.org/>
- Lerner, R.M., Sparks, E.E., & McCubbin, L.D. (1999). *Family diversity and family policy: Strengthening families for America's children*. Boston: Kluwer Academic Publishers.
- Lesser, J., Koniak-Griffin, D., & Anderson, N.L.R. (1999). Depressed adolescent mothers' perceptions of their own maternal role. *Issues in Mental Health Nursing*, 20, 131-149.
- Levesque, R.J. (2000). *Adolescents, sex, and the law: Preparing adolescents for responsible citizenship*. Washington, DC: American Psychological Association.
- Love, J.M., Kisker, E.E., Ross, C.M., Schochet, P.Z., Brooks-Gunn, J., Paulsell, D., et al., (2002a). *Making a difference in the lives of infants and toddlers and their families: The impacts of Early Head Start: Volume I: Final technical report*. Washington D.C.: Administration on Children, Youth and Families, Department of Health and Human Services.
- Love, J.M., Kisker, E.E., Ross, C.M., Schochet, P.Z., Brooks-Gunn, J., Paulsell, D., Boller, K., Constantine, J., Vogel, C., Fuligni, A.S., Brady-Smith, C. (2002b). *Making a difference in the lives of infants and toddlers and their families: The impacts of Early Head Start (Vol. 2: Final Technical Report Appendices)*. Washington D.C.: Administration on Children, Youth and Families, Department of Health and Human Services.
- Lowenthal, B. (1996). Training early interventionists to work with culturally diverse families. *Infant-Toddler Intervention*, 6(2), 145-152.
- Luker, K. (1996). *Dubious conceptions: The politics of teenage pregnancy*. Cambridge, MA: Harvard University Press.
- Luster, T. (1998). Individual differences in the care giving behavior of teenage mothers: An ecological perspective. *Clinical Child Psychology and Psychiatry*, 3, 341-360.
- Lyons-Ruth, K., & Melnick, S. (2004). Dose-response effect of mother-infant clinical home visiting on aggressive behavior problems in kindergarten. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 699-707.
- MacPhee, D. (1981). *Knowledge of Infant Development Inventory and Catalogue of Previous Experience with Infants*. Princeton, NJ: Educational Testing Service.
- Manlove, J. (1998). The influence of high school dropout and school disengagement on the risk of school-age pregnancy. *Journal of Research on Adolescence*, 8(2), 187-220.
- Margie, N.G., & Phillips, D.A. (1999). *Revisiting home visiting: Summary of a workshop*. Washington, DC: National Academy Press.
- Martin, J.A., Hamilton, B.E., & Ventura, S.J. (2001). Births: Preliminary data for 2000. *National Vital Statistics Reports*, 49(5), 1-19.
- Martin, J.A., Hamilton, B.E., Sutton, P.D., Ventura, S.J., Menacker, F., & Munson, M.L. (2003) *Births: Final Data for 2002*. *National Vital Statistics Reports*, 52(10), 1-113. Hyattsville, MD: National Center for Health Statistics.
- Mason, J. L., Benjamin, M.P., & Lewis, S.A. (1996). The cultural competence model: Implications for child and family mental health services. In C.A. Heflinger & C.R. Nixon (Eds.), *Families and the mental health system for children and adolescents* (pp. 165-190). Thousand Oaks, CA: Sage.
- Maynard, R.A. (1996). The costs of adolescent childbearing. In R.A. Maynard (Ed.), *Kids having kids: Economic costs and social consequences of teen pregnancy* (pp. 285-337). Washington, DC: The Urban Institute Press.
- Maynard, R.A. (1997). *Kids having kids: Economic costs and social consequences of teen pregnancy*. Washington, DC: The Urban Institute Press.
- McBride, S., & Peterson, C. (1997). Home based early intervention with families of children with disabilities: Who is doing what? *Topics in Early Childhood Special Education*, 17(2), 1-14.
- McCall, R.B., & Green, B.L. (2004). Beyond the Methodological Gold Standards of Behavioral Research: Considerations for Practice and Policy. *Social Policy Report*, 18(2), 3-4, 6-10.
- McCurdy, K. (1995). Risk assessment in child abuse prevention programs. *Social Work Research*, 19(2), 77-87.
- McElroy, S.W., & Moore, K.A. (1997). Trends over time in teenage pregnancy and childbearing: The critical changes. In R.A. Maynard (Ed.), *Kids having kids: Economic costs and social consequences of teen pregnancy* (pp. 23-53). Washington, DC: The Urban Institute Press.
- McWilliam, R.A., Tocci, L., & Harbin, G. (1995). *Services are child-oriented and families like it that way—but why?* Chapel Hill: Early Childhood Research Institute on Service Utilization, Frank Porter Graham Child Development Center, University of North Carolina.
- Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis*. Beverly Hills, CA: Sage Publications.

