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Relationship of Service Coordinators' Family-Centered Service Delivery and Maternal Empowerment in Tennessee's Early Intervention System

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To the Graduate Council:

I am submitting herewith a dissertation written by Fred W. Coulter entitled "Relationship of Service Coordinators' Family-Centered Service Delivery and Maternal Empowerment in Tennessee's Early Intervention System." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

Vey M. Nordquist, Major Professor

We have read this dissertation and recommend its acceptance:

Brian K. Barber, Julia A. Malia, John G. Orme

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(Original signatures are on file with official student records.)

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_____Brian K Barber_____________

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_____John G. Orme_______________

Accepted for the Council:

_____Anne Mayhew_____________
Vice Chancellor and Dean of
Graduate Studies

(Original signatures are on file with official student records)

RELATIONSHIP OF SERVICE COORDINATORS' FAMILY-CENTERED SERVICE DELIVERY AND MATERNAL EMPOWERMENT IN TENNESSEE'S EARLY INTERVENTION SYSTEM

A Dissertation
Presented for the
Doctor of Philosophy Degree
The University of Tennessee, Knoxville

Fred W. Coulter
August 2006

DEDICATION

To my parents, Fred W. Coulter, Sr., and Josephine J. Coulter, for their support of my education and life goals. To my son, Benjamin, who has been a steady source of encouragement to complete my degree. Our being students together has motivated me to strive to do my best. Finally, to Dr. Jean M. Gerard, who has been unwavering in her support and encouragement throughout my graduate work. All of you have inspired me to achieve my educational, professional, and personal goals.

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All of you have helped to make this project and my dissertation possible.

ABSTRACT

The purpose of the present study was to assess mothers’ perceptions of family- centered practices and how these practices influenced their feelings of empowerment. The review of literature included examining the basis for family-centered practices and the conceptualization of empowerment. Twelve studies that reported a relationship between family-centered practices and empowerment were reviewed in detail.

The current study was conducted as a component of the Pathways to Family Empowerment Project, whose purpose is to evaluate service delivery and family empowerment of Tennessee’s Early Intervention System. The collected data were responses of 370 mothers to the Family-Centered Program Rating Scale (FamPRS) and the Family Empowerment Scale (FES). The relationship among the factors was examined using both correlational analyses and structural equation modeling (SEM) techniques.

Factor analyses produced two factors for each instrument, which were labeled *Partnership Building Communication* and *Sensitive Service Delivery* from the FamPRS and, from the FES, *Personal Competence* and *System Competence.* These factors were found to be significantly correlated to each other. SEM results indicated that the data fit a model in which family-centered practices used by service coordinators are significantly related to mothers’ empowerment outcomes. Mothers reported they were more empowered to seek services for themselves and their children with disabilities than they were for advocating for better services through the early intervention system.

The results are discussed in light of findings of previous studies. In addition, explanations are discussed for the similar but more specific relationships found in this study between family-centered practices and empowerment. Finally, future directions for research and practice are presented.

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CHAPTER 1

Introduction

The Individuals with Disabilities Education Act (IDEA) first passed by Congress in 1986, reauthorized in 1997, and most recently signed into law by President G. W. Bush in December of 2004 serves to regulate special education for infants, children, adolescences, and young adults. The statute is divided into four parts, A through D. Part A outlines the general provisions of IDEA, describing the scope and purpose of the act. Part B, the lengthiest of the four, includes regulations for educating all students with disabilities, ages 3 to 22, through special education programs in local school districts. Part C deals specifically with maximizing the potential development of at-risk and developmentally delayed infants and toddlers from birth to 3. Part D outlines national initiatives to improve education of children with disabilities. Together, these four parts of IDEA represent the Federal government's two decade old commitment to the stipulation, regulation, and funding of educational programs for children with disabilities.

Part C of IDEA sets forth nine provisions by which children with special needs, ages birth to 3, and their families should receive services that maximize young children's development. The provisions serve as a guide to state agencies and individual service providers across the country and are organized into two categories: (a) Findings and (b) Policy. These provisions published by Congress are found in Section 631 of IDEA (2004).

(a) FINDINGS. -- Congress finds that there is an urgent and substantial need –

(1) to enhance the development of infants and toddlers with disabilities, to minimize their potential for developmental delay, and to recognize the significant brain development that occurs during a child's first 3 years of life;

(2) to reduce the educational costs to our society, including our Nation’s schools, by minimizing the need for special education and related services after infants and toddlers with disabilities reach school age;

(3) to maximize the potential for individuals with disabilities and maximize the potential for their independently living in society;

(4) to enhance the capacity of families to meet the special needs of their infants and toddlers with disabilities; and

(5) to enhance the capacity of State and local agencies and service providers to identify, evaluate, and meet the needs of all children, particularly minority, low- income, inner city, and rural children, and infants and toddlers in foster care.

> (b) POLICY.--It is the policy of the United States to provide financial assistance to States--
>
> > (1) to develop and implement a statewide, comprehensive, coordinated, multidisciplinary, interagency system that provides early intervention services for infants and toddlers with disabilities and their families;
> >
> > (2) to facilitate the coordination of payment for early intervention services from Federal, State, local, and private sources (including public and private insurance coverage);
> >
> > (3) to enhance State capacity to provide quality early intervention services and expand and improve existing early intervention services being provided to infants and toddlers with disabilities and their families; and
> >
> > (4) to encourage States to expand opportunities for children under 3 years of age who would be at risk of having substantial developmental delay if they did not receive early intervention services.

In response to the IDEA’s policy section mandating that each state develop and implement an early intervention system, Tennessee’s legislature authorized the creation of a new agency under the auspices of the Department of Education (DOE). Tennessee's Early Intervention System (TEIS) was created in January 1988 and for the next 5 years, TEIS personnel developed and field-tested 14 different service components required by the law. Among these was the state definition of developmental delay, the Individual Family Service Plan (IFSP), and a family-centered model of service delivery. In order for a child to be eligible for TEIS services, she or he had to meet state eligibility requirements as described in the state's definition of developmental delay. Using appropriate and approved methods of developmental assessment, a child who has a delay of at least 40% in one developmental domain, such as speech and language, or a delay of at least 25% in two or more domains of development, such as fine motor skills and self-help behaviors, is eligible for TEIS services. Any child who has a diagnosed disability (i.e., Down Syndrome) also is eligible, as are children who, in the judgment of a medical practitioner, are developmentally delayed.

The IFSP is a written document focusing on specific areas of family strengths and limitations as well as children's positive developmental outcomes. It is prepared by a team that includes at least one member of the child's family, service providers, and a designated service coordinator. The family-centered model of early intervention service delivery mandated by IDEA and manifested in the IFSP is based on the premise that the best method for helping children develop is by supporting the strengths of their families as they care for their children (Bronfenbrenner, 1974). Thus, the written goals, strategies, and outcomes in the IFSP include those that promote both the child’s development and support his or her family members in their efforts to make informed choices about ways to address their child’s special needs.

In 1993, TEIS began to implement family-centered service coordination to all families of eligible children with developmental delays and diagnosed disabilities. Concurrently to implementation, TEIS personnel conducted a host of ongoing activities to find children who are eligible for services in the medical public health, mental health, education, and general public domains. These activities had the effect of increasing the number of families served by TEIS since 1993 by 500%. TEIS currently is serving about 5,000 families across the state through a network of nine district offices that employ approximately 100 service coordinators. Eight of these offices are located on the campuses of major universities and ninth is associated with a major hospital in southwest Tennessee. This organizational structure was created for the specific purpose of standardizing assessment and service coordination procedures and minimizing risks relating to conflict of interest issues.

The focus of the present research study is on Provision 4 in the Findings section of Part C in IDEA. This provision acknowledges an “urgent and substantial need to enhance the capacity of families to meet the special needs of their infants and toddlers with disabilities” (IDEA, 2004). This provision embodies what many providers, families, educators, and scholars believe is the most important goal of birth to 3 early intervention programs specifically, family empowerment. In the present study, an effort is made to assess the long-standing and widely accepted belief that empowerment is more likely to be achieved when service providers adhere to a family-centered philosophy and utilize practices consistent with its central features to interact with families.

Family-Centered Service Delivery

The central theme of the family-centered approach to service delivery is that positive developmental outcomes and overall family well-being are best achieved when the service system diligently supports the abilities of families to meet the needs of their children (Allen & Petr, 1995). The term *family-centered* has been used to describe certain forms of service delivery to families with children since the 1950s (Scherz, 1953). Birt (1956) described a model of social work practice that delivered coordinated comprehensive services to multi-problem families in contrast to a host of agencies working independently and at times at odds with each other. The family-centered approach to service delivery is not limited to social work. Descriptions of family-centered practices can be found in other fields such as early intervention (Dunst, 1997), mental health (Langley, 1991), health care (Timberlake, 1975), and education (Wagner, 1993). Allen and Petr (1998) reviewed more than 120 human service-related articles to formulate a definition of family-centered practices that would be applicable across the helping professions. Results of a content analysis showed 28 articles contained specific definitions of family-centered practices. Using these definitions, 10 common concepts were identified: (a) the family as the unit of attention or concern, (b) family involvement and collaboration/partnership with professionals, (c) individualized services for families and children, (d) a flexible method of case management that fits with the changing needs of families, (e) the importance of giving families choices about services and recognizing them as the decision-maker for their children, (f) a focus on families' strengths, (g) providing services in natural environments where children and families are most comfortable, (h) respect for families' cultural diversity, (i) empowering families' to advocate for services, and (j) providing services so as not to disrupt families' regular schedules. Based upon these key concepts, Allen and Petr composed the following definition of family-centered practice:

> Family-centered service delivery, across disciplines and settings, recognizes the centrality of the family in the lives of individuals. Delivery of these services is guided by fully informed choices made by the family and focuses on the family's strengths and capabilities (p. 9).

Despite the long standing and well-established belief among practitioners in a variety of help-giving professions that services to families are most effective when they are delivered in a manner consistent with family-centered concepts, not all professionals working with families have fully embraced family-centered service delivery or recognized parents as the primary decision makers for meeting the needs of their children. Cost effectiveness is one of the reasons professionals continue to use the traditional practice of client-centered care because the provider can control the services' location, type, and frequency. Another reason is that client-centered service delivery can contain cost by identifying one member of the family as the client and limit services only to that person. Using early intervention as an example, the child's treatment regimen would be implemented by the professional without regard for the family's resources and the family support network. In this situation, service locations and appointments are made based on what is most cost effective for the provider. Families have to adapt the professionals' schedules, which are usually weekdays during regular business hours. Some providers have become more family-centered in their practices by providing services in places that are more convenient to families, such as in the families' homes or children's daycare settings, but long-established policies and practices take time to change.

To help chart the progress from client- to family-centered practices, Dunst, Johanson, Trivette, and Hamby (1991) developed a framework for classifying the orientation of programs serving children and families in early intervention and special education. The framework included four categories of service delivery conceptualized along a continuum ranging from programs whose services were prescribed and directed by professionals to those where parents worked with professionals to decide on the delivery of needed services. The researchers labeled these categories, *professionally-centered, family-allied, family-focused,* and *family-centered.*

At one end of the spectrum, in professionally-centered program, professionals were viewed as the experts who determined the needs a family. Families were seen mostly as needing the help of professionals to function more effectively. Professionals implemented interventions because families were seen as incapable of solving their own problems. At that other end of the spectrum, in family-centered programs, service delivery practices are consumer-driven, meaning that the families' needs determine all aspects of service delivery. The professional service providers intervene with families in ways that promote their decision-making abilities and competence in securing services for themselves. This method of intervention by professionals is called *strength-based*, because it increases families' capacity to build formal networks (working within an institutional system) and informal networks (working within a system of family and friends). Building these support networks decrease families' complete dependence upon professionals for obtaining services and enable families to understand how to work within the formal early intervention system.

Between the two extremes of service delivery, Dunst et al. (1991) described family-allied and family-focused programs. In family-allied programs, one-step from professionally-centered programs toward family-centered, families were recruited as agents and enlisted by professionals to implement interventions that the professionals deemed necessary for the benefit of families and their children. Families were seen as minimally capable of independently effecting changes in their lives and able to do so only under the tutelage of professionals. In another step nearer to being family-centered, family-focused programs are characterized by families and professionals working collaboratively to define the families’ needs for improved family functioning. Families were seen in a more positive light by the professionals but generally were viewed as needing outside advice and guidance. In order to function as well as possible, families were encouraged to use formal networks to meet their service needs.

The implication of the family-centered approach to service delivery as described by Dunst et al. (1991) is that families are fully engaged in accessing and working with service providers providing services to promote the development of their children with disabilities. First, when accessing services, families are completely involved in the decision as to what services are needed, who will provide the services, and where the services will be delivered. For example, if a child has been identified as having a speech delay and is eligible for speech-language therapy through TEIS, then the family would be involved in every decision regarding speech services. They would help decide if therapy services would best be delivered at home in the child’s natural environment where he or she would be more comfortable or at the therapist’s office where there may be fewer familial distractions. The families are critical in this decision-making process because they know their children's dispositions best of all. The families' importance in promoting their children's development extends beyond decision-making about services; they need to be involved in every aspect of the services their children are receiving.

Families become extensions of the services provided to their children. Continuing with the example of a child receiving speech therapy, the speech therapist would include family members in the therapy sessions so they could repeat and reinforce the therapist's intervention. A child may see a therapist only once or at most twice a week, and a child's attention span may shorten the therapy session to only 25 five minutes. Naturally, the child is with the family in the remaining time between sessions. This time can be turned into therapy sessions in the child's natural environment. Family members can encourage the child to use words and language introduced by the therapist during the forma sessions. Essentially, the child can receive many hours of speech therapy between the combined efforts of the speech therapist and family members.

Part C of IDEA calls upon service providers to use an approach that would be considered family-centered by working with families as equal partners to develop a comprehensive and coherent plan of service. This plan would be responsive to families' concerns and empower them to become more self-determined and autonomous to exercise greater control over practices that affect their family's functioning in providing for their child(ren)'s special needs.

The goal of family-centered service delivery is the empowering of families so they can find and obtain needed services for themselves and their children. In order to reach this goal, service providers must, according to Dunst and Trivette (1996), use a more broadly based social systems perspective when working with families. This social systems perspective posits three assumptions about fostering an empowering relationship. First, empowerment is more likely to occur when professionals accept that families are competent or have the capacity to become competent. This proactive stance by service providers keeps the working relationship from becoming professionally-centered so that families are not viewed as needing help to solve their problems but rather can be actively engaged in changing their own situations. Second, failure to display competence is not due to deficits in the family but rather the failure of professionals to create opportunities for competencies to be displayed or learned. This is most likely to happen in families who have been exposed only to professionally-centered or family-allied service delivery systems. Because of this type of exposure they are not as likely to have competency building opportunities. Finally, families who seek help must receive it from service providers in ways that promote a change in the families' behavior so that families can acquire a sense of control over their own efforts that is necessary to manage their affairs. In family-focused and ultimately, family-centered service delivery programs, families should begin to feel more empowered by provider practices that promote knowledge, resources, and instill feelings of confidence, so that families eventually can make more informed choices and mobilize early intervention services.

Family Empowerment

One important outcome that occurs when families are empowered by service providers is that child and family needs are met in ways that make family members more competent in negotiating their own futures. This *empowerment* framework was described by Rappaport (1981) as follows:

> Empowerment implies that many competencies are already present or at least possible . . . Empowerment implies that what you see as poor functioning is a result of a social structure and lack of resources which make it impossible for the existing competencies to operate. It implies that in those cases where new competencies need to be learned, they are best learned in a context of living life rather than in artificial programs where everyone, including the person learning, knows that it is really the expert who is in charge. (p. 16)

In addition to Rappaport's (1981) description, other descriptions of empowerment can be found across all health-related literature. Included each description are three characteristics that are common in nearly all definitions of empowerment. These characteristics include families' (a) access and control over needed resources (Brickman, Rabinowitz, Karuza, Coates, Cohn, &

Kidder, 1982); (b) decision-making and problem-solving abilities (Hobbs, Dokecki, Hoover-Dempsey, Moroney, Shayne, & Weeks, 1984); and (c) acquisition of instrumental behavior needed to interact effectively with others to procure resources (Solomon, 1985). Dunst, Trivette, and Deal (1988) drew upon these characteristics to synthesize a definition of empowerment specifically for the field of early intervention as “a family’s ability to meet needs and achieve aspirations in a way that promotes a clear sense of intrafamily mastery and control over important aspects of family functioning” (p. x).

When applied to early intervention, the concept of family empowerment focuses on promotion of growth-producing behaviors rather than treatment of problems or prevention of negative outcomes. Emphasis is placed on promoting and strengthening family functioning by fostering the acquisition of self-sustaining, self-efficacious, and other adaptive behaviors. Families are empowered when they play a major role in deciding what is important to them and what options they will take when making decisions about their children’s early intervention needs. Empowered families are essentially their own agents of change and more likely to become empowered when service providers support, encourage, and create opportunities for them to exercise greater control over decisions that affect their children’s early intervention services. Service providers who promote family empowerment do not mobilize resources on behalf of families, but rather they create opportunities for families to acquire competencies that permit them to mobilize the resources and support necessary to cope, adapt, and grow in response to their children's disabilities. While working with families, service providers are expected to be positive, see the strengths of families, and assist families to see their own potential and capabilities. This is all done in a cooperative partnership approach that emphasizes joint responsibility between families and service providers. Empowerment is more likely to occur when service providers help families cope more effectively with problems, needs, and aspirations, rather than taking on the responsibility for dealing with the problems themselves.

Purpose of the Study

Ever since the passage of IDEA in 1986, much has been published regarding family-centered service delivery and its presumed effect on family empowerment. However, only nine studies have actually assessed the relationship between family-centered practices and family empowerment outcomes. All of the studies have reported a positive relationship between family-centered practices and parental empowerment (Dempsey & Dunst, 2004; Dempsey, Foreman, Sharma, Khanna, & Arora, 2001; Dunst, Trivette, Boyd, & Brookfield, 1994; Dunst, Trivette, & LaPointe, 1992; Judge 1997; Trivette, Dunst, Boyd, & Hamby, 1996; Trivette, Dunst, & Hamby, 1996a; Trivette, Dunst, & Hamby, 1996b; Trivette, Dunst, Hamby, & LaPointe, 1996). In light of these promising yet limited research findings, there is a need for still more research, in particular, by expanding on the concept of family empowerment. The purpose of the present study is threefold: (a) to assess the extent to which and in what ways TEIS service coordinators are utilizing family-centered practices, (b) to identify particular family-centered practices that are related to parental perceptions of empowerment, and (c) to measure the extent of the relationship of the identified family-centered practices to families' empowerment. Results of this study should have immediate implications for allocation of the Tennessee Department of Education's resources and focus of a statewide TEIS service coordinator training program as well as future directions for research.

Chapter 2

Literature Review

Family-centered service delivery, across disciplines and settings, recognizes the centrality of the family in the lives of individuals. Delivery of these services is guided by fully informed choices made by family members and focuses on the family's strengths and capabilities (Allen & Petr, 1998). Three core elements emerge from this description of family-centered service delivery. First, families are the crucible in which children develop physically, mentally, and emotionally. Second, development of these children is dependent upon families being involved in every aspect of the decision-making process to identify, obtain, secure, and utilize services for their children. Third, families, no matter what their situation economically, educationally, or socially, have identifiable capabilities that can be mobilized to aid their children's development. Together, these three elements form the guiding principles of family-centered service delivery.

Family-Centered Service Delivery

Centrality of the family

Families are the critical element in the rearing of healthy, competent, and caring children. Hobbs et al. (1984) suggested that not all families can perform this function as well as they might unless they are supported by a caring and strong community, for it is community support that provides the both informal and formal supplements to a family's own resources.

Community support consists of extended family members, friends, religious affiliations, and professional service providers. Bosch (1996) identified families' informal and formal support networks as the means by which they secure the necessary resources and services for their children with special needs. Informal support could be provided by family members, friends, and religious organizations through emotional encouragement, sage advice, and, in some cases, limited financial assistance. Formal support includes both publicly or privately funded professionals and programs that provide services to facilitate the children's development. When service providers help families to identify and access both types of support, most families are able to help their children with special needs.

Informed family choice

When accessing both formal and informal support resources, the family is considered by the service provider as the consumer and director of the service delivery process. Katan and Prager (1986) asserted that consumer participation was viewed as having a strong educative premise, the conviction being that such participation can enhance individual capacity to properly perform their roles as clients and promote their sense of consumerism. Applying this assertion to the early intervention system, it stands to reason that the effectiveness and acceptability of an organization would be enhanced if practices are consistent with client preferences and if clients are invested in both the organization and the decision-making process. Three implications for family-centered practices can be derived from this process of informing families about their choices of service delivery. First, the family maintains the right to choose its level and nature of involvement in the service delivery process (Leviton, Mueller, & Kauffman, 1992). Second, information flows in both directions between the family and the service provider (Brown, Pearl, & Carrasco, 1991). Finally, the needs of the family and their children are identified from the family's perspective (Bennett, Nelson, Lingerfelt, & Devenport-Ersoff, 1992). When these implications are enacted through family-centered service delivery, the family is given a substantial amount of authority over the decision-making process.

A considerable amount of variation can occur in the mode of the family-professional relationship when families are given the choice about who and at what level professionals may be involved in the decision-making process regarding services for themselves and their children. By the families' choice, these relationships can vary from the professional who is responsible for the care, to an equal partnership between professionals and families, to families taking complete control over the service delivery process. Leviton et al. (1992) found that parents often value professionals' expertise in addressing their children's needs but feel that only they have the knowledge and experience to determine whether the professionals' recommendations are in their family's best interest.

Brown et al. (1991) proposed a model of family-centered services where families are in control of the amount and type of information they disclose and receive. This process can give families time to digest information about their children's disabilities. Depending on the severity of the disabilities, families may not want to have all the information at one time but would rather have it given to them in comprehensible *bite-sized* portions. As families become more involved in the decision-making process, they should be given complete access to all relevant information and exercise control over how the information is shared with other professionals.

Family-centered practice begins by identifying children's and families' needs from the families' perspective. Bennett et al. (1992) suggested that professionals should view each family's situation broadly and holistically so that identified needs are not limited solely to either those directly pertaining to family members, the children's specific disability, to the professionals' particular area of expertise, or to the specific function of the professionals' organizations. Instead, consideration of each family's needs should be as comprehensive and expansive as the family members wish it to be, regardless of the presenting concern about their child's disabilities. After the family's needs have been identified, then members are given whatever assistance they need to develop and implement a plan of action that suits their unique situation.

Fostering family's strengths and capabilities

The third core element of family-centered practice is a commitment by professionals to work with families building upon their strengths and capabilities so they might access services for themselves. This commitment derives from a respect for the inherent strength and capabilities of family members (Simeonsson & Bailey, 1991). Allen and Petr (1995) described an approach that professionals can use to identify, foster, and expand families' strengths. First, professionals must involve family members in identifying their strengths and capabilities (Saleeby, 1992). In this approach, professionals may need to encourage families in adopting this perspective themselves. The reason is that families might not be completely aware of their own strengths because they have taken them for granted or did not recognize the positive functional qualities of particular family members. Second, family-centered professionals need to foster opportunities for families to build new strengths and capabilities. Dunst, Trivette, and Deal (1988) made the point that professionals may not learn about families' capabilities because family members have not had opportunities to learn, practice, or display their strengths. One of the functions of the professional is to create opportunities for family members to identify and learn important capabilities. These learning opportunities lead to the third aspect of this approach to family-centered practices that as families' capabilities are recognized and fostered in the process of accessing services, emerging or existing skills can be applied to other situations, not just the early intervention system, thereby increasing the family's overall sense of competence. Besides the obvious benefit of this approach to families, Briar (1991) described a more systemic benefit: "The more capacity of strengths and capabilities are built through families, work groups, and support networks, the less of a capacity crisis the helping systems will experience" (p. 76). Therefore, family-centered practices can be beneficial for families and service providers alike.

These interrelated foundational concepts of the centrality of the family, informed choice, and building family strengths provide the basis on which to develop family-centered principles. Shelton and Stepanek (1994) outlined eight principles that should guide family-centered interactions between professionals and families. Collectively these principles form a framework that can inform professionals as they try to help families identify and meet their service needs.

1. Incorporating into policy and practice the recognition that the family is the constant in a child's life, whereas service systems and support personnel within those systems fluctuate.

