Creating a Family-Centered Approach to Early Intervention Services: Perceptions of Parents and Professionals

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Purpose: This study compares the attitudes of parents and early intervention (EI) providers concerning the effectiveness of family-centered services, identifies factors associated with parental satisfaction, and describes providers' perceptions of obstacles in forming collaborative relationships with families. **Methods:** A cross-sectional study was used to assess providers' (N = 11) and parents' (N = 18) perceptions of EI services. Participants completed a questionnaire including basic demographics, services received, and perceived effectiveness in the delivery of services. Participants also completed a modified version of the Project Dakota assessment of program effectiveness in meeting the needs of families. **Results:** Eighty-seven percent of parents were satisfied with their EI programs, with lesser parental satisfaction noted in learning how to develop strategies and set goals, strategies to discipline and set limits, and available community resources. Providers' overall satisfaction was 99%. Providers felt they needed more development in building parent networks and helping parents value the time their child spends with children without delays. **Conclusions:** The results of this study are consistent with previous literature and suggest that the attitudes of parents and professionals regarding program effectiveness are similar. **(Pediatr Phys Ther 2003;15:23–31)** *Key words: infant, child, professional-family relations, early intervention (education), outcome and process assessment, attitude of health personnel, questionnaires*

INTRODUCTION

Early intervention (EI) began in the 1960s with a childfocused approach to care. Recognizing the role the family plays in the integration and carryover of care, the focus has shifted from child-centered to family-centered service delivery. The philosophy of family-centered care promotes the treatment of the child within the context of the family to optimize the child's developmental outcome. Treatment goals and planning are conducted in collaboration with the parents

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to assist the family in managing the child's needs. Therefore, providers must possess the skills necessary to effectively communicate with parents and to recognize and appreciate their diverse backgrounds when designing interventions. The EI philosophy stresses the importance of practitioners who are "family centered and culturally competent" and who recognize the importance of service provision in the natural environment. EI professionals "must attain discipline-specific knowledge and skills to provide their unique contribution to the EI team."¹ The process by which an interventionist becomes an expert in EI is an ongoing one that develops as the family-centered approach to EI evolves. The physical therapy profession has accounted for the need for further education for early interventionists in pediatrics and has developed specific guidelines for specialization.¹

EI can be defined as the provision of services, including physical therapy, occupational therapy, speech therapy, and/or educational services, to children with developmental disabilities. In 1986 federal public law (PL) 99-457,

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the Education of the Handicapped Act (amendments under part H), promoted the provision of EI services to all children between the ages of birth to three years. In 1990 the Education of All Handicapped Children Act (PL 94-142) was reauthorized as PL 101-476 and renamed the Individuals with Disabilities Education Act (IDEA). IDEA differs from the Education of All Handicapped Children Act because it describes the need for a family-centered approach to the delivery of care in a community-based program and because it does not view children as service recipients apart from their families.² The law encourages parents to be active participants in their child's cross-disciplinary EI team and requires EI professionals to meet the needs of families as well as children with disabilities.³

Project Dakota, developed in the mid-1980s,⁴ was one of the government's pilot programs in the transition of EI services from client-centered to family-centered care. As part of that project, and to make the transition of services from child centered to family centered, a program evaluation instrument was developed for staff and parents to assess and monitor EI services.⁴ The data collected from this instrument were used to help restructure policies and practices. The major process change was the emphasis on and responsibility for the EI provider to engage and involve the parent in the program. As a result, parent participation in discussions increased substantially (64%), as did their reports of needs and concerns (68%) and involvement in planning (68%); previously parent contribution was less than 25%. Dakota's success resulted from the recognition of parents as primary caregivers and the development of practices that strengthened their ability to identify the child's needs and plan and implement interventions.