- Mishler, E.G. (1986). *Research interviewing: Context and narrative*. Cambridge, MA: Harvard University Press.
- Moore, K.A., Driscoll, A.K., & Lindberg, L.D. (1998). *A statistical portrait of adolescent sex, contraception, and childbearing*. Washington, DC: National Campaign to Prevent Teen Pregnancy.
- Moore, K.A., Manlove, J., Terry-Humen, E., Williams, S., Papillo, A.R., & Scarpa, J. (2001). *Facts at a glance*. Washington, DC: Child Trends.
- Moore, K.A., Morrison, D.R., & Greene, A.D. (1995). *Children born to teenage mothers: Analysis of the National Longitudinal Survey of Youth-Child Supplement and the National Survey of Children*. Washington, DC: Child Trends.
- Moore, K.A., Morrison, D.R., & Greene, A.D. (1997). Effects on the children born to adolescent mothers. In R. Maynard (Ed.), *Kids having kids: Economic costs and social consequences of teen pregnancy* (pp. 146-180). Washington, DC: Urban Institute Press.
- Moore, K.A., Myers, D., Morrison, D.R., Nord, C., Brown, B., & Edmonston, B. (1993). Age at first childbirth and later poverty. *Journal of Research on Adolescence, 3*(4), 393-422.
- Moore, K.A., Romano, A., & Oakes, C. (1996). *Facts at a glance: Annual newsletter on teen pregnancy*. Washington, DC: Child Trends.
- Moore, K.A., & Sugland, B. (1999, June). Piecing together the puzzle of teenage childbearing. *Policy and Practice, 36*-42.
- Mulsow, M.H., & Murry, V.M. (1996). Parenting on edge: Economically stressed, single, African-American adolescent mothers. *Journal of Family Issues, 17*(5), 704-721.
- Murray, L., Fiori-Cowley, A., Hooper, R., & Cooper, P. (1996). The impact of postnatal depression and associated adversity on early mother-infant interactions and later infant outcomes. *Child Development, 67*(5), 2512-2526.
- Musick & Stott (2000). Paraprofessionals revisited and reconsidered. In J.P. Shonkoff and S.J. Meisels (Eds.). *Handbook of early childhood intervention (2nd ed)*. Cambridge, UK: Cambridge University Press.
- Myers-Walls, J. (1999). *Parenting self-confidence scale*. West Lafayette, Indiana: Purdue University. Unpublished manual.
- Nagy M.C., Leeper J.D., Hullett S., Northrup R., & Newell W.H. (1988) The rural Alabama pregnancy and infant health program. *Family and Community Health, 11*(2), 49-56.
- National Campaign to Prevent Teen Pregnancy. (1997). *Whatever happened to childhood? The problem of teen pregnancy in the United States*. Washington, DC: Author.
- National Campaign to Prevent Teen Pregnancy. (2002). *Not just another single issue: Teen pregnancy prevention's link to other critical social issues*. Washington, DC: Author.
- National Center for Chronic Disease Prevention and Health Promotion. (1992). *Handbook for conducting Youth Risk Behavior Surveys*. Atlanta, GA: Center for Disease Control.
- Nauta, M.J., Brush, L., Johnson, L., Affholter, D., Hewett, K., Algere-Knox, L., Connel, D., Ladner, R., & Stepto, J. (1980). *Evaluation of the Child and Family Resource Program (CFRP). Phase II report. Vol. I: Research report*. Cambridge, MA: Abt Associates.
- Nauta, M.J., & Johnson, L. (1981). *Evaluation of the Child and Family Resource Program (CFRP). Phase II research report*. Cambridge, MA: ABT Associates.
- Nauta, M.J., Johnson, L., Algere-Knox, L., Brush, L., Connell, D., Ladner, R., Singer, J., & Travers, J. (1980). *Evaluation of the Child and Family Resource Program (CFRP). Phase III research report*. Cambridge, MA: ABT Associates.
- Navaie-Waliser, M., Martin, S.L., Campbell, M.K., Tessaro, I., Kotelchuck, M., & Cross, A.W. (2000). Factors predicting completion of home visitation program by high-risk pregnant women: The North Carolina Maternal Outreach Worker Program. *American Journal of Public Health, 90*(1), 121-124.
- Norr, K.F., Crittenden, K.S., Lehrer, E.L., Reyes, O., Boyd, C.B., Nacion, K.W., & Watanabe, K. (2003). Maternal and infant outcomes at one year for a nurse-health advocate home visiting program serving African Americans and Mexican Americans. *Public Health Nursing, 20*(3), 190-203.
- O'Callaghan, M.F., Borkowski, J.G., Whitman, T.L., Maxwell, S.E., & Keogh, D. (1999). A model of adolescent parenting: The role of cognitive readiness to parent. *Journal of Research on Adolescence, 9*, 203-225.
- Olds, D.L. (2002). Prenatal and infancy home visiting by nurses: From randomized trials to community replication. *Prevention Science, 3* (3), 153-72.
- Olds, D., Henderson, C., Kitzman, H., Eckenrode, J., Cole, R., & Tatelbaum, R. (1998). The promise of home visitation: Results of two randomized trials. *Journal of Community Psychology, 26* (1), 5-21.
- Olds, D.L., Henderson, C.R., Kitzman, H.J., Eckenrode, J.J., Cole, R.E., & Tatelbaum, R.C. (1999). Prenatal and infancy home visitation by nurses: Recent findings. *The Future of Children, 9* (1), 44-65.
- Olds, D., Henderson, C., Phelps, C., Kitzman, H., & Hanks, C. (1993). Effect of prenatal and infancy nurse home visitation on government spending. *Medical Care, 31*(2), 155-174.
- Olds, D., & Kitzman, H. (1993). Review of research on home visiting pregnant women and parents of young children. *The Future of Children, 3*(3), 53-92.
- Olds, D.L., Kitzman, H., Cole, R., Robinson, J., Sidora, K., Luckey, D.W., et al. (2004). Effects of nurse home-visiting on maternal life course and child development: Age 6 follow-up results of a randomized trial. *Pediatrics, 114*, 1550-1559.
- Olds, D.L., & Korfmacher, J. (1998). Intervention processes as predictors of outcomes in a preventive home-visitation program. *Journal of Community Psychology, 26*(1), 49-64.
- Olds, D.L., & Korfmacher, J. (1998). Maternal psychological characteristics as influences on home visitation contact. *Journal of Community Psychology, 26*(1), 23-36.
- Orrell-Valente, J.K., Pinderhughes, E.E., Valente, E., & Laird R.D. (1999). If it's offered, will they come? Influences on parents' participation in a community-based conduct problems prevention program. *American Journal of Community Psychology, 27*(6), 753-783.

