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Inside home visits: a collaborative look at process and quality

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Abstract

Home visit quality was assessed in an Early Head Start program ($N = 92$ families) using measures developed in collaboration with program staff. Parent ratings were high, indicating "customer satisfaction" with home visiting. Home visitors rated their relationships with parents as having a feeling of partnership and their home visits as typically going well. Researcher observations of home visits were consistent with the program's theory of change: Home visitors attempted to facilitate parent-child interaction, parents were engaged in home visit activities, home visitors interacted mostly with both parent and child together. Families perceived by staff as improving the most had home visitors observed by researchers as most effective at engaging parents and involving parent and child together. Families seen as "success" cases showed consistently high engagement in home visits; while "non-success" cases showed consistently low home visitor facilitation of parent-child interaction. Through a collaborative partnership, assessments of home visits were used to guide both program improvement and research.

Keywords: Home visits; Early Head Start; Collaborative partnerships

1. Introduction

Home visits are used by many different kinds of programs serving children and families. Recently, the general effectiveness of home visiting has been questioned because of research findings that failed to support large or consistent benefits of home visits to various child

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outcomes (Gomby, Culross and Behrman, 1999; Roberts and Wasik, 1990; St. Pierre and Layzer, 1999). Unfortunately, little research has considered the process of home visiting by examining variations in what actually happens on home visits or variations in the quality of home visits (for an exception, see McBride and Peterson, 1997). The processes and quality indicators that should be examined depend on the population being served and the philosophy of the program providing services. Identifying the home visit processes and quality indicators to be studied therefore benefits from a collaborative effort between researchers and practitioners. The collaborative process, in addition to providing this information, also increases the likelihood that practitioners will find the results useful.

Home visiting programs are often committed to this strategy for service delivery because of practical and philosophical concerns. For example, some programs use home visits as the only viable strategy for serving remote rural areas. Other programs may make home visits because their philosophy emphasizes parent-child relationships, parent education, or family strengths as targets of intervention (Powell, 1993). For all programs making home visits, an important question is the extent to which the process and content of home visits match the program's intended model and are effective. Although a program may design a particular type of home visit, individual home visitors may implement visit strategies in different ways. Even within the same program, the content of a particular home visit may not match the program's intended model (Baker, Piotrkowski, and Brooks-Gunn, 1999; Wagner and Clayton, 1999). Variations among home visitors and families in how home visits are structured and the quality of interactions during the visits may determine how effective a home visiting program is for a particular family. Therefore, an informative evaluation of home visits includes an examination of the processes that occur during home visits, the consistency of those processes with the program objectives, and how families respond to those processes.

To get an inside look at home visits, we collaborated with the staff of an Early Head Start (EHS) program that emphasized home visits as part of their program's theory of change. The research objectives, research methods, and interpretation of the data grew out of this collaborative process. The objectives of this study were to (a) assess the content and quality of home visits using multiple measures representing multiple points of view, (b) investigate relations among these multiple measures of home visits, (c) explore the relations between multiple measures of home visits and staff perceptions of family improvement, (d) report data back to the program for the purpose of continuous program improvement.[1]

2. Methods

The challenge of studying home visits is that there are few methods developed for examining the content or process of home visits or for evaluating the quality of home visits. Indeed, the relevant content and the indicators of quality depend on the program's purpose for using home visits as an intervention and the program's selection of specific strategies to use in home visits for implementing the intervention. Therefore, the development of methods and measures for studying home visits benefits from collaboration between the researchers studying home visits and the practitioners using them.

One reason home visits have often remained "in the box," invisible to researchers, program evaluators, and supervisors, is that home visits are private. Home visits occur in families' homes and require trusting relationships that often include intimate sharing of confidences and feelings. Home visitors and families may feel reluctant to have their visits observed and studied if they feel intruded upon. This is another reason collaboration is valuable between researchers and practitioners.

To do this study, an interactive partnership was formed between university researchers and program staff at an EHS program in the local community. Meetings to develop methods for studying home visits were designed in a variety of formats. Focus groups involved researchers and staff at multiple levels and in multiple disciplines. Researchers with backgrounds in psychology, human development, social work, and special education met with staff members with backgrounds in education, psychology, special education, social work, nutrition, and early childhood. Staff members who worked directly with families as well as supervisors and administrators were included in these meetings. Researchers reviewed the program's grant application, documented objectives, and written theory of change in preparation for the meetings. In addition to focus groups, there were formal meetings to review program objectives and informal meetings to discuss the "ideal" home visit process. Researchers collaborated with program staff over many months to understand the "vision" of home visits implicit in the program's theory of change and to define questions and behaviors that could be used to measure the content and quality of home visits in relation to this vision.

Feedback from program to research and back again contributed both to program quality and research methodology. For example, early program descriptions of the purpose and strategies of home visits guided early observations of home visits by researchers. When the strategies observed were not a close match with the ideal visit described by the program, researchers provided feedback to the program. As a result two things happened. First, program staff developed more specific strategies and a clearer definition of effective home visiting in their theory of change. Second, researchers then revised the home visiting behaviors targeted for observation. Through this joint problem solving strategy, the researchers were able to accommodate their methods to more accurately reflect the program's theory of change in the research. This same collaborative process was used to develop multiple measures of home visits.