2. Facilitating family-professional collaboration at all levels of hospital, home, and community care.

3. Exchanging complete and unbiased information between families and professionals in a supportive manner at all times.

4. Incorporating into policy and practice the recognition and honoring of cultural diversity, strengths, and individuality within and across all families, including ethnic, racial,

> spiritual, social, economic, educational, and geographic diversity.
>
> 5. Recognizing and respecting different methods of coping and implementing comprehensive policies and programs that provide developmental, educational, emotional, environmental, and financial supports to meet the diverse needs of families.
>
> 6. Encouraging and facilitating family-to-family support and networking.
>
> 7. Ensuring that hospital, home, and community service and support systems for children needing specialized health and developmental care and their families are flexible, accessible, and comprehensive in responding to diverse family-identified needs.
>
> 8. Appreciating families as families and children as children, recognizing that they possess a wide range of strengths, concerns, emotions, and aspirations beyond their need for specialized health and developmental services and support. (p. 51)

These guiding principles later were developed into 10 family-centered practices by Dunst (1997), whose intention was to provide behaviorally-based practices that could serve as standards for professionals. Conceptual foundations and principles are only as good as they are clearly understood and adopted by professionals who are working with families. These descriptions of family-centered practices were intended to help professionals better understand how to interact with families.

> 1. Families and family members are treated with dignity and respect at all times.
>
> 2. Practitioners are sensitive and responsive to family cultural, ethnic, and socioeconomic diversity.

> 3. Family choice and decision-making occurs at all levels of family involvement in the intervention process.
>
> 4. Information necessary for families to make informed choices is shared in a complete and unbiased manner.
>
> 5. The focus of intervention practices is based on family-identified desires, priorities, and needs.
>
> 6. Supports, resources, and services are provided in a flexible, responsive, and individualized manner.
>
> 7. A broad range of informal, community, and formal supports and resources are used for achieving family-identified outcomes.
>
> 8. The strengths and capabilities of families and individual family members are used as resources for meeting family-identified needs and as competencies for procuring extrafamily resources.
>
> 9. Practitioner-family relationships are characterized by partnerships and collaboration based on mutual trust and respect.
>
> 10. Practitioners employ competency-enhancing and empowering help-giving styles that promote and enhance family functioning and have family strengthening influence. (p. 79)

Early intervention for infants and toddlers with special needs is firmly based on a family-centered philosophy and on a fairly clear set of principles and practices. Families must be included in every aspect of service provision, from the children's assessment, to parent education about the disability, to informed decision-making about the services themselves. Further, all services must be provided at a time and in a setting that is best for families. For example, suppose the parents of a 2 year-old child suspect that he or she has a speech delay. From the time that the first contact is made with a service coordinator, particular aspects of the family's life must be taken into consideration. Where and when should the child's developmental assessment be conducted, in the home or in an office? If the child is eligible for services, how many therapy sessions per week would be most beneficial for the child? Should the sessions be in the child's home where he or she is comfortable or are their too many distractions, suggesting that an office setting might be more appropriate? Who is going to pay for the services? Will the family's health insurance cover the cost or will they have to rely on TEIS? These few questions illustrate how each family's situation is unique and how, if delivered appropriately, family-centered practices can make a positive impact on the family's ability to help its child. The philosophy, definition, principles, and practices of family-centered care have been carefully developed to better insure that children with special needs have the service opportunities they need to maximize their development.

Illustrative research related to the use of family-centered practices

Much research has been conducted conceptualizing, operationalizing, and measuring family-centered practices. From this vast array of studies, four studies were chosen because they illustrate the scope of the family-centered practices literature that has a direct relation to the first purpose of this study, namely, to assess the extent to which and in what ways TEIS service coordinators are utilizing family-centered practices. The scope of these studies covered the effect of family-centered practices at four levels: national, state, local, and family. This research demonstrates how pervasive the implementation of family-centered practices is in early intervention services at all levels. TEIS service coordinators have operated under the same legislative mandates and performance expectations as the participants in the selected studies. Hence, there is a direct relationship between these particular studies' findings and a primary focus of the proposed study. The selected studies analyzed legislation and policies, surveyed service providers in four states, and two studies surveyed parents satisfaction with early intervention services.

Dunst, Johanson, Trivette, and Hamby (1991) determined whether federal legislation written to support families and their children with disabilities could be considered family-centered. Bailey, Buysee, Edmonson, and Smith (1992) surveyed professionals regarding how family-centered practices should be implemented and what were the barriers to implementation. Able-Boone, Sandall, Loughry, and Frederick (1990) interviewed parents for their opinions of service providers and changes that needed to be made in the early intervention system. Finally, McWilliam, Lang, Vandivere, Angell, Collins, and Underdown (1995) surveyed over 500 parents and interviewed 6 of them in-depth about their satisfaction with services and about what could be done to improve service delivery.

Dunst, Johanson, Trivette, and Hamby (1991) collected data from several sources to determine if family-centered policies and practices were being adopted by early intervention service providers. The first source of data included seven pieces of federal legislation that were rated for the extent to which each piece adopted and promoted family-centered principles. The second source of data was from state-level policy makers, service providers, and family members who were in direct positions to evaluate the family-centeredness of early intervention services. A sample of policy makers, service providers, and family members was gathered from 25 states. The participants were asked to rate the extent to which they agreed or disagreed that family-centered principles represented the official policy or position within their state. Results indicated that family-centered policies and practices were being enacted at the national, state, and local levels, which provided empirical support for the conclusion that the field of early intervention services had adopted and fully promoted family-centered practices. Based on these findings, Dunst et al. (1991) asserted that family-centered interventions are more likely to have broad-based positive influences on families' abilities to care for their children with special needs.

Bailey, Buyesse, Edmonson, and Smith (1992) gathered data related to professionals' perceptions of family involvement in early intervention programs across four states. One-hundred and eighty professionals who were working in early intervention programs from two Southern states and one each from the Midwest and Northeast rated various aspects of family involvement in early intervention programs, such as decision-making about their children's services. The professional participants also rated how families should be involved in early intervention programs. If there was a discrepancy on individual items between the professionals' perceived family involvement and the ideal, they were asked to identify the barriers that made it difficult to implement best practices. Results indicated that professionals believed family-centered practices were being implemented in their states, but that many forms of implementation were not ideal. It was concluded that families themselves often were the major barrier to implementation. Professionals reported that families who had children with special needs often were so overwhelmed that they found it difficult to become involved in the early intervention process. However, the researchers also concluded that barriers to involvement could be overcome when families had time and were better informed about early intervention laws and availability of services.

Able-Boone, Sandall, Loughry, and Frederick (1990) evaluated parents' opinions about current early intervention services, needed changes, and recommendations regarding the implementation of Public Law 99-457 (amended to become part of IDEA). They interviewed a total of 30 families (30 mothers and 28 fathers) were interviewed about their involvement in Colorado's early intervention system. Qualitative analyses of the interviews produced two findings. First, parents indicated they needed to become more knowledgeable about their children's disabilities and better informed about available services. Parents also said it was important that professionals provide information in ways that would help them become informed decision-makers for their children. From these results, the authors recommended that the successful implementation of P. L. 99-457 (IDEA) depended on professionals adopting family-centered practices that involved families in all aspects of accessing early intervention services.

McWillaim, Lang, Vandivere, Angell, Collins, and Underdown (1995) surveyed 539 parents of children who were receiving early intervention services in a Southeastern state. Overwhelmingly, families reported they were satisfied with the services that they and their children were receiving. Follow-up interviews with six families revealed that good family experiences came from support given to them by individual professionals. Bad experiences were related to problems family members had trying to obtain appropriate services for their children. It was concluded that, although families were satisfied with the early intervention services, providers needed to find ways to make services more available and also coordinate services more effectively so families could access them more readily.

Taken together, these studies illustrate how family-centered practices have been developed, adopted, and implemented from national to local levels with fairly satisfactory results. One of the reasons why early intervention researchers, practitioners, and policy makers have allied themselves in this effort is that family-centered practices promote family functioning even when child and family needs are very demanding. In the study conducted by Able-

Boone et al. (1990), one of several improvements for the early intervention system recommended by parents was that they “be educated about services and given control so they can decide for themselves what they want for their child” (p. 106). The purpose of family-centered practices is to support families to make informed decisions so that all family members can continue to grow, develop, and mature by promoting healthy family functioning.

The primary goal of early intervention service providers is the empowerment of families. Family-centered service providers offer families opportunities to be involved in the process of acquiring essential services for their children with special needs. For families to be involved in the acquisition process, they need to be fully informed of their service options and included in all decision-making occasions. This informative and inclusive relationship between service providers often helps families feel more in control of their situation, which is one form of empowerment.

Family Empowerment

The implied result of service providers using family-centered practices is that families will be empowered to access services for their children. Working with families whose children are 3 years-old and under is unique. Dunst, Trivette, and Deal’s (1988) definition of empowerment was tailored for the field of early intervention and focused on “a family’s ability to meet needs and achieve aspirations in a way that promotes a clear sense of intrafamily mastery and control over important aspects of family functioning” (p. x). While researchers tend to agree regarding the conceptual features of empowerment, there is still some confusion about how the construct should be operationalized and measured. Ackerson and Harrison (2000) reviewed the human services literature and delineated three different operationalizations of empowerment. Some authors described empowerment as a process, characterized by interactions of professionals and their clients. For others, empowerment was an outcome associated with noticeable positive changes in clients' behavior. Finally, for another group, empowerment was represented as a perspective or approach to working with clients. According to this view, professionals used a strengths-based approach when working with their clients. All three views can still be found in the early intervention literature.

In an effort to address this conceptual confusion, Dunst, Trivette, and LaPointe (1992) organized these three perspectives into a matrix comprised of six diverse yet interrelated dimensions: philosophy, paradigm, process, partnership, performance, and perception. They further organized these six dimensions into three components: empowerment beliefs and values (philosophy and paradigm), participatory experiences (process and partnership), and empowering outcomes (performance and perception). Figure 1 presents the model developed by Dunst and Trivette (1996) that illustrates the relationships among the components (please note the relative size of the ovals only reflects the number of headings and does not connote any weight of importance to each component). Five sub-dimensions are listed

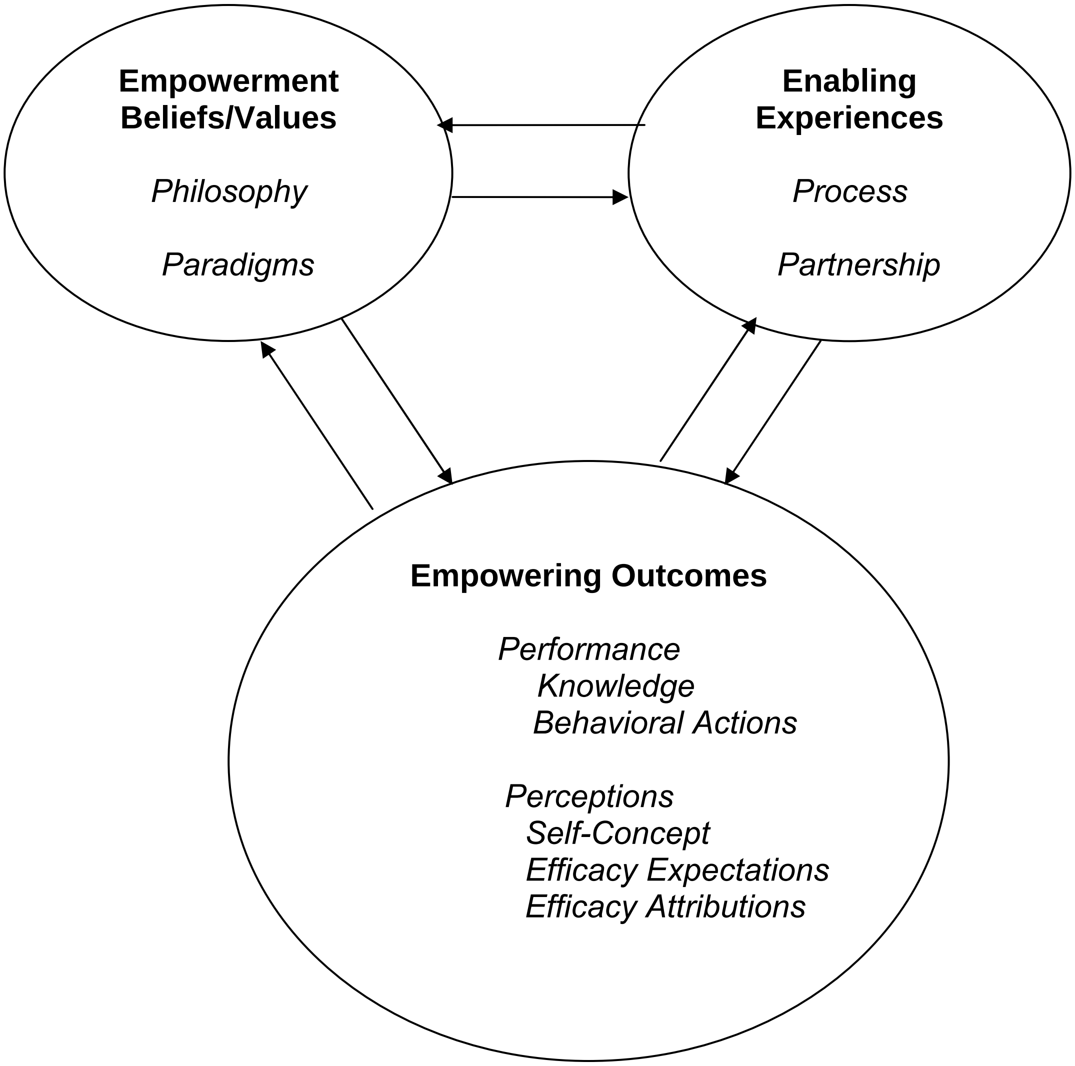


Figure 1: Relationships among Three Major Components (with corresponding dimensions and subdimensions) of Empowerment.

in the empowering outcomes component, two under performance, and three under perception. The relationship among the components is clearly shown as bi-directional with each component influencing the other. Although Dunst, Trivette, and LaPointe (1992) did not make an effort to link these empowerment components to specific family-centered practices, the first two components, empowerment beliefs/values and participatory experiences, share a great deal in common with family-centered practices and the third component, empowering outcomes, can be viewed as one important product of them.

Empowerment beliefs/values include the conviction that all people have existing strengths and capabilities to become more competent. Participatory experiences include various kinds opportunities that strengthen existing capabilities and promote acquisition of new capabilities. Together, these two components reflect the third core element of family-centered practices, namely, fostering families' strengths and capabilities. In the present study, the first two components of Dunst's et al. (1992) model of empowerment will not be addressed because conceptually they are related more to family-centered practices than empowerment. The third component of the model will be addressed, however. The dimensions of performance and perceptions will serve as outcome measures in the proposed research.

Empowerment as Performance

Empowerment as performance focuses on knowledge and skills families have learned or have strengthened when they work with service providers. These experiences enable them to function in collaboration with their service providers and not be dependent on them for knowledge about navigational skills around the early intervention system. Families use the acquired knowledge and skills to secure information about services they need. Dunst, Trivette, Gordon, and Pletcher (1989) described the characteristics of performance empowerment as the ability of parents to initiate contacts with service providers to procure desired services without the assistance of a professional. Their findings indicated that the more parents learned how to successfully function within the early intervention system, the less dependent they were on professionals for assistance in obtaining services. While this burgeoning independence of parents may seem to be a logical conclusion to acquiring knowledge about the early intervention system, parents learned more than just how the system works; they also became more confident about themselves as caregivers for their children with special needs.

Empowerment as Perception

Empowerment as perception reflects the basic idea that, in order to be empowered, family members must *believe* they are knowledgeable and competent. In the early intervention literature, this view of empowerment has been associated with a wide array of perceptions that contribute to a family's sense of greater control over their lives. Examples include an internal locus-of-control, or the belief that control resides within the family (versus in the external environment), and a high degree of political efficacy, or the belief that the family is competent to deal with formal social systems (e.g., schools, social service agencies). The importance of control appraisals as an empowerment outcome is derived from the fact that decades of research has established that people's sense of control "is a robust predictor of people's behavior, emotion, motivation, performance, and success and failure in many domains of life" (Skinner 1995, p. 3). For example, Affleck, Tennen, and Rowe (1991) found that positive control appraisals functioned as a coping mechanism for mothers' reactions to their children's care in an intensive care unit. For each family, the sense of control and, hence, the perception of empowerment will undoubtedly vary across situations and time. This means that some families may feel more empowered in particular areas than others, which in turn requires the service coordinator to continually assess the families' needs and respond accordingly. Dunst, Trivette, and Johanson (1994) found that enabling experiences that encouraged active parental participation in an early intervention program produced greater changes in perceptions of self-efficacy in obtaining resources for children than did programs that emphasized a professional assistance model. This suggests that an empowered family is one whose members believe that they can make a difference through direct action.

Taken together, these dimensions describe two important characteristics of empowered families. First, empowered families are involved in the process of gathering information, making decisions, and scheduling services for their children. As they learn about the early intervention system, they rely less on the service provider for help and support. Second, as empowered families negotiate the early intervention system, they feel more in control of their situation. Therefore, they are confident they have direct influence on the needed services for their children. An important point for service providers is that, as families become empowered, their working relationship is going to change. Hence, the service provider has to continually assess the families' needs and respond accordingly.

Family-Centered Practices and Empowerment

Investigators in the early intervention field have long held the assumption that, when service providers use family-centered practices when working with families, family members feel empowered to access needed services. To a limited extent, this assumption has been tested and supported by empirical research. A comprehensive review of the literature produced only nine articles in which investigators examined the relationship between family-centered practices and empowerment. These articles will not be presented in chronological order. Rather they will be grouped according to the instrument used to measure empowerment. When grouped this way, the results are easier to compare, and it also should be easier to see how the present study will build upon this body of research. The first five studies used a single item measure of empowerment, the Perceived Control Appraisal Scale (Affleck et al., 1991). The next two studies used the Family Empowerment Scale, a multidimensional scale that was developed by Koren, DeChillo, and Friesen (1992). However, because in these two studies researchers did not factor analyze the scale, but rather used a total score to measure family empowerment, the result was a unidimensional measure of empowerment that could not identify any potential multi-dimensional, conceptual structure to the items. The last two studies used a multidimensional instrument, the Parent Empowerment Survey (LaPointe, Trivette, & Dunst, 1990) that factored into several dimensions of empowerment and was found to be positively correlated to family-centered practices.

Studies that focused on empowerment as a unidimensional concept

Dunst, Trivette, Boyd, and Brookfield (1994) reported the results of three studies in which all the participants were parents of preschool aged children. The families were involved in three different programs that served children with special needs: early intervention/family support, public health departments, and human service agencies. In Study 1, the participants were 107 mothers of preschool children who lived in western North Carolina, all of whom were from low socioeconomic backgrounds based on the Hollingshead system for determining social status. The mothers mean age was 25.22 years and they had completed an average of 11.45 years of education. A series of one-way between group ANOVAs using type of program (early intervention/family support, public health department, and human services agency) as a blocking variable failed to produce significant effects for mothers education, family SES, or income. The only demographic variable that differentiated mothers was age: mothers in the early intervention/family support program were on average 5 years older than mothers in the other two programs.

In Study 2, the participants were 141 parents, predominantly mothers of preschool aged children who were involved in three different types of early intervention programs sponsored by human service agencies in western Pennsylvania. One of the early intervention programs was categorized by the investigators as *family-centered,* while the other was considered more *professionally oriented* (the authors themselves determined the family-centeredness of the programs based on unreported criteria). The third program was therapeutically based and offered a variety of services such as speech, physical, and occupational therapy. The parents mean age was 33.73 years. They had completed an average of 14.10 years of education. A series of one-way between group ANOVAs, with program type as a blocking variable, failed to reveal any significant differences between groups on the demographic variables.

The participants in Study 3 were 1,110 parents. No information was presented regarding the gender of the parents. The children were enrolled in

104 early intervention programs across the state of Pennsylvania. In contrast to Studies 1 and 2, in this study, the program type was a function of the age of the children. The sample was categorized into three groups, birth to 24 months, 24 to 36 months, and 36 to 60 months. This categorization was based on the types of programs in which the children were enrolled. The youngest group participated in an early intervention program that had several family-centered features. Children of the next oldest group were transitioning between early intervention and a preschool program, and the children in the oldest group were enrolled exclusively in a preschool program that had no family-centered features at all. The parents who participated in Study 3 were, on average, 32.83 years old and had completed approximately 13.85 years of education. A series of one-way between group ANOVAs failed to find significant differences between the early intervention program groups on any of the demographic variables.

To measure family-centered practices, the investigators used either the long- or short-form of the Professional Helpers Characteristics Scale (HCS; Trivette & Dunst, 1990). To measure empowerment, they used a perceived control measure that rated participants' ability to procure needed support and resources from the early intervention programs and professionals (Affleck et al., 1991). The long-form HCS included 26 items ($\alpha = .92$), while the short-form HCS included five items ($\alpha = .86$). When participants completed the scale, they were asked to indicate, for each item, whether the professional displayed one of five behaviors when the parent and professional worked together. When analyzing the data from the HCS, an aggregate of the item ratings was used to compute a total family-centered practices score. When the term *professional* was used in this and subsequent studies, it referred to service providers who came from any number of fields that served children with disabilities, not an individual provider per se. In this particular article, the professional service providers represented six different fields: early intervention specialist, health-care providers, therapists (physical, occupational, and speech), educators, and special educators. Thus, it was not possible to know the specific provider that participants rated or what the relationship between the provider and participant was like. Consequently, only discipline areas were analyzed. While all of the providers worked toward improving developmental outcomes for children, their approach to working with families varied from seeing themselves as the experts giving direct instructions to parents to full inclusion of parents in the decision-making process regarding services.

Perceived control was rated on a 10-point scale that required parents to rate their feelings about how much control they had over the service delivery process. A score of 1 indicated the respondent had very little control, whereas a rating of 10 meant that the respondent had a great deal of control. The control measure was intended to reflect the “conviction that one can successfully execute the behavior required to produce a desired outcome" (Bandura, 1977, p. 193).

In each of the three studies, the relationship between family-centered practices and control appraisals (self-efficacy) was determined by computing the percentage of participants who indicated they had a high degree of control over resources and support (operationally defined as a score of 8 or higher on the 10-point scale). Scores from the HCS were divided into quartiles for purposes of establishing four levels or blocks (low to high) of participants' ratings of family-centered practices.

In Study 1, 69% of the mothers who participated in programs for the youngest group of children (family-centered) reported the highest degree of control compared to mothers of children who were enrolled in the other programs. Similar findings were reported in Studies 2 and 3. In Study 2, 77% of the parents who were involved with professionals who used family-centered practices had the highest control ratings, and in Study 3, 83% of parents who were involved with professionals who used family-centered practices had the highest control ratings. The investigators concluded that the "results from all three studies, both separately and taken together, demonstrate a remarkably powerful association between the kinds of practices used by program staff and the degree to which parents indicated they could procure needed supports and resources from the staff and their programs" (Dunst et al., 1994, p. 220).

Trivette, Dunst, Boyd, and Hamby (1996) further explored the relationship between family-centered practices and parental reports of personal control by taking into account the frequency of contact between families and service providers. Thirty different programs that served children with disabilities employed the providers in this study. They represented several different fields, including early intervention specialist, health-care provider, educator, and rehabilitation therapist. The participants in the study were 280 parents, of which 98% were mothers. The children's ages ranged from birth to age 5, and they either had identifiable disabilities or were at-risk for poor developmental outcomes. All of the children were enrolled in early intervention/family support programs in western North Carolina and western Pennsylvania. Parents in the North Carolina sample were, on average, 26.48 years old and had completed 11.57 years of education. According to the Hollingshead social strata scale (Hollingshead 1975), the parents were classified in the low-middle income group. The majority (63.6%) of the parents were married, some (24.7%) worked outside the home, and most (91.9%) were European American. Similar demographic data obtained from the Pennsylvania sample of parents indicated that their mean age was 33.69 years. All parents had completed 14.10 years of education on average and were classified in the middle socioeconomic group according to the Hollingshead scale (Hollingshead 1975). Most (84.6%) of these parents were married, some (37.7%) worked outside the home, and nearly (93%) all were European American.

Parents completed both the Helpgiving Practices Scale (HPS; Dunst, Trivette, & Hamby, 1996) and the Personal Control Appraisal Scale (Affleck, Tennen, & Rowe, 1991). In addition, participants estimated how often a particular service provider worked with them (on average) each month during the previous 6-months. Parents' estimates were based on contacts with service providers with whom they interacted on a regular basis. Service providers' programs in each sample were classified as either family-centered, family-allied, or professionally-centered. Classifications were based on the investigators' experience with the program as well as written and descriptive information about the programs. Data from the two sites were analyzed separately using hierarchical multiple-regression by blocks or sets to identify the sources of variation in both family-centered practices and personal control. For the first regression analysis, the measure of family-centered practices was used as the independent variable and personal control was entered as the dependent variable. Five control variables were entered in the first set: parent age and education, family SES, child age, program type, and frequency of contact. In the second regression analysis, personal control was the dependent variable and the same five independent variables were entered in addition to the participants' responses on the Helpgiving Practices Scale, which were entered as a dependent variable.