- Panzarine, S., Slater, E., & Sharps, P. (1995). Coping, social support, and depressive symptoms in adolescent mothers. *Journal of Adolescent Health, 17*, 113-119.
- Parker, G., Tupling, H. & Brown, L.B. (1979). A parental bonding instrument. *British Journal of Medical Psychology, 52*, 1-10.
- Patterson, J. M., & McCubbin, H. I. (1991). A-Cope, Adolescent Coping Orientation for Problem Experiences. In A. I. Thompson (Ed.), *Family Assessment Inventories for Research and Practice* (2nd ed.). University of Wisconsin, WI.
- Paulsell, D., Kisker, E.E., Love, J.M., & Raikes, H. (2000). Leading the way: Characteristics and early experiences of selected Early Head Start programs, Vol. III: Program implementation. Princeton, NJ: Mathematica Policy Research.
- Phillips, D., and Shonkoff, J. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.
- Powell, C., & Grantham-MacGregor, S. (1989). Home visiting of varying frequency and child development. *Pediatrics, 84*(1), 157-164.
- Powell, D.R. (1984). Social network and demographic predictors of length of participation in a parent education program. *Journal of Community Psychology, 12*, 13-20.
- Proctor, E. & Davis, L. (1994). The challenge of racial difference: Skills for clinical practice. *Social Work, 39*(3), 314-323.
- Radloff, L.S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*(3), 385-401.
- Rawlings, J.S., Rawlings, V.B., & Read, J.A. (1995). Prevalence of low birthweight and preterm delivery in relation to the interval between pregnancies among white and black women. *New England Journal of Medicine, 332*, 69-74.
- Reis, J. (1988). Child-rearing expectations and developmental knowledge according to maternal age and parity. *Infant Mental Health Journal, 9*, 287-304.
- Reissman C.K. (1993). *Narrative Analysis*. London: Sage Publications.
- Rescorla, L. A., Provence, S. & Naylor, A. (1982). The Yale Child Welfare Research Program: Description and results. In E. Zigler and E.W. Gordon (Eds.), *Day care: Scientific and social policy issues* (pp. 183-199). Boston, MA: Auburn.
- Rhodes, J.E., Contreras, J.M., & Mangelsdorf, S.C. (1994). Natural mentor relationships among Latina adolescent mothers: Psychological adjustment, moderating processes, and the role of early parental acceptance. *American Journal of Community Psychology, 22* (2), 211-227.
- Rhodes, J.E., Ebert, L., & Fischer, K. (1992). Natural mentors: An overlooked resource in the social networks of young, African American mothers. *American Journal of Community Psychology, 20*(4), 445-461.
- Roberts, E.M. (1997). Neighborhood social environments and the distribution of low birth weight in Chicago. *American Journal of Public Health, 87*(4), 597-603.
- Roberts, R.N., Akers, A.L., & Behl, D.D. (1996). Family-level service coordination within home visiting programs. *Topics in Early Childhood Special Education, 16*(3), 279-301.
- Roberts, R.N., & Wasik, B.H. (1990). Home visiting programs for families with children birth to three: Results of a national survey. *Journal of Early Intervention, 14*(3), 274-284.
- Roberts, R. N., Wasik, B. H., Casto, G., & Ramey, C. T. (1991). Family support in the home: Programs, policy, and social change. *American Psychologist, 46*, 131-137.
- Robin Hood Foundation. (1996). *Kids having kids: A Robin Hood Foundation special report on the costs of adolescent childbearing*. New York: Author.
- Rogoff, B. (2003). *The cultural nature of human development*. New York: Oxford University Press.
- Roosa, M.W., Tein, J, Reinholtz, C., & Angelini, P.J. (1997). The relationship of childhood sexual abuse to teenage pregnancy. *Journal of Marriage and the Family, 59*(1), 119-130.
- Ross, G.S. (1984). Home intervention for premature infants of low-income families. *American Journal of Orthopsychiatry, 54*, 263-270.
- Ryan, S., Franzetta, K., & Manlove, J. (2005, February). Hispanic teen pregnancy and birth rates: Looking behind the numbers. *Child Trends Brief #2006*.
- Samuels, V.J., Stockdale, D.F., & Crase, S.J. (1994). Adolescent mothers' adjustment to parenting. *Journal of Adolescent Health, 22*, 376-382.
- Scales, P.C., Benson, P.L., Leffert, N., & Blyth, D.A. (1998). Contribution of developmental assets to the prediction of thriving among adolescents. *Applied Developmental Science, 4*(1), 27-46.
- Scales, P.C., & Leffert, N. (1999). *Developmental assets: A synthesis of the scientific research on adolescent development*. Minneapolis, MN: Search Institute.
- Sedlak, A. & Broadhurst, D. (1996). *The Third National Incidence Study of Child Abuse and Neglect: NIS 3*. US. Department of Health and Human Services.
- Seitz, V., Rosenbaum, L.K., & Apfel, N.H. (1985). Effects of family support intervention: A ten-year follow-up. *Child Development, 56*, 376-91.
- Simeonsson, R.J., & Bailey, D.B. (1990). Family dimensions in early intervention. In S.J. Meisels & J.P. Shonkoff (Eds.), *Handbook of early childhood intervention* (pp. 428-443). Cambridge, MA: Cambridge University Press.
- Singh, H., & Darroch, J.E. (2000). Adolescent pregnancy and childbearing: Levels and trends in developed countries. *Family Planning Perspectives, 32*, 14-23.
- SmithBattle, L., & Leonard, V. W. (1998). Adolescent mothers four years later: Narratives of the self and visions of the future. *Advances in Nursing, 20*(3), 36-49.
- Social Policy Institute. (2002, September). *Final report—Answers Benefiting Children program evaluation*. Unpublished manuscript.