The theory of change of this local EHS program emphasizes home visits as a context for a particular target of intervention: the parent-infant relationship. Their written theory of change states that the "program's objectives are to increase positive parent-infant play interactions, nurturant and responsive parenting, and parents' knowledge about child development . . . The primary strategy is through staff-parent relationships that are nurturing, supportive, and reinforcing . . . These relationships develop mostly in the context of home visits . . . " These ideas were used explicitly in designing procedures and methods for studying home visits. Staff-parent relationships in the context of home visits are such a central part of the program's theory of change that they were evaluated explicitly in several ways. Parents (mothers) rated their relationships with their home visitors, staff rated the quality of their relationships with both parents in the home, and researchers rated the quality of staff-parent interactions during home visits.

2.1. Participants

Bear River EHS in northern Utah and southern Idaho serves low-income families with infants and toddlers (ages prenatal to age 3) in a semi-rural area with many small agriculturally based communities and one small urban population center. The families served by this program during the evaluation period were predominantly White (82%), married (73%), and politically and religiously conservative (79% members of the Church of Jesus Christ of Latter Day Saints (Mormon)). Baseline data obtained before enrollment in EHS indicate that 35% of the mothers did not complete high school, 30% graduated from high school, and 35% had at least some college. However, few mothers (13%) worked 20 or more hours per week, and the majority of mothers (62%) were not employed. Children ranged in age from 0.5 to 11 months ($M = 5.15$ mo, $SD = 2.91$ mo), with 18 not yet born at the time of enrollment. Family size ranged from 0 children, in 8 families where the mother was pregnant with her first infant, to 7 children in two families ($M = 1.84$, $SD = 1.4$). Fifty-two percent were first time parents.

Many of these family characteristics, in addition to the relationship-based theory of change, are what led the program to select home visits with parents and children as a primary intervention strategy. Many families live in outlying areas and would be unlikely to come to a center for services. In addition, conservative values in this population discourage child care and encourage mothers to stay at home while their children are young. Therefore, the target and setting of intervention are the mother and child in their home.

The number of families whose data were included in this study varies across measures. As part of the national multi-site evaluation of EHS, 103 families were randomly assigned to the program. The local EHS is funded to serve 75 families at any given time, but because some families moved away or dropped out and were then replaced with other families, the research reported here is based on a maximum potential sample of 103 families, of whom 92 completed interviews, 8 dropped out or moved away before the interview could be scheduled or completed, 2 could not be located, and 1 refused. Staff provided ratings on 61 families, and home visits were videotaped and observed for 49 families.

2.2. Procedures

Families enrolled in the program were recruited by program staff who explained the research and obtained informed consent to participate in the research from each family applying for the program. During the application process, program staff also collected background, demographic, and contact data from these families on application forms that were then copied for the researchers.

Three procedures were used to collect data on home visits from multiple sources. The purpose of using multiple sources was two-fold. First, different sources, for example parents served by the program compared to practitioners implementing the program, have different perspectives. Second, multiple sources of data offer a more complete picture of what is actually happening in a complex program. The three main sources of data were parent ratings, staff ratings, and researcher observations.

Parent ratings, as indicators of “customer satisfaction,” were obtained during interviews

by research staff. Parents were asked to make quality ratings of their home visits and their home visitors. Researchers contacted all families enrolled in the EHS program, by telephone or letter, to schedule these interviews, except for two families who could not be located. Ratings were elicited during telephone interviews (or in-home interviews for families without telephones) that asked about a wide range of services families were getting from the community, including EHS. Trained interviewers, working for the research project, scheduled interviews with the parents 6 and 15 months after they had been enrolled in the program. Data from the two time points were averaged together to reflect the general experience parents had of their home visits and home visitors across their enrollment in the program.[2]

Staff ratings were obtained as part of the program's self-assessment after the second year of the program. Home visitors were asked to complete forms on which they evaluated the quality of visits and the level of functioning for each family. (In some cases, home visitors who were new to the program could not rate families with whom they were not familiar.) These forms were designed by the researchers with staff input and completed by home visitors at the end of the second program year of operation.

Researchers' observations were conducted on 49 videotaped home visits made during the program's second year of operation. Videotaping of home visits was the most sensitive part of the research and required the strongest partnership between practitioners and researchers. Home visits are private, home visitors are accustomed to doing their "art" unobserved, and families are sometimes reluctant to have themselves or their homes on display. This source of data demanded the enthusiastic support of staff. At first, as expected, some home visitors were reluctant to have their home visits videotaped. There were several steps in gaining staff support.

Initially, the primary investigator met with the program administrator to develop a plan for data collection on home visits as part of a larger effort toward continuous program improvement as required by the program's original grant. From this meeting came the purpose for observing home visits directly and a plan for incorporating videotaping of selected home visits as part of the program's regular in-home supervision of visits. Subsequently, a member of the research staff met with the home visit supervisor to design a schedule and procedure that would not be too intrusive. Finally, the research team met with home visitors to talk about concerns and generate solutions collaboratively that relieved those concerns by ensuring confidentiality (protection of tapes, privacy of families and home visitors), encouraging staff input into coding objectives, and agreeing that the video camera could be turned off if sensitive topics were discussed. For several observed home visits ($n = 28$) a research staff member scheduled and videotaped home visits. For the remaining observed home visits ($n = 30$), the home visitor's supervisor did the videotaping and the schedule for videotaping was predetermined through random selection by family, home visitor, and date. Some families ($n = 9$) had more than one home visit videotaped, and measures from the two times were averaged together to reflect as accurately as possible the general quality of home visits received by each family.[3]

In general, the procedures of this study involved program staff directly in several ways. Program staff had multiple roles: as "researchers" they recruited subjects and collected data from them, as "informants" or "respondents" they provided ratings on home visits and functioning for each family, and as "subjects" they were rated by the parents and videotaped

during home visits. The methods used in this study also involved program staff indirectly because measures were developed with input from program staff, either through written program documents or through meetings and collaboration with the researchers.