Results from the first set of multiple regression analyses revealed that the demographic variable of child age significantly predicted variance in only for the North Carolina sample ($R^2 = .113$, $p < .001$). In addition, program type (North Carolina sample, $R^2 = .294$, $p < .001$; Pennsylvania sample, $R^2 = .231$, $p < .001$) and frequency of contact (North Carolina sample, $R^2 = .327$, $p < .001$; Pennsylvania sample, $R^2 = .268$, $p < .01$) predicted parental perceptions of family-centered practices. The finding that frequency of contact significantly predicted variance led the researchers to conclude that parents were more inclined to assign higher ratings to family-centered practices when they were contacted more often by providers.

Results from the second set of multiple regression analyses revealed that none of the demographic variables were significant for either sample. However, program type (North Carolina sample, $R^2 = .164$, $p < .001$; Pennsylvania sample, $R^2 = .157$, $p < .05$), frequency of contact (North Carolina sample, $R^2 = .175$, $p < .001$; Pennsylvania sample, $R^2 = .194$, $p < .01$), and most importantly, family-centered practices (North Carolina sample, $R^2 = .410$, $p < .001$; Pennsylvania sample, $R^2 = .579$, $p < .001$) did significantly predict variance in perceived control. While these results demonstrated that family-centered practices and empowerment are related, they also showed that the relationship was based on interactions between parents and their selected service providers' program type. Not only was the type of interaction (family-centered) significant, but the more contact between service providers and parents, the more parents felt in control of their situation. The investigators cautioned that any generalizations of the findings should be limited to early intervention service provider/family relationships and not situations outside this relationship such as family life in general.

Trivette, Dunst, and Hamby (1996a) surveyed 107 mothers of preschool-aged children who were enrolled in three different kinds of human service programs: (a) Department of Social Services with families receiving Medicaid services (*n* = 18) and AFDC (*n* = 14), (b) Public Health Departments that provided medical/health related services (*n* = 18) and instrumental support, such as WIC or child care classes (*n* = 17), and (c) Family Support/Early Intervention where families received child-specific instructional practices (*n* = 25) or a combination of child and family support (*n* = 15). Demographic variables included mothers age, years of completed education, socioeconomic status, family size, gross monthly family income, and number of people supported by the income. Except for mothers age, the participants in the three groups did not differ significantly on any of the variables. The sample was overwhelmingly (95%) European American, a majority (70%) of the mothers were married, nearly none (92%) worked outside the home, and most (70%) of the families were below the poverty level (70%).

The mothers completed a questionnaire that included the Helpgiving Practices Scale (HPS; Trivette & Dunst, 1994) and the one-item perceived control measure used in previous studies to measure empowerment (Affleck et al., 1991). They were asked to rate the family-centered practices that they received and their level of perceived control in obtaining services from the service provider. Trivette, Dunst, and Hamby (1996a) conceptually factored the HPS into four dimensions, each of which measured an important aspect of family-centered practices. The first factor, empowerment ideology, included eight items (α = .97) that reflected professionals beliefs about the capabilities of the parents in the program. The second factor, participatory actions, also included eight items (α = .98) and reflected interaction processes that promoted parental knowledge and competency attributions. The third factor, help-giving traits, consisted of five items (α = .97) that reflected professionals behaviors such as active listening, honesty, and empathy. The last factor, help-seeker reactions to aid, was comprised five of items (α = .91) that reflected professionals supportiveness and effort to promote reciprocity in their relationships with parents.

The human service programs were classified according to their degree of family-centeredness by the first two authors and two research staff members using a 7-point scale ranging from 1 *(professionally-centered)* to 7 *(family-centered)*. Means of the investigators' classifications indicated that social service agencies were professionally-centered (*M* = 1.68, *SD* = 0.46), health departments were family-allied (*M* = 2.92, *SD* = 0.74), and family support/early intervention programs were family-centered (*M* = 5.76, *SD* = .49). When the data were analyzed using ANCOVA (the four help-giving subscale scores served as dependent measures), the family-centered programs were found to be significantly different from the professionally-centered and family-allied programs. Mothers rated the family-centered practices of service providers in the family-centered programs higher than the practices of service providers in family-allied or professionally-centered programs. Mothers also assigned significantly higher ratings of family-centered practices to service providers in family-allied programs than did mothers who received services from professionally-centered programs. These findings demonstrated a continuum of family-centered practices that related to program type and that were consistent with investigators' expectations.

To determine if there were significant differences among program types when perceived control was the dependent variable, a 3 Type of Program x 2 Type of Help-Giving Practices ANCOVA was performed. Results yielded a main effect for programs, $F(2, 95) = 5.72$, $p < .005$, and a main effect for type of family-centered practices $F(1, 95) = 14.92$, $p < .001$, but no significant interaction between the two variables. Findings from both these analyses suggested service providers in family-centered programs utilized more family-centered practices than providers in other programs. In addition, when mothers interacted with service providers who used family-centered practices, mothers felt more in control of decisions related to their children's services than mothers who interacted with providers who did not utilize family-centered practices as often.

Trivette, Dunst, and Hamby (1996b) described findings from two studies that included a total of 209 participants (Study 1, *n* = 128; Study 2, *n* = 81) whose children were receiving services from either an early intervention program or a family support program that served children at-risk for poor developmental outcomes. The participants were mostly (98%) mothers and were overwhelmingly (93%) European American. Participants' ages ranged from 15 to more than 40 years with a majority between 21 and 30 years. Over 71% of the participants had graduated from high school and 56% were in the low or low-middle income groups.

The participants completed the Helpgiving Practices Scale (HPS, Dunst, Trivette, & Hamby, 1996), the Perceived Control Scale (Affleck et al., 1991), and the Early Intervention Control Scale (EICS; Trivette, Dunst, & Hamby, 1996b), which was administered to only the participants in Study 2. This last instrument was a five-item scale (α = .92) that measured the extent to which families had control over the timing, type, satisfaction with, and self-efficacy attributions about obtaining early intervention services. Participants were asked to assign ratings based on interactions they had with service providers who worked with them most often in the early intervention or family support program. In addition to adding another control measure, Trivette et al. (1996b) performed a factor analysis of the HPS. A two-factor solution emerged from the analysis. The first factor, *service provider traits and attributions*, included items such as active listening, empathy, and a caring attitude (Items 2 and 4). The second factor, *participatory involvement*, included items that were action oriented and emphasized the active participation of families in making choices and decisions about the content as well as the focus of their services (Items 1 and 3). Exemplars of each factor are presented in Figure 2.

Results of hierarchical multiple regression analysis indicated that, in both studies, efficacy attributions were related significantly to family-centered practices. Although Trivette et al. (1996b) factor analyzed the HPS, they did not report findings for individual factors in either study. Rather, they treated the two factors as a single variable by aggregating the scores. Further, in Study 2, family-centered practices significantly predicted more parental control over early intervention services. Trivette et al. concluded that good clinical help-giving practices may be a necessary but not a sufficient condition for family-centered practices to promote parental control over obtaining needed services. They recommended, therefore, that service providers focus greater attention on participatory skills such as guiding family members through the process of procuring services in order to ensure positive empowerment outcomes.

Judge (1997) surveyed parents (88% mothers) whose children's ages ranged from birth to 5 years-old. The children's mean age was 36.93 months, just over 3 years-old, with an average of 1.90 children per family. Children were enrolled in eight different programs that were rated either family-

1. Professional helpers sometimes differ in whether they believe people know their own *needs and strengths.* Which rating best describes whether (insert selected helper here) believes you know your *needs and strengths?*

1	2	3	4	5
Rarely treats me as if I know my needs and strengths	Seldom treats me as if I know my needs and strengths	Sometimes treats me as if I know my needs and strengths	Generally treats me as if I know my needs and strengths	Almost always treats me as if I know my needs and strengths

2. Professional helpers sometimes differ in whether they view people in a *negative or positive light.* Which rating best describes whether (insert selected helper here) views you in a *negative or positive light?*

1	2	3	4	5
Almost always views me in a negative light	Sometimes views me in a negative light	Views me neither positively or negatively	Sometimes views me in a positive light	Almost always views me in a positive light

3. Professional helpers sometimes differ in how much they help people *learn new skills* so they can get resources to meet their needs. Which rating best describes how much (insert selected helper here) works to help you *learn new skills* to get resources to meet your needs?

1	2	3	4	5
Rarely assists me in learning new skills to get resources	Seldom assists me in learning new skills to get resources	Sometimes assists me in learning new skills to get resources	Generally assists me in learning new skills to get resources	Almost always assists me in learning new skills to get resources

4. Professional helpers sometimes differ on how well they *listen* to what parents have to say about their children or other family member. Which rating best describes how well (insert selected helper here) *listens* to you?

1	2	3	4	5
Rarely listens to what I have to say	Seldom listens to what I have to say	Sometimes listens to what I have to say	Generally listens to what I have to say	Almost always listens to what I have to say

Figure 2: Sample Items from the Helpgiving Practices Scale.

centered, family-focused, family-allied, or professionally-centered. The program's family-centeredness was rated using model characteristics described by Dunst, Johanson, Trivette, and Hamby (1991). In family-centered programs, service providers involved families in acquiring the knowledge and skills needed to obtain services. In family-focused programs, families were viewed as consumers of services. As such, service providers collaborated with families to find the needed services for their children. In family-allied programs, service providers perceived families as needing a great deal of help to locate and obtain services and also believed that need for help would remain constant throughout their working relationship. In professionally-centered programs, service providers are considered experts in the field of early intervention and families are expected to accept the prescribed services without question.

Thirty-nine percent of the families received services primarily in their homes from three early intervention programs; two were rated family-centered and the other was rated family-allied. All three programs served children birth to age three. The remaining 61% of the families received services from five programs located in early intervention centers or preschool sites. Of the center-based programs, two were rated family-focused and one was rated family-allied. All three programs enrolled children birth to 3 years of age. The last two center-based programs served children aged 3 to 6 years of age and were rated professionally-centered. The mothers' average age was 30.10

years. The fathers' mean age was 32.92 years. The mothers completed an average of 12.84 years of education and the fathers completed 13.55 years. The families were classified as middle-class according to the Hollingshead social strata scale (Hollingshead, 1975). Seventy-seven percent of the mothers and fathers were married and 38% of the mothers worked outside the home. As in previous studies, an overwhelming majority (96%) of the participants were European-American.

Judge (1997) included the same instruments that Trivette et al. (1996b) used to measure family-centered practices (HPS, Dunst, Trivette, & Hamby, 1996), perceived control (Affleck et al. 1991), and control over early intervention services (EISC; Trivette, Dunst, & Hamby, 1996b). She also created a variable that included the amount of contact between parents and professionals in an effort to examine the contribution made by frequency of contact to empowerment outcomes. Helpgiving practices were described as service providers attitudes and behaviors that enhanced the competency of family members to secure services for themselves and their children. Personal control was defined as the extent to which family members were able to procure needed resources and services from service providers. Control over early intervention services focused on the extent family members had control over the type and delivery of services provided to them. Amount of contact was measured by family members' estimated number of contacts with service providers during the previous six months. Parents kept the same service providers in mind when they used the other measures. Judge was interested in the contact measure because it had been shown in a previous study (Trivette, Dunst, Boyd, & Hamby, 1996) to correlate positively with the amount of control family members had over needed services.

Multiple regression analyses included six independent variables (parent age and education, family SES, child age and diagnosis, program type, frequency of contact, and family-centered practices) and two dependent variables (efficacy attributions and the perceived control scale) and program control (the early intervention control scale). Results showed that only frequency of contact ($R^2 = .214$, $p < .05$) and family-centered practices ($R^2 = .437$, $p < .001$) predicted efficacy attributions. In addition, the same two independent variables significantly predicted parental control over early intervention programs (frequency of contact, $R^2 = .239$, $p < .01$; and family-centered practices, $R^2 = .488$, $p < .001$). Judge (1997) concluded first that more frequent contacts between parents and providers enhanced parents' sense of empowerment and control over early intervention services, and, second, that service providers who used family-centered practices may have promoted a greater sense of parental control over obtaining needed services compared to service providers who did not utilize family-centered practices.

Judge (1997) also reported significant correlations between empowerment and service location ($r = .271$, $p < .02$) as well as between program control and age of the children ($r = .238$, $p < .05$). The first finding indicated that parents were more likely to feel empowered when services were delivered in the home. The second finding indicated that parents who had children enrolled in an early intervention program that served only birth to 3 year-old children felt more in control over the timing and type of services they received than did parents whose children were enrolled in 3 to 6 year-old children's programs. One reason for the significant difference between program settings may have been that in home based settings service providers are more family-focused because they are more likely to attend to individual needs of families during home visits than they are when services are delivered in centered-based programs where several children and families are being served in the same classroom and individual family needs are more obscured. Another reason might be that birth to 3 year-old children's programs offer more flexibility in service delivery compared to preschool programs that usually have to integrate services into a fixed curriculum. Regardless, the results highlighted the positive impact of family-centered practices, the importance of contact between parents and service providers as a means of promoting empowerment and also the importance of location of service delivery for promoting enhanced parental feelings of control over service-related decisions.

Koren, DeChillo, and Friesen (1992) developed the Family Empowerment Scale (FES) as a multidimensional measure of parental empowerment of families whose children had severe emotional disorders.

However, the decision-making process related to service delivery is much the same for children with emotional disorders as it is for children with disabilities, as Thompson et al. (1997) demonstrated. The FES is a 34 item Likert-type rating scale that measures parental perception of empowerment across two dimensions: level of empowerment (family, service system, and community) and expression of empowerment (attitude, knowledge, and behavior). These two dimensions can be arranged to form a nine-cell matrix that conceptually reflects several different components of empowerment. When organized in this manner, empowerment can be examined at three levels: (a) the family, which focuses primarily on ways that parents manage day-to-day routines in the home, (b) the service system, which emphasizes how parents work with professionals to obtain services for their children, and (c) the community/ political level, which places importance on parent advocacy for improved services. With regard to the second dimension, empowerment can be demonstrated in three ways: (a) parental attitudes about the quality of services, (b) parental knowledge about available services and practices, and (c) parental actions. Koren et al. (1992) factor analyzed the FES and found that the items loaded on four factors. Items loaded primarily on the *level* dimension of empowerment (family, service system, and community). The authors did not label the factors per se, but the items that comprised them seem to fall conceptually into categories of parent advocacy (Factor 1), system knowledge (Factor 2), family empowerment (Factor 3), and parent decision-making (Factor 4). The factor analysis led the investigators to conclude that the FES provided a multidimensional and relevant measures of empowerment.

Factor 1, *parent advocacy,* was defined by a strong core of items that measured parents efforts to advocate for and improve services for children and families (community level). One of the items that loaded on the factor was, “I tell people in agencies and government how services for children can be improved.” (Koren et al., 1992, p. 311). Factor 2, *system knowledge,* was defined by items that measured knowledge of the service system. Items that loaded on Factor 2 measured parents’ knowledge of working with agencies and professionals to obtain services for their children (system level). One of the items was, “I know steps to take when I am concerned my child is receiving poor services.” (p. 311). As characterized in the example, items that loaded on Factor 2 focused on parents understanding of the service system and on their decisions to make changes. All of the items that loaded on Factor 3, *family empowerment,* were from the family level dimension of empowerment. An example is, “I am confident in my ability to help my child grow and develop.” (p. 311). All of the items that comprised this factor were defined by their tendency to measure parents’ confidence in their parenting roles and abilities to handle childhood problems. Factor 4, *parent decision-making,* was characterized by an emphasis on the right of parents to make decisions about their children’s services (system level). An example is, “My opinion is just as important as professionals’ opinions in deciding what services my child needs." (p. 311). Taken together, these four factors measured empowerment at different levels of families' involvement with service providers as well as with the social service system.

Another group of researchers, Singh, Curtis, Ellis, Nicholson, Villani, and Wechsler (1995), factor analyzed the FES and also found four factors. Their sample size was 228 parents (87% were mothers) whose children had been diagnosed with a severe emotional disorder, attention-deficit/hyperactivity disorder or both. The average age for parents was 41.2 years and for their children was 13.3 years. However, their factors were comprised of different items compared to Koren et al.'s (1992) analysis. The first factor, *systems advocacy*, included items that reflected beliefs and behaviors of parents with regards to interactions they had with people in the service delivery system. An example of the nine items that make up this factor is, "I help other families get the services they need." The second factor, *knowledge,* reflected parents understanding of and ability to care for their child with special needs. One of the 10 items in this factor is, "I know what to do when problems arise with my child." Factor 3, *competence*, included items that reflect parents' beliefs about their child-rearing abilities. An example would be, "When dealing with my child, I focus on the good things as well as the problems." The fourth factor, *self-efficacy*, was comprised of items that relate to parental impact on and use of services in a manner that will benefit the family as well the child with special needs. An example would be, "When necessary, I take the initiative in looking for services for my child and family." The investigators stated that, when factored in the manner they proposed, the FES can be used by "service delivery personnel as a 'snapshot' measure of empowerment of individual families and as a tool that provides the basis for periodically assessing the changing state of empowerment of target families" (p. 91).

There are only two studies in which the FES has been used to assess the relationship between family-centered practices and empowerment outcomes. Even though the FES was developed as a multidimensional measure of empowerment, it was not utilized in that manner in either of these studies. Instead, the investigators chose to use a single score based on all the items as an indication of parental empowerment.

Dempsey, Foreman, Sharma, Khanna, and Arora (2001) recruited families from three different agencies that enrolled children with disabilities in Australia and India. The first group of families was involved in an Australian advocacy organization that promoted the inclusion of students with disabilities in regular classrooms. The second group came from a stratified random sample of nine special and regular schools that provided support classes for children with disabilities in the New South Wales Department of Education and Training Schools. The final group of families was located in India and included families who had children or adolescents with disabilities. Half of the children in this group attended state sponsored special schools and the other half attended programs for children with disabilities in New Delhi. A total of 205 families participated in the study; 29% of the families were in the advocacy group, 22% were in the schools group, and the remaining 49% comprised the two groups in India.

The three groups included mothers (77%), fathers (15%), and other caregivers (8%). The ages of the children varied substantially: 45% were over the age of 12 years and the authors reported that the rest of the children (55%) were under 12 years old. This means that ,although the study measured the relationship between family-centered practices and empowerment the ages of the children were very different compared to children in the other studies presented above, which had an upper-age ceiling of 5 years.

The Enabling Practices Scale (EPS; Dempsey, 1995) was used to measure family-centered practices. The EPS is a 24-item instrument that measures parents' perceptions of service provider support. Items were developed using the 12 enabling practices identified by Dunst, Trivette, and Deal (1988). The scale is comprised of three factors: (a) comfort level of parents in their relationship with professionals, such as, staff acceptance of family's values and beliefs, (b) collaboration between parents and professionals, and the (c) degree of autonomy parents perceive in their relationship with service providers. Reliabilities for the three factors were:

comfort with relationship, α = 93; parent-professional collaboration, α = .85; and parental autonomy, α = .70.

The previously described FES (Koren et al., 1992) was used to measure parental empowerment. Although the investigators described factor analyses of the EPS and FES in the Instruments section of the article, they did not use the separate factors in their data analyses. Instead, they used a sum of the all the EPS and FES items as single family-centered practices and empowerment scores. Results of a standard multiple regression analysis using the total FES score as the dependent variable revealed a significant relationship with the EPS (family-centered practices) for the New South Wales school ($R^2 = .38$, $p < .05$) and Indian groups ($R^2 = .463$, $p < .001$). Dempsey et al. (2001) suggested that these findings represented an important empirical relationship between family-centered practices and empowerment, but only for one of the Australian and Indian groups.

Dempsey and Dunst (2004) surveyed a total of 120 families; 66 families received services in early intervention programs in North Carolina and 54 families of preschool children received services from an early intervention program at the University of Newcastle, Australia. Mothers comprised 81.8% of the total sample (United States = 80.3% and Australia = 83.3%). There were significant differences between the two groups found on several demographic variables. The Australian sample of parents was older, included more participants who were employed part-time, had more children who were over 3 years of age, and had higher rates of contact between parents and their service providers. Parents in both programs were quite satisfied with services and the scores on this variable did not differ significantly.

Dempsey et al. (2004) reconceptualized family-centered practices into two factors similar to ones proposed by Trivette, Dunst, and Hamby (1996b), *service provider traits and attributions and participatory involvement* (see Table 1). Dunst, Trivette, and Snyder (2000) already had refined these components into two independent but related factors, *relational practices* (service provider traits and attributions) and *participatory practices* (participatory involvement). Relational practices included a combination of attributions and ways of interacting with family members that expressed feelings such as compassion, concern, and a sense of caring about a family’s circumstances. Relational practices also included behaviors such as active listening, responsive inquiry, openness, and accessibility that reflect the service providers commitment to and respect for the family. Participatory practices included action-oriented behaviors that service providers use to strengthen families existing capabilities and also promote new competencies. These practices are supposed to involve families in exchanges with service providers in ways that promote parental feelings of control over resources and services.

Dunst et al. (2000) proposed that relational practices are a necessary component of family-centered service delivery, but not sufficient for the optimal

Table 1: *Common Features of Effective Helpgiving Practices and Elements of Family-Centered Care*

Common Practices Elements		
Helpgiving Component	**Helpgiving Practices**	**Family-Centered Care Elements**
Service Provider Traits and Attributions (relational practices)	Listens to families concerns and bases interventions on families needs	Is responsive to families concerns and priorities
	Is honest, sincere, and supportive	Is supportive at all times
	Is warm and caring	Is respectful of families individuality
	Treats families as capable	Recognizes families strengths and diversity
	Acknowledges families role in achieving desired outcomes	Promotes mutual respect
Participatory Involvement (participatory practices)	Provides families with information needed to make informed choices	Exchanges include complete and unbiased information between families and service providers
	Works collaboratively with families	Facilitates family and service provider collaboration
	Encourages families in decision-making	Facilitates family decision-making and choices
	Build on families strengths	Honors families strengths and respects families coping strategies
	Promotes families capabilities	Builds families confidence

empowerment of families. In their view, it is participatory practices that contribute most to empowerment. Relational practices are important because they help build trust and rapport between family members and service providers. However, interactions that promote emotional bonds between service coordinators and family members do not ensure needed services. It is participatory practices that are most likely to help families meet their service needs and, hence, are more likely than relational practices to promote a sense of parental control over the service delivery system. Empowerment is more the product of actions, therefore, not so much feelings that a parent has toward individual service providers.

Based on this conceptual model, Dempsey et al. (2004) proposed three hypotheses: (Hypothesis 1) family-centered practices will be a more powerful predictor of empowerment than will demographic variables; (Hypothesis 2) the relationship between family-centered practices and empowerment will be similar among the different samples of parents; and (Hypothesis 3) there will be significant differences between relational and participatory practices in terms of their individual contributions to empowerment.

All participating families completed the Enabling Practice Scale (EPS; Dempsey, 1995) and the Family Empowerment Scale (FES; Koren, DeChillo, & Friesen, 1992). They were asked to complete the EPS with reference to the early intervention program that supported them and their child. However, the investigators did not specify any individual provider the parents should rate when completing the FES. Significant differences between the United States and Australian groups were found on the measures of family-centered practices and also the empowerment measure. The mean EPS score for the U.S. group (*M* = 107.9, *SD* = 12.53) was significantly higher than that of the Australian group (*M* = 100.52, *SD* = 11.96; *t* (1, 119) = 3.24, *p* = .001). In addition, the mean FES score for the U.S. group (*M* = 119.43, *SD* = 14.49) was significantly higher than the Australian group (*M* = 108.45, *SD* = 14.44; *t* (1, 118) = 4.13, *p* = .001). As in the Dempsey et al. (2001) study, all of the item scores were used for family-centered practices (EPS) and empowerment (FES), presumably because in this study reliable factors could not be identified. Unfortunately, the investigators did not explain why they conducted analyses using only total scores.

Multiple regression analyses were conducted separately for both groups using the total FES score as the dependent variable and the total EPS score as the independent variable. Significant relationships were reported for both the U.S. and Australian groups. In this regression model, other independent variables such as parental age, employment, education, child's age, frequency of contact, and locus of control did not predict empowerment in either of the two groups. Family-centered practices accounted for the largest amount of variance in both samples (U.S., $R^2 = .364$, $p < 0.00$; Australian, $R^2 = .393$, $p < 0.00$). The investigators did not discuss why frequency of contact was not a significant predictor of empowerment when it had been shown to be one in two previous studies. However, one reason might have been that contact was measured differently in this study as opposed to Judge (1997), who asked parents to estimate the average monthly frequency of contacts that parents had with their service provider over the previous 6 months. On the other hand, Dempsey and Dunst (2004) used a categorical rather than continuous measure of contact (i.e., more than once a week, once a week, every two weeks, once a month, and less than once a month). Dempsey et al.'s method of measuring contact may not have been sensitive enough to accurately quantify contacts like Judge's frequency measure did and, for this reason perhaps no significant association with the measure of family-centered practices was found.