- Spieker, S.J., Larson, N.C., Lewis, S.M., Keller, T.E., & Gilchrist, L. (1999). Developmental trajectories of disruptive behavior problems in preschool children of adolescent mothers. *Child Development, 70*(2), 443-458.
- St. Pierre, R.G., & Layzer, J.I. (1999). Using home visits for multiple purposes: The Comprehensive Child Development Program. *The Future of Children, 9*(1), 134-151.
- St. Pierre, R.G., Layzer, J.I., Goodson, B.D., & Bernstein, L.S. (1999). The effectiveness of comprehensive, case management interventions: Evidence from the National Evaluation of the Comprehensive Child Development Program. *American Journal of Evaluation, 20*(1), 15-34.
- Stevens, J., Ammerman, R.T., Putnam, F.G., & Van Ginkel, J.B. (2002). Depression and trauma history in first-time mothers receiving home visitation. *Journal of Community Psychology, 30*(5), 551-564.
- Stevens-Simon, C., Kelly, L., Singer, D., & Cox, A. Why pregnant adolescents say they did not use contraceptives prior to conception. *Journal of Adolescent Health, 19*(1), 48-53.
- Stevens-Simon, C., & Nelligan, D. (1998). Strategies for identifying and treating adolescents at risk for maltreating their children. *Aggression and Violent Behavior, 3*(2), 197-217.
- Stock, J.L., Bell, M.A., Boyer, D.K., & Connell, F.A. (1997). Adolescent pregnancy and sexual risk-taking among sexually abused girls. *Family Planning Perspectives, 29*(5), 200-203.
- Stone, W.L., Bendell, R., & Field, T.M. (1988). The impact of socioeconomic status on teenage mothers and children who received early intervention. *Journal of Applied Developmental Psychology, 9*(4), 391-408.
- Stormshak, E.A., Kaminski, R.A., & Goodman, M.R. (2002). Enhancing the parenting skills of Head Start families during the transition to kindergarten. *Prevention Science, 3*(3), 223-234.
- Straus, M., Hamby, S., Boney-McCoy, S. & Sugarman, D. (1996). The revised Conflict Tactics Scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues, 17* (3), 283- 316.
- Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse & Neglect, 22*(4), 249-270.
- Suner, J., Nakamura, S., & Caulfield, R. (2003, Fall). Kids having kids: Models of intervention. *Early Childhood Education Journal, 31*, 71-74.
- Terry-Humen, E. (2003, May 19). *Teen pregnancy and childbearing in the U.S. and Virginia: Keeping the Focus*. Paper presented at the 1st Annual Adolescent Sexual Health Evaluation Conference, Richmond, VA.
- Teti, D.M., Gelfand, D.M., Messinger, D.S., & Isabella, R. (1995). Maternal depression and the quality of early attachment: An examination of infants, preschoolers, and their mothers. *Developmental Psychology, 31*(3), 364-376.
- Torralla-Romero, J. (1998). Recruitment, retention, training, and supervision of mental health services staff. In M. Hernandez & M.R. Isaacs (Eds.), *Promoting cultural competence in children's mental health services* (pp. 81-93). Baltimore, MD: Paul H. Brookes.
- Trad, P.V. (1999). Assessing the patterns that prevent teenage pregnancy. *Adolescence, 34*, 221-240.
- Travers, J., Nauta, M.J., Irwin, N., Goodson, B., Singer, J., & Barclay, C. (1982). *The effects of a social program: Final report of the Child and Family Resource Program's infant-toddler component*. Cambridge, MA: Abt Associates.
- Trickett, P.K., Apfel, N.H., Rosenbaum, L.K., & Zigler, E.F. (1982). A five-year follow-up of participants in the Yale Child Welfare Research Program. In E.F. Zigler & E.W. Gordon (Eds.), *Day care: scientific and social policy issues*. Boston, MA: Auburn.
- Trivette, C. M., & Dunst, C. J. (1988). Personal Network Matrix. In A. G. Deal (Ed.), *Enabling and empowering families* (pp. 165-170). Cambridge, MA: Brookline Books, Inc.
- Unger, D. G & Wandersman, L. P. (1985, Spring). Social support and adolescent mothers: Action research contributions to theory and application. *Journal of Social Issues, 41*(1), 29-45.
- U.S. Department of Health and Human Services. (2001a, July 24). *New CDC report shows teen birth rate hits record low: Health and Human Services News Release*. Washington, DC: Author.
- U.S. Department of Health and Human Services, Administration on Children, Youth and Families. (2001b). *Child maltreatment 1999*. Washington, DC: US Government Printing Office.
- U.S. Department of Health and Human Services, Administration on Children, Youth and Families. (2004). *Child maltreatment 2002*. Washington, DC: US Government Printing Office.
- van Doorninck, W.J., Dawson, P.M., Butterfield, P.M., & Alexander, H.I. (1980). *Parent-Infant Support Through Lay Home Visitors. Final Report*. Denver, CO: Parent-Infant Programs.
- Ventura, S.J., Curtin, S.C., & Mathews, T.J. (1998). Teenage births in the United States: National and state trends, 1990-96. *National Vital Statistics System*. Hyattsville, MD: National Center for Health Statistics.
- Ventura, S.J., Curtin, S.C., & Mathews, T.J. (2000). Variations in teenage birth rates, 1991-1998: National and state trends. *National Vital Statistics Reports, 48*(6), 1-13.
- Ventura, S.J., Mathews, T.J., & Hamilton, B.E. (2001). Births to teenagers in the United States, 1940-2000. *National Vital Statistics Reports, 49*(10), 1-24.
- Wagner, M.M., & Clayton, S.L. (1999). The Parents as Teachers Program: Results from two demonstrations. *The Future of Children, 9*(1), 91-115.
- Wagner, M., Spiker, D., Gerlach-Dowrie, S., & Hernandez, F. (2000). *Parental engagement in home visiting programs—Findings from the Parents as Teachers multisite evaluation*. Menlo Park, CA: SRI International.
- Wakschlag, L.S., Chase-Lansdale, P.L., & Brooks-Gunn, J. (1996). Not just "Ghosts in the Nursery": Contemporaneous intergenerational relationships and parenting in young African-American families. *Child Development, 67*(5), 2131-2147.