2.3. Measures

The measures used in this study were designed to be appropriate to this program's theory of change. Instrument development occurred over a period of time and involved several different strategies depending on the source of data. Measures included parent and staff ratings in addition to researcher observations. Parent and staff ratings are analogous to service satisfaction measures used widely in program evaluation approaches that are consumer- or participant-oriented (Worthen and Sanders, 1987). The use of parent satisfaction ratings and the use of home visitors' ratings to assess case progress has been used in other studies of home visits as well (Duggan et al., 1999; Heinicke et al., 1999; Korfmacher, Adam, Ogawa, and Egeland, 1997).

2.3.1. Parent ratings

Two scales were developed for use in parent interviews. One asked parents a series of 14 questions about their home visits, and the other asked parents a series of 15 questions about their home visitor. For both scales, items were developed as a result of content analysis of the program's original grant proposal's description of program objectives. For example, the original grant proposal says that home visits activities "will be adapted to the developmental level of the infant/child and the individual needs and interests of the parent." A corresponding item for rating home visits asks parents the extent to which their home visits "have changed as my baby and me and our needs have changed." A related item asks how much home visits "are different for me than for some of the other families." Another example is that the original grant proposal says that home visitors will "assist parents in setting realistic goals," and a corresponding parent rating item asks how much their home visitor "plans things for our home visits that will help me reach my goals."

Parents were asked to respond to these items using a Likert-type 1 to 5 response scale with 1 being strongly disagree and 5 being strongly agree. Reliability for a total scale using all of the items was estimated for the home visit and home visitor rating scales using Cronbach's alpha. The resulting alphas were over .99 for both home visit ratings and home visitor ratings. Scores for the two scales were analyzed, but individual items were also examined to identify areas of possible improvement for the program.

2.3.2. Staff ratings

Home visitors completed a paper and pencil form rating the home visiting program for each family. Several types of ratings were developed for home visitors based on the program's theory of change and research questions derived collaboratively with researchers and program staff. In collaborative meetings, home visitors began verbally sharing their perspective of each family and home visits to that family. From those meetings, specific questions were developed as a way for staff to share information about each family

Table 1
Staff ratings of home visits, relationships, and family functioning and improvement

Quality of home visits
1. distractions, crisis oriented, many cancellations
2. adequate for information and some activities
3. typical, activities go well, parent cooperative
4. better than most, collaborate and learn together
5. outstanding, what every home visit should be
Quality of relationship with parent
1. tense, difficult, a sense of uneasiness
2. adequate for working together but some difficulty
3. typical, comfortable, at ease, cooperative
4. better than most, feeling of partnership
5. outstanding, effective relationship
Current family functioning
1. inadequate, needs basic help
2. adequate but could improve a lot
3. good but room for improvement
4. very good, can share with others
5. outstanding and helps others
Family improvement since enrollment
1. inadequate progress
2. adequate progress but less than most
3. good progress, typical in program
4. very good, an example of program effects
5. outstanding, a true success story

systematically. This allowed program staff to share their professional expertise regarding the families in their caseload.

Ratings by staff members who provide program services are analogous to assessments by other professionals such as teachers or physicians who evaluate outcomes of the treatment or services they provide. Teacher ratings, although they could easily be criticized as biased by teachers' concerns about their own performance, have long been established as a reliable and valid measure of children's functioning in the classroom (Baker, Piotrkowski, and Brooks-Gunn, 1999; Spivak and Swift, 1973). More than anyone, home visitors are aware that some home visits are better than others, that some families are more responsive than others, and that some families improve more than others as a result of the home visits. Staff expressed a strong interest in learning more about how these variations were related to parents' ratings of the program and researchers' observations of home visits.

Home visitors provided, for each family in their caseload, global ratings of the quality of the home visits and the quality of their relationships with the parents. These rating scales are shown in Table 1. Definitions of points on the rating scale were developed with staff input. Home visitors also rated their perceptions of each family's current level of functioning and extent of improvement. Perceived functioning and improvement were rated using a 1 to 5 rating scale in response to 16 items asking about specific domains of family functioning. The definitions of each point on the rating scales, written with staff input, are shown in Table 1.

Items were developed as a result of content analysis of the program's original grant proposal's description of program objectives. For example, the original grant proposal includes as an expected result "increased family skills and education . . . to support and promote the optimal development of the child." Related items for home visitors to rate functioning and improvement ask about parents' "knowledge of infant development" and "promoting infant development." Reliability was estimated for the resulting perceived functioning and improvement scales using Cronbach's alpha. The resulting alphas were .95 for both current functioning ratings and improvement ratings.

2.3.3. Independently coded home visit videotapes

A total of 49 families had home visits videotaped for researcher observations. Observation codes were developed with staff input, and reliability was assessed by having two coders independently code 13 of the home visit videotapes (22% of the total 58 tapes).

Coders for this project were two graduate degreed experts in child development who both had experience with early intervention projects, observational research, and home visit observations. The coders reviewed the coding scheme in detail to clarify ambiguities, viewed and discussed several videotapes together, and separately coded a subset of 4 videotapes to establish reliability before the formal process of coding took place. Upon finding high agreement with these videotapes, the coders proceeded to code all the videotapes, with each of them independently coding every fifth videotape to check reliability. Over the course of the project, whenever discrepancies occurred, the coders observed the videotapes together and resolved any disagreements. Reliability estimates are reported for each coded scale. Both percentage of agreement and Kappa, correcting for chance, were calculated as reliability estimates.

