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FATHER PERSPECTIVES ON THE RELATIONSHIP BETWEEN FAMILY-CENTERED PRACTICES AND EMPOWERMENT OUTCOMES IN EARLY INTERVENTION

A Dissertation

Presented for the

Doctor of Philosophy

Degree

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William Bryan Higgins

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DEDICATION

To my loving wife, **Lisa Dawn Higgins**. You have been my strength and companion through our four years together. You have my heart and I look forward to sharing the rest of my life with you, sweetheart.

To my closest friends **Brooks** and **Lesley Brendle** and to the memory of their daughter **Christina Marie** (August 4, 2002 – July 14, 2005). You have been my comfort and rock in times of need and have celebrated with me in times of joy. I treasure our friendship and look forward to the day we will again be together with a whole and healthy Christina in our Father's house.

To my parents **Bill** and **Jane Higgins**. Your faith, belief, and lives have taught me more than anyone else about life and what it means to be both a Christian and an individual. Your constant support has been a true inspiration for me to reach for and achieve my goals.

I lovingly dedicate this manuscript to you.

God Bless You All!

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ABSTRACT

The purpose of the present investigation was to explore fathers' perceptions of family-centered practices in early intervention services and to examine how these practices influence fathers' feelings of empowerment. Literature reviewed examined the family-centered approach to service delivery and empowerment outcomes, especially in early intervention programs. In addition, a brief discussion of fatherhood research was presented in an effort to inform potential hypotheses and discussion.

The current study was conducted as part of the Pathways to Family Empowerment Project whose purpose is to evaluate the family-centered model of service delivery in Tennessee's Early Intervention System (TEIS). The data collected were responses of fathers to the Family-Centered Program Rating Scale (FamPRS) and the Family Empowerment Scale (FES), which were two of several measures included in questionnaires completed by mothers and fathers. These instruments were factor analyzed producing correlated dimensions of both family-centered practices and family empowerment. The relationship between family-centered practices and empowerment outcomes was examined using both correlational analyses and structural equation modeling techniques.

Results indicated that fathers perceive family-centered practices as having multiple dimensions: *respectful communication, strengths-focused support, sensitive service delivery,* and *collaboration*, and they felt that TEIS service coordinators performed each of these types of family-centered practices very well. The findings also suggested that fathers perceived empowerment as multi-faceted: *competence, system*

advocacy, and *initiative.* Fathers reported they generally felt that they were competent in their ability to parent their children with special needs and in their ability to obtain services for the children. However, fathers reported that they rarely advocated for their children at either system or government levels. Finally, the results suggested that there was a significant and positive relationship between family-centered practices and empowerment, but the dimensions of family-centered practices were differentially related to the dimensions of empowerment.

The results are discussed in comparison with the findings of previous studies that generally had samples consisting largely of mothers. In addition, possible explanations of the differential relationships are discussed. Finally, future directions for research in early intervention especially with fathers and implications for TEIS and other early intervention service system are presented.

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CHAPTER 1

INTRODUCTION

The Individuals with Disabilities Education Act (IDEA; PL 101-476) was enacted by the Congress in 1986 and continues to guide policy and program activity concerning the education of children with disabilities in the United States. Initially approved as amendments to the 1975 *Education for All Handicapped Children Act* (Public Law 94-142), IDEA has been reauthorized twice, once in 1997 (PL 105-17), and most recently in December, 2004. IDEA (2004; PL 108-446) is divided into four parts that specify unique aspects of the law. Part A – General Provisions, details the purpose and overall scope of the law. The largest part of the legislation, Part B – Assistance for Education for All Children with Disabilities, addresses free and appropriate education for children with special needs ages 3 to 21 years. Part C – Infants and Toddlers with Disabilities, describes provisions for extending services to children under the age of 3 years who are at-risk for developmental delays or have identifiable disabilities. Part D – National Activities to Improve Education of Children with Disabilities, describes national initiatives for providing education to children with special needs. Overall