- Walker, M.A., Brown, B., & Whittle, B. (1999). Mentoring as a bridge to positive outcomes for teen mothers and their children. *Child and Adolescent Social Work Journal, 16*(6), 467-480.
- Walker, K.E., & Kotloff, L.J. (1999). *Plain talk: Addressing adolescent sexuality through a community initiative. A final evaluation report prepared for the Annie E. Casey Foundation*. Baltimore: Annie E. Casey Foundation.
- Ware, L.M., Osofsky, J.D., Eberhart-Wright, A., Leichtman, M.L. (1987). Challenges of home visitor interventions with adolescent mothers and their infants. *Infant Mental Health Journal, 8*(4), 418-428.
- Warfield, M. E., Hauser-Cram, P., Krauss, M. W., Shonkoff, J. P., & Upshur, C. (2000). The effect of early intervention services on maternal well-being. *Journal of Early Education and Development, 11*, 499-517.
- Wasik, B. (1993). Staffing issues for home visiting programs. *The Future of Children, 3*, 140-157.
- Wasik, B.H., Bryant, D.M., & Lyons, C. (1990). *Home visiting: Procedures for helping families*. Newbury Park, CA: Sage.
- Wasik, B.H., Ramey, C.T., Bryant, D.M., & Sparling, J.J. (1990). A longitudinal study of two early intervention strategies: Project CARE. *Child Development, 61*, 1682-1696.
- Wasik, B.H., & Roberts, R.N. (1994a). Home visitor characteristics, training, and supervision: Results of a national survey. *Family Relations, 43*, 336-341.
- Wasik, B.H., & Roberts, R.N. (1994b). Survey of home visiting programs for abused and neglected children and their families. *Child Abuse & Neglect, 18*(3), 271-283.
- Wasik, B.H. & Sparling, J.J. (1995). *Home Visit Assessment Instrument*. Chapel Hill, NC: School of Education, University of North Carolina, Chapel Hill.
- Way, N. & Leadbeater, B.J. (1999). Pathways toward educational achievement among African American and Puerto Rican adolescent mothers: Reexamining the role of social support from families. *Development and Psychopathology, 11*, 349-364.
- Werner, E.E. (2000). Protective factors and individual resilience. In J.P. Shonkoff & S.J. Meisels (Eds.), *Handbook of early childhood intervention* (2nd ed., pp. 115-132). New York: Cambridge University Press.
- Wertheimer, R., & Moore, K. (1998). Childbearing by teens: Links to welfare reform. *New Federalism: Issues and options for states* (Policy Brief A-24). Washington, DC: The Urban Institute.
- Whitehead, D.B., & Ooms, T. (1999). *Goodbye to girlhood: What's troubling girls and what we can do about it?* Washington, DC: The National Campaign to Prevent Teen Pregnancy.
- Whitman, T. L., Borkowski, J.G., Keogh, D., & Weed, K. (2001). *Interwoven lives: Adolescent mothers and their children*. Mahwah, NJ: Erlbaum.
- Widom, C.S., & Kuhns, J.B. (1996). Childhood victimization and subsequent risk for promiscuity, prostitution, and teenage pregnancy: A prospective study. *American Journal of Public Health, 86*(11), 1607-1612.
- Williams, Stern, & Associates. (2002a). *Healthy Families Florida: Statewide evaluation: Formative report 2002*. Miami, FL: Author.
- Williams, Stern, & Associates. (2002b). *Healthy Families Florida: Statewide evaluation: Summative report 2002*. Miami, FL: Author.
- Williams, Stern, & Associates. (2003). *Healthy Families Florida: Statewide evaluation report*. Miami, FL: Author.
- Woodson, C. (2001). *Evaluation Summary. Healthy Families New Jersey* (September 1996-June 1999). New Brunswick, NJ: Prevent Child Abuse New Jersey.
- Zaslow, M.J., Dion, M.R., Morrison, D.R., Weinfield, N., Ogawa, J., & Tabors, P. (1999). Protective factors in the development of preschool-age children of young mothers receiving welfare. In E.M. Hetherington (Ed.), *Coping with divorce, single parenting, and remarriage: A risk and resilience perspective* (pp. 193-223). Mahwah, NJ: Lawrence Erlbaum Associates.
- Zill, N., Resnick, G., McKey, R.H., Clark, C., Connell, D., Swartz, J., O'Brien, R., & D'Elia, M.A. (1998). Head Start Program performance measures: Second progress report. Washington, DC: Research, Demonstration and Evaluations Branch and the Head Start Bureau, Administration on Children, Youth and Families, U.S. Department of Health and Human Services
- Zippay, A. (1995). Expanding employment skills and social networks among teen mothers: Case study of a mentor program. *Child and Adolescent Social Work Journal, 12*(1), 51-69.