The coding system was based on past research, program objectives and theory of change, and initial review of a small set of videotaped home visits. McBride and Peterson (1997) have developed a standardized Home Visit Observation Form (HVOF) to study the content and process of home visits. This instrument was selected because it would provide information relevant to the theory of change on which this program is based. One section of the HVOF identifies the participants of interactions in time intervals across home visits. Given our local EHS's focus on the parent-child relationship, a goal of their home visits is for the home visitor to spend a substantial amount of each visit interacting with the parent and child together. Therefore, the main interaction pattern was coded for each 30-second interval across the entire home visit. Interaction patterns included: parent-child, staff-child, staff-parent, staff-parent-child, each of these patterns combined with "other" persons in the home (e.g., other adults or children), and no interaction. These patterns were reliably coded, as indicated by 87% agreement, Kappa = .81, across intervals, a level of interrater reliability that meets and exceeds that reported for the original measure.

In addition, the HVOF includes a rating scale for parent engagement. Using a 1 (unengaged) to 6 (highly engaged) scale, parent engagement was rated for each home visit using definitions from the HVOF. Interrater agreement was 88%, Kappa = .75. These ratings, based on an existing instrument, were the only ones in this study using a 1 to 6 rather than a 1 to 5 scale and were therefore transformed to a 5-point scale before analysis.

The HVOF also includes multiple codes for the content and strategy used on home visits.

Table 2
Home visitor (HV) facilitation of parent-child interaction

5.	HV facilitating interactions effectively, sitting back and facilitating again, flowing in and out with ease, smoothly and comfortably facilitating parent-child interaction; responsive to cues of parent and child, hands materials for child to parent, provides suggestions and encouragement for positive parent-child interaction.
4.	HV attempting to facilitate and somewhat effective but some little difficulty or momentary problem (e.g., child or parent lost interest and HV missed the early cues). Or HV is doing the facilitating and connecting but faltered, broke the flow by doing something the parent could do themselves, e.g., reinforcing child before parent does.
3.	HV trying to facilitate but it's not working maybe just because it's a bad day, an activity not interesting to parent and/or child. Or HV trying but not working because HV not responsive to parent or parent is not responding, or HV persisting with activity that is too hard or not interesting.
2.	HV makes some attempts to facilitate but is not effective, may make gestures trying to be facilitative, but is not consistent. Or HV makes an excess of suggestions and directions but not intrusively.
1.	HV is not facilitating at all, ignoring parent-child interactions that are not working, parent and child not engaged with each other but either may be engaged with HV. Or HV is being intrusive and directive and overwhelming, frequently telling parent what to do, taking over activities and playing with child herself.

In our initial review of a subset of videotapes, a few of these codes were used repeatedly, most codes were rarely used, and reliability was low. Careful review of these codes and the program's objectives and theory of change suggested that although these codes were developed collaboratively with other early intervention programs, they were not a good fit with our local EHS program's objectives and theory of change. Therefore, an additional coding scheme was developed in collaboration with the program.

Researchers used the program's theory of change to identify examples from the videotapes of home visits that seemed to exemplify the program's primary strategy of facilitating parent-child interaction. The primary investigator and the EHS program director then met to define those behaviors in detail and develop a 5-point coding scheme with 1 representing no facilitation or overly intrusive and directive behavior and 5 representing effective facilitation and responsiveness to the cues of both parent and child. The definitions developed for coding home visitor facilitation are shown in Table 2.[4] Observers then coded these ratings of the effectiveness of the home visitors in facilitating positive parent-child interactions for each home visit. Inter-rater agreement was 88%, Kappa = .75.

2.3.4. Identification of "success" and "nonsuccess" families

Program staff identified families they believed were "success" cases, perceived as making substantial improvement, and "nonsuccess" cases, perceived as not making substantial improvement. Program staff identified these cases through their ratings of perceived family improvement and through nominations of specific families. First, program coordinators as a group nominated two "success" and two "nonsuccess" cases in the context of a meeting to discuss the program's theory of change. Second, the home visit supervisor, who is familiar with the families because she has observed home visits and discussed families with home visitors, nominated 5 "success" and 4 "nonsuccess" cases. Finally, the home visitors' 5 highest and 5 lowest improvement ratings for each family, as described above, were used to identify "success" and "nonsuccess" cases. This type of purposeful sampling, intensity

Table 3
Descriptives of parent ratings, staff ratings, and researcher ratings and observations

Measure	*n*	*M*	*SD*	Range
Parent Ratings				
Home visitor	92	4.78	.40	1.80–5.00
Home visits	91	4.67	.43	2.79–5.00
Staff ratings				
Relationship with parent	61	3.60	1.23	1.00–5.00
Home visits with family	61	3.48	1.32	1.00–5.00
Researcher direct observation ratings				
Parent engagement[a]	49	3.17	1.06	1.00–5.00
Home visitor facilitation	49	2.89	.92	1.00–4.50
Researcher observed percentages of interactions				
Parent-child	49	4.95%	6.71%	0%–34%
Parent-home visitor	49	37.20%	17.14%	8%–83%
Home visitor-child	49	6.51%	6.72%	0%–28%
Home visitor-parent-child (joint)	49	41.14%	18.85%	8%–79%
Family functioning ratings				
Current functioning	61	3.21	.85	1.50–4.94
Improvement	61	3.35	.81	1.38–5.00

[a] The scale for this measure was transformed to a 1–5 scale to match other scales used in this study.

sampling, was used to identify families that met the program's definition of "success" and "nonsuccess" (Gall, Borg, and Gall, 1996). These nominations provided families for two case studies to further illustrate the home visiting process.