Instruments such as the Dakota assessment provide a more complete picture of parental satisfaction and the effectiveness of the EI services rendered to their child.^{5,6} The evaluation process provided feedback from the parents and the staff on how family-oriented EI benefited the child's development, the effect of the intervention on the family, and the therapist-family relationship. The family's needs were incorporated into the planning of the individual child's intervention process: "During planning, parents were the source of 83% of the goals and 40% of the strategies to achieve the goals."⁴

Although research has focused on the service delivery models used in EI programs and described the roles of various providers, the perceptions of program effectiveness by staff and parents have not been studied intensively. The perception of parents and EI physical therapists of the effects of the family-centered approach to EI in children is a topic that only recently has been explored by the pediatric physical therapy profession. Additionally, research on the characteristics that either support or detract from collaboration between parents and EI providers is lacking.⁷ Research indicates that perceptions regarding the quality of care delivered may differ among parents and professionals^{5,8,9} and may be affected by many factors. For example, recent studies examining the multicultural aspects of EI indicate poor matching of parents' and professionals' racial and cultural backgrounds, a factor that may impose a barrier to service delivery.⁹⁻¹⁴

O'Neil et al¹⁵ conducted a study to explore the correlation between therapists' attitudes, children's motor ability, and parenting stress, and mothers' perceptions of therapists' behavior concerning family-centered EI. Questionnaires were given to 25 clusters that contained one therapist and three mother-child groups. The parents filled out the short form of the Parenting Stress Index. The children's motor abilities were assessed using the Bayley-II Motor Scale. O'Neil et al found that parenting stress explained a considerable amount of the variance in mothers' perceptions of family-centered behaviors and that parental stress was inversely related to the child's motor ability. Therapists' attitudes, in turn, influenced mothers' perceptions of respectful and supportive care.

Cooperation between the parent and EI specialist is essential to the success of EI services. As the family-centered approach has evolved, parents' roles in their partnership with EI professionals has changed, creating many challenges, such as parental competence, a family environment conducive to the child's development, communication between parent and child, parental counseling regarding the child's development, personal and family dynamics, dialogue between parents and experts, and social relationships. Therefore, parents' views of their partnership with the interventionists must be examined to truly evaluate the effectiveness of the intervention programs.¹⁰

MATERIALS AND METHODS

Recruitment and Procedure

We assessed service providers' and parents' perceptions of EI services using a cross-sectional study design. The Northeastern University Institutional Review Board granted approval for the project. Sixteen EI programs in metropolitan areas of Massachusetts were contacted between January and April 1997. Programs were excluded if they were currently involved in another research project or did not have a parent group. Service providers for families and parents whose child had been receiving EI services for at least three months, who were enrolled in a parent group, and who were able to complete the questionnaires were eligible.

Of the 16 programs contacted, six programs did not meet eligibility requirements, leaving 10 potentially eligible programs. Seven programs considered this study but did not schedule appointments for intake. Reasons for not participating included disinterest, staff refusal to participate, and staff shortage. The remaining three programs (33%) agreed to participate. Eleven service providers and 18 parents volunteered from these three centers. One of the facilities had 100% provider involvement with the remaining two centers representing about 50% of the participants eligible for the study. After informed consent was obtained, participants completed a questionnaire including basic demographics, services received and provided surrounding

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family needs, and perceived program effectiveness of service delivery. A modified version of the Project Dakota assessment was developed so that parents and professionals could assess the effectiveness of the EI program in meeting the needs of families. The subscales covered goals and objectives of EI programs as established by the Massachusetts Department of Public Health.¹⁶ The instrument contained 36 questions in five subscales: (1) program and staff responsiveness, (2) growth in knowledge and skills in helping the child, (3) growth in understanding normal behavior and problems, (4) utilization of community resources, and (5) building a support system through participation in the program.

Participants were told that the survey was voluntary and that all information would be kept confidential. The response rate was ensured by offering a feedback form that could be used to help improve EI service delivery in that program. Professionals were also given an open-ended questionnaire about potential barriers to meeting family needs. The survey was scored using a four-point Likert scale with responses ranging from strongly disagree to strongly agree. Eight practicing early childhood special educators with a minimum of a master's degree examined questions for content validity. The total scales had an α coefficient of 0.95.

Analysis

The survey was analyzed using the SAS statistical package.¹⁷ Frequencies and means were used to describe parents' and service providers' perceptions of the program's effectiveness in meeting families' needs. Nonparametric tests were used to assess differences in perceptions regarding EI service provision. The open-ended questionnaires were examined for content, collapsed into themes,¹⁸ and coded accordingly by members of the research team, including two physical therapists, one trained in EI and a student researcher.

RESULTS

Demographics

Parents. The majority of parent participants were female (89%). Nine parents (50%) were white, and the mean age was 34 years (25–48 years). More than half of the parents had a high school education or less, and 11 (65%) had a family income of less than \$30,000 per year. The results indicate that a diverse population of parents was represented (Table 1).