In an effort to disentangle the hypothesized effects that family-centered practices (relational and participatory) had on the empowerment measure, the Dempsey and Dunst (2004) conducted their own content analysis of the items from the EPS (Dempsey, 1995) and HPS (Dunst, Boyd, Trivette, & Hamby, 2002). The results revealed a substantial item overlap between relational and participatory practices. The comfort factor from the EPS corresponded quite well with the relational factor from the HPS. In addition, the collaboration and autonomy factors from the EPS were similar to the HPS's participatory factor. Standardized regression coefficients of the family-centered practice components of the EPS factors of comfort (relational) and autonomy (participatory) were significantly associated with parental empowerment. The authors noted that; “a combination of different helpgiving practices, and not just relational practices were found to contribute to variations in parent empowerment.” (Dempsey & Dunst, 2004, p. 48). It was concluded that not only was there a significant relationship between family-centered practices and empowerment, but also that this relationship held true despite cultural and demographic differences across the families.

In general, results of these studies provide fairly strong support for the empowering effects of family-centered practices. The limitation of the findings was that empowerment was measured and reported as a single dimension. In five of the studies, empowerment was measured using a single item that asked parents to rate the amount of control they felt they had in obtaining services for their children. In the other two studies, a multi-item measure of empowerment was used, but only a total score was used in the analyses. While these findings are promising, their interpretation and application are limited to parents feeling more in control or empowered in general. More specific measures of empowerment are needed to discern multiple ways that parents may be empowered by family-entered practices.

Studies that focused on empowerment as a multidimensional concept

Dunst, Trivette, and LaPointe (1992) conceptually divided what they termed *empowerment* into three components, six dimensions, and five sub-dimensions to measure family-centered practices and empowerment (see Figure 1). Seventy-four mothers of young children who were enrolled in early intervention and family support programs participated in the study. The mothers mean age was 32.53 years and they had completed 12.22 years of education on average. Most (76%) of the mothers were married and a majority (56%) worked outside the home. When the mothers' household economic level and their level of education were examined using the Hollingshead system for determining social class (Hollingshead, 1975), 73% of the mothers were classified into the three lowest socioeconomic categories.

Mothers completed two instruments, the Professional Helpers Characteristics Scale (HCS; Trivette & Dunst, 1990) and the Parent Empowerment Survey (PES; LaPointe, Trivette, & Dunst, 1990). Both instruments were developed for the purpose of examining the meaning, determinants, and outcome indicators of empowerment. The HCS included 28 items, 13 of which required respondents to indicate the extent to which a particular service provider displayed a range of family-centered beliefs, attitudes, and behaviors. In this study, service providers included only early intervention specialists employed by the program. Family-centered practices on the HCS corresponded very loosely to the philosophical, paradigmatic, process, and partnership dimensions of empowerment described by Dunst et al. (1992). The PES included 32 items, of which 21 related to the performance and the perception dimensions of empowerment. The items on the PES required mothers to indicate the extent to which they felt a sense of control over different life events. Unfortunately, neither of the scales have been published so it is not possible to present descriptions of actual items.

Correlations between the HCS measures and the PES empowerment measures were all significant, except for the paradigm dimension. Correlation coefficients for the family-centered practices dimensions (philosophy, process, and partnership) and empowerment (performance) were: philosophy and performance ($R = .40$, $p < .005$), process and performance ($R = .19$, $p < .05$), and partnership and performance ($R = .29$, $p < .01$). Correlations for family-centered practices dimensions and perception were: philosophy and perception ($R = .42$, $p < .005$), process and perception ($R = .27$, $p < .01$), and partnership and perception ($R = .29$, $p < .01$). The investigators concluded that these three family-centered practices and empowerment outcomes are related, at least when mothers of young children with special needs and their providers collaborate to find appropriate services.

Trivette, Dunst, Hamby, and LaPointe (1996) built upon the previous findings by using another instrument, the Helpgiving Practices Scale (HPS; Dunst, Trivette, & Hamby, 1996), along with the Parent Empowerment Survey (PES; LaPointe, Trivette, & Dunst, 1990), to examine the relationship between family-centered practices and empowerment. Participants in this study were 74 mothers of children whose ages ranged from birth to 3 years ($n = 26$), 3 to 6 years ($n = 40$), and 6 to 11 ($n = 8$). All of the children were enrolled in either an early intervention program or a family support program for children with special needs. The average age of the mothers was 32.20 years and they had completed 12.19 years of education on average. Their mean gross monthly family income was $1,489, which placed 54 of the families in the lowest of three socioeconomic strata using the Hollingshead method for determining social class (Hollingshead, 1975). Fifty-five percent of the mothers worked full- or part-time outside the home and 76% were married when they completed the questionnaire. Sixty-two percent of the children were male, 77% were diagnosed as mentally retarded or developmentally disabled, 12% had physical disabilities, and 11% were at-risk for developmental delays.

The Helpgiving Practices Scale included a total of 25 items ($\alpha = .96$), 16 of which measured family-centered practices that related to the philosophical, paradigmatic, process, and partnership dimensions of empowerment described by Dunst et al. (1992). As mothers completed the HPS, they responded to each item and indicated whether a professional displayed one of five family-centered practices. Unfortunately, Trivette et al. (1996) did not identify the professionals that mothers were asked to rate, but most likely they were early intervention specialists in the children's program. Examples of items from the HPS can be found in Figure 2. Each dimension consisted of four items that yielded a single factor solution that was used in the subsequent analyses.

The PES included 21 items that related to the *perceptions* and *performance* dimensions of empowerment ($\alpha = .92$). Mothers read each item and indicated the extent to which the item reflected a sense of control over a particular situation. Each item was rated on a 5-point scale that ranged from *Disagree-a-Lot* to *Agree-a-Lot.* The PES performance items were further subdivided, measuring mothers' *knowledge* (e.g., their knowledge of community activities for young children) and *behavioral actions* (e.g., the ways in which they procured quality childcare). The perception items measured three types of personal beliefs. *Efficacy expectations* was measured by items that reflected mothers' beliefs about their ability to obtain supports for themselves and their children. *Self-concept* was measured by items that related to feelings about fulfilling parental responsibilities, and *efficacy attributions* was measured by items that related to how well mothers managed family problems.

The correlational results were very similar to those of the previous Dunst, Trivette, and LaPointe (1992) study. Three of the four family-centered dimensions (philosophical, process, and partnerships) were significantly related to the *performance* and *perception* empowerment outcomes. The paradigm dimension did not relate significantly to any of the empowerment measures. Within the performance dimension, the subdimension called *knowledge* was significantly correlated to the philosophical (R = .43, p < .005) and partnership (R = .22, p < .05) dimensions of family-centered practices. Another subdimension of performance, *behavioral actions*, correlated with philosophical (R = 47, p < .0001), process (R = .21, p < .05), and partnerships

($R = .33$, $p < .005$) dimensions. For the three types of empowerment within perception, *efficacy attributions* correlated with philosophy ($R = .46$, $p < .0001$), process ($R = .24$, $p < .05$), and partnerships ($R = .26$, $p < .05$) dimensions. The second type, *self-concept* correlated with philosophy ($R = .42$, $p < .005$) and process ($R = .22$, $p < .05$) dimensions. The third type, *efficacy expectations,* correlated with philosophy ($R = .41$, $p < .005$), paradigm ($R = .26$, $p < .05$), process ($R = .27$, $p < .01$), and partnerships ($R = .31$, $p < .01$) dimensions. Thus, 70% of the correlations between family-centered practices and empowerment outcomes were significant, demonstrating a strong and consistent relationship between family-centered practices and empowerment from the point of view of mothers.

In addition to the correlational analyses, the investigators used structural equation modeling and found a significant pathway (.41, $p < .01$) between a latent variable, *participatory activities* (which was comprised of the manifest family-centered variables of philosophy and paradigm) and the latent variable *performance* (which was comprised of the manifest empowerment outcomes of knowledge and behavioral actions). Another significant pathway (.94, $p < .001$) was found between the variable of *performance* and the empowerment dimension of *perceptions* (this latent variable was comprised of the manifest outcomes of efficacy attributions, self-concept, and efficacy expectations. The model's goodness-of-fit indices exceeded .92. The results supported the conclusion that family-centered practices may promote the formation of maternal beliefs that relate to greater control over important life events.

One implication of these findings was that early intervention practitioners should include parents in the decision-making process because family-centered practices are likely to make them less rather than more dependent on service providers as a source of guidance for mapping the course of their children’s development. A mother of a young child with a disability who was enrolled in an early intervention program best described the conditions and positive consequences of family-centered practices when she said, “I don’t want promises. I don’t want them (professionals) to do it for me, I want to learn how to get my family back to where we are in control.” (Duwa, Wells, & Lalinde, 1993; p. 95).

General Summary and Conclusions

The nine articles with 12 studies described above represent the total body of empirical support that currently addresses the theoretical and empirical relationship between family-centered practices and parental empowerment. Taken together, they present a number of important points regarding each of these concepts. First, there does seem to be a relationship between family-centered practices and empowerment, one that is positive and can be measured by different instruments. Also, the relationship seems to hold up across cultures, regions in the United States, and diverse demographic categories. Moreover, programs based on the family-centered philosophy seem to promote more favorable empowerment outcomes than other types of service delivery programs (e.g., family-focused, family-allied, or professionally-centered programs). Finally, researchers identified specific aspects of parents' actions and feelings that enabled them to procure needed services for their children.

For all the contributions these studies have made to our understanding of the relationship between family-centered practices and empowerment, there are at least three limitations of the literature that need to be addressed. First, seven of the studies either used a single-item measure of empowerment or summed the items on a multi-dimension instrument, which, in effect, represented a unidimensional measure. The Perceived Control Scale (Affleck et al., 1991) was used in five of the studies as a single item measure that was highly correlated (*r* = .70) with an unidentified multiple-item measure of perceived control (Trivette, Dunst, & Hamby, 1996). Two studies included the FES (Koren et al., 1992), a multidimensional measure of empowerment (Singh et al., 1995), but the investigators did not factor analyze it or conduct any kind of multidimensional analysis. In contrast, in this dissertation, the FES will be not only be conceived as a multidimensional measure of empowerment but it will also be analyzed as such.

Second, the findings of the reviewed studies were based on parents of children who ranged in age from birth to adolescence and were in enrolled in a variety of different early intervention programs. A strength of this dissertation's design is that all children will be receiving early intervention services through one agency, namely TEIS, and they will range in age from birth to 3 years. This will permit the investigator to exert greater control over demographic and service variables that might confound the relationship between family-centered practices and parental empowerment.

Third, in all of the reviewed studies above service providers who were involved represented different professional fields and parents often were expected to assign ratings based on their experience with multiple providers; thus, it was never possible to relate findings to the relationship between an individual provider and parents. In contrast, in this dissertation, parents will specifically evaluate their TEIS service coordinators. Thus, it will be possible to examine the actual relationship between a service coordinator and parents using a method that will permit the investigator to be relatively certain that real, on-going relationships will be the unit of analysis rather than some combination of relationships that involve multiple, unknown providers.

Conceptually, the term *family* has been used ubiquitously throughout the literature, such as *family-centered practices* and *family empowerment*. However, in the nine articles reviewed above, an overwhelming percentage of the participants were actually mothers. The nine articles contained 12 studies, and of those, 10 included the number or percentage of mothers, fathers, and other caregivers who completed the questionnaires. On average, 94% of the participants were mothers. In other words, the literature to date has focused on parents, not families, and, moreover, almost universally, on mothers. For comparative purposes, therefore, this dissertation focused exclusively on mothers (see Higgins, 2005, for a similar analysis of fathers' responses from the same data set).

In sum, the fundamental purpose of this dissertation was to build upon previous findings in three ways: (a) to assess the extent to which and in what ways service coordinators in TEIS utilize family-centered practices via a multi-dimensional measure of family-centered practices, (b) to assess the extent to which mothers felt empowered to obtain services for their children with disabilities using a multi-dimensional assessment of empowerment, and (c) to identify the associations among the dimensions of family-centered practices and empowerment.

CHAPTER 3

Method

Participants

Tennessee's Early Intervention System (TEIS) is divided into nine districts across the state. Each district is based in a metropolitan area serving a major city and surrounding counties. For example, the East Tennessee District is based in Knoxville and serves Knox County and 15 other counties. Currently, the nine district offices are serving over 5,000 families statewide. The number of families served in each district varies according to the population inside the assigned catchment area. This study used data collected from a sample of families selected to participate in the Pathways to Family Empowerment Project, a comprehensive evaluation of TEIS services. (Nordquist & Richey, 2002).

Approximately 1,000 families were selected using a stratified random sampling method that drew samples of families from each of the nine TEIS districts in proportion to the percentage of families that individual districts were serving relative to the total families served in the state. Data provided by the State Department of Education (DOE) allowed researchers from the Pathways Project to determine the percentage of families served by each TEIS district relative to the total served by all of the districts and then to select at random the number in each district that corresponded to that percentage. For example, if the East Tennessee District served 20% of all families in the state, then 200 families (20% of 1,000) were selected from the total number of families who were receiving services in the 16-county area that comprises the East Tennessee District. Project Coordinators in each of the nine districts identified potential participants using an alphabetical list of family names and selected every third family until they obtained the district's number of designated families. This method of random selection was implemented to maximize the chance that samples of families from each of the nine districts shared all of the important features that might be related to the family-centered practices and empowerment variables (e.g., race, education, family composition, type of disability, length of time receiving services from TEIS, and the number of different services).

For the purposes of this dissertation, only mothers' responses to the questionnaires were analyzed. As discussed earlier, he primary reason for focusing on this portion of the sample was that the trend in the literature has been to sample only mothers. The nine studies discussed in the literature review are illustrative of this practice and the intent was to compare findings in this study with those in previous studies. Thus, even though fathers were invited to complete the same questionnaire, their responses were not be included in the data analysis (see Higgins, 2005, for a similar analysis of data from fathers from the same data set). Maternal demographic information is presented in Table 2 and children's demographic information is presented in Table 3.

Table 2: *Mothers' Demographic Characteristics*

Demographic	Number	Percent
Race		
European-American	326	88.1
African-American	29	7.8
Hispanic/Latino	1	0.3
Asian	5	1.4
Other	9	2.4
Marital Status		
Single – Never Married	49	13.5
Married – Never Divorced	215	58.3
Separated	15	3.9
Divorced – Single	29	7.8
Remarried	59	15.7
Widowed/single	2	0.5
Widowed/remarried	1	0.3
Education Level		
Did not complete high school	8	1.3
High school graduate	27	7.4
Some college	97	26.4
Associates/Technical degree	86	23.4
Bachelors degree	34	9.3
Some graduate school	76	20.7
Masters degree	16	4.4
Doctoral degree	26	7.1
Family Income (annual)		
Less than $15K	66	20.4
$15K - $30K	69	21.3
$30K - $45K	56	17.3
$45K - $60K	49	15.1
$60K - $75K	33	10.2
More than $75K	51	15.7

Table 2 Continued

Demographic	Number	Percent
Employment Status (last 6 months)		
Full-time	86	23.2
Part-time	61	16.5
Unemployed	101	27.4
(No Response)	122	32.9
Residence setting		
Urban	95	25.7
Suburban	140	37.8
Rural	119	32.2
(No Response)	16	4.3

Table 3: *Children with Disabilities Demographic Characteristics*

Demographic	Number	Percent
Age		
Birth – 12 months	46	12.9
12 – 24 months	136	36.4
24 – 36 months	166	44.5
36 months and older	18	6.2
Diagnoses		
Autism	14	3.8
Cerebral Palsy	28	7.6
Developmental Delay	171	46.2
Down Syndrome	27	7.3
Speech/Hearing Disorder	108	29.1
Spina Bifida	5	1.4
Other	116	31.4

(note: some children have multiple diagnoses, therefore the percentages summed are greater than 100%)

Instruments

For the larger project of which this study is a part, the TEIS evaluation questionnaire was developed to gather information about family demographic variables, family-centered practices, and family functioning. Selection of individual instruments for the overall questionnaire was based on psychometric properties that had been published in peer-reviewed studies. Because a large number of instruments were included in the questionnaire, length was a major concern to the Pathways Project research team. Consequently, a small sample of parents from five former TEIS families was asked to complete the questionnaire (their children had transitioned out of the program when they turned 3 years old).

As an added incentive, parents were given a $25 Kroger gift certificate when they agreed to participate in the pilot study. Five mothers and three fathers completed the questionnaire and provided valuable feedback to the team. Their suggestions were incorporated in the final draft of the questionnaire. The parents concluded that the length of the questionnaire was not a reason to keep them from completing the survey. In addition, very few words had to be changed because they were too difficult for parents to understand.

For the purpose of this study, only data from two of the questionnaire's instruments will be analyzed. These instruments are the Family-Centered

Program Rating Scale (FamPRS; Murphy, Lee, Turnbull, & Turbiville, 1995) and the Family Empowerment Scale (FES; Koren, DeChillo, & Friesen, 1992).

Family-Centered Program Rating Scale. Murphy et al. (1995) developed the Family-Centered Program Rating Scale (FamPRS) on the belief that family-centered program evaluation instruments should reflect parents' satisfaction, opinions, and expectations of services provided to them. The FamPRS was designed to measure both satisfaction with and the importance of services parents were receiving and professionals were providing. In order to measure the satisfaction and importance parents placed on services, parallel responses were included in the instrument. Parents read an item, responded first by rating their satisfaction with the service practice described in the item, and then responded to the importance of the practice. The final 59 items that were included in the instrument assessed a wide range of family-centered practices as well as parents' decision-making roles at all levels of their involvement. These levels included personal, family, system, and policy.

Wording of the FamPRS was edited slightly to accommodate the TEIS system in general and, more specifically, the family-centered practices of TEIS service coordinators. For example, the words *staff members* were changed to *service coordinators*, because of the DOE's interest in knowing the extent to which TEIS service coordinators were using family-centered practices. One item from the original FamPRS instrument was expanded to two items to eliminate confusion created by the double meaning that was contained in the original item. Thus, the original item (#43) was: “Staff members get to know my family and let us get to know them.” In the Pathways version, the restructured two items were: “My TEIS service coordinator gets to know my family” and “My TEIS service coordinator lets us get to know him or her.” This change eliminated the possibility that a parent might not know how to rate the item when for example, one of the components (e.g., “staff member gets to know my family”) needed to be rated positively, but the other component *(*e.g., “lets us get to know them”) needed to be rated negatively, or vice-versa.

Each of the four sections of the FamPRS was headed by a different stem. The first stem was: “In Tennessee’s Early Intervention System . . .” and was used with the first 13 items. For the next six items the stem line was, “Tennessee’s Early Intervention System . . .” For the majority of the items (44), the following stem was used: “Our family’s TEIS Service Coordinator . . .” The last four items had the stem: “My Family . . .” Responses were entered on a 4-point Likert-type scale that permitted mothers to respond to an item by marking either *poor, okay, good,* or *excellent* using the criterion: “How well is this done?” Based on recommendations from parents who participated in the pilot survey, two other response options were added to each item: *N/A (not applicable/available)* and *Don’t Know/Unsure*. These response options were added because parents who participated in the pilot study expressed their concern that if an item did not pertain to them they were forced to leave it blank. The additional response options provided a way to control for missing data by giving participants a fuller range of options to express their opinions and, in addition, it provided potentially useful information. For example, the new options would allow a comparison of *Don't Know/Unsure* responses for mothers and fathers, which might reveal some very interesting differences on particular items. Such an analysis was not done in the present study, but it will be done eventually by the Pathways research team. Thus, mothers rated the *performance* of their individual TEIS service coordinators and their experiences with TEIS using 58 items from the original FamPRS instrument along with the one additional item.

Although Murphy et al. (1995) conducted a factor analysis of the FamPRS items, only responses to the *importance* scale (and not the *performance* scale) were analyzed. The reason Murphy et al. gave for not analyzing the performance items was that in their opinion:

> A family-centered program rating scale should reflect the opinions, beliefs, and expectations of parents. Although this point of view might be controversial, it was the intent of the investigators to develop an instrument organized around parents' perspectives on programs for their families and children with special needs. In effect, this approach uses parents' perspectives as the standard for judging a program's performance" (Murphy, p. 33).

Taking Murphy et al.'s approach into account, the DOE and the Pathways Co-Principal Investigators decided they were more interested in mothers' perceptions of TEIS service coordinators performance of their duties (rather than the importance of them). Therefore, it was necessary to conduct a factor analysis of the FamPRS *performance* scale first because this procedure was not done when the instrument was originally developed (and has not been done since it was published in 1995).

Family Empowerment Scale. Parental empowerment was assessed using the Family Empowerment Scale (FES; Koren, DeChillo, & Friesen, 1992). The FES includes 34 items that required mothers to respond to items on a Likert-type scale that ranged from 0 *(not true at all)* to 4 *(always true).* All items were phrased so that *"always true"* was the most empowered response. The FES was developed and first used by Koren et al. in a study of 440 parents of children with emotional, behavioral, or cognitive impairments (see above).

Koren et al. (1992) examined the internal consistency of the FES by computing alpha coefficients for the three subscales based on the level dimension of their conceptual framework. Reliabilities for the family, service system, and community/political scales were .88, .87, and .88, respectively. These coefficients showed that all three of the subscales were highly reliable. Based on the conceptual framework, a confirmatory factor analysis conducted by Koren et al. revealed four factors: (a) *parent's effort to advocate for and improve mental health services*, (b) *empowerment within the family unit,* (c) *parent's knowledge in working with agencies and professionals to obtain* *services,* and (d) *the right of parents to make decisions about their children*. The first factor corresponded with the community/political level, the second factor with the family level, and the others with the service system level. Together, these variables accounted for 52% of the total variance. The correspondence of the factors with the expression dimension was minimal.

Other researchers also analyzed the psychometric properties of the FES. Singh, Curtis, Ellis, Nicholson, Villani, and Wechsler (1995) found a conceptually meaningful four-factor solution that significantly corresponded with Koren et al.'s (1992) analysis (congruence coefficients ranged from .88 to .98) and accounted for 52.5% of the total variance. Singh et al. labeled the factors (a) *system advocacy*, (b) *knowledge,* (c) *competence,* and (d) *self-efficacy*. *Systems advocacy* items represented the thoughts, beliefs, and behaviors of parents with regard to their interactions with service providers. *Knowledge* items reflected parents' understanding and skills about how to work within the service delivery system in order to obtain needed services for themselves and their children. *Competence* items represented parents' perceptions of their ability to have an impact on and utilize the service delivery system that would affect them or their children. *Self-efficacy* items characterized parents' ability to obtain needed services from professionals. Scale items were categorized according the four-factor solution proposed by Singh et al. and are presented in Table 4.

Table 4: *Items Categorized by Subscale of the Family Empowerment Scale*

Factor	Item Number	Item
1. Systems advocacy		
	20.	I tell people in agencies and government how services for children can be improved.
	15.	I help other families get the services they need.
	14.	I have ideas about the ideal service system for children.
	8.	I get in touch with my legislators when important bills or issues concerning children are pending.
	25.	I feel that my knowledge and experience as a parent can be used to improve services for children and families.
	22.	I know how to get agency administrators or legislators to listen to me.
	3.	I feel I can have a part in improving services for children in my community.
	32.	Professionals should ask me what services I want for my child.
2. Knowledge		
	10.	I understand how the service system for children is organized.
	5.	I know the steps to take when I am concerned my child is receiving poor services.
	24.	I know what the rights of parents and children are under the special education laws.
	30.	I have a good understanding of the service system that my child is involved in.
	11.	I am able to make good decisions about what services my child needs.
	7.	I know what to do when problems arise with my child.
	12.	I am able to work with agencies and professionals to decide what services my child needs.
	6.	I make sure that professionals understand my opinions about what services my child needs.
	16.	I am able to get information to help me better understand my child.
	9.	I feel my family life is under control.
	23.	I know what services my child needs.
3. Competence		
	4.	I feel confident in my ability to help my child grow and develop.
	34.	I feel I am a good parent.
	29.	When dealing with my child, I focus on the good things as well as the problems.
	21.	I believe I can solve problems with my child when they happen.
	2.	When problems arise with my child, I handle them pretty well.
	27.	I make efforts to learn new ways to help my child grow and develop.
	31.	When faced with a problem involving my child, I decide what to do then do it.
	33.	I have a good understanding of my child’s disorder.
4. Self-efficacy		
	26.	When I need help with problems in my family, I am able to ask for help from others.
	19.	I tell professionals what I think about services being provided to my child.
	28.	When necessary, I take the initiative in looking for services for my child and family.
	18.	My opinion is just as important as professional’s opinions in deciding what services my child needs.
	1.	I feel that I have a right to approve all services my child receives.
	13.	I make sure I stay in contact with professionals who are providing services to my child.

Questionnaire Dissemination

After potential participants were identified, Co-PI Nordquist and a graduate assistant met with project coordinators and service coordinators in each of the nine TEIS districts. The purpose of the meetings was to describe the goals of the program evaluation, discuss procedural issues and concerns, address questions, and review a written protocol that guided the service coordinators' contacts with families. The protocol consisted of a step-by-step procedure for service coordinators to use when contacting potential participants.