Appendix A

Massachusetts Healthy Families Evaluation Technical Advisory Board

Catherine Ayoub, RN, Ed.D.

Licensed Forensic Psychologist and
Associate Professor
Harvard Graduate School of Education/
Harvard Medical School

Theodore Cross, Ph.D.

Senior Research Associate and
Adjunct Assistant Professor
Heller School and Department of Psychology
Brandeis University

Lisa Aronson Fontes, Ph.D.

Visiting Scholar
University of Massachusetts at Amherst

Jean Layzer, Ed.M.

Principal Associate
Abt Associates, Inc.
Cambridge, MA

Richard Lerner, Ph.D.

Bergstrom Chair in Applied Developmental Science
Eliot-Pearson Department of Child
Development
Tufts University

Marji Erickson Warfield, Ph.D.

Social Scientist
Heller School for Social Policy and Management
Brandeis University

Sharon Ray, Sc.D., OTR/L

Assistant Professor
Boston School of Occupational Therapy
Tufts University

Appendix B

Program Evaluation

Evaluation Activities for the Five-Tiered Approach*

Tier	Purposes of Evaluation	Types of Evaluation Activities
TIER 1: Needs Assessment	<ul style="list-style-type: none"> To document the size and nature of a public problem To determine unmet need for services in a community To propose program and policy options to meet needs To set a data baseline from which later progress can be measured To broaden the base of support for a proposed program 	<ul style="list-style-type: none"> Review existing community, county, and state data Determine additional data needed to describe problem and potential service users Conduct "environmental scan" of available resources Identify resource gaps and unmet needs Set goals and objectives for intervention Recommend one program model from range of options
TIER 2: Monitoring and Accountability	<ul style="list-style-type: none"> To monitor program performance To meet demands for accountability To build a constituency To aid in program planning and decision making To provide a groundwork for later evaluation activities 	<ul style="list-style-type: none"> Determine needs and capacities for data collection and management Develop clear and consistent procedures for collecting essential data elements Gather and analyze data to describe program along dimensions of clients, services, staff, and costs
TIER 3: Quality Review and Program Clarification	<ul style="list-style-type: none"> To develop a more detailed picture of the program as it is being implemented To assess the quality and consistency of the intervention To provide information to staff for program improvement 	<ul style="list-style-type: none"> Review monitoring data Expand on program description using information about participants' views Compare program with standards and expectations Examine participants' perceptions about effects of program Clarify program goals and design
TIER 4: Achieving Outcomes	<ul style="list-style-type: none"> To determine what changes, if any, have occurred among beneficiaries To attribute changes to the program To provide information to staff for program improvement 	<ul style="list-style-type: none"> Choose short term objectives to be examined Choose appropriate research design, given constraints and capacities Determine measurable indicators of success for outcome objectives Collect and analyze information about effects on beneficiaries
TIER 5: Establishing Impact	<ul style="list-style-type: none"> To contribute to knowledge development in the field To produce evidence of differential effectiveness of treatments To identify models worthy of replication 	<ul style="list-style-type: none"> Decide on impact objectives based on results of Tier 4 evaluation efforts Choose appropriately rigorous research design and comparison groups Identify techniques and tools to measure effects in treatment and comparison groups Analyze information to identify program impacts

* Jacobs, F.H. (2003). Child and family program evaluation: Learning to enjoy complexity. *Applied Developmental Science*, 7(2), 62-75.

Appendix C

Outcome Measures: Psychometrics

Construct	Measure	Description of Measure	Subscales	Administration	Utilization	Reliability	Validity	Standardized
Parenting Attitudes	Adult-Adolescent Parenting Inventory (AAPI) (Bavolek, 1984)	Purpose is to help identify adolescents at risk for abusive parenting attitudes and child rearing. Divided into four constructs associated with abuse parents: inappropriate expectations of child; inability of parent to be empathetically aware of the child's needs; strong parental belief in the value of punishment; and role reversal.	Inappropriate parental expectations of child; inability of parent to be empathetically aware of the child's needs; strong parental belief in the value of punishment; and role reversal. Unclear if separate scores can be derived for each.	32 statements; parents select of 5 point scale (SA=strongly agree, A=agree, U=uncertain, D=disagree, SD=strongly disagree).	Use with teen parent and adult parents. Suggested as screening tool with adolescents and new parents to assess attitudes and risk of abusive behavior (Daro, Abrahams, & Casey, 1990)	Internal consistency good; fairly good reliability	Content validity excellent based on expert judgments, construct validity based on different types of analysis.	Yes. Norm tables are by age (adult and adolescent), sex (male, female and combined), race (Black, White and combined), and status (abused/non-abused and abusive/non-abusive).
	Parenting Self-confidence Scale (Myers-Walls, 1999)	Assesses extent to which parents feel confident in their knowledge and performance of day-to-day tasks of parenting	Social-emotional growth of child, Cognitive-intellectual growth of child, Physical care, Health care, Other home & family responsibilities	15 questions; parents choose from 5-point likert scale (1=very poorly; 5=very well)	Used twice in evaluation of Indiana Healthy Families	Average alpha=.83 (good internal consistency)	Good face validity	No.
Parenting Stress	Parenting Stress Index/Short Form (Abidin, 1995)	Designed to measure stress in the parent-child system; can be administered in less than 10 minutes	Parental Distress, Parent-Child Dysfunction, and Difficult Child			Internal test-retest reliability established.	Validity indicator derived from the full-length PSI	Yes. Normal ranges for Total Stress and for the three subscales.