Providers. The mean age of the service providers was 33 years (26–50 years). The majority of the service providers were white females (91%). More than three quarters of the providers had at least a master's degree, and more than half had an annual income of \$30,000 or more. A variety of professionals were represented in the study, including one physical therapist, one occupational therapist, one speech-language pathologist, four educators, one psychologist, one registered nurse, and two social workers. Most professionals had an average of four years experience in EI

TABLE 1. Characteristics of Parents (N = 18)

Mean age (y)	34 (range, 25–48)
Female	16 (89%)
Race	
White	9 (50%)
African American	2 (11%)
Hispanic	3 (17%)
Caribbean	2 (11%)
Asian	1 (5.5%)
American Indian	1 (5.5%)
Education	
Less than high school	4 (22%)
High school diploma or diploma plus technical	7 (39%)
training	
Associate's or bachelor's degree	4 (22%)
Master's degree	3 (17%)
Annual family income $(n = 17)$	
<\$10,000	5 (29.3%)
\$10,000 to <\$30,000.00	6 (35.2%)
\$30,000.00 to <\$50,000	2 (12%)
≥\$50,000	4 (23.5%)

(range, one to six years) (Table 2). We assessed the internal consistency of the Dakota assessment, a measure of reliability, using Cronbach's α (Table 3). The α coefficients for the total scales of both parents and providers were 0.98 and 0.98, respectively.

Perceptions of Program Effectiveness

Perceptions of program effectiveness by facility. The mean score of the service delivery subscales was examined for each facility (Fig. 1). In all three facilities, teaching parents about child development and behavior problems was a reported weakness. All facilities had a mean that was relatively low in this area (facility 1, 2.85; facility 2, 2.50; and facility 3, 2.58). One explanation for these low scores may be related to the interpretation of the item assessing the value of the child spending time with children without disabilities. Six of the parents (33.3%) and three of the

TABLE 2.

Characteristics of Professionals Working in Early Intervention (N = 11)

Mean age (y)	33 (range, 26–50)
Female	10 (91%)
White	10 (91%)
Education	
High school with technical training	1 (9%)
Bachelor's degree	1 (9%)
Master's degree or above	9 (82%)
Annual family income:	
<\$30,000	4 (36%)
30,000 to <\$50,000	5 (46%)
≥\$50,000	2 (18%)
Mean years in early intervention profession	3.8 (range, 1-6)
Physical therapist	1 (9%)
Occupational therapist	1 (9%)
Speech/language pathologist	1 (9%)
Educator	4 (36%)
Psychologist	1 (9%)
Registered nurse	1 (9%)
Social worker	2 (18%)

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TABLE 3.

Reliability of Total Dakota Scale and Its Subscales for Parents and Providers*

	Parents	Providers
1. Staff responsiveness	0.97	0.95
2. Growth in knowledge	0.93	0.94
3. Growth in understanding	0.78	0.93
4. Utilization of community resources	0.95	0.94
5. Building a support network	0.92	0.93
Reliability of total scale	0.98	0.98

 \ast Cronbach's α values are reported for each subscale and the total scale.

professionals (27%) felt they valued the time a child spent with any other child, whether the other child was developing typically or not. The intent of the item was to elicit beliefs about the integration of children with disabilities with children who exhibit normal developmental milestones to assess the positive effect on socialization skills and incidental learning.

Parents' perception of program effectiveness. Descriptive statistics were used to examine parent satisfaction with service delivery. Responses were categorized as either agree or disagree (Fig. 2). Of the parents surveyed, 16 parents (87%) were satisfied with their EI programs (range, 61%-100%). Parents reported less satisfaction in the areas of goal setting and developing strategies to help their child (66% agree), learning strategies to discipline and set limits for their child (75% agree), and learning about community resources and agencies available to assist them (61% agree).

A Wilcoxon rank sum test was used to compare parents' responses in each subscale according to race and level of education. A slight difference was found by race with regard to parents' perceptions of program and staff responsiveness. In

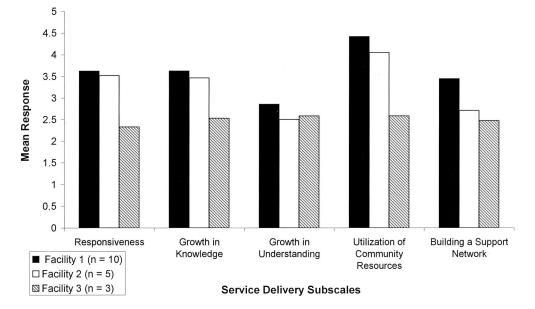


Fig. 1. Mean scores on service delivery subscales by facility.