3. Results

3.1. Descriptive statistics

Table 3 displays the means, standard deviations, and ranges for measures of home visiting quality. Parent ratings of their home visits and home visitors were high and consistent. High mean scores and low standard deviations on the parents' ratings of their relationship with their home visitor ($M = 4.78$, $SD = .40$) and their home visits in general ($M = 4.67$, $SD = .43$) indicated that parents consistently agreed with positive statements about their home visits and home visitors. Staff and researcher ratings were more moderate and variable than parent ratings.

The home visitors' rated their relationships with parents as "better than most" with a "feeling of partnership" ($M = 3.60$, $SD = 1.23$). Relationships with 30% of families were rated as "outstanding," 26% "better than most," 23% "typical," 13% "adequate," and 6% as "tense, difficult." Home visits were rated, on the average, as somewhere between "typical" and "better than most" ($M = 3.48$, $SD = 1.23$). Home visits with 23% of families were rated as "outstanding," 38% "better than most," 18% "typical," 7% "adequate," and 15% "distractions, crisis oriented." The averages of staff ratings close to the midpoint of the scale in addition to the considerable variation in ratings indicate that program staff members were not simply evaluating their own performance in a uniformly positive way.

Researchers' ratings of home visitor facilitation indicated that, on the average, home visitors were "trying to facilitate" parent-child interaction although not all of their attempts were effective ($M = 2.89$, $SD = .92$). Researchers' ratings of parent engagement indicated that, on the average, parents were available and appeared interested in activities of the home visit, asking questions and participating although not initiating activities or focusing on child development topics ($M = 3.17$, $SD = 1.06$). These observational codes from the researchers averaged near the midpoint of the scales and showed moderate variation using the full range of codes.

Codings of interaction patterns estimate the home visit time allocated to specific interactions. The interaction patterns of the home visits reflected the programs' primary focus on the parent-child relationship with an average of 41% of the home visit involving the home visitor, parent, and child in joint interaction. A similar amount of time during the home visit, 37%, was spent in parent-home visitor interaction. However, time allocation varied widely across home visits and home visitors. Specifically, joint interactions, those interactions involving the home visitor, parent, and child, ranged from 8% to 79% of the home visit, and parent-home visitor interactions ranged from 8% to 83% of the home visit.

For several reasons, it is not appropriate to directly compare these various measures of home visit quality and process. The different data sources represent distinct viewpoints. Furthermore, the data from each of the perspectives are based on responses to different questions. Finally, the number of families included in each analysis varied.[5] The interrelations among these measures offer a clearer understanding of the measures themselves as well as an exploration of the meaning of quality and process in home visits.

3.2. Interrelations of different perspectives of home visit quality

There were significant positive correlations both within and between measures of parent ratings, program staff ratings, and researcher observation ratings (see Table 4). Parents who viewed their home visits positively also viewed their relationship with their home visitor as positive. Similarly, home visitors who rated a relationship with a parent as positive also rated the quality of their home visits with that family as positive. Researcher ratings of parent engagement and home visitor facilitation were also positively correlated with each other, suggesting that those parents whose home visitor supported their interaction with their child were also the parents who were highly involved and engaged during the home visit.

Home visitor ratings of the quality of relationships with parents were positively correlated with parent ratings of the quality of their home visits. Home visitor ratings were also correlated with researcher observation ratings. Home visitor ratings of relationships with parents and quality of home visits were higher for parents whom researchers rated as highly engaged during home visits. Furthermore, home visitor ratings of the quality of their relationship with parents were negatively related to the amount of time researchers observed the parent and child interacting during visits without the home visitors' involvement. However, parent ratings were not statistically significantly correlated with any other staff ratings or to any researcher ratings, perhaps because of the low variability and restricted range of parent ratings.

Interaction patterns were negatively correlated with each other, as would be expected for

Table 4
Correlations among the home visiting quality ratings

Measure	Correlates										
	1	2	3	4	5	6	7	8	9	10	11
Parent ratings											
1. Home visitor											
2. Home visits	.70**										
n	(91)										
Staff ratings											
3. Relationship with parent	.20	.27*									
n	(54)	(53)									
4. Home visits with family	.19	.15	.80**								
n	(54)	(53)	(61)								
Researcher observation ratings											
5. Parent engagement	.16	.04	.31*	.39*							
n	(44)	(43)	(40)	(40)							
6. Home visitor facilitation	.07	.01	.20	.27	.54**						
n	(44)	(43)	(40)	(40)	(49)						
Researcher observed interactions											
7. Parent-child	−.02	.04	−.32*	−.22	−.14	−.03					
n	(44)	(43)	(40)	(40)	(49)	(49)					
8. Parent-home visitor	.16	.14	.27	.15	.03	−.07	−.35*				
n	(44)	(43)	(40)	(40)	(49)	(49)	(49)				
9. Home visitor-child	.12	.08	−.05	−.17	−.28	−.04	.10	−.28			
n	(44)	(43)	(40)	(40)	(49)	(49)	(49)	(49)			
10. Home visitor-parent-child	−.02	−.05	.12	.26	.11	.16	−.10	−.58*	−.12		
n	(44)	(43)	(40)	(40)	(49)	(49)	(49)	(49)	(49)		
Family functioning ratings											
11. Current functioning	.13	.05	.72**	.79**	.48**	.27	−.01	.06	−.01	.07	
n	(57)	(56)	(61)	(61)	(43)	(43)	(43)	(43)	(43)	(43)	
12. Improvement	.21	.19	.64**	.71**	.49**	.34*	−.02	.03	−.11	.15	.86**
n	(52)	(51)	(54)	(54)	(40)	(40)	(40)	(40)	(40)	(40)	(57)