Appendix C (continued)

Construct	Measure	Description of Measure	Subscales	Administration	Utilization	Reliability	Validity	Standardized
Parent Knowledge	Knowledge of Infant Development (KIDI) (MacPhee, 1981)	KIDI was designed to assess one's knowledge of parental practices, developmental processes, and infant behavior norms.	Subscales include norms and milestones, principles, parenting, health and safety.	Administered in two sections due to length; Includes 47 questions selected from 100 items on original inventory.	Use in research on what determines parent behavior and to evaluate parent education programs.	Reliability established for the 100- item inventory.	Validity established for the 100- item inventory.	The 100-item inventory has been standardized.
	Parental Bonding Instrument (Parker, Tupling, & Brown, 1979)	Measures quality of childrearing experiences with family of origin	2 scales: Parental care and Parental overprotection	50 questions on likert scale	Used in research on predictors of parenting ability	Test-retest=.63 (overprot.) & .76 (care) Split-half=.879 (care) & .74 (overprot)	Good concurrent validity	Yes; normed with 410 normal adults (mean age=36, range =12-74).
Childhood history of parenting	Conflict Tactics Scale -Adult Recall version (CTS-PC; Straus, Hamby, Finkelhor, Moore & Runyan, 1998)	Measures the extent to which a parent has carried out specific acts of psychological or physical aggression regardless of whether the child was injured	3 subscales: Nonviolent discipline; Ordinary Psychological aggression; Severe Psychological Aggression; Ordinary Physical Punishment; Severe Physical Punishment	22 questions on 8-point scale: 0= never happened; 6= more than 20 times that year; 7= not in that year but did happen		Internal consistency=.55-.70	Some research indicates good construct and discriminant validity.	No.
	Family Risk	Youth Risk Behavior Survey (Centers for Disease Control, 1992)	None	Includes 29 multiple-choice questions	National school-based survey used grades 9-12 in 39 states and Puerto Rico			
	Neighborhood Conditions	Measures community safety and resources for children	None	Includes 21 true/false questions				

Appendix C (continued)

Construct	Measure	Description of Measure	Subscales	Administration	Utilization	Reliability	Validity	Standardized
Community Resource Use	Community Life Skills Scale (Barnard, 1991)	Measures skill: what person knows; how well person is organized; how regular or predictable clients life is; and, consistency and completeness of social network	6 subscales: transportation; budgeting; support services; support-involvement; interest-hobbies; regularity-organization-routines	Includes 33 questions scored yes/no	Part of NCAST measures	Internal consistency=.63-.69		
Social Support	"My Friends" (adaptation of Deviant Peers)	Measures peer support and peer involvement with risky and positive behaviors such as dropping out of school, stealing, violence, working, volunteering, and involvement with religion.	None	12 questions on a 4-point scale from "none" to "all"		No	No	No
	Personal Network Matrix (Trivette & Dunst, 1988)	Provides a basis for identifying needs, sources of support and resources for meeting needs	None	Three part measure: Part I — persons with whom one has contact; Part II — persons who help provide for listed needs; Part III — dependability of network members.	Developed as an assessment tool for intervention purposes	Not established	Not established	No

Appendix C (continued)

Construct	Measure	Description of Measure	Subscales	Administration	Utilization	Reliability	Validity	Standardized
Personal Functioning/ Identity	Center for Epidemiological Studies Depression Scale ("Feelings Questionnaire") (Radloff, 1977)	Developed to be appropriate for use in epidemiological studies of symptoms of depression in the general population	None	20 questions: Respondents asked "how often they felt this way during the past week" and asked to choose from a 4-point scale ranging from "1" rarely or none of the time to "4" most or all of the time.	Used in both clinical and psychiatric settings	Good internal consistency; fair test-retest stability	Excellent concurrent validity	Norms established with 3574 white respondents of both sexes from the general population and a sample of 105 psychiatric patients
	Hopelessness Scale ("My Future") (Kazdin, French, Unis, Esveltd-Dawson, & Sherick, 1983)	Measures cognitions of hopelessness, a construct pertinent to depression and suicidal ideation. Hopelessness is defined as negative expectations about oneself and the future.	None	20 true/ false questions	Used for children 7 years and older, with a second-grade reading level	Internal consistency established	Concurrent validity demonstrated between Hopelessness Scale and three measures of depression; inversely correlated with self-esteem	Norms established on a sample of 66 children

Appendix C (continued)