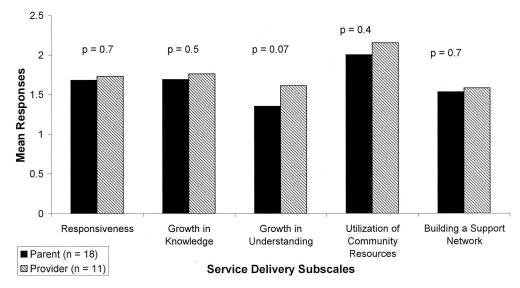


Fig. 2. Parents' and providers' mean responses for each subscale of the modified Dakota assessment.

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this case, white parents were more likely to report staff responsiveness than nonwhite parents (median, 3.63 and 3.01, respectively; p = 0.03). No differences were found with regard to level of education.

Providers' perceptions of program effectiveness. Providers' overall satisfaction with the program's effectiveness was slightly higher than that reported by parents (99%; range, 70%–100%). Areas where providers felt they needed more development included building parent networks and helping parents value the time their child spends with children without developmental delays.

Parent vs provider perception of program effectiveness. A Wilcoxon rank sum test was used to examine the differences in the subscale scores between parents and providers (Table 4). Although not statistically significant, the providers' perception of the program's and staff's effectiveness in providing services to promote growth in understanding normal child development differed from the parents' rating of the providers. Providers tended to overrate their effectiveness in promoting parents' growth in understanding normal child development as compared with parents' rating of the providers' abilities in this area (median, 1.61 and 1.35, respectively; p = 0.07). This was also an area that parents were least satisfied with as compared with other service areas.

Overall rating of program effectiveness at meeting family needs. We examined the frequency of responses to identify specific service areas that may require improvement (Fig. 2). Responses were collapsed into two groups, agree vs disagree, to determine program strengths and weaknesses. Perceived areas of weakness included parents' lack of awareness on how to set goals for their children, how to elicit the cooperation of their children, parents' need for more knowledge about community resources, greater parental involvement as a team member, and parents' beliefs that the child's strengths are being discussed.

According to these findings the strengths of the programs included the ability of the staff to give useful and clear information, parents' increased ability to look at their child and see what he or she is learning to do, parents' increased confidence in their ability to help their child and family, staff's willingness to help families and friends with questions and concerns, and parents' confidence that their child is receiving services that combine the expertise of all staff members (Table 5).

Providers' Perceptions of Barriers to Building Collaborative Relationships with Families

Seven of the 11 providers (64%) completed the openended questionnaire. The four providers from facility 3 did not answer this section of the survey. The providers who completed the open-ended questions believed parent contributions were important to a child's outcome and listed parent satisfaction as a major goal of the program. However, only four of seven (59%) expressed confidence in working with families. Two providers stated that their confidence in working with parents was dependent on the characteristics of the family. Some providers attributed TABLE 4.

Parents' and Providers' Perceptions of EI Program Effectiveness (N = 29)

	Resp	ercentage sponding irmatively	
Question	Parents	Providers	
2. Parents included as active team	83%	91%	
8. Fits into daily routine	83%	91%	
9. Staff respect limits	88%	100%	
10. Informed about variety of choices	89%	100%	
14. Knows what the child needs to learn	83%	100%	
19. Child's strengths discussed	83%	100%	
20. Know more ways to set goals	66%	100%	
21. Value time child spends with children without delays	83%	70%	
23. Know more ways to get child to cooperate	75%	91%	
25. Know more about resources	61%	91%	
34. Support from other parents	82%	80%	
Overall satisfaction	87%	99%	

TABLE 5.