Briefly, the procedure called for service coordinators to contact families for the purpose of arranging meetings to discuss the Pathways Project and invite parents to participate. During this initial meeting, safeguards were explained and informed consent was obtained. Parents who met with service coordinators received a $5 gift certificate to Wal-Mart, regardless of whether or not they agreed to participate in the research project. If parents indicated were not comfortable completing the questionnaire on their own, arrangements were made at that time for a parent advisor to come to the home and help them complete the questionnaire. This was done in an effort to assist parents who may have had difficulty reading parts of the questionnaire. Parent assistants from each district were recruited to serve in this capacity. None of them were receiving TEIS services and all of them were naïve to the purposes of the research. Also, service coordinators explained to the participants the goals of the Pathways Research Project and how they could participate in evaluating TEIS service delivery practices. Each parent of a child with special needs who agreed to participate was given a copy of the questionnaire (Appendix A).

Once parents met with their service coordinators and agreed to participate, they were given 2 weeks in which to complete the questionnaire and mail it back to the Pathways research team in a stamped return envelope. Mothers and fathers in the same family were encouraged to complete the questionnaires separately and mail them back in separate envelopes. In the case of single-parent families, just the one parent was asked to compete and return the questionnaire. Each parent (or caregiver) of the child with special needs who agreed to participate was given a copy of the questionnaire.

Parents who did not complete and return their questionnaires within three weeks after service coordinators met with them were contacted by a member of the research team and asked to complete the questionnaire as soon as possible. In cases where the original questionnaires were misplaced or lost duplicate questionnaires were sent to the parent(s). If at any time a parent decided not to complete the questionnaire, another family from the district’s replacement list was selected and contacted by their service coordinator. The parents in the new family were visited by the service coordinator and invited to participate in the research in precisely the same way as described above.

Data Analyses

Deletion of items and cases

A dataset of 408 mothers was created and used to analyze the Family Program Rating Scale (FamPRS). First, frequencies of mothers responses were run and those items that had 20% or more missing or non-substantive (*Not Applicable or Don't Know/Unsure)* responses were deleted from the data set. Thirteen items subsequently were deleted and presented in Table 5. This left a total of 47 items that could be used in the factor analyses. Second, frequencies were run on individual participants to ascertain their response patterns. Mothers who either did not respond or answered using a non-substantive response for more than 20% of the FamPRS items were dropped from the database. When this criterion was used to delete cases, 30 parents were deleted from the original sample, which left a total of 378 mothers who met the retention criterion.

For the Family Empowerment Scale (FES), the newly trimmed database of 378 mothers was used to determine if any items needed to be dropped because of the same 20% missing data criterion. Using this criterion, none of the items were deleted. When frequencies were run on mothers' cases, 8 were found to have not responded to 20% or more of the FES items. Therefore, these 8 mothers were deleted from the database, bringing the total number of retained cases to 370. After the items and cases were deleted, the remaining missing data were imputed using the Expectation Maximization

Table 5: *Deleted Items from the Family Program Rating Scale*

Number	Item
11.	In Tennessee’s Early Intervention System, there is a comfortable way to work out disagreements between families and service coordinators.
13.	Tennessee’s Early Intervention System helps my family when we want information about basic family needs such as, jobs, money, counseling or housing.
14.	Tennessee’s Early Intervention System gives the other children in my family support and information about their brother or sister’s special need.
15.	Tennessee’s Early Intervention System gives us information on how to meet other families of children with similar needs.
16.	Tennessee’s Early Intervention System offers special times for parents to talk with other parents and with the service providers.
17.	Tennessee’s Early Intervention System offers information in a variety of ways (written, videotape, cassette tape, workshop, etc.)
19.	Our Family’s TEIS Service Coordinator is available to go to service provider appointments with my family to help ask questions, sort out information, and decide on services.
21.	Our Family’s TEIS Service Coordinator gives information to help my family explain our child’s needs to friends and other family members.
39.	Our Family’s TEIS Service Coordinator helps my family feel more comfortable when asking for help and support from friends and other family members.
45.	Our Family’s TEIS Service Coordinator helps my family learn how we can help our child with special needs feel good about him or herself.
49.	Our Family’s TEIS Service Coordinator helps my family use problem-solving skills for making decisions about ourselves and our child with special needs.
50.	Our Family’s TEIS Service Coordinator gives information that helps my family with our child’s everyday needs, (feeding, clothing, playing, health care, safety, friendship, etc.)
57.	Our Family’s TEIS Service Coordinator helps my family to have a normal life.

(EM) method from the SPSS program. This method was selected because according to Roth (1994), the EM method was generally superior to listwise, pairwise, and mean substitution approaches.

Factor analyses. Once the data were collected and a data set of mothers' responses was created, the FamPRS (Murphy et al., 1995) and FES (Koren et al., 1992) were factor analyzed for this sample. This procedure was performed for two reasons. First, the FamPRS performance responses had not yet been factor analyzed in any study. Consequently, scales needed to be developed for subsequent analyses. Second, the FES has not been factor analyzed using only responses of mothers whose children were receiving birth to 3 early intervention services.

Family Program Rating Scale. An exploratory factor analysis was conducted using principle components extraction and direct oblimin rotation methods. This method was used because it made the analyses easier by grouping data into more manageable units and decreasing problems of multicolinerarity (Vogt, 1993). The resulting pattern matrix was inspected. Two criteria were used for retention of items. First, items that had coefficients less than .50 on any of the factors were deleted. Second, items that cross-loaded on two or more factors (i.e., the coefficients had values within .10 of each other) also were deleted. Factor analyses were repeated and items were deleted until a simple factor structure was realized (i.e., none of the items cross-loaded on multiple factors and all items loaded only on one factor to at least the .50 level). The remaining items and factors were analyzed for face validity. This was done to help ensure that the factored items made sound conceptual sense. Finally, the retained item set was analyzed using confirmatory factor analysis (CFA) using the AMOS 5.0 (Arbuckle, 2003) statistical program. The CFA produced an item factor structure that had acceptable goodness of fit statistics as well Cronbach's alpha for each factor. These findings are presented in the Results section.

Family Empowerment Scale. A factor analysis of the FES was conducted using the same methods that were used to factor analyze the FamPRS. Principal components and direct oblimin rotation methods were used to conduct the initial exploratory factor analysis. The resulting pattern matrix was inspected. The same two criteria were used for retention of items. After deletion, factor analyses were repeated and items were deleted until a simple factor structure was realized (i.e., none of the items cross-loaded on multiple factors and loaded only on one factor to at least the .50 level). The remaining items and factors were analyzed for face validity. This was done to help ensure that the factored items made sound conceptual sense. Finally, the retained items set was analyzed using confirmatory factor analysis (CFA) using the AMOS 5.0 (Arbuckle, 2003) statistical program. The CFA produced an item factor structure that had acceptable goodness of fit statistics as well Cronbach's alpha for each factor. These findings are presented in the Results section.

Descriptive analyses. Once the factor analyses were completed, scales were created for family-centered practices and empowerment factors by averaging the assigned values of the responses to the items comprising each factor. The assigned values for the original scales were: FamPRS = 1 – *poor*, 2 – *okay,* 3 – good, 4 – *excellent;* FES = 0 – *never true,* 1 – *rarely true,* 2 – *sometimes true,* 3 – *often true,* 4 – *always true.* Measures of central tendency and variability were computed using the means and standard deviation scores from the mothers' FamPRS and FES factor items. The results were used to determine the family-centeredness of TEIS service coordinator practices. In addition, FES results were used to identify ways that mothers felt empowered in their roles as parents of children with special needs.

Bivariate analyses. Pearson correlations were performed to examine the associations among the FamPRS and FES factors. The bivariate correlation matrix is presented in the Results section. Correlations were also computed among the latent factors from the structural equation analyses. The resulting correlations were slightly different than the bivariate correlations among the scale scores because the correlations among the latent variables from the structural equation analyses accounted for the within measure factor correlations. In addition, the latent variables were analyzed to take into account measurement error.

Multivariate Analyses. AMOS 5.0 (Arbuckle, 2003) was used to analyze the associations among the latent variables for family-centered practices and empowerment. Structural equation analysis was chosen because it accounts for measurement error and provides correlations among the underlying factors, as well as allowing for the examination of regression relationships and covariances among the observed items (manifest variables) and unobserved constructs (latent variables). The manifest variables were the FamPRS and the FES factors; the latent variables were the constructs of family-centered practices and empowerment.

CHAPTER 4

Results

Factor analyses of the Family-Centered Program Rating Scale (FamPRS) are presented first, followed by factor analyses of the Family Empowerment Scale (FES). Univariate descriptive results of the scales are presented next to illustrate mothers' perceptions of family-centered service coordination practices and maternal empowerment. Then, bivariate correlations are presented among both the scale score versions of the variables and the latent construct versions of the variables. This is followed by the multivariate structural equation modeling.

Factor Analyses

Two types of factor analyses were conducted using FamPRS and FES items. The first was an exploratory factor analysis. This was done first because factor analysis had not been performed before using the FamPRS *performance* items. Although factors had been determined for the FES, this was the first time with a sample of mothers whose children were receiving early intervention services. After factors were identified using the exploratory method, a confirmatory factor analysis was done in order to determine the best fit of a measurement model.

Family-Center Program Rating Scale

A multi-step exploratory factor analysis was conducted for the Family-Centered Program Rating Scale (FamPRS) items using principle components extraction and direct oblimin rotation of the data. At each step, the scree plot was examined to determine the number of possible factors. The solution for the final scree plot is presented in Figure 3. Alignment of the eigenvalues to component numbers suggests a two-factor solution. The final factor matrix of the items and respective factor loadings are presented in Table 6. Conceptual examination of these factors suggested that the terms *Partnership Building Communication* and *Sensitive Service Delivery* best described the item groupings. Overall, these factors accounted for 56.27% of the total explained variance of family-centered practices. The reliabilities for both factors were excellent, with a Cronbach's alpha of .95 for *Partnership Building Communication* and an alpha of .90 for *Sensitive Service Delivery.* After the exploratory factor analyses, these two factors and their respective items were entered into a confirmatory factor analysis (CFA) model. The best fitting CFA model (X^2 (319) = 830.06, p = .000, CFI = .922, RMSEA = 0.66) is presented in Figure 4. According to standards articulated by Byrne (2001), this model fits the data reasonably well.

Family Empowerment Scale

The same procedures were used to factor analyze the FES items. The scree plot presented in Figure 5 clearly suggests a two-factor solution. The two factors and their respective eigenvalues from the pattern matrix output are presented in Table 7. As a result of a discussion among the Pathways research team, the factors were labeled *Personal Competence* and *System*

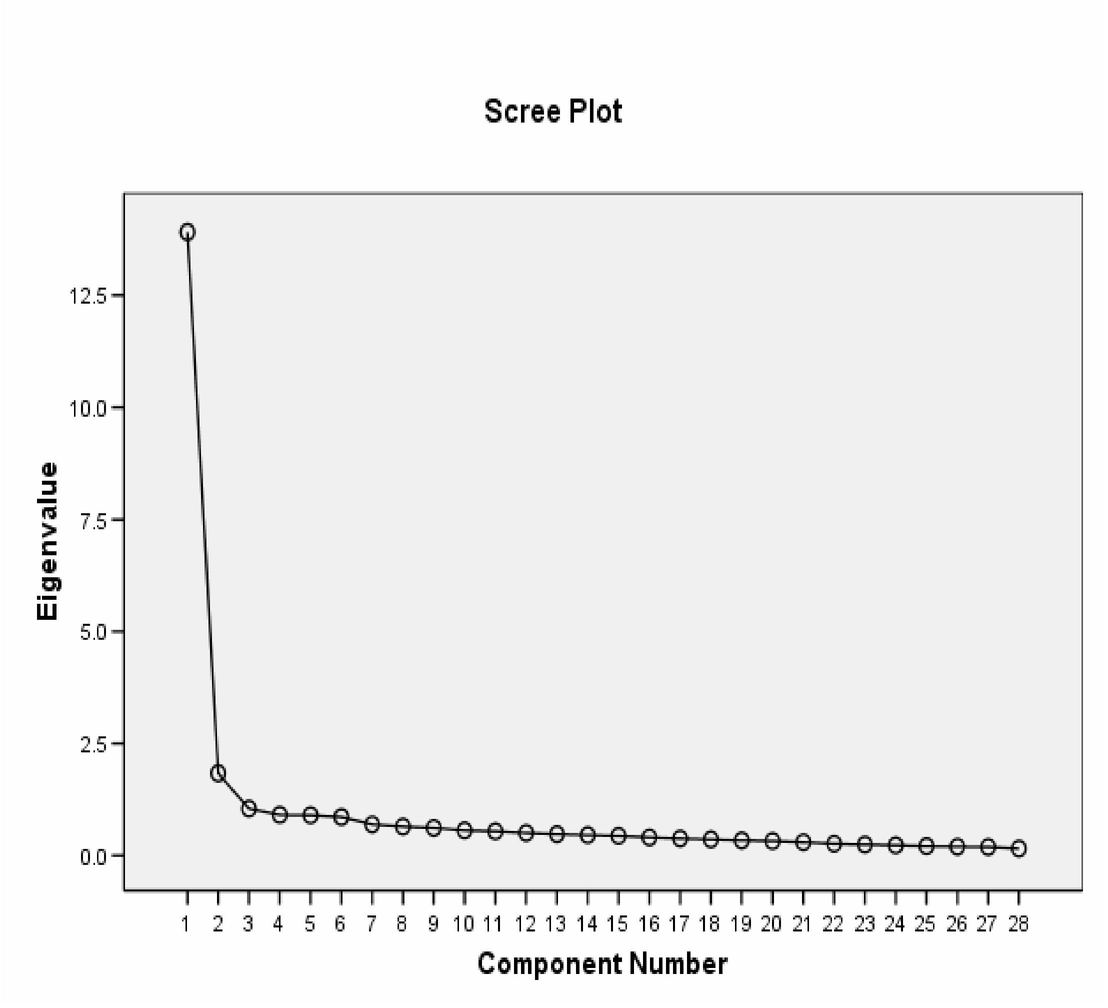


Figure 3: Scree plot for the Family-Centered Program Rating Scale

Table 6: *Summary of Exploratory Factor Analysis Results for Family-Centered Program Rating Scale using Principal Components Estimation*

Item		Factor Loadings	
		Partnership Building Communication	Sensitive Service Delivery
20.	Our family's TEIS service coordinator helps my family learn how to teach our child with special needs particular skills	.97	
59.	Our family's TEIS service coordinator gives my family information about how children usually grow and develop	.91	
40.	Our family's TEIS service coordinator regularly asks my family about how well TEIS is doing and what changes we might like to see	.86	
60.	Our family's TEIS service coordinator helps my family see the good things we are doing to meet our child's needs	.82	
51.	Our family's TEIS service coordinator helps my family see what we are doing well	.78	
47.	Our family's TEIS service coordinator gets to know my family	.69	
22.	Our family's TEIS service coordinator helps my family plan for the future	.69	
31.	Our family's TEIS service coordinator gives my family clear and complete information about our child's special needs	.68	
8.	In TEIS a service coordinator can help my family communicate with all the other professionals serving us and our child with special needs	.67	
61.	Our family's TEIS service coordinator considers my family's strengths and needs when planning ways to meet our child's needs	.65	
48.	Our family's TEIS service coordinator lets us get to know him or her	.65	
32.	Our family's TEIS service coordinator tells my family what he or she has learned right after our child's evaluation	.63	

Table 6 Continued

	Item	Factor Loadings	
		Partnership Building Communication	Sensitive Service Delivery
44.	Our family's TEIS service coordinator gives my family clear and complete explanations in matters relating to our child with special needs	.62	
38.	Our family's TEIS service coordinator gives my family clear and complete information about available services	.58	
41.	Our family's TEIS service coordinator offers to visit my family in our home	.54	
35.	Our family’s TEIS service coordinator does not try to tell my family what we need or do not need		.86
66.	My family is an important part of the team when our IFSP is developed, reviewed or changed		.85
64.	My family is included in all meetings about us and our child with special needs		.82
33.	Our family's TEIS service coordinator does not act rushed or in a hurry when he or she meets with my family or me		.70
37.	Our family's TEIS service coordinator gives clear and complete information about my family's rights		.68
25.	Our family's TEIS service coordinator does not rush my family to make changes		.68
53.	Our family's TEIS service coordinator asks my family's opinion and includes us in the process of evaluating our child with special needs		.68
34.	Our family's TEIS service coordinator does not ask my family to repeat information that is already in my child's file		.62
24.	Our family's TEIS service coordinator respects whatever level of involvement my family chooses in making decisions		.62
1.	In TEIS meetings family are scheduled when and where they are most convenient for us		.58
54.	Our family's TEIS service coordinator is friendly and easy to talk to		.57
10.	In TEIS the IFSP is used as a *plan of action* for my child with special needs		.55

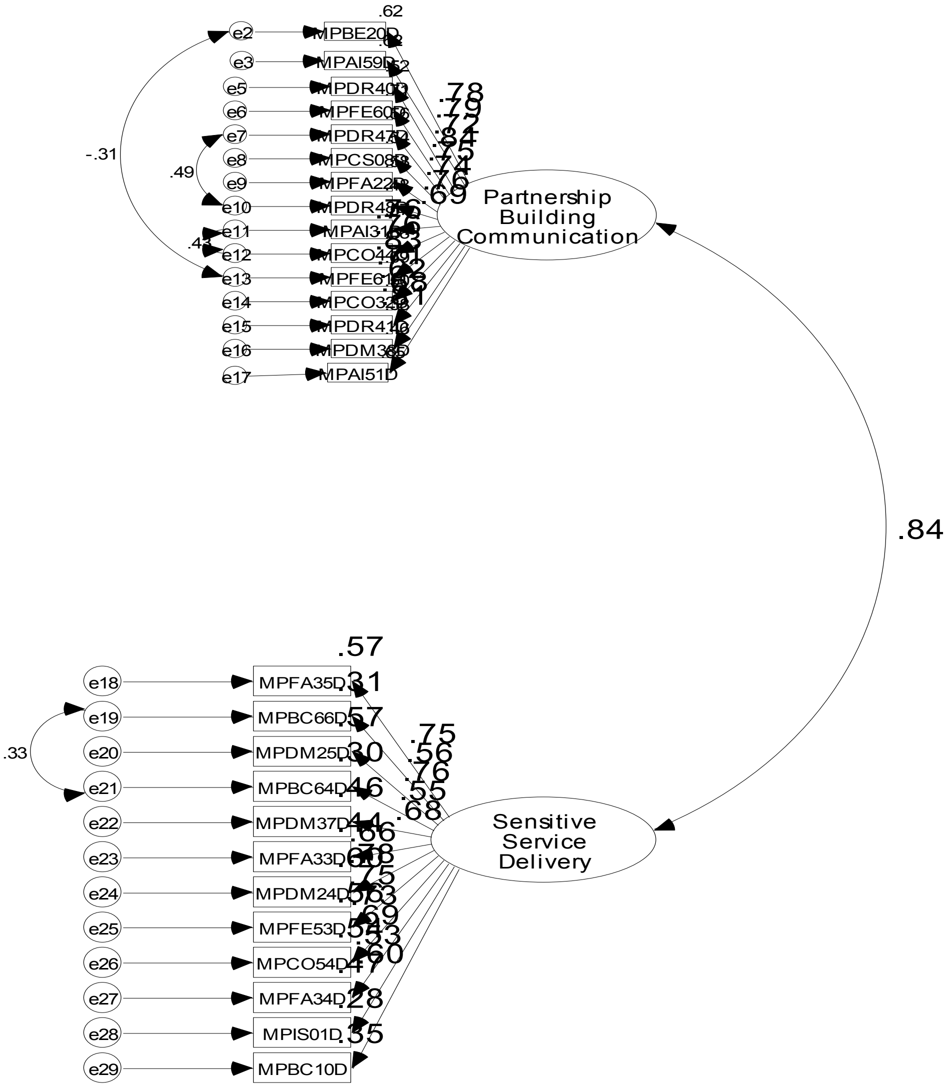


Figure 4: Confirmatory Factor Model of Family-Centered Practice Dimensions

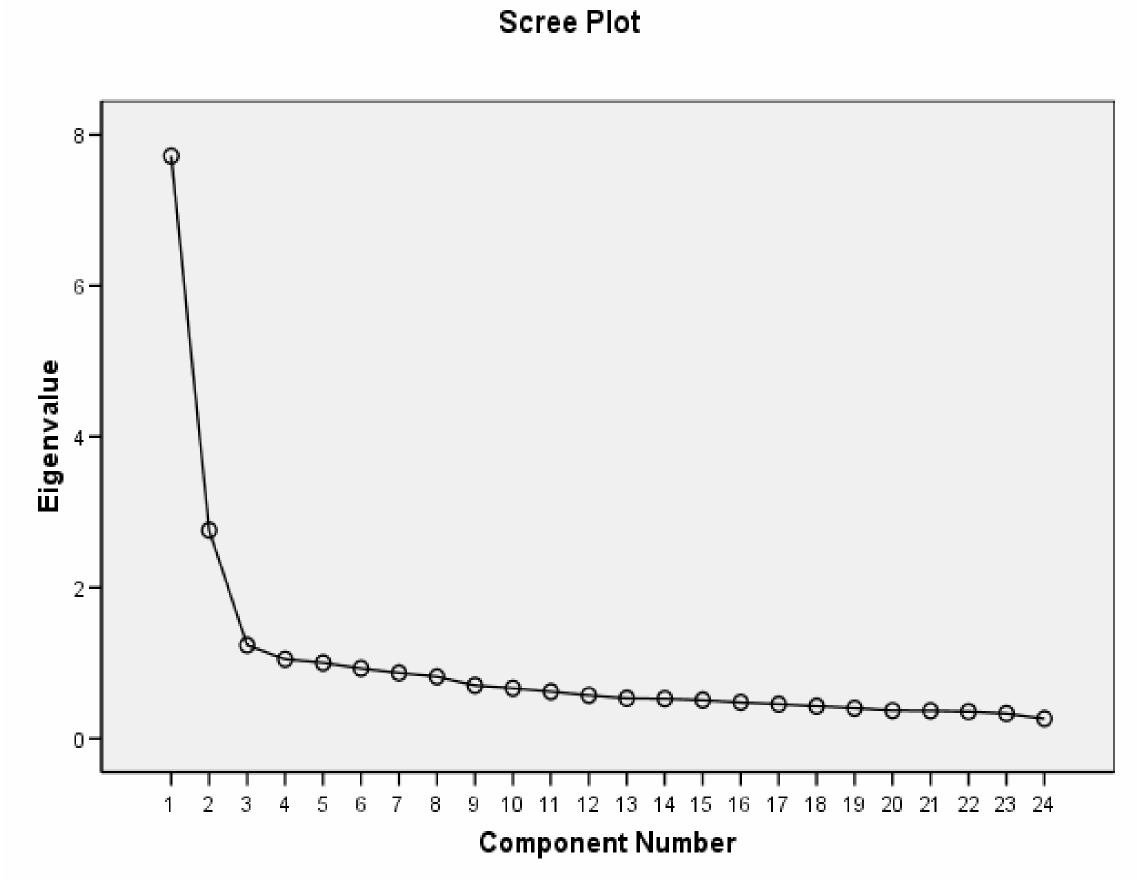


Figure 5: Scree plot of the Family Empowerment Scale

Table 7: *Summary of Exploratory Factor Analysis Results for Family Empowerment Scale using Principal Components Estimation*

	Item	Factor Loading	
		Personal Competence	System Competence
2.	When problems arise with my child, I handle them pretty well	.76	
7.	I know what to do when problems arise with my child	.75	
21.	I believe I can solve problems with my child when they happen	.72	
4.	I feel confident in my ability to help my child grow and develop	.70	
34.	I feel I am a good parent	.65	
9.	I feel my family life is under control	.60	
33.	I have a good understanding of my child's special needs	.60	
29.	When dealing with my child, I focus on the good things as well as the problems	.56	
30.	I have a good understanding of the service system that my child is involved in	.54	
5.	I know the steps to take when I am concerned my child is receiving poor services	.52	
16.	I am able to get information to help me better understand my child	.52	
20.	I tell people in agencies and government how services for children can be improved		.80
14.	I have ideas about the ideal service system for children		.77
15.	I help other families get the services they need		.76
17.	I believe that other parents and I can have an influence on services for children		.67
22.	I know how to get agency administrators or legislators to listen to me		.66
25.	I feel that my knowledge and experience as a parent can be used to improve services for children and families		.63
3.	I feel I can have a part in improving services for children in my community		.61
8.	I get in touch with my legislators when important bills or issues concerning children are pending		.57

Competence. Reliability testing for the two factors resulted in identical Cronbach's alphas of .85. Once these analyses were completed, the factors were entered into a CFA model. Results of the CFA (X^2 (147) = 378.764, p = .000, CFI = .904, RMSEA = 0.65, AGFI = .869) are presented in Figure 6. According to standards articulated by Bryne (2001), this model fits the data reasonably well.