Construct	Measure	Description of Measure	Subscales	Administration	Utilization	Reliability	Validity	Standardized
Personal Functioning/ Identity	A-COPE ("Coping Questionnaire") (Patterson & McCubbin, 1991)	Adolescent Coping Orientation for Problem Experiences. Measures strategies used for coping when feeling tense or facing difficulties	Items can be grouped into the following patterns: developing and maintaining a sense of competence and self-esteem; investing in family relationships and fitting into family lifestyle; investing in extra-familial relationships and seeking social support; developing positive perceptions about life situations; relieving tension through substance abuse and/or expression of anger; and avoiding confrontation and withdrawing.	54 questions on a 5-point scale from "1—Never" to "5—Most of the time"	Used with adolescents	Fair to good internal consistency. Stability data not available for A-COPE, but is available for the Young Adult-COPE which is only slightly modified from the A-COPE, and has good test-retest stability.	Fair predictive validity, with several correlations in predicted directions for the use of illicit substances	Actual norms are not available, but total mean scores for adolescents living in residential treatment for social adjustment problems are available. No differences in A-COPE scores based on race
	Organizing/ Planning	Measures how routinely respondent plans activities each week	None	21 questions on a 3-point scale from "1 – always true" to "3 – never true"				
	The Pie ("My Self"; Cowan, Cowan, Cole, & Cole, 1978)	Measures how respondents define the roles they play and how happy they are with these roles	None	Four questions, including dividing a circle into pie pieces of different sizes and naming them as the roles they play	Modification of the instrument used by Cowan & Cowan in the transition to parenthood studies	Not established	Not established.	No
	Optimism Scale	Measures participants outlook on future	None	12 questions on a 5-point scale from "1-strongly disagree" to "5-strongly agree"				

Appendix C (continued)

Construct	Measure	Description of Measure	Subscales	Administration	Utilization	Reliability	Validity	Standardized
Life Stress	Multicultural Events Scale for Adolescents ("Life Events") (Gonzales, Gunnoe, Jackson & Samaniego, in press)	Measures life stresses such as loss of family, friends or job, divorce, moving, unplanned pregnancy, natural disaster, or experiences of racial or ethnic prejudice	Violence/victimization, negative peer hassles	Respondent reads list of 40 events and checks those that happened to them in the last three months.	Used mostly with young adolescents of varying ethnic and economic background	Test-retest .76	Effects of risk different for African-American, Hispanic, and European-American youth	No
Current Domestic Violence	Conflict Tactics Scale-Revised (Straus, Hamby, Boney-McCoy, & Sugarman, 1996)	Measures the extent to which partners in a dating, cohabiting, or marital relationship engage in physical attacks on each other and their use of reasoning or negotiation to deal with conflicts	5 subscales: negotiation; psychological aggression; physical assault; sexual coercion; injury scale	78 questions on a 7-point scale: 1=once in past year; 7= not in past year but has happened. Additional choice of 0=never happened	Used in many studies since development in 1972; over 400 papers published on its use; used with diverse ethnic and cultural groups	Internal consistency=.79-.95	Construct validity is good. Findings indicate good discriminant validity.	Not normed; preliminary psychometric analyses conducted with 317 college students.
Perceptions of Services	Home Visitor-Client Relationship Inventory (Barnard, 1998)	Measures the client's perceptions of the home visitor-client relationship; adapted from the Nurse-Client Relationship Inventory	None	27 questions on a 5-point scale from "1=agree strongly" to "5=disagree strongly"	Used to inform and interpret intervention outcomes of a home visiting program	Not established	Not established	No
	Family-Centered Behavior Scale (Allen, Petr & Brown, 1995)	Measures how family centered a program or organization is	None	26 questions on a 5-point scale from "1=never" to "5=always" with a "0=I don't know"	Used to help document how family-centered a program or organization is	Test-retest reliability established	Validity established	

Appendix D

Glossary of Acronyms

Acronym	Meaning
AAPI	Adult-Adolescent Parenting Inventory
A-COPE	Adolescent Coping Orientation for Problem Experiences
ANOVA	Analysis of Variance
ASQ	Ages and Stages Questionnaire
CCDP	Comprehensive Child Development Program
CES-D	Center for Epidemiological Studies Depression Scale
CLS	Community Life Skills Scale
CTS	Conflict Tactics Scale
DSS	Massachusetts Department of Social Services
DTA	Massachusetts Department of Transitional Assistance
EA	Emotional Availability Scales
EHS	Early Head Start
EI	Early Intervention
FAF	Family Assessment Form
FCBS	Family-Centered Behavior Scale
FTA	Five-Tiered Approach (to Evaluation)
GED	General Equivalency Diploma
HF	Healthy Families
HFA	Healthy Families America
HFM	Healthy Families Massachusetts
HIPPY	Home Instruction Program for Preschool Youngsters
HLM	Hierarchical Linear Modeling
HOME	Home Observation for Measurement of the Environment
HVCI	Home Visitor-Client Relationship Inventory
HVDS	Home Visitor Demographic Survey
HVOS	Home Visitor Observation Scale
HVSI	Home Visitor Staffing Inventory
IFSP	Individualized Family Service Plan
KIDI	Knowledge of Infant Development Inventory
MCTF	Massachusetts Children's Trust Fund
MDPH	Massachusetts Department of Public Health

Acronym	Meaning
MELD	Minnesota Early Learning Design
MESA	Multicultural Events Scale for Adolescents
MHFE	Massachusetts Healthy Families Evaluation
PBI	Parental Bonding Instrument
PCP	Primary Care Physician
PDS	Participant Data System
PSCS	Parenting Self-Confidence Scale
PSI	Parenting Stress Index
RFR	Request for Responses
RI	Client Research Interview
TAB	Technical Advisory Board
TANF	Temporary Assistance for Needy Families
VNA	Visiting Nurse Association
WIC	The Special Supplemental Nutrition Program for Women, Infants, and Children
YRBS	Youth Risk Behavior Survey

HFM FINAL EVALUATION REPORT PRODUCTION CREDITS

DESIGN: [David Gerratt/NonprofitDesign.com](http://DavidGerratt.com)

PHOTOGRAPHY: [Goddard Photography, Stoughton, MA](http://GoddardPhotography.com)

TUFTS



Children's Trust Fund




Massachusetts Healthy Families Evaluation
Tufts University, 177 College Avenue, Medford, MA 02155
<http://ase.tufts.edu/mhfe/>