Areas of Program Strengths as Noted by a High Percentage of Agreement (N = 29)

x x 71

Area	Percentage Who Agreed	
	Parents	Providers
3. Feel they receive expertise of other staff	94%	91%
4. Staff give useful information	100%	100%
6. Program meets child's needs	94%	100%
11. Parents more able to see what child is learning to do	100%	100%
12. Parents learned about helping their child	94%	100%
13. Enjoy their child more	94%	100%
 Feel more confident about how family is helping child 	100%	100%
24. Help on how to handle child's behavior	94%	91%
32. Helped parents know how to be caring and understanding	94%	90%
33. Helped parents to know other people who are caring and understanding	94%	90%
36. Willing to help family or friends when they have questions or concerns	94%	88%

their lack of comfort in working with families to a lack of formal training in family assessment and communication skills and their personal observation that some parents do not want the services the EI program could provide. Providers' confidence in working with parents seemed to be related to their years of experience in EI and their belief that families are usually responsive to EI services.

Providers were also asked to describe the role they believed parents should play in EI service provision. Among the roles they reported were observer to primary teacher, therapist, "active" participant, expert on their child's development, advocate, and a team member. Although providers were able to list a variety of roles that would actively engage the parents, they felt a number of barriers prevented the formation of collaborative relationships. These barriers included nonvoluntary referrals, active substance abuse, families with priorities or concerns

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other than their children, race, language, scheduling difficulties, differing views on what EI services are and what they can do for the family, and the parents' view of outside agencies (eg, the Department of Social Services) with respect to family function.

These providers reported that they incorporated a variety of techniques to reduce barriers and promote active family involvement in care. Some of these techniques include involving the families at each step of the process, respecting their priorities and concerns, providing information on child development and resources, listening to what parents want, keeping an open dialogue, discussing parents' goals, being flexible, and offering positive reinforcement to parents.

DISCUSSION

This study examined parents' and providers' attitudes regarding the effectiveness of family-centered EI services and identified providers' perceived barriers to forming collaborative relationships with families. Our results are consistent with past studies in this area and suggest that the attitudes of parents and professionals regarding EI program effectiveness are fairly similar.^{12,19} Both parents and professionals reported high levels of satisfaction with EI service delivery, although providers felt more confident working with children than with families because of a perceived lack of formal training. Greater confidence was reported by the more experienced EI professionals. Formal training in family assessment would provide EI staff with the knowledge, skills, and confidence necessary to communicate information at an appropriate level and to encourage parent participation.

All three facilities reported a need to increase parents' knowledge and understanding of normal child development and the potential problems that may arise as a child grows and matures. Educating parents about child development is perhaps a new role for EI service providers and is an area for future growth.

A common concern reported by parents was the feeling that their child's strengths were not discussed. One parent reported that she felt that she continually had to point out to the service provider what her child was doing. Parents also recognized the need to learn to set goals and strategies for their children. Only 66% of the parents felt they had improved their knowledge regarding their ability to develop strategic goals and plans for their child, whereas 100% of the providers felt they had taught the parents how to accomplish this objective.

A 1996 study¹² researched mothers' perceptions of the effects of physical and occupational therapy services on their caregiving competency. The results showed the services helped to augment the maternal caregiver's confidence in caring for her child. Furthermore, although the therapists' technical skills were much appreciated, the relationship between the therapist and mother and their communication with each other had a greater effect on the mother's perceptions of the therapists' caregiving skills.

A final area of concern was the parents' lack of awareness of community agencies and programs that could help their child and family manage their needs when they are no longer receiving EI services. Only 61% of the parents, as compared with 91% of the providers, believed that this information had been shared. These results are consistent with the findings of Lanners and Mombaerts,13 who examined parental perceptions of EI services. Lanners and Mombaerts found that parents were generally satisfied with their EI services; however, the degree of satisfaction depended on the dimension of early intervention.¹³ For example, parents were mostly satisfied with the EI services they were receiving, yet they gave low scores to the three dimensions concerning social support networks. This study also identified factors associated with parent satisfaction with EI services. Parent satisfaction with the program was associated with demographic features of the parents. White parents seemed to be more satisfied with services than nonwhite parents. In general, white healthcare professionals are providing services for families with diverse cultural backgrounds. A review of the literature shows that of 24 studies on the congruence of parent-professional perceptions about the development of young children with disabilities, 22 were based on white, middle-class families.⁵ Researchers suggest that intervention programs do not always meet the needs of families from diverse backgrounds.4 The differences seen between parents' responses may be indicative of poor matching between parents and providers with respect to their racial and cultural backgrounds and beliefs. It is important that providers evaluate their own cultural views and see how these beliefs may enhance or present barriers to meeting the needs of the family seeking EI services. Family assessments are one method that providers can use to identify the cultural characteristics of families. As one study¹⁶ suggests, cultural sensitivity should be considered in both design and implementation of EI programs. Cultural sensitivity training would enhance providers' awareness of cultural differences, enabling them to recognize and respond to differences in parents' perception of the impact of disabling conditions and their beliefs about the value of EI.¹⁶