* $p \leq .05$; ** $p \leq .01$.

measures based on the percentage of time. For example, the time spent in parent-home visitor interactions was negatively associated with the time spent in joint home visitor-parent-child interactions and also negatively associated with the time spent in parent-child interactions. Home visitors who interacted primarily with the parent were less likely to include the child in their interaction than home visitors who interacted primarily with both the parent and child.

3.3. Perceived improvement of families

We examined staff ratings of families' current functioning and improvement (see Table 3). Staff perceived families' overall current functioning, on the average, as "good but room for improvement" ($M = 3.21$, $SD = .85$) with family improvement showing "good progress, typical in the program" ($M = 3.35$, $SD = .81$). However, individual family functioning varied widely from a low of 1.50 to a high of 4.94 for a family rated as "outstanding, helps

Table 5
Characteristics of "success" and "nonsuccess" families

	Success families				Nonsuccess families			
	A	B	C	D	E	F	G	H
Nomination method								
EHS staff	X	X			X	X		
EHS ratings			X	X			X	X
Parent ratings								
Home visitor	4.93	5.00	4.87	4.97	4.86	4.97	4.87	4.90
Home visit	4.79	5.00	4.89	4.93	5.00	4.96	5.00	4.71
Staff ratings								
Relationship with parent	5	5	5	5	5	3	3	2
Home visits with family	4	4	5	5	1	3	2	1
Research observations								
Parent engagement[a]	5	3.33	5	4.17	3.33	1.67	1.67	0.83
Home visitor facilitation	4	2	4	4	2	2	2	1
Joint interaction	42%	29%	49%	43%	12%	11%	35%	08%
Family functioning ratings								
Improvement	3.63	4.19	4.44	4.38	2.88	2.80	1.88	2.13

[a] The scale for this measure was transformed to a 1–5 scale to match other scales used in this study.

others." Improvement varied just as widely from 1.38 to 5.00 for a family rated as a "true success story."

Staff ratings of families' current functioning and improvement were highly correlated with each other and with staff ratings of relationships and home visit quality. Families perceived as currently functioning very well were also perceived as showing improvement. How staff perceived family functioning and improvement were related to staff ratings of relationships and home visits. Staff ratings of families in their caseload in relation to their own home visits may be influenced by a "halo effect." That is, when home visitors feel like families are making good progress, they may perceive the home visits to those families more positively. Thus, it was important to examine the relation of staff perceptions of family improvement with the researchers' independent assessment of home visit quality. Indeed, staff perceived family improvement scores were correlated with research observers' ratings of how effectively home visitors facilitated parent-child interaction during home visits. Furthermore, staff perceptions of both family functioning and improvement were correlated with researcher ratings of parent engagement.

3.4. "Success" and "nonsuccess" cases

To identify "success" and "nonsuccess" cases, high and low scores on family improvement scales were used along with staff nominations. A subset of "success" and "nonsuccess" cases for which we have complete data are described in Table 5. For illustrative purposes two families and their home visits are described in detail. (Case information was provided by EHS staff and research records.)

3.4.1. "Success" case

Family "A" was named by the EHS program staff as an obvious "success" case because they were seen as improving so much in their functioning. Alisha and Brett (not their real names) live in a small semirural community with their three children. Brett is 33 years old and has a bachelors degree. His employment has not been very stable and he has gone through several jobs during the past three years, often avoiding home even when unemployed. Alisha is 26 years old and was employed part-time when the family enrolled in EHS, but quit working with the birth of their third child. Alisha often rejected her children's attempts to be held and touched; she did not seem to realize she could touch her children in positive ways. When the family first attended EHS group activities, Alisha and Brett would literally turn their backs on the kids and ignore them during the entire activity. Alisha and Brett both wanted to interact with other adults in the program, but they had poor social skills, said inappropriate things, and offended people frequently. The housekeeping situation was poor and even hazardous, with open paint containers within reach of their young children. For the first few months of the program, home visits were chaotic and difficult to schedule. The home visitor persisted, rescheduled visits many times, and spent a lot of home visit time interacting jointly with both Alisha and her sons and effectively facilitating their interactions with each other. Staff worked with this family on social skills, encouraging them to continue attending group activities, but sometimes pulling Alisha and Brett aside and telling them, "That's not really appropriate." Their behaviors improved, and after two years in the program Alisha and Brett have learned new social skills and have made good friends with other EHS parents.

Alisha and Brett have become very involved in the program and are using many of the program resources available to them. This past year they have received 49 home visits (of 50 possible) and attended 31 group socialization meetings. Alisha has participated in mental health counseling and is dealing with problems that have interfered with her parenting. She has also used EHS respite child care so that she can get a break from the children once in a while. Her parenting skills have improved, and she is learning to enjoy her children. During home visits her children now sit on her lap during activities instead of jumping and pouncing on her back to be close to her. She is aware of what they are doing and really listens to them. All three boys have speech problems, but Alisha is working with them, and EHS has helped them get access to other intervention services. Alisha is now taking pride in her home and feels much better about herself. EHS has also helped Brett, who is now holding down a full-time job and has learned how to interact more positively with his coworkers. Brett has become a much more involved father and spends more time at home. Now both the parents come to pick their children up from child care, and the children run to their parents where before the children didn't want to leave.