Descriptive Analyses

Once the factors were constructed, scales were created for the family-centered practices and empowerment factors by averaging the assigned values of the responses. The assigned values for the original scales were: FamPRS = 1 – *poor,* 2 – *okay,* 3 – *good,* 4 – *excellent;* FES = 0 – *never true,* 1 – *rarely true,* 2 – *sometimes true,* 3 – *often true,* 4 – *always true.* For both scales, the higher the mean, the more mothers either felt service coordinators used family-centered practices or mothers felt empowered. Measures of central tendency and variability were computed using means and standard deviations from the mothers' FamPRS and FES factors. Results for all factors, including frequency quartiles, are presented in Table 8. The FamPRS factors mean ratings were high, suggesting that from the perception of mothers in this sample, TEIS service coordinators did indeed use family-centered practices. Specifically, the mean rating for *Partnership Building Communication* was 3.40 with a standard deviation of .63, and the mean rating for *Sensitive Service Delivery* was 3.70 with a standard deviation of .40.

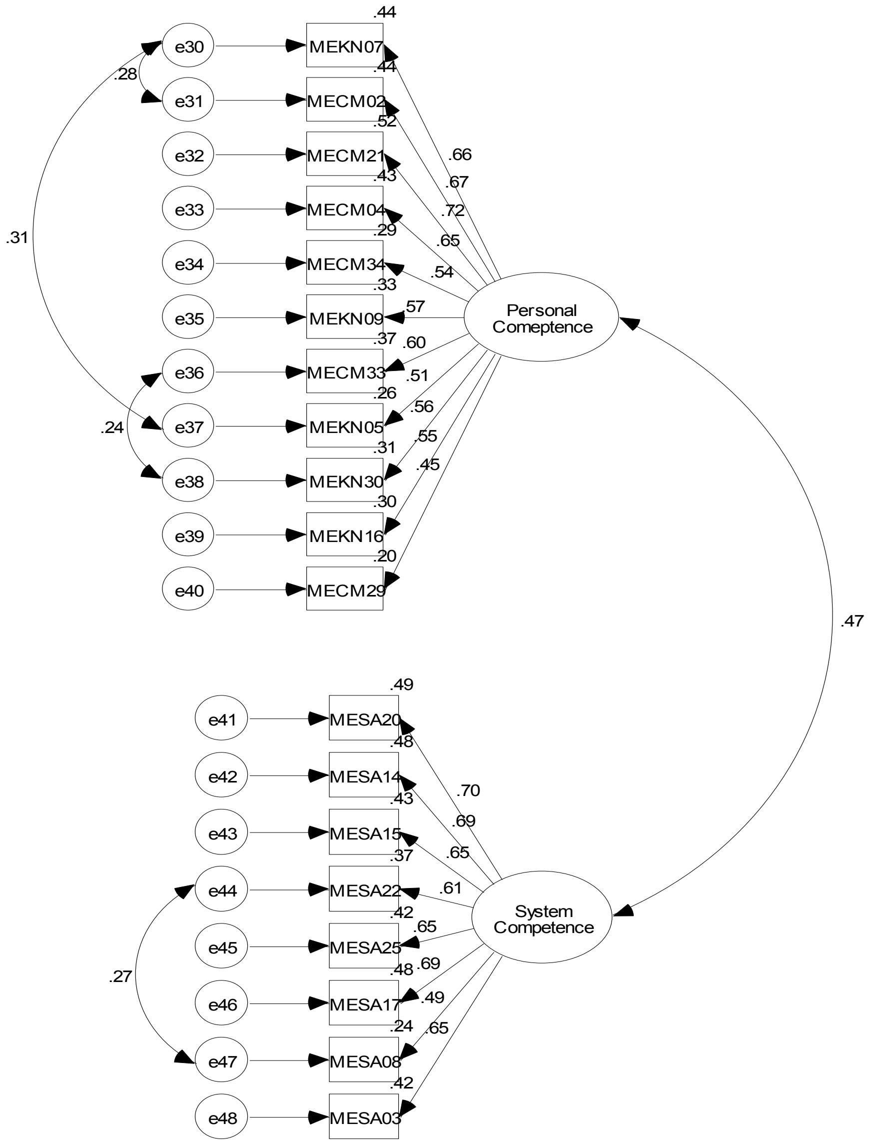


Figure 6: Confirmatory Factor Model of Family Empowerment Scale

Table 8: Family-Centered Program Rating Scale: Descriptive Statistics

Scales	*M*	*SD*	Range	*α*
Partnership Building Communication	3.40	.63	1 - 4	.95
Sensitive Service Delivery	3.70	.40	1 - 4	.90

		Quartiles	
	25%	50%	75%
Partnership Building Communication	3.00	3.62	3.93
Sensitive Service Delivery	3.53	3.83	4.00

Family Empowerment Scale: Descriptive Statistics

Scales	*M*	*SD*	Range	*α*
Personal Competence	3.38	.45	0 - 4	.85
System Competence	2.16	.40	0 - 4	.85

		Quartiles	
	25%	50%	75%
Personal Competence	3.09	3.36	3.81
System Competence	1.50	2.13	2.75

The mean ratings for the two FES factors were different. The mean of *Personal Competence* factor was 3.38 (based on a 5-point Likert-type scale) and a standard deviation of .45. However, the mean rating for the *System Competence* factor was substantially lower, 2.16 with a standard deviation of .40. These means indicate that mothers felt quite empowered and competent to obtain services for their children, their families, and themselves but that they did not feel as competent to influence the policies and practices of the early intervention system.

Analysis of Bi-Variate Correlation

Pearson correlations among the FamPRS and FES scale scores are presented in Table 9. All of the correlations, either within the scale factors or between them, were significant at the .05 level or lower. Naturally, the within scale factors had higher correlations than the between scale factors. Also, the correlation between the two FamPRS factors (r = .782) was higher than the correlation between the FES factors (r = .413).

Correlations among the latent factors were examined using the AMOS 5.0 (Arbuckle, 2003) statistical program. These correlations accounted for the error variance in the relationships among the latent factors. Correlations among the factors are presented in Table 10. As in the analyses of the scale score versions of these factors, all the correlations are significant and follow the same pattern of correlational strength.

Table 9: *Family-Centered Program Rating Scale Factors and Family Empowerment Scale Factors: Zero-Order Correlations*

Factors	Partnership Building Communication	Sensitive Service Delivery	Personal Competence	System Competence
Partnership Building Communication	___			
Sensitive Service Delivery	.782**	___		
Personal Competence	.413**	.354**	___	
System Competence	.207**	.120*	.417**	___

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

Table 10: *Family-Centered Program Rating Scale Factors and Family Empowerment Scale Factors: Multivariate Correlations*

Factors	Partnership Building Communication	Sensitive Service Delivery	Personal Competence	System Competence
Partnership Building Communication	___			
Sensitive Service Delivery	.841***	___		
Personal Competence	.417***	.388***	___	
System Competence	.227***	.134*	.474***	___

Note: The correlations account for the relationships between other factors and the focal factors and for measurement error.
**p* < .05, ****p* < .001

Multivariate Structural Equation Analyses

Using AMOS 5.0 (Arbuckle, 2003) the four variables identified in the previous analyses were situated in a predictive model in which both of the empowerment factors were regressed on the family-centered practice factors. This model is presented in Figure 7 and had the following fit indices: X^2 (932) = 1858.536, p = .000, CFI = .896, RMSEA = 0.52, AGFI = .795.

Measurement model

In the measurement model, error terms of the FamPRS and FES factors were correlated to improve the fit of the model as suggested by the modification indices. All of the correlated error terms were between items within a factor and none of the error terms were allowed to be correlated between the factors. Three pairs of terms were correlated in the FamPRS factor, *Partnership Building Communication*. Error term correlations for pairs of items were: -.31 between the items: “Our family's TEIS service coordinator helps my family learn how to teach our child with special needs particular skills” and “Our family's TEIS service coordinator considers my family's strengths and needs when planning ways to meet our child's needs;” .49 between the items: “Our family's TEIS service coordinator gets to know my family” and “Our family's TEIS service coordinator lets us get to know him or her;” and .43 between the items: “Our family's TEIS service coordinator gives my family clear and complete information about our child's special needs” and “Our family's TEIS service coordinator offers to visit my family in our home.”

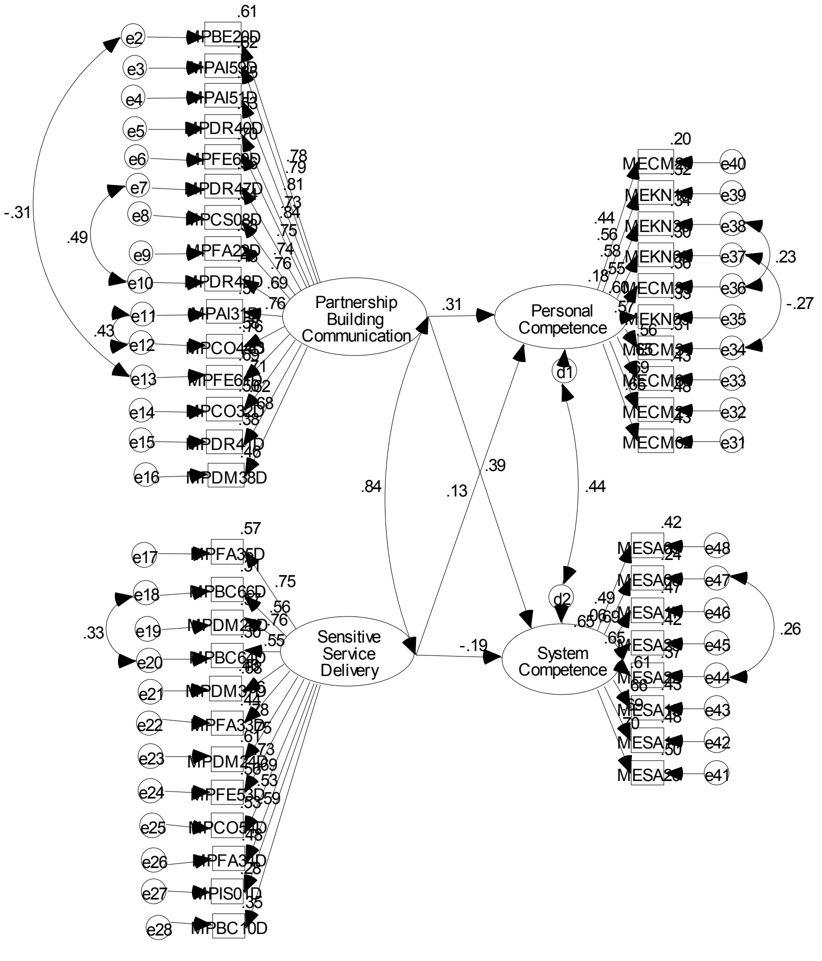


Figure 7: Structural Model with both Empowerment Factors Regressed on Family-Centered Practice Factors

Only two error terms were positively correlated for the second FamPRS factor *Sensitive Service Delivery.* The error term correlation was .33 between the items: “My family is an important part of the team when our IFSP is developed, reviewed or changed” and “My family is included in all meetings about us and our child with special needs*.*”

For the two FES factors, only three pairs of errors terms were correlated. Two of the pairs were for the *Personal Competence* factor*.* The error term correlation was .23 between the items: “I have a good understanding of the service system that my child is involved in” and “I have a good understanding of my child’s special needs” and -.27 between the items: “I feel I am a good parent” *and* “I know the steps to take when I am concerned my child is receiving poor services.” Finally, the error term correlation was .26 between the two items from the *System Competence* variable: “I get in touch with my legislators when important bills or issues concerning children are pending” and “I know how to get agency administrators or legislators to listen to me.” After these modifications were made to the measurement models to maximize fit, attention was turned to the structural portion of the model, that is, the association among the latent variables.

Structural model

An examination of the pathways among the latent variables found that only two of the four were significant. The two significant pathways led from *Partnership Building Communication* to *Personal Competence* ($p < .01$) *and*

System Competence ($p < .002$). Neither of the pathways leading from *Sensitive Service Delivery* to the empowerment factors were significant. Some consideration was then given to ways to improve the fit of the model and to more carefully assess the potential associations among the FamPRS and FES variables .

Two reasons were used to develop a second-order model that had the family-centered practice factors, *Partnership Building Communication* and *Sensitive Service Delivery,* as indicators of an overarching *Family-Centered Practices* construct. The main reason was that in both of the bivariate and multivariate correlation matrixes, the coefficients between the FamPRS factor of *Sensitive Service* Delivery and the FES factors of *Personal Competence* and *System Competence* were positive and statistically significant. Using these results as a guide, plus the fact that the two FamPRS factors were highly correlated ($r = .84$), having them contribute to a single factor made conceptual sense. In this model, the regression weights for the paths leading from *Family-Centered Practices* to *Partnership Building Communication* and *Sensitive Service Delivery* were set to 1. Results indicated that the structural paths between the second-order *Family-Centered Practices* and both of the empowerment factors were significant. The fit was remained relatively the same from the first-order model (X^2 (934) = 1884.830, $p = .000$, CFI = .893, RMSEA = 0.53, AGFI = .794). This model is presented in Figure 8.

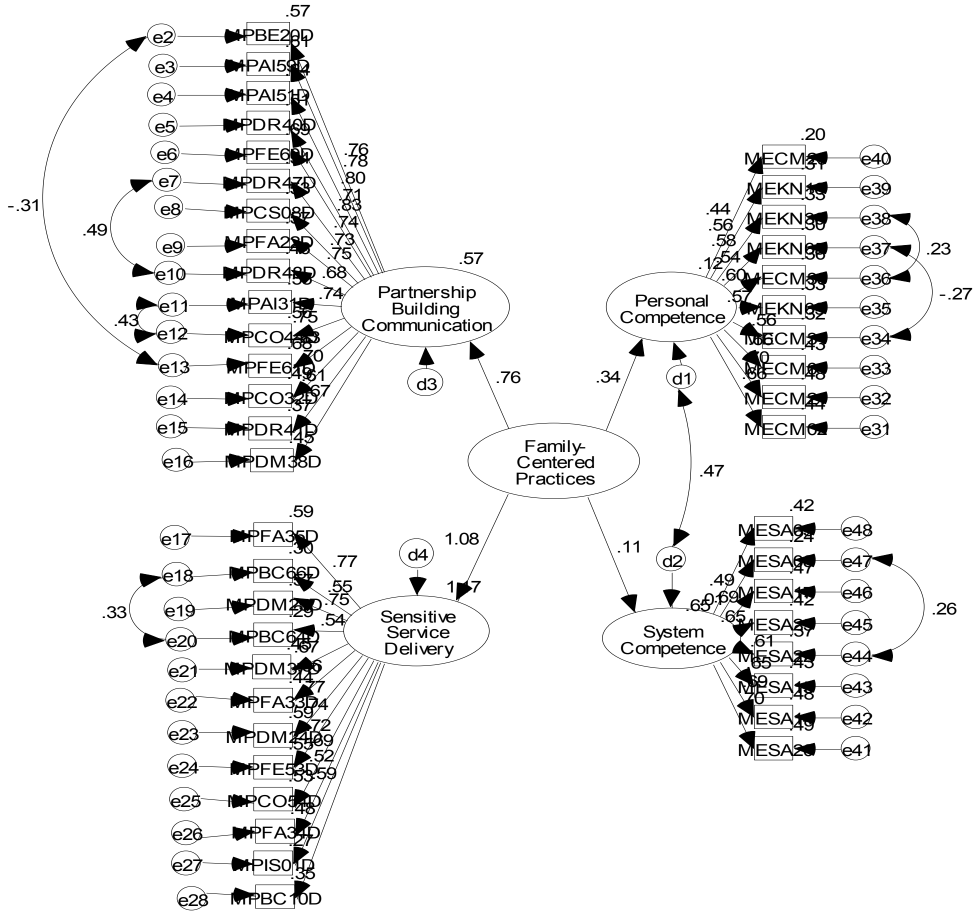


Figure 8: Second-Order Structural Model

In an effort to improve the fit with the data, other models were developed and tested. These included clustering items within the *Partnership Building Communication* factor that pertained to what Dunst et al. (2000) labeled *relational practices.* While significant paths from these clustered items to the empowerment factor of *System Competence* were found, the overall fit of the model did not improve. Based on this information, a decision was made to retain the second-order model as representing the best fit for the data.

CHAPTER 5

Discussion

The purpose of this research was to measure the relationship of family-centered practices and mothers' feelings of empowerment while receiving services through Tennessee's Early Intervention System (TEIS). The intention was to be more specific in measuring family-centered practices and maternal empowerment than had been done in previous studies. To that end, analytic techniques were employed that resulted in multiple factor solutions of these constructs. In addition, the methodological rigor allowed for analyses that identified specific relationships among the factors. These findings have important implications for TEIS service coordinators specifically and for the field of early intervention in general.

Three research questions were examined in the present study. First, to what extent and in what ways do service coordinators use family-centered practices from the point of view of mothers with whom they interact on a regular basis? Second, to what extent and in what ways do mothers acknowledge feelings of empowerment? Finally, is there a relationship between family-centered practices and maternal empowerment? In this chapter, each of these questions is addressed in relation to the findings and the existing body of knowledge about family-centered practices, empowerment, and relationships between these two concepts. Strengths and limitations of the research are discussed, followed by recommendations for future research and early intervention practices.

Family-Centered Practices

The first research question is best answered in two parts. First, mothers reported that service coordinators extensively used family-centered practices when they worked together. Strong evidence for this assertion is derived from the high means of both the FamPRS factors. These high scores are very encouraging for TEIS service coordinators and administrators. Implications for future practice of mothers' ratings will be discussed later in this section. These scores make a very important contribution to the family-centered practice literature because this study was able to assess the working relationship between two specific groups in one particular early intervention program, i.e., those service coordinators and mothers. In other studies, participants (mothers) who were associated with several different programs none of which were exclusively birth-to-three programs, rated the family-centered practices of service providers from different fields, which sometimes included early intervention, but also included health care, education, and therapy. (Dempsey & Dunst, 2004; Dempsey et al., 2001; Dunst, Trivette, Boyd, & Brookfield, 1994; Judge, 1997; Trivette, Dunst, Boyd, & Hamby, 1996; Trivette, Dunst, Hamby, 1996a). Thus, the present findings represent the first empirical support for the family-centered practices/empowerment relationship that emerged from a relationship between individual service coordinators and the mothers they served in a statewide program for birth-to-three children with disabilities.

Dunst and Bruder (2006) recently published an article that evaluated the family-centered practices of service coordinators form 46 states' Part C programs. They found that the dedicated service coordination model (used by TEIS) is less family-centered than two other models. According to the mother's ratings on the FamPRS, TEIS service coordinators did use a wide variety of family-centered practices in ways that mothers described as highly effective. This finding is not consistent with those reported by Dunst and Bruder and indicates that some dedicated service coordinator models may be family-centered indeed. The task for researchers is to try to identify those conditions that make this kind of service delivery model more or less effective.

To answer the second part of the question, in what ways do service coordinators use family-centered practices, can be answered by examining the items that comprise the two factors, *Partnership Building* Communication and *Sensitive Service Delivery.* This is another contribution to the literature, in that the FamPRS items ask respondents very specific questions about family-centered practices (see Table 6). The HPS (Dunst, Trivette, & Hamby, 1996) is more general in the way items ask respondents to rate family-centered practices (see Figure 2). This is especially important from a program evaluation perspective. The more specific family-centered practices can be identified , the better the opportunity to train service coordinators to acquire and demonstrate these practices.

The two factors identified from the FamPRS items reflect the definition of family-centered practices as proposed by Allen and Petr (1998). The key elements of the definition are that the family is central to children's development, that families are given opportunities to make fully informed choices, and that families' strengths as well as their capabilities are the focus of help-giving efforts. In particular, items that comprise the *Partnership Building Communication* factor highlight how families are informed, such as, "Our family's TEIS service coordinator gives my family clear and complete information about available services" and "Our family's TEIS service coordinator give my family information about how children usually grow and develop*."* Another item, "Our family's TEIS service coordinator considers my family' strengths and needs when planning way to meet our child's needs," clearly exemplifies the strengths-based approach to service delivery. Items from the *Sensitive Service Delivery* factor emphasize family involvement in decision-making. These include, "My family is included in all meetings about us and our child with special needs" and "Our family's TEIS service coordinator respects whatever level of involvement my family chooses in making decisions." The high ratings by mothers of service coordinators family-centered practices demonstrates how well they are fulfilling the Part C of

IDEA's mandate to enhance the capacity of families to meet the special needs of their infants and toddlers with disabilities.

The careful and thorough factor analysis of a family-centered practice measure is the first to yield two factors. The specificity of the items that comprise the factors not only helps to identify relevant family-centered practices, but also helps to identify specific relationships between the FamPRS factors and those resulting from a factor analysis of the Family Empowerment Scale (FES).

Maternal Empowerment

In answer to the second research question, the findings indicate that mothers felt empowered, particularly on a personal level, to obtain needed services for their children. They reported, for example, that they often knew how to handle and solve problems. They also said they knew what to do if their children received poor services, and felt confident in their ability to help their children develop. It was not surprising, therefore, that they believed they were good, effective parents. These are important findings for TEIS service coordinators and administrators. As mothers are able to obtain services for their children, then the assumption is that their children will benefit from these services and this will improve their developmental trajectory. More than just providing valuable feedback to TEIS regarding the empowerment of mothers, this study is the first to factor analyze a measure of empowerment using reports from mothers whose children are receiving services through one early intervention program. In addition, all the children are birth to 3 years old. Therefore, the resulting two factors from the analysis give important insights into the empowerment of mothers whose children are receiving services through TEIS.

While mothers said they felt personally competent to address the service needs of their children, they did not feel as empowered to affect changes in the early intervention system. They did not feel as confident about contacting legislators, for example, or suggesting to people in government how services could be improved. Mothers may have felt less empowered at the system level for two reasons. First, mothers of young children with disabilities are most invested in meeting the immediate service needs of their children. They want to obtain all the services they can for them. It is understandable, therefore, that their children’s health, growth, and well-being would come first. Contacting legislators and advocating on behalf of their children and families may not be a high priority for most mothers who are still at a very early stage in learning who to deal with in a very large and complicated early intervention system. Second, if mothers are quite satisfied with the services they are receiving, then there is little need to contact officials about improving the early intervention system. Although results related to maternal satisfaction with TEIS services was not the focus of the present study, several satisfaction items were included on the questionnaire, and overwhelmingly, mothers reported they were extremely satisfied with TEIS services as well as services from other providers.

The mothers' FES results are consistent with previous studies that reported similar empowerment outcomes (Dempsey & Dunst, 2004; Dempsey, Foreman, Sharma, Khanna, & Arora, 2001; Dunst, Trivette, & LaPointe, 1992; Dunst, Trivette, Boyd, & Brookfield, 1994; Judge, 1997; Trivette, Dunst, & Hamby, 1996a; Trivette, Dunst, & Hamby, 1996b; Trivette, Dunst, Boyd, Hamby, 1996; Trivette, Dunst, Hamby, & LaPointe 1996). When these items are compared to Singh's et al. (1995), they are virtually identical to those that comprise Singh's et al. *Knowledge* and *Competence* factors. In the present study, however, instead of being distinct factors, knowledge and competence inform and support each other. As mothers gain knowledge about their children's disability, they may feel more competent about handling the situation, and in turn, what to learn more about how to help their children.

When the *System Competence* items are compared to Singh's et al. (1995) factor analysis of the FES, all of them are included in the factor labeled, *System Advocacy,* although the definitions for advocacy and competence are different (advocacy meaning *active* support and competence meaning being well qualified). In this study, the items reflect mothers' feeling <u>qualified</u> to advocate, but not having as much confidence in their ability to do so. Mothers reported that this was only *sometimes true*. This finding may reflect the limited experience of mothers who have very young children with disabilities.

In addition to the consistency of this study's findings of empowerment with those of the literature, the most important finding is the multi-dimensionality of the construct. In previous studies empowerment was measured either as a single-item that expressed mothers' perceived control over the situation (Dunst, Trivette, Boyd, & Brookfield, 1994; Judge, 1997; Trivette, Dunst, & Hamby, 1996a; Trivette, Dunst, & Hamby, 1996b; Trivette, Dunst, Boyd, & Hamby, 1996) or the total FES score was used in the analyses (Dempsey, Foreman, Sharma, Khanna, & Arora, 2001; Dempsey & Dunst, 2004).

The multiple items in *Personal* Competence overcome the limitation of the single-item measure, the Perceived Control Appraisal Scale (Affleck et al., 1991) that was used in five studies cited above. In each of those studies, the measure of empowerment was how much control mothers felt they had to obtain services from a particular service provider. Trivette et al. (1996) warned against generalizing from the findings because the measure of empowerment was specific to relationships between participants and service providers and not broader-life situations. In the present study, mothers reported greater control over multiple aspects of their lives, not just the ability to access services.