The collection of information regarding parents' attitudes about EI service delivery is a distinctive aspect of this study. The Massachusetts Department of Public Health supports the inclusion of parents in all phases of EI program activity and project development.³ McNaughton²⁰ agrees that including parental attitudes in program evaluations can be useful in delivering more effective familycentered EI services.

Furthermore, parents participating in a parent group may be more involved than other parents and may therefore be an important source of information for other parents. Targeted as "ideal" parents, they can provide valuable insight on areas where the child and family's interests need to be met. For example, despite being in a parent group, only 82% of parents and 80% of providers believed that parents increased their support of other parents through

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the program. One facility reported that they already involve parents in program evaluations through their own satisfaction survey. This facility (facility 1) had slightly higher mean scores on the service delivery subscales (Table 4). These higher ratings may reflect the parents' greater sense of control over EI program offerings as a result of the incorporation of parent feedback. The other two facilities involved in this study believed that parent involvement in EI program evaluations was a worthwhile idea. One provider reported that parent satisfaction with EI program effectiveness should be assessed more often throughout a parent's involvement in the program.

The limitations of this study include the potential for selection bias because facilities with less satisfied parents and staff may have chosen not to participate. Johnson et al¹⁹ acknowledge that the development and implementation of program evaluations in EI has not been satisfactorily done. They note that service providers are often resistant to program evaluations and view them as cumbersome. Johnson et al¹⁹ recommend demonstrating the benefits of program evaluation and the impact of feedback on enhancing service delivery to decrease staff resistance to evaluations. McNaughton²⁰ suggests ways to improve response rate: endorsement letters, follow-up calls, using a variety of data collection tools, and sampling the opinions of nonrespondents to determine if they differ from those who responded. Another limitation of this study was the inability to match parents with their service providers so that both participants could rate services provided by the case manager. However, because of issues of confidentiality, this strategy could not be implemented. Finally, this study used a small sample of the provider and parent groups and was limited in geographic area.

The strengths of the study should also be mentioned. We used the Project Dakota assessment, a valid and reliable instrument for assessing program effectives,4 along with open-ended questions to elicit further information from provider and parents. McNaughton²⁰ recommends the use of parent and provider surveys in conjunction with a variety of other tools (open-ended questionnaires, interviews, and child outcome measures) because parents' and providers' evaluations of EI programs do not solely reflect program quality and effectiveness. We also examined demographic features of parents and providers to determine the impact of these factors on program satisfaction and perceived effectiveness of service delivery. Consistent with the findings of McWilliam et al,¹⁴ we found that both parents and providers believed services could be better, families hold strong beliefs about the need and quantity of therapy, and barriers such as amount of control over service intensity affect satisfaction with EI service delivery.

CONCLUSIONS

Overall parents and providers were similar in their views of EI program effectiveness, with parents ranking categories slightly lower than providers. The biggest difference was seen in the area of goal setting and developing strategies to help the child. Although providers reported that were performing very well in this area, parents' reports resulted in considerably lower scores. Satisfaction with EI services did differ, though not significantly, on the basis of racial and cultural characteristics of the parents.

The modified Project Dakota survey is an effective tool for program evaluation, providing useful information on the strengths and weaknesses of EI programs sampled from metropolitan area of Massachusetts. Parents and providers who participated seemed to be very positive about using this instrument as a means of improving EI service delivery. The open-ended questionnaire provided additional useful information on potential barriers to providing family-focused services that would not have been obtained by the structured survey alone. Assessing the impact of family-focused EI service delivery is more accurately represented by collecting data from both parents and providers. Involving parents early in the assessment process of EI service delivery may facilitate more active parent participation in the child's care.

EI programs and state agencies are becoming increasingly concerned about the effectiveness of family-focused services to prove that earlier intervention constitutes best practice. This study has suggested several effective, costefficient ways of evaluating EI services through both quantitative and qualitative measures. Future research is warranted to determine the effect of cultural diversity and provider training in family assessment and communication skills on the perceived effectiveness of program delivery and satisfaction with care.