3.4.2. "Nonsuccess" case

Family "G" was perceived by their home visitor as showing very little improvement. Misty and Don (not their real names) have been living in a series of small remote communities. Misty has one child, but has never lived with her child's father. Don and Misty have been married for two years. Misty is on medication for depression. Misty is 18 years old and did not complete high school, but went on to finish her GED. She has worked as a certified nurse's aide off and on. She usually works the night shift, but has lost several jobs because

Don encouraged her to skip work and stay home with him. Don is 20 years old, has a 10th grade education and is employed as a temporary worker. He is usually unemployed and does not want to work. They have been a very difficult family to contact and schedule, for both program staff and researchers. Misty and Don have moved at least 10 times in two years and have been evicted several times. They have not had a phone most of the time.

EHS staff members say Misty is not committed to the program, and Don is rarely involved although he is usually in the home during home visits. Misty and Don have not attended any group socialization meetings and have received only 18 home visits during this past year (of 50 possible). Misty has said she does not like change and is not interested in setting goals. During research interviews she answers the response-scale questions, but refuses to answer the open-ended questions. Misty's daughter is developing well, but Misty rarely plays with her or even acknowledges her. During home visits, Misty ignores suggestions to get involved in activities with her daughter. Because Misty and Don live with extended family from time to time, there are often repeated interruptions of home visits and an atmosphere of chaos. Misty works nights, when she works, and does not sleep when she gets home so she is usually tired. Her home visitor has been very persistent, but has been unable to help Misty get involved in the program or interested in home visits. Even though the home visitor has been able to interact jointly with both Misty and her daughter for about a third of the home visit time, she has not been effective at facilitating their interaction with each other. When Misty was asked by researchers how she liked the program, she responded that it was a good program and that she likes the people, but she has moved too much to be involved.

These two cases illustrate the importance of both the home visitors' strategies and the parents' engagement. In both cases, home visits were initially chaotic and difficult to schedule. In both cases, the home visitor has persisted, but in the "nonsuccess" case, the program staff members suggest that "the family has moved so often and there are so many interruptions in the home visits" that the program has not been effective at helping the mother support her daughter's development. The mothers in both cases have some mental health problems, and the fathers in both cases have had some employment problems. In the "success" case, both mother and father have taken advantage of the services available through the program, whereas in the "nonsuccess" case neither parent has done so. In the "nonsuccess" case, the home visitor's efforts to involve the mother with her child have not been successful, and the mother continues to ignore her daughter during home visits. In the "success" case, in contrast, program staff members suggest that it is because "the mother has become increasingly engaged in home visits" that the home visitor has been able to facilitate more interactions between the mother and her children during home visits.

4. Discussion

To get an inside view of home visits, we assessed the content and quality of home visits from the perspectives of parents, program staff members, and researchers. Multiple viewpoints are valuable for guiding program improvement efforts because each perspective represents a different view of the quality of home visits. How parents view the quality of the home visits they receive is different from how program staff or researchers view the quality

of home visits. These perspectives together indicated that the perceived quality of home visits in this particular program was high, especially from the parents' perspective. Parents reported consistently strong positive reactions to their home visits and to their home visitors.

Variations in how staff and researchers viewed the quality of home visits were related to how much staff believed families improved. Data from both staff and researchers indicated that how well home visitors and parents worked together was related to how much parents seemed to benefit from the program. Consistent with the program's theory of change, the quality of home visitors' relationships with parents, as perceived by home visitors and as observed by researchers, was related to staff perceptions of greater family improvement. It is not surprising that home visitors would experience their home visits more positively with families who seem to be benefitting more from the program and making more progress in improving family functioning.

Stronger support for an association between home visit quality and perceived family improvement is provided by the researchers' observations. Videotapes of home visits allowed an independent, standardized, and reliable observation of the content and process of home visiting. When home visitors were coded by researchers as more effective at facilitating parent-child interaction, parents were coded as more engaged and families were perceived by staff as making more progress toward program objectives. Parent engagement, an essential component of a successful home visiting program, has been emphasized recently by Gomby et al. (1999) in their review of home visiting programs. Parent engagement and staff-parent relationships are so important to this program that staff suggested that "some home visitors may have tried to build a positive relationship by interacting mostly with the parent." Regardless of the reason why a home visitor may interact mostly with only the parent, the simple cost of more time spent in this interaction pattern is less time available for the home visitor to interact with parent and child together. Despite the program's emphasis on joint home visitor-parent-child interaction, interaction patterns were not related to other measures. There may be ways other than joint interaction for home visitors to facilitate parent-child interaction, such as handing a book or toy directly to the parent instead of the child. When home visitors were coded as facilitating more parent-child interaction during home visits, families were perceived as improving. When home visitors did not effectively facilitate parent-child interaction and, even more importantly, when parents were not engaged, families were not seen as improving.

Families perceived as improving more had higher scores for home visitor facilitation of parent-child interaction as well as higher scores for parent engagement during their home visits, compared to families perceived as improving less. Taken together with the ratings of home visit quality and process, these results suggest that the actual delivery of services and perceptions of family success are consistent with the program's theory of change. Nevertheless, some home visitors are more effective than others, and some families are more responsive than others to the home visit process. For less skilled home visitors working with resistant or hard-to-serve families, it may be especially challenging to implement strategies reflecting the program's theory of change, such as engaging parents and encouraging parent-child interactions.