This is the first study in which the FES was found to have multiple factors when the participants' children were receiving services from a state birth-to-three early intervention system. These factors, *Personal* and *System*

Competence, help to clarify ways that mothers may be empowered by engagement with these kinds of systems. The two factors are distinct conceptually and suggest differences in ways that mothers felt empowered by family-centered practices. They felt more empowered at a personal level rather than a systems level. When the empowerment outcome was conceptually factored, (Dunst et al. 1992) into *Performance* and *Perceptions,* exemplars of these factors such as, *skills* and *personal control*, corresponded to items in *Personal Competence* such as, “I know what to do when problems arise with my child” and “I feel my family life is under control.” Thus, the present findings are both consistent with previous studies and also add specificity to how mothers feel empowered.

Relationship between Family-Centered Practices and Empowerment

In the previously reviewed literature, a positive relationship was found between family-centered practices and empowerment outcomes (Dempsey & Dunst, 2004; Dempsey, Foreman, Sharma, Khanna, & Arora, 2001; Dunst, Trivette, & LaPointe, 1992; Dunst, Trivette, Boyd, & Brookfield, 1994; Judge, 1997; Trivette, Dunst, & Hamby, 1996a; Trivette, Dunst, & Hamby, 1996b; Trivette, Dunst, Boyd, Hamby, 1996; Trivette, Dunst, Hamby, & LaPointe 1996). The same holds true in this study. The main difference in the present findings and those from previous studies is that multiple dimensions of family-centered practices and empowerment were derived from the factor analyses. Previously, investigators used a variety of instruments to measure both constructs, but family-centered practices were factor analyzed only in one study (Trivette et al., 1995) and empowerment was measured either using a single item that asked participants to rate their perception of control (Affleck et al., 1991) or investigators failed to factor analyze the FES and relied instead on the total score (Dempsey et al., 2001; Dempsey and Dunst, 2004). In this study, structural equation modeling was used to test the relationship between family-centered practices and empowerment. The final model fit the data and indicated that *Family-Centered Practices* (comprised of *Partnership Building Communication* and *Sensitive Service Delivery*) was a significant predictor of *Personal Competence* and *System Competence*. This finding is consistent with previously cited studies that also found a positive relationship between family-centered practices and maternal empowerment but it is more complex and suggests there are qualitatively different dimensions of family-centered practices that promote specific kinds of maternal empowerment. This finding is precisely what theory predicts but has not been demonstrated in previous research.

This is the first instance that factor analyzed, multi-dimensions of family-centered practices and empowerment were fit into a structural equation model. Results of this model can be used to identify specific relationships between the two constructs, for example, service coordinators giving clear and complete information to mothers about their children with special needs, who in turn, report they have a good understanding about their children’s disability.

Another example would be that service coordinators give mothers clear and complete information about available services and mothers report that they know how to improve services for their children. Finally, service coordinators ask mothers how well TEIS is doing and what changes they would like to see and mothers report that they have ideas about how to improve the early intervention system. These examples illustrate how specific family-centered practices directly influence maternal empowerment and thus advance the understanding of the specific relationships between family-centered and empowerment that previously had been understood only in very general terms.

Strengths of the Study

The study has three strengths, they are: (a) adequate sample size, (b) methodological rigor, and (c) applicability to practice. The large sample size of 370 mothers undoubtedly enhanced the power of the statistical analyses and contributed to the strong reliability of the data. Having all the mothers served by the same birth-to-three agency overcame a limitation of previous studies that included multiple agencies (Dempsey & Dunst, 2004; Dempsey, Foreman, Sharma, Khanna, & Arora, 2001; Dunst, Trivette, Boyd, & Brookfield, 1994; Judge, 1997; Trivette, Dunst, & Hamby, 1996a, Trivette, Dunst, Boyd, Hamby, 1996) serving maternal samples whose children were over as well as under the age of three (Dempsey & Dunst, 2004; Dempsey, Foreman, Sharma, Khanna, & Arora, 2001; Dunst, Trivette, Boyd, & Brookfield, 1994; Judge, 1997; Trivette, Dunst, Boyd, & Hamby, 1996;Trivette, Dunst, Hamby, &

LaPointe, 1996). The constant in the sample was that all the children were in the same age range, birth to three. The problem with older children being included in the sample is that their demands on the family might be different, this in turn, could cause mothers to need other services delivered different ways. Also, in the present study mothers evaluated their individual TEIS service coordinators, not a group of providers, such as therapists, educators, and medical staff, which was often done in previous studies (Dempsey, Foreman, Sharma, Khanna, & Arora, 2001; Dunst, Trivette, Boyd, & Brookfield, 1994; Judge, 1997; Trivette, Dunst, Hamby, 1996a; Trivette, Dunst, Boyd, & Hamby, 1996). Findings from this study give an accurate picture of the relationship between service coordinators and mothers whose children are receiving early intervention services. Such accuracy in understanding the relationship between specific groups of service providers and parents was not possible in previous studies.

A second strength of the current study was the use of rigorous analytical procedures. For various reasons, family-centered practice and empowerment instruments were not factor analyzed in previous studies of children receiving early intervention services. When researchers did present factors in their analyses, they were derived conceptually rather than statistically (Dunst et al., 1992; Trivette et al., 1996). The sample size in the present study permitted the use of several types of statistical analyses e.g. descriptive, exploratory and confirmatory factor analyses, correlational analyses, and structural equation modeling. Taken together, these analyses contributed to a more believable demonstration of the multi-dimensionality of family-centered practices and maternal empowerment as well as the positive relationship between them. Factor analyses in this study more accurately describe the dimensions of family-centered practices and empowerment. The preciousness of the factors help to conceptualize what constitutes these foundational constructs of the early intervention field. Most importantly, structural equation modeling findings contribute to identifying the specific relationships between family-centered practices and empowerment.

Finally, results from this project have practical implications for early intervention practitioners. TEIS administrators can use the findings to demonstrate that service coordinators are, in fact, using family-centered practices and that these practices empower mothers. These findings can be related directly to the mandate from IDEA to enhance the capacity of families to meet the special needs of their infants and toddlers with disabilities. They also can be used to enhance the morale of TEIS service coordinators and inform in-service programs that are designed to teach service coordinators how to relate effectively to parents. Suggestions for how the findings can be applied are presented under the Implications for Future Practice.

Limitations of the Study

The study has at least four limitations: (a) cross-sectional design, (b) single source reporting, (c) service coordinators were not equally represented in the sample, and (d) the lack of comparable psychometric analyses for the FamPRS. First, the design was cross-sectional in nature. Cross-sectional data provide only a snapshot of maternal perceptions regarding family-centered practices and empowerment. While the findings may be accurate, they are bound by time and limited to this particular group of mothers.

Second, findings are based solely on maternal reports. This single perspective, while informative, may not represent in any comprehensive way the relationship between family-centered practices and empowerment. In addition, participating families received services through TEIS. Thus, maternal responses may have been biased because mothers felt obligated to provide positive ratings and/or may have feared interruption or lose services if they rated their service coordinators negatively. There could be more general response bias in that mothers would tend to consistently rate all positive items high and negative items low. Mothers did rate service coordinators very high on family-centered practices with little variability in the scores.

Third, service coordinators were not equally represented in the sample. Not every mother that agreed to participate in the study returned her questionnaire. Therefore, some service coordinators were rated more often by a group of mothers than others. Further analysis of mothers' responses to their individual service coordinators will have to be conducted to determine if there is a bias.

Finally, the FamPRS has not been used in other published studies. While reliable factors were derived, additional research will need to be done to establish the stability of the factor structure. In the original effort to develop and evaluate the FamPRS, 322 parents completed the questionnaire and of that sample, 87% were mothers (Murphy et al., 1995). While the sample size is somewhat similar to the one used in the present study, a factor analysis was conducted only on *importance* items, not the *performance* items. Thus, a comparison of the present findings with results from the original study is not possible.

Despite these limitations, the study does provide a solid foundation that helps to clarify conceptual understanding of the relationship between family-centered practices and empowerment and also contribute to the small but growing body of research that relates to these concepts.

Implications for Research and Practice

Research

One important area that needs to be investigated is the contribution that demographic factors make to the relationship between family-centered practices and maternal empowerment outcomes. For example, demographic variables, such as race, length of time service coordinators and parents have worked together, the amount of contact between service coordinators and parents as well as the size of the service coordinators' caseload may have a profound effect on the practices/

empowerment relationship. A related area is the potential mediating effects of variables such as social-emotional support, family stress, and family functioning. Any one or all of these variables might strengthen or weaken the practice/empowerment relationship.

In light of the Dunst and Bruder (2006) article, future research should focus on family-centered practices and the TEIS model of service coordination. Dunst and Bruder concluded that the model of designated service coordination, which is the one used by TEIS, is not as family-centered compared to other models. TEIS service coordinators have always worked with parents independent from other types of service provision. This *dedicated model* of service coordination was established in part to ensure that TEIS service coordinators would be protected from conflicts of interest that surely would arise if they were employed by a service agency. Because TEIS service coordinators work for the state and not an early intervention agency, they can offer parents choices regarding services without thought to financial gain or loss. In the *intra-agency model,* coordinators provide not only service coordination but also are employed by an agency that provides of early intervention services. In order for TEIS to exemplify this model, it would have to employ therapists to provide speech, physical, and occupational therapies, in addition to service coordinators. Service coordinators would not provide early intervention services, but would work closely with those who did. In a *blended* model “the service coordinator provides both service and coordination and early intervention services" (Dunst & Bruder, 2006, p. 156). All three of these models are used by states' early intervention agencies, but none is used by a majority.

After comparing the three models on several measures of family-centered practices, Dunst and Bruder (2006) reported that the *dedicated* model did not compare favorably with the other two models. For example, parents reported fewer contacts with *dedicated* service coordinators than those who were associated with *blended* or *intra-agency* models. Dunst and Bruder believed that lack of contact was due to the complexity of the interactions that must take place among parents, service coordinators, and providers. They go on to say, "this practice might require the need to integrate activities among five, six, or more systems. Both common sense and empirical evidence tells us that this cannot work effectively or efficiently" (p. 162). Findings from the present study do not support their conclusions and suggest that the number of contacts per se may not be a very good predictor of the *family-centeredness* of designated service delivery systems. In spite of TEIS implementing a dedicated model of service coordination, mothers reported that their service coordinators consistently used family-centered practices that have been identified as best practices by experts in the field of early intervention. This finding does not mean, however, that children and families *benefited* from early intervention services that were arranged in consultation with TEIS service coordinators. It does seem unlikely, though, that mothers would assign such consistently positive ratings on the FamPRS to their service coordinators and also feel that early intervention services arranged by them were not meeting child and family needs. Future research should begin with examining the relationship of family-centered practices to the size of service coordinators' caseloads and the amount of contact between service coordinators and mothers. This research could shed new light on Dunst and Bruder's findings.

Future research also should include child outcome data to determine if there is a relation between children's developmental outcomes and parental empowerment. Throughout the literature, measurement of child outcomes is lacking. In an effort to help States measure children's developmental progress, the Office of Special Education Programs (OSEP) in October 2003, made a five-year commitment to fund the Early Childhood Outcomes Center (ECO; http://www.fpg.unc.edu/~eco/index.cfm). The ECO's goals are to promote the development and implementation of child and family outcome measures for infants, toddlers, and preschoolers with disabilities. These measures can be used in local, state, and national accountability systems. To fulfill these goals, the staff of the ECO engages in three types of activities. First, they collaborate with stakeholders and other groups concerned with outcome measurement. Second, they research issues related to the development and implementation of outcome measures. Finally, they provide technical assistance to support states in developing and implementing outcome measurement systems. The ECO Center measures the success of these activities through achievement of two outcomes: (a) development of data on outcomes for young children with disabilities that can be aggregated at the national level and (b) regular use of outcome data for documenting program effects and improving programs at the local and state levels. Currently, TEIS is working with the ECO to develop and implement a family and child outcomes data collection system.

The ECO outlines three specific desired child outcomes: (a) children have positive social relationships, (b) children acquire and use knowledge and skills, and (c) children take appropriate action to meet their needs. A developmental assessment instrument, such as the Battelle Developmental Inventory, could measure these outcomes. Children's developmental progress would be quantified by comparing the assessment scores when the children were deemed eligible for services, both at their annual Individualized Family Service Plan meeting, and upon exit from the TEIS program. By charting children's progress in this way, relationships between family-centered practices, empowerment, and important child outcomes could be examined and hopefully demonstrate that both parents *and* children benefit from the family-centered approach to early intervention.

Another direction for future research might be to conduct a panel study (Babbie, 1995). When applying this type of study to TEIS families and children, data would be collected every year from families on their perception of family-centered practices and empowerment as well as child outcomes. The data then could be subjected to a longitudinal analysis to assess how families are being empowered over time and children's developmental progress. In addition, the sample of participants could be compared from year to year to measure the reliability and validity of the FamPRS and FES over time and across groups.

Practice

By being as specific as possible about family-centered practices that empower parents, pre- and in-service training programs can include very detailed descriptions of how service coordinators should work with families. TEIS currently uses a new set of DVD *modules* to train service coordinators. Nearly all of the important practices that emerged from the present study are included in the training program, with the exception of system advocacy skills. This is an area that DOE personnel may want to examine and consider for inclusion in the training program when it is updated. However, it will be important to determine first whether an emphasis on advocacy skills is developmentally appropriate for parents of young children with disabilities.

REFERENCES

Able-Boone, H., Sandal, S., Loughry, A., & Frederick, L. (1990). An informed, family-centered approach to public law 99-457: Parental views. *Topics in Early Childhood Special Education, 10*(1), 100-111.

Affleck, G., Tennen, H., & Rowe, J. (1991). Infants in crisis: How parents cope with newborn intensive care and its aftermath. New York: Springer-Verlag.

Allen, R. & Petr, C. (1995). *Family-centered service delivery: A cross-disciplinary literature review and conceptualization.* Lawrence, KS: University of Kansas, Beach Center on Families and Disabilities.

Allen, R. & Petr, C. (1998). Rethinking family-centered practice. *American Journal of Orthopsychiatry, 68* (1), 4-15.

Arbuckle, J. (2003). *Amos 5.0 update to the Amos user's guide.* Chicago: Stillwaters.

Babbie, E. (1995). *The practice of social research* (7th ed). Belmont, CA: Wadsworth

Bailey, D., Buysse, V., Edmondson, R., & Smith, T. (1992). Creating family-centered services in early intervention: Perceptions of professionals in four states. *Exceptional Children, 58*(4), 298-309.

Bailey, D., Buysse, V., Smith-Bonahue, T., & Elam J. (1992). The effects and perceptions of family involvement in program decisions about family-centered practices. *Evaluation and Program Planning, 15,* 23-32.

Balcazar, R., Seekins, T., Fawcett, S., & Hopkins, B. (1990). Empowering people with physical disabilities through advocacy skills training, *American Journal of Community Psychology, 18,* 281-296.

Belasco, J. (1990). *Teaching the elephant to dance: Empowering change in your organization.* New York: Crown.

Bennett, T., Nelson, D., Lingerfelt, B., & Devenport-Ersoff, C. (1992). Family-centered service coordination. In T. Bennett, D. Nelson, and B. Lingerfelt (Eds.). *Facilitating family-centered training in early intervention.* (pp. 143-171). Tucson, AR: Communication Skill Builders.

Birt, C. (1956). Family-Centered Project of St. Paul. *Social Work, 1,* 41-47.

Bosch, L. (1996). Needs of parents of young children with developmental delay: Implications for social work practice. *The Journal of Contemporary Human Services. 65,* 447-487.

Briar, K. (1991) Promoting new partnerships. In A. L. Salle & J. C. Lloyds (Eds.), *Family preservation: Papers from the Institute for Social Work Educators, 1990.* (pp. 70-78). Riverdale, IL: National Association for Family-Based Services.

Brickman, P., Kidder, L., Coates, D., Rabinowitz, V., Cohn, E., & Karuza, J. (1983). The dilemmas of helping: Making aid fair and effective. In J. Fisher, A. Nadler, & B. DePaulo (Eds.), *New directions in helping; Vol. 1. Recipient actions to aid* (pp. 18-51). New York: Academic.

Bronfenbrenner, U. (1974). Is early intervention effective? *Teachers College Record, 76* (2), 279-303.

Brown, W., Pearl, L., & Carrasco, N. (1991). Evolving models of family-centered services in neonatal intensive care. *Children’s Health Care, 20*(1), 50-55.

Byrne, B. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming.* Mahwah, NJ: Lawrence Erlbaum.

Dempsey, I. (1995). The Enabling Practices Scale: The development of an assessment instrument for disability services. *Australia and New Zealand Journal of Developmental Disabilities, 20,* 67-73.

Dempsey, I. & Dunst, C., (2004). Helpgiving styles and parent empowerment in families with a young child with a disability. *Journal of Intellectual & Developmental Disability, 29*(1), 40-51.

Dempsey, I., & Foreman, P. (1997). Toward a clarification of empowerment as an outcome of disability service provision. *International Journal of Disability, Development and Education, 44,* 287-303.

Dempsey, I., Foreman, P., Sharma, N., Khanna, D., & Arora, P. (2001). Correlates of parental empowerment in families with a member with a disability in Australia and India. *Developmental Disabilities Bullentin, 29*(2), 113-131.

Dunst, C. (1985). Rethinking early intervention. *Ananlysis and Intervention in Development Disabilities, 5,* 165-201.

Dunst, C. (1995). *Key characteristics and features of community-based family support programs.* Chicago: Family Resource Coalition.

Dunst, C. (1997). Conceptual and empirical foundations of family-centered practice. In R. Illback, C. Cobb, & H. Joseph (Eds.), *Integrated services for children and families: Opportunities for psychological practice.* Washington, D.C. American Psychological Association.

Dunst, C. (1999). Placing parent education in conceptual and empirical context. *Topics in Early Childhood Special Education, 19,* 141-147.

Dunst, C. (2002). Family-centered practices: Birth through high school. *The Journal of Special Education, 36,* 3, 139-147.

Dunst, C. & Bruder, M. (2006). Early intervention service coordination models and service coordinator practices. *Journal of Early Intervention, 28*(3), 155-165.

Dunst, C. & Paget, K. (1991). Parent-professional partnerships and family empowerment. In M. Fine (Ed.), *Collaboration with parents of exceptional children* (pp. 25-44). Brandon, VT: Clinical Psychology.

Dunst, C. & Trivette, C. (1987). Enabling and empowering families: Conceptual and intervention issues. *School Psychology Review, 16*(4), 443-456.

Dunst, C. & Trivette, C. (1988). A family systems model of early intervention with handicapped and developmentally at-risk children. In D. Powell (Ed.), *Parent education as early childhood intervention: Emerging* *direction in theory, research, and practice, (pp. 131-180).* Norwood, NJ: Ablex

Dunst, C., & Trivette, C. (1989). An enablement and empowerment perspective of case management. *Topics in Early Childhood Special Education, 8*(4), 87-102.

Dunst, C. & Trivette, C. (1996). Empowerment, effective helpgiving practices, and family-centered care. *Pediatric Nursing, 22,* 334-337.

Dunst, C., Trivette, C., & Deal, A. (1988). *Enabling and empowering families: Principles and guidelines for practice.* Cambridge, MA: Brookline.

Dunst, C., Trivette, C., & Hamby, D. (1996). Measuring the helpgiving practices of human services program practitioners. *Human Relations, 49*(6), 815-835.

Dunst, C., Trivette, C., & Johanson, C. (1994). Parent-professional collaboration and partnerships. In C. Dunst, C. Trivette, & A. Deal (Eds.), *Supporting & strengthening families: Vol. 1: Methods, strategies, and practices.* Cambridge, MA: Brookline Books.

Dunst, C., Trivette, C., & LaPointe, N. (1992). Toward clarification of the meaning and key elements of empowerment. *Family Science Review, 5/6,* 111-130.

Dunst, C., Trivette, C., & LaPointe, N. (1994). Meaning and key characteristics of empowerment. In C. Dunst, C. Trivette, & A. Deal (Eds.), *Supporting*

& strengthening families: Vol. 1: Methods, strategies, and practices. Cambridge, MA: Brookline Books.

Dunst, C., Trivette, C., & Snyder, D. (2000). Family-professional partnerships: A behavioral science perspective. In M. Fine & R. Simpson (Eds.). *Collaboration with parents and families of children and youth with exceptionalities, 2nd ed. (p. 27-48).* Austin, TX: Pro-ed.

Dunst, C., Trivette, C., & Thompson, R. (1990). Supporting and strengthening family functioning: Toward a congruence between principles and practice. *Prevention in Human Services, 9* (1), 19-43.

Dunst, C., Johanson, C., Trivette, C., & Hamby, D. (1991). Family-oriented early intervention policies and practices: Family-centered or not? *Exceptional Children, 58,* 2, 115-126.

Dunst, C., Boyd, K., Trivette, C., & Hamby, D. (2002). Family-oriented program models and professional helpgiving practices. *Family Relations, 51,* 221-229.

Dunst, C., Trivette, C., Boyd, K., & Brookfield, J. (1994). Helpgiving practices and the self-efficacy appraisals of parents. In C. Dunst, C. Trivette, & A. Deal (Eds.)¸*Supporting and strengthening families: Vol. 1. Methods, strategies and practices* (pp. 212-220). Cambridge, MA: Brookline.

Dunst, C. Trivette, C., Davis, M., & Cornwell, J. (1994). Characteristics of effective help-giving practices. *Childrens Health Care, 17*(2), 71-81.

Dunst, D., Trivette, C., Gordon, N., & Pletcher, L. (1989). Building and mobilizing informal family support networks. In G. S. Singer & L. K. Irvin (Eds.), *Support for caregiving families: Enabling positive adaptation to disability* (pp.121-142). Baltimore: Paul H. Brooks.

Dunst, C., Johanson, C., Rounds, T., Trivette, C., & Hamby, D. (1992). Characteristics of parent-professional partnerships. In S. Christenson & J. Conoley (Eds.), *Home-school collaboration* (pp. 157-174). Washington, DC: National Association of School Psychologists.

Duwa, D., Wells, C., & Lalinde, P. (1993). Creating family-centered programs and policies. In D. Bryant & M. Graham (Eds.), *Implementing early intervention.* (p. 92-123). New York: Guildford.

Early Childhood Outcomes Center (2006). http://www.fpg.unc.edu/~eco/index.cfm.

Higgins, W. (2005). *Father perspectives on the relationship between family-centered practices and empowerment outcomes in early intervention.* Unpublished doctoral dissertation, University of Tennessee, Knoxville.

Hobbs, N., Dokeck, P., Hoover-Dempsey, K., Moroney, R., Shayne, M., & Weeks, K. (1984). *Strengthening Families.* San Francisco: Jossey Bass.

Hollingshead, A. (1975). Four factor index of social status. Unpublished paper. Department of Sociology, Yale University, New Haven, CT.

Individuals with Disabilities Education Act of 1986, PL 99-457, 20 U.S.C. § 1400 et seq.

Judge, S. (1997). Parental perceptions of help-giving practices and control appraisals in early intervention programs. *Topics in Early Childhood Special Education, 17,* 4, 457-476.

Koren, P., DeChillo, N., & Friesen, B. (1992). Measuring empowerment in families whose children have emotional disabilities: A brief questionnaire. *Rehabilitation Psychology, 37,* 305-321.

Langley, P. (1991). The coming of age of family policy. *Families in Society,* 72, 116-120.

LaPointe, N., Trivette, C., & Dunst, C. (1990). *Parent empowerment survey.* Unpublished scale, Center for Family Studies, Western Carolina Center, Morganton, NC.

Leviton, A., Mueller, M., & Kauffman, C. (1992). The family-centered consultation model: Practical application for professionals. *Infants and Young Children, 4*(3), 1-8.

McWilliam, R., Harbin, G., Porter, P., Vandiviere, P., Mittal, M., & Munn, D. (1995). *An evaluation of family-centered coordinated Part H services in North Carolina: Part 1. Family-centered service provision.* Chapel Hill: University of North Carolina, Frank Porter Graham Child Development Center.

McWilliam, R., Lang, L., Vandiviere, P., Angell, R., Collins, L., Underdown, G. (1995). Satisfaction and struggles: Family perceptions of early intervention services. *Journal of Early Intervention, 19*(1). 43-60.

Murphy, D., Lee, I., Turnbull, A., & Turbiville, V. (1995). The Family-Centered Program Rating Scale: An instrument for program evaluation and change. *Journal of Early Intervention, 19*(1), 24-42.

Nordquist, V., & Richey, D. (June, 2002). Pathways to family empowerment: An evaluation of Tennessee's Early Intervention System and the impact of family-centered service delivery. (Available from Dr. V. M. Nordquist, Department of Child and Family Studies, The University of Tennessee, 1215 West Cumberland Avenue, Jessie Harris Building, Room 115, Knoxville, TN, 37996-1912).