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REFERENCES

- 1. Effgen SK, Chiarello LA. Physical therapist education for service in early intervention. *Infants Young Child*. 2000;12:63–76.
- McLean M, Bailey D, Wolery M. Assessing Infants and Preschoolers with Special Needs. Englewood Cliffs, NJ: Prentice-Hall Inc; 1996.
- Family Participation Task Group of Massachusetts Early Intervention Integracy Council with collaboration of the Massachusetts Department of Public Health. Working Together. 1997.
- Kjerland L, Kovach J. Family-staff collaboration for tailored infant assessment. In: Gibbs E, Teti D, eds. Interdisciplinary Assessment of Infants: A Guide for Early Intervention Professionals. Baltimore, MD: Paul Brookes; 1990:287–297.
- 5. Bailey DB Jr, McWilliam RA, Darkes LA, et al. Family outcomes in early intervention: a framework for program evaluation and efficacy research. *Exceptional Child*. 1998;64:313–328.
- Gavidia-Payne S, Stoneman Z. Family predictors of maternal and paternal involvement in programs for young children with disabilities. *Child Dev.* 1997;68:701–717.
- Dinnebeil L, Hale H, Rule S. Early intervention program practices that support collaboration. *Top Early Child Special Educ.* 1999;19:225–244.
- Holloway E. Parent and occupational therapist collaboration in the neonatal intensive care unit. Am J Occup Ther. 1994;48:535–538.
- Sexton D, Lobman M, Constans T, et al. Early interventionists' perspectives of multicultural practices with African-American families. *Exceptional Child*. 1997;63:313–328.
- Peterander F. The best quality cooperation between parents and experts in early intervention. *Infants Young Child*. 2000;12:32–45.

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- 11. Masin H. Perceived maternal knowledge and attitudes toward physical therapy during early intervention in Cuban-American and African-American families. *Pediatr Phys Ther.* 1995;7:118–123.
- 12. Washington K, Schwartz I. Maternal perceptions on the effects of physical and occupational therapy services on caregiving competency. *Phys Occup Ther Pediatr.* 1996;16:33–54.
- 13. Lanners R, Mombaerts D. Evaluation of parents' satisfaction with early intervention services within and among European countries: construction and application of a new parent satisfaction scale. *Infants Young Child.* 2000;12:61–70.
- 14. McWilliam RA, Young H, Harville K. Therapy services in early intervention: current status, barriers, and recommendations. *Top Early Child Special Educ.* 1996;16:348–374.
- 15. O'Neil ME, Palisano RJ, Wescott SL. Relationship of therapists' attitudes, children's motor ability, and parenting stress to mothers' perceptions of therapists' behaviors during early intervention. *Phys Ther*. 2001;81:1412–1424.
- McGonigel M. Guidelines and Recommended Practices for the Individualized Family Service Plan. Bethesda, Md: Association for the Care of Children's Health; 1991.
- 17. SAS Institute. SAS System for Windows. Cary, NC: SAS Institute Inc: 1996.
- Glaser BG. Theoretical Sensitivity: Advances in the Methodology of Grounded Theory. Mills Valley, CA: Sociology Press; 1978
- Johnson LJ, Gallagher RJ, Lamontagne MJ. Meeting Early Intervention Challenges: Issues From Birth to Three. Baltimore, MD: Paul Brookes; 1994:1–13, 185–271.
- McNaughton D. Measuring parent satisfaction with early childhood intervention programs: current practice, problems, and future perspectives. *Top Early Child Special Educ.* 1994;14:26–48.

APPENDIX I

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Professional Survey Questions

- 1. I listen and respond to the concerns, questions, and ideas of caregivers.
- 2. In meetings with staff (for assessments, conferences, monthly updates, etc), I feel I encourage caregivers to be an active member of the team and not just a listener.
- 3. Although one staff member mainly serves a child, I feel that I seek the expertise of other staff.
- 4. I give information that is clear and useful to caregivers.
- 5. I feel I create programs for a child that include what is important to caregivers.
- 6. I feel I create programs that meet the individual needs of a child.
- 7. Overall I am satisfied with the progress children make with this program.
- 8. I try to make sure the help I offer fits into the family's routines and activities.
- 9. I respect the limits a family puts on the time and energy they have for their child's program.
- 10. I inform caregivers of a variety of choices for how their child could be served.
- 11. I enable caregivers to look at their child and see what he/she is learning to do.
- 12. I enable caregivers to learn about helping their child.
- 13. I enable caregivers to enjoy their child more.
- 14. I enable caregivers to know what their child needs to learn.