Development of this EHS program was enhanced by the collaboration with researchers. Information based on data about the quality of home visits was summarized to the program at several points. Feedback to the program was both formal and informal. Formal feedback

was provided in written reports and in structured meetings with program staff. For example, after the first year of the program, parent ratings after six months of participation were reported with specific low-rated items identified in terms of suggestions for program improvement. Informal feedback was provided in one-to-one meetings between research staff and program staff, usually between the principal investigator and program director. In response to both formal and informal feedback about variations in the quality of home visits, the program re-examined their home visit strategies, provided more extensive training and supervision for home visitors, and refined their theory of change. Subsequently, the collaborative process of home visit evaluation reported here resulted in specific suggestions after the second year of the program for further development of home visitors' skills in facilitating parent-child interactions. The program's emphasis on relationship building in their theory of change guided the development of their home visiting strategies and led to their interest in an in-depth assessment of the content and quality of home visits. The results of this assessment of home visit quality were then used to strengthen the effectiveness of their home visits.

What is the best way to assess the quality of home visits? Staff and researchers varied more than parents did in their perceptions of home visits. Parents provided almost uniformly high ratings, a positive assessment that was rewarding to program staff but suggested little room for improvement in the program and thereby limited the usefulness of parent ratings to the program. Perhaps modifications to the questions could elicit a wider range of ratings from parents. In contrast to parents, staff and researchers reported a wider range of home visit quality across families. Differences in variability may be due to differences in measures, differences in items across measures, differences in the meaning of the underlying construct, or to differences in the experiences of parents, staff, and researchers. Parents experienced only one home visiting situation, but staff and researchers had the opportunity to observe home visits across multiple settings and families. Therefore, their ratings were based on a broader context of experience and offered a more realistic assessment of quality. Home visitors themselves may have shown some bias in rating the quality of their own work, but the wide variation and more moderate average of their ratings suggest this is not true. Research observers' ratings were correlated with staff ratings, suggesting they shared at least some similarity in their perspectives. Nevertheless, the intercorrelation between staff and researcher ratings was only moderate and limited to only one relation between specific ratings. Researcher ratings based on observations of home visits offer an independent reliable measure of home visit quality that is related to staff perceptions of family improvement.

Obtaining ratings from both parents and staff was useful for understanding differing perspectives, but because parents and home visitors have different perspectives, their ratings reflect distinct views of the quality of home visits. Because these viewpoints differ, the items used to assess these viewpoints also differed. Parents' positive responses to home visits and positive feelings about their home visitors may stem from their own reactions to parenting, to their own children, and to the experience of having program staff come into their home to encourage certain kinds of behaviors. Home visitors' ratings of their home visits and relationships with parents may reflect their experiences with the range of families with whom they work and their sense of professional competence. Both perspectives are vulnerable to the personal biases of the raters.

The researchers' observational ratings may be more objective, and their objectivity was

evident in the inter-rater reliability of their ratings. However, observational ratings were limited in this study to a subset of the families. It was not practical to observe multiple home visits for all of the families. Any particular home visit may not reflect the typical home visit to that family, by that home visitor, or from the program. Furthermore, the limited number of home visit observations decreased the power of statistical analyses using the researchers' ratings.

In spite of these limitations, this examination of the quality of home visits as they varied within a single home visiting program offers an important source of data for understanding the home visit process. Not all home visiting programs are alike, and even within the same program, not all home visits are alike. The interaction patterns during some home visits and the strategies used by some home visitors were a better match than others with the program's theory of change. Variations in how effectively home visitors used these interactions and strategies to engage the parents were related to how much families seemed to improve while they were in the program. For the EHS program studied, families believed to improve the most were those in which the parents were highly engaged in the home visits and whose home visitors effectively facilitated parent-child interaction.

Our purpose was to conduct a formative, not summative, evaluation that examined the quality and process of home visits from multiple perspectives in relation to perceptions of family success. Our participant-oriented, collaborative approach to this evaluation is particularly appropriate for the purpose of continuous program improvement (Roberts, Rule, and Innocenti, 1998; Worthen and Sanders, 1987) and responsive to recent recommendations by home visit researchers (Gomby et al., 1999). Researchers provided program staff with useful feedback to guide program improvement in home visit quality. Program staff provided researchers with an insider's view of home visits. Both program and research were improved as a result.

Notes

1. The continuous program improvement process involves both program staff and external evaluation researchers in extensive review, evaluation, and development of improvement strategies for all aspects of Bear River EHS, including home visits, child care, socialization groups, parent involvement, health services, and social services.
2. Only 48 parents were interviewed both 6- and 15-months post-enrollment. Parents' home visit ratings were moderately correlated over time ($r = .63$, $p = .01$) and changed little, although their home visitor ratings were not ($r = .20$, $p = .18$) and improved slightly over time (from an average of 4.68 to 4.85, *paired* $t = 2.74$, $p = .01$).
3. Researcher observation ratings of home visits to the same families ($n = 9$) did not differ across time and were not correlated across time.
4. The coding scheme used for this study was subsequently improved by distinguishing between facilitation and intrusiveness in a set of two distinct coding schemes. These revised coding schemes, currently in use, are available from the authors.
5. Means and standard deviations were within an approximately .1 difference when calculated for only the parent ratings for which we had staff ratings and for only the parent and staff ratings for which we had videotaped home visits.

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