Rappaport, J. (1987). Terms of empowerment/exemplars of prevention: Toward a theory for community psychology. *American Journal of Community Psychology, 15*(2), 121-128.

Roth, P. (1994). Missing data: A conceptual review for applied psychologists. *Personnel Psychology*, 47, 537-560.

Saleeby, E. (Ed.). (1992). *The strengths perspective in social work practice.* New York: Longman.

Scherz, F. (1953). What is family-centered casework? *Social Casework, 34*, 343-349.

Shelton, T., & Stepanek, J. (1994). *Family-centered care for children needing specialized health and developmental services* (2nd ed.). Bethesda, MD: Association for the Care of Childrens Health.

Simeonsson, R., & Bailey, D. (1991). Evaluating the effects of family-focused intervention. In D. Bailey & R. Simeonsson, R. (Eds.), *Early intervention in transition: Current perspectives on programs for handicapped children* (pp. 91-108). New York: Praeger.

Singh, N. (1995). In search of unity: Some thoughts on family-professoinal relationships in service delivery systems. *Journal of Child and Family Studies, 4,* 3-18.

Singh, N., Curtis, W., Ellis, C., Nicholson, M., Villani, T., & Wechsler, H. (1995). Psychometric analysis of the Family Empowerment Scale. *Journal of Emotional and Behavioral Disorders, 3*(2), 85-91.

Skinner, E. (1995). *Perceived control, motivation, and coping.* Thousand Oaks, CA: Sage.

Solomon, B. (1985). How do really empower families? New strategies for social work practitioners. *Family Resource Coalition Report, 3,* 2-3.

Thompson, L., Lobb, C., Elling, R., Herman, S., Jurkiewicz, T., & Hulleza, C. (1997). Pathways to empowerment: Effects of family-centered delivery of early intervention services. *Exceptional Children, 64* (1), 99-113.

Timeberlake, B. (1975). The New Life Center. *American Journal of Nursing, 75,* 1456-1461.

Trivette, C & Dunst, C., (1990). *Professional helpers characteristics scale.* Unpublished scale, Center for Family Studies, Western Carolina Center, Morganton, NC.

Trivette, C., Dunst, C., & Hamby, D., (1996a). Characteristics and consequences of help-giving practices in contrasting human services programs. *American Journal of Community Psychology, 23*(2), 273-293.

Trivette, C., Dunst, C., & Hamby, D. (1996b). Factors associated with perceived control appraisals in a family-centered early intervention program. *Journal of Early Intervention, 20*(2), 165-178.

Trivette, C. Dunst, C., Boyd, K., Hamby, D. (1996). Family–oriented program models, helpgiving practices, and parent control appraisals. *Exceptional Children,* *62,* 237-248.

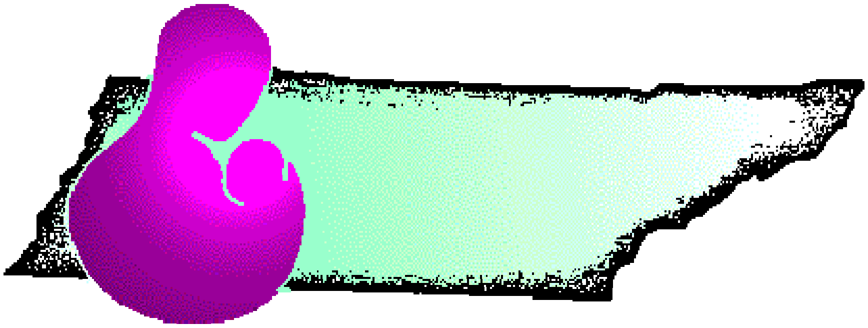
Trivette, C., Dunst, C., Hamby, D., & LaPointe, N. (1996). Key elements of empowerment and their implications for early intervention. *Infant-Toddler Intervention, The Transdiciplinary Journal, 6*(1), 59-73.

Vogt, P. (1993).*Dictionary of statistics and methodology.* Newbury Park, CA: Sage.

Wagner, M. (1993). Revisiting the issues: School-linked services. *The Future of Children, 3* (3), 201-204.

APPENDIX

Appendx A



Tennessee’s Early Intervention System

Program Evaluation Questionnaire

TO BE COMPLETED BY MOTHERS

Conducted by the

Department of Child and Family Studies
The University of Tennessee, Knoxville

and

Department of Curriculum and Instruction
Tennessee Technological University, Cookeville

Instructions for Completing the Questionnaire

This questionnaire is being used to evaluate the family centered service coordination practices of Tennessee's Early Intervention System (TEIS). Family-centered service delivery is rooted in the belief that the best way to meet children's special needs is to support and build upon the individual strengths of their families. Your family is currently receiving services through the efforts of your TEIS service coordinator. The Department of Education (DOE), which is responsible for overseeing TEIS, has asked an evaluation team comprised of faculty and students at the University of Tennessee and Tennessee Technological University, to determine ways in which TEIS service coordinators are helping families address their children's special needs. This questionnaire was designed by the team so that you and many other parents in Tennessee can express your views about family-centered practices and, in particular, identify ways that your family has been affected by its involvement with TEIS. The information that you and other families provide will be used to make improvements in the TEIS service delivery system and eventually contribute to the development of a more comprehensive and better informed state-wide training program for TEIS service coordinators.

Who and What is Being Evaluated in the Questionnaire?

This is an evaluation of your experiences, as you alone recall them, with your **current TEIS service coordinator**. You may have had other service coordinators but you should respond to items in the questionnaire as they pertain to experiences that you have had with the service coordinator who is assigned to your family. It is important that you do **not** respond to items based on experiences you have had with individual providers (e.g., speech therapists, occupational therapists, physical therapists) or agencies (e.g., rehabilitation centers, hospitals, child care programs) that are not part of TEIS. It may be that you have not been satisfied with some of these providers and/or agencies. You will have an opportunity to address these kinds of concerns toward the end of the questionnaire at places clearly designated for this purpose. Until then please respond to items with only TEIS and you **current** service coordinator in mind. **It also is important for you to know that there are no right or wrong answers; only your family's experiences with your current TEIS coordinator are the focus of this questionnaire.**

This also is an evaluation of your family, but only as you feel as it has been affected by experiences with TEIS. As you proceed through the questionnaire, you will notice that it covers a wide array of areas related to family functioning. Some of these areas may have changed with your association with TEIS; others may not have changed. Some areas will seem to be more directly related to your child's special needs; others will not. Regardless of the area addressed or the content of an individual item, all of the information could have important implications for improving TEIS and helping families meet their goals for children with special needs.

Who Will See the Questionnaire Responses?

This evaluation is being conducted by a small team of faculty and students. Only they will know the names of families that complete the questionnaire. This is necessary because a member of the team may contact you to seek clarification about the responses in your individual questionnaire. It also is necessary because some parents will be invited later to participate in follow-up interviews. No one associated with your TEIS district, the DOE, or anyone else in or outside of TEIS will ever have access to your questionnaire or know how you responded. Your TEIS service coordinator and project coordinator in your district will know however, that you participated in the evaluation. This is because the evaluation team felt it was important that your service coordinator make a personal contact with you, explain the purpose of the evaluation, answer any questions you may have, and make sure you understand that the information you provide will be held in strict confidence by the evaluation team.

Once the evaluation team has received the questionnaires from all of the participants across the state, the responses will be analyzed and findings reported to District Staff, DOE personnel, and at regional and national conferences. Some of the findings also will be published in research journals. At no time will individual participants be identified or findings reported for individual families; only findings based on groups of families will be presented to protect the identity of participants. To help ensure confidentiality, please do not write your name or the names of any family members on this questionnaire. The evaluation team has included your family’s name on a separate list that is kept in a locked cabinet at the University of Tennessee. Your name has been assigned a code, the same one on this questionnaire, so the team will know who you are if it is necessary to contact you.

Do All of the Items Have to be Answered?

The more items that you answer the more the evaluation team will know about TEIS service coordination and how it has affected your family. The large majority of the items are not very personal and you should have no trouble answering them. Some items are more personal however, and it may be that some of them may make you feel uncomfortable. The evaluation team hopes that you will answer these questions too, but if you feel uncomfortable and do not want to answer an item or have other reasons for not answering particular items, please do not respond to them.

Can Items on the Questionnaire be Discussed with a Spouse or Partner?

Please **do not** discuss your responses on the questionnaire with anyone particularly your spouse or partner. Also, please **do not** ask your spouse or partner about his or her responses on the questionnaire. Once you and your spouse or partner have completed both questionnaires and mailed them to the evaluation team, you may discuss any aspect of the questionnaire with your spouse or partner.

Does the Whole Questionnaire Have to be Completed at One Time?

This questionnaire was designed so you can complete it one section at a time if you so desire. It may take you as little as an hour or as long as two hours to complete the questionnaire without taking a break and the evaluation team encourages you to do this if it is convenient for you. However, if it is not convenient you may complete one or more sections as your time permits until you have completed the entire questionnaire. There are clear indicators at the end of each section that will remind you that you can stop and put the questionnaire aside until it is more convenient for you to proceed. The evaluation team does ask you, however, to complete an individual section if at all possible before you put the questionnaire aside.

What Should be Done If a Question or Concern Comes to Mind When Completing the Questionnaire?

If you have a question or concern about the questionnaire that was not addressed during your meeting with a TEIS service coordinator, please contact Dr. Vey M. Nordquist at the Department of Child and Family Studies, University of Tennessee, Knoxville. His phone number is: (865) 974-6269. His email address is: vnordqui@utk.edu. It is always better to be sure you understand what to do before you do it and Dr. Nordquist will try to provide the assistance you need. You may not understand a particular word on the questionnaire, for example, or know the intended meaning of an individual item. Or, you may be concerned that your response to a particular item may not be understood. You are encouraged, therefore, to seek clarification whenever you feel the need. If you have any questions about your rights as a participant in this evaluation, you may contact the Compliance Section of the Office of Research at the University of Tennessee, Knoxville; the phone number is: (865) 974-3466.

What Should be Done with the Questionnaire Once it is Completed?

When you have completed the questionnaire, please insert the questionnaire into the envelope addressed to Dr. Vey M. Nordquist and drop it in the mail. Please make every effort to complete the questionnaire within two (2) weeks after you have received it from your TEIS service coordinator. If the evaluation team has not received your questionnaire within three (3) weeks from the date you received it, a member of the team will contact you to make sure you still intend to complete and mail the questionnaire. After your questionnaire is received, a member of the evaluation team will review it and may contact you if there is reason to believe that you unintentionally skipped an item or section.

Informed Consent

It is important for you to know that your participation is voluntary. You may decide at any time that you want to withdraw from the evaluation. If you do decide to withdraw, you may be certain that none of the services you receive from TEIS or any of the relationships you have established with TEIS personnel will be adversely affected. Only members of the evaluation team will know that you decided to no longer participate. Neither your service coordinator nor any other staff person associated with TEIS will know about your decision. Please understand that completion and return of this questionnaire means that you are giving your informed consent to participate. If you indicate at the end of this questionnaire that you would be willing to participate in a follow-up interview, a member of the evaluation team may contact you sometime in early 2003.

DIRECTIONS: Family-centered care is the basis of TEIS services. The following questions ask how you would rate the services you received. Each statement on this rating scale finishes a sentence that begins with the words at the top of the section. For example, statements in the first section begin with:

IN TENNESSEE'S EARLY INTERVENTION SYSTEM. . .

All statements in the first section finish this sentence. There are four sections; each section has a different beginning phrase. Read each statement and mark it two times in relation to your child with special needs:

FIRST:

The first time indicate how well Tennessee's Early Intervention System (TEIS) is doing on each item. Circle the letters that most closely tell us your opinion about how TEIS is doing.

NA = Not Applicable
P = Poor
OK = Okay
G = Good
E = Excellent

SECOND:

The second time indicate how important the item is to you, personally. Circle the letters that most closely tell us how important this practice is to you.

NI = Not Important
SI = Somewhat Important
I = Important
VI = Very Important

		How well is this done?					How important is this to you?			
		Not Applicable	Poor	Okay	Good	Excellent	Not Important	Somewhat Important	Important	Very Important
A. In Tennessee's Early Intervention System. . .										
1.	meetings with my family are scheduled when and where they are most convenient for us.	**NA**	**P**	**OK**	***G***	***E***	**NI**	**SI**	**I**	***VI***
2.	the information service coordinators give my family helps us make decisions about our child with special needs.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
A. In Tennessee's Early Intervention System. . .										
3.	during the assessment and information gathering stage before the Individualized Family Service Plan (IFSP) meeting, the TEIS evaluation team sought my family's involvement.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
4.	a service coordinator can help my family get services from other agencies and service providers.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
5.	services change quickly when my family's or child's needs change.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
6.	I would rate my family's first IFSP meeting as being.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
7.	services are planned with my family's transportation and scheduling needs in mind.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
8.	a service coordinator can help my family communicate with all the other professionals serving us and our child with special needs.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***

		How well is this done?					How important is this to you?			
		Not Applicable	Poor	Okay	Good	Excellent	Not Important	Somewhat Important	Important	Very Important
9.	the service coordinator makes my family feel comfortable when we have questions or complaints.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
10.	the IFSP is used as a “plan of action” for my child with special needs.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
11.	there is a comfortable way to work out disagreements between families and service coordinators.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
12.	my child with special needs is able to have his or her services provided in surroundings where he or she is most comfortable, such as at home, day care, or relatives’ home.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
B. Tennessee’s Early Intervention System. . .										
13.	helps my family when we want information about basic family needs such as, jobs, money, counseling or housing.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
14.	gives the other children in my family support and information about their brother or sister’s special need.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
15.	gives us information on how to meet other families of children with similar needs.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
16.	offers special times for parents to talk with other parents and with the service providers.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
17.	offers information in a variety of ways (written, videotape, cassette tape, workshop, etc.)	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
18.	helps my family expect good things in the future for ourselves and our child with special needs.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***

	How well is this done?					How important is this to you?			
	Not Applicable	Poor	Okay	Good	Excellent	Not Important	Somewhat Important	Important	Very Important
C. Our Family's TEIS Service Coordinator. . .									
19. is available to go to service provider appointments with my family to help ask questions, sort out information, and decide on services.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
20. helps my family learn how to teach our child with special needs particular skills.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
21. gives information to help my family explain our child's needs to friends and other family members.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
22. helps my family plan for the future.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
C. Our Family's TEIS Service Coordinator. . .									
23. does not ask my family about personal matters unless it is necessary.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
24. respects whatever level of involvement my family chooses in making decisions.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
25. does not rush my family to make changes.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
26. helps my family feel we can make a positive difference in our child's life.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
27. gives my family time to talk about our experiences and things that are important to us.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
28. is honest with my family.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***

		How well is this done?					How important is this to you?			
		Not Applicable	Poor	Okay	Good	Excellent	Not Important	Somewhat Important	Important	Very Important
29.	scheduled our first IFSP meeting in a timely manner.	NA	P	OK	*G*	E	NI	SI	I	***VI***
30.	creates ways for my family to be involved in making decisions about services.	NA	P	OK	*G*	E	NI	SI	I	***VI***
31.	gives my family clear and complete information about our child's special needs.	NA	P	OK	*G*	E	NI	SI	I	***VI***
32.	tells my family what he or she has learned right after our child's evaluation.	NA	P	OK	*G*	E	NI	SI	I	***VI***
33.	does not act rushed or in a hurry when he or she meets with my family or me.	NA	P	OK	*G*	E	NI	SI	I	***VI***
34.	does not ask my family to repeat information that is already in my child's file.	NA	P	OK	*G*	E	NI	SI	I	***VI***
35.	does not try to tell my family what we need or do not need.	NA	P	OK	*G*	E	NI	SI	I	***VI***
C. Our Family's TEIS Service Coordinator. . .										
36.	helps my family feel more confident about working with professionals.	NA	P	OK	*G*	E	NI	SI	I	***VI***
37.	gives clear and complete information about my family's rights.	NA	P	OK	*G*	E	NI	SI	I	***VI***
38.	gives my family clear and complete information about available services.	NA	P	OK	*G*	E	NI	SI	I	***VI***

		How well is this done?					How important is this to you?			
		Not Applicable	Poor	Okay	Good	Excellent	Not Important	Somewhat Important	Important	Very Important
39.	helps my family feel more comfortable when asking for help and support from friends and other family members.	NA	P	OK	G	E	NI	SI	I	VI
40.	regularly asks my family about how well TEIS is doing and what changes we might like to see.	NA	P	OK	G	E	NI	SI	I	VI
41.	offers to visit my family in our home.	NA	P	OK	G	E	NI	SI	I	VI
42.	offers ideas on how my family can have fun with our children.	NA	P	OK	G	E	NI	SI	I	VI
43.	treats my family as the true experts on our child with special needs when planning and providing services.	NA	P	OK	G	E	NI	SI	I	VI
44.	gives my family clear and complete explanations in matters relating to our child with special needs.	NA	P	OK	G	E	NI	SI	I	VI
45.	helps my family learn how we can help our child with special needs feel good about him or herself.	NA	P	OK	G	E	NI	SI	I	VI
46.	does not overwhelm us with too much information.	NA	P	OK	G	E	NI	SI	I	VI
47.	gets to know my family.	NA	P	OK	G	E	NI	SI	I	VI
48.	lets us get to know him or her.	NA	P	OK	G	E	NI	SI	I	VI

C. Our Family’s TEIS Service Coordinator. . .

		How well is this done?					How important is this to you?			
		Not Applicable	Poor	Okay	Good	Excellent	Not Important	Somewhat Important	Important	Very Important
49.	helps my family use problem-solving skills for making decisions about ourselves and our child with special needs.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
50.	gives information that helps my family with our child's everyday needs, (feeding, clothing, playing, health care, safety, friendship, etc.)	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
51.	helps my family see what we are doing well.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
52.	respects differences among our children, other families, and our family's way of life.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
53.	asks my family's opinions and includes us in the process of evaluating our child with special needs.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
54.	is friendly and easy to talk to.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
55.	helps my family feel more confident that we are experts on our child with special needs.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
56.	enjoys working with my family and our child with special needs.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
57.	helps my family to have a normal life.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
58.	explains how information about my child with special needs and family will be used.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***
59.	gives my family information about how children usually grow and develop.	**NA**	**P**	**OK**	***G***	**E**	**NI**	**SI**	**I**	***VI***

	How well is this done?					How important is this to you?			
	Not Applicable	Poor	Okay	Good	Excellent	Not Important	Somewhat Important	Important	Very Important
60. helps my family see the good things we are doing to meet our child's needs.	NA	P	OK	*G*	E	NI	SI	I	*VI*
C. Our Family's TEIS Service Coordinator. . .									
61. considers my family's strengths and needs when planning ways to meet our child's needs.	NA	P	OK	*G*	E	NI	SI	I	*VI*
62. helps my family find services for my child with special needs that enables him or her to function comfortably in his or her natural environment, such as our home, day care, or neighborhood.	NA	P	OK	*G*	E	NI	SI	I	*VI*
D. My Family. . .									
63. is included in all meetings about us and our child with special needs.	NA	P	OK	*G*	E	NI	SI	I	*VI*
64. receives complete copies of all reports about us and our child with special needs.	NA	P	OK	*G*	E	NI	SI	I	*VI*
65. is an important part of the team when our IFSP is developed, reviewed or changed.	NA	P	OK	*G*	E	NI	SI	I	*VI*

You may take a break now or proceed to the next section.

DIRECTIONS: Building upon families' strengths and abilities is a goal of TEIS. Please respond to the following questions by circling the number that most closely matches how you feel about your child with special needs.

How closely do these statements match how you feel?

Not True at All = 1
Occasionally True = 2
Somewhat True = 3
True = 4
Very True = 5

		Not True at All	Occasionally True	Somewhat True	True	Very True
1.	I feel that I have the right to approve all services my child receives.	**1**	**2**	**3**	**4**	**5**
2.	When problems arise with my child, I handle them pretty well.	**1**	**2**	**3**	**4**	**5**
3.	I feel I can have a part in improving services for children in my community.	**1**	**2**	**3**	**4**	**5**
4.	I feel confident in my ability to help my child grow and develop.	**1**	**2**	**3**	**4**	**5**
5.	I know the steps to take when I am concerned my child is receiving poor services.	**1**	**2**	**3**	**4**	**5**
6.	I make sure that professionals understand my opinions about what services my child needs.	**1**	**2**	**3**	**4**	**5**
7.	I know what to do when problems arise with my child.	**1**	**2**	**3**	**4**	**5**
8.	I get in touch with my legislators when important bills or issues concerning children are pending.	**1**	**2**	**3**	**4**	**5**
9.	I feel my family life is under control.	**1**	**2**	**3**	**4**	**5**
10.	I understand how the service system for children is organized.	**1**	**2**	**3**	**4**	**5**

		Not True at All	Occasionally True	Somewhat True	True	Very True
11.	I am able to make good decisions about what services my child needs.	**1**	**2**	**3**	**4**	**5**
12.	I am able to work with agencies and professionals to decide what services my child needs.	**1**	**2**	**3**	**4**	**5**
13.	I make sure I stay in regular contact with professionals who are providing services to my child.	**1**	**2**	**3**	**4**	**5**
14.	I have ideas about the ideal service system for children.	**1**	**2**	**3**	**4**	**5**
15.	I help other families get the services they need.	**1**	**2**	**3**	**4**	**5**
16.	I am able to get information to help me better understand my child.	**1**	**2**	**3**	**4**	**5**
17.	I believe that other parents and I can have an influence on services for children.	**1**	**2**	**3**	**4**	**5**
18.	My opinion is just as important as professionals' opinions in deciding what services my child needs.	**1**	**2**	**3**	**4**	**5**
19.	I tell professionals what I think about services being provided to my child.	**1**	**2**	**3**	**4**	**5**
20.	I tell people in agencies and government how services for children can be improved.	**1**	**2**	**3**	**4**	**5**
21.	I believe I can solve problems with my child when they happen.	**1**	**2**	**3**	**4**	**5**
22.	I know how to get agency administrators or legislators to listen to me.	**1**	**2**	**3**	**4**	**5**
23.	I know what services my child needs.	**1**	**2**	**3**	**4**	**5**
24.	I know the rights of parents and children under the special education laws.	**1**	**2**	**3**	**4**	**5**
25.	I feel that my knowledge and experience as a parent can be used to improve services for children and families.	**1**	**2**	**3**	**4**	**5**
26.	When I need help with problems in my family, I am able to ask for help from others.	**1**	**2**	**3**	**4**	**5**
27.	I make efforts to learn new ways to help my child grow and develop.	**1**	**2**	**3**	**4**	**5**

		Not True at All	Occasionally True	Somewhat True	True	Very True
28.	When necessary, I take the initiative in looking for services for my child and family.	**1**	**2**	**3**	**4**	**5**
29.	When dealing with my child, I focus on the good things as well as the problems.	**1**	**2**	**3**	**4**	**5**
30.	I have a good understanding of the service system that my child is involved in.	**1**	**2**	**3**	**4**	**5**
31.	When faced with a problem involving my child, I decide what to do and then do it.	**1**	**2**	**3**	**4**	**5**
32.	Professionals should ask me what services I want for my child.	**1**	**2**	**3**	**4**	**5**
33.	I have a good understanding of my child's special needs.	**1**	**2**	**3**	**4**	**5**
34.	I feel I am a good parent.	**1**	**2**	**3**	**4**	**5**

You may take a break now or proceed to the next section

VITA

Fred W. Coulter was born September 7, 1954 in Portsmouth, Virginia. He graduated from Craddock High School with honors in 1972. He graduated from the University of Rhode Island with a B.A. in Psychology in 1976. Fred went on to earn a Master of Divinity at Andover Newton Theological School, Newton, Massachusetts in 1980. In the same year, he was ordained a minister of the United Church of Christ (UCC) at Kingston Congregational Church (UCC), Kingston, Rhode Island. In the fall of 1980, he began serving as the Associate Minister of the Congregational Church of Greens Farms (UCC) in Westport, Connecticut. In March 1985, Fred was called to be the minister of the First Congregational Church (UCC) of Ledyard, Connecticut.

He moved to Knoxville, Tennessee in November 1994 and enrolled as a doctoral student in the Department of Child and Family Studies (CFS) at the University of Tennessee in the fall of 1995. He became involved in student organizations and served terms as the President and Treasurer of the Graduate Student Organization of CFS. In addition, he served on the Graduate Student Association for the university as a representative from the College of Human Ecology and later as the Vice-President. He earned several awards as a graduate student from CFS. In 1998 he was awarded the Outstanding Student Organization Leader. Also, in 2000 and 2001 he was awarded the Outstanding Student Service Award. In 1999 he was given the

Andersen Consulting Peer Achievement Awards for Leadership in Student Government.

Since the fall of 2002, Fred has been an Assistant Professor in the Education Division of Defiance College, Defiance, Ohio. In addition to his academic duties he has been a member of the Pathways to Family Empowerment Project at the University of Tennessee working closely with the Co-PI, Dr. Vey M Nordquist.