- 15. I enable caregivers to be aware of how to help their child's learning and development.
- 16. I enable caregivers to feel more confident about how they and their family are helping their child.
- 17. I enable caregivers to be more aware of how to help their child's development.
- 18. I enable caregivers to have a clearer picture of their child's special needs at this time.
- 19. I enable caregivers to feel satisfied that their child's strengths are being discussed.
- 20. I enable caregivers to know more about how to set goals and strategies for their child.
- 21. I enable caregivers to more strongly value their child spending time with children who don't have developmental delays.
- 22. I enable caregivers to be more aware of how their child is like other children.
- 23. I enable caregivers to know more ways to get their child to cooperate.
- 24. I enable caregivers to get the help they need to learn about handling their child's behavior.
- 25. I enable caregivers to know more about community agencies, services, and programs that can help their child or family.
- 26. I enable caregivers to get help from staff when they want other programs to people to work with them, their child, or family.
- 27. I enable caregivers to have contact with services and programs or people to work with them, their child, or their family.
- 28. I enable caregivers to be satisfied with the communication between their child's team and community resource persons involved in their child's program.
- 29. I enable caregivers to be able to get information that is important to the health and happiness of their family and child.
- 30. I enable caregivers to involve their partner/family more in their child's learning.
- 31. I enable caregivers to have more friends or other children helping caregivers help their child.
- 32. I enable caregivers to help the people they know be more caring and understanding of their child.
- 33. I help caregivers get to know other people who are caring and understanding.
- 34. I help caregivers get support from other parents.
- 35. I enable caregivers to feel less alone as the parents of their child.
- 36. I enable caregivers to help their family and friends when they have concerns or questions about their child.

APPENDIX II

Parent Satisfaction Survey Questions

1. The staff listens and responds to my concerns, questions, and ideas.

Pediatric Physical Therapy

- 2. In my meetings with staff (for assessments, conferences, monthly, updates, etc.), I feel I am an active member of the team and not just a listener.
- 3. Although one staff member mainly serves my child, I feel that we receive the expertise of other staff.
- 4. The staff gave me information that is clear and useful to me.
- 5. I feel the program for my child includes what is important to me.
- 6. My child's program meets my child's needs.
- 7. I am satisfied with my child's progress since beginning this program.
- 8. The help I get fits into our family routines and activities.
- 9. The staff respects the limits my family puts on our time and energy for our child's program.
- 10. I am informed of a variety of choices for how my child could be served.
- 11. I am more able to look at my child and see what he/she can do.
- 12. I have learned about helping my child.
- 13. I enjoy my child more.
- 14. I know what my child needs to learn.
- 15. I am aware of how ordinary activities are part of my child's learning and development.
- 16. I feel more confident about how my family and I are helping our child.
- 17. I am more aware of how to help my child's development.
- 18. I have a clearer picture of my child's special needs at this time.
- 19. I feel satisfied that my child's strengths are being discussed.
- 20. I know more about how to set goals and strategies for my child.

- 21. I more strongly value my child spending time with children who don't have developmental delays.
- 22. I am more aware of how my child is like other children.
- 23. I know more ways to get my child to cooperate.
- I am getting the help I need to learn about handling my child's behavior.
- 25. I know more about community agencies, services, and programs that can help my child or my family.
- 26. I get help from staff when I want other programs or people to work with my child, my family, or me.
- 27. I now have contact with services and programs or people to work with me, my child, or my family.
- 28. I am satisfied with the communication between my child's team and community resource persons involved in my child's program.
- 29. I am able to get information that is important to the health and happiness of my family and child.
- 30. My partner/family are more involved in my child's learning.
- 31. I have more friends or other children helping me with my child.
- 32. The staff helped the people I know be more caring and understanding of my child.
- 33. The staff helped me get to know other people who are caring and understanding.
- 34. I have gotten support from other parents.
- 35. I feel less as the parent of my child.
- 36. The staff is willing and able to help my family and friends when we have concerns or questions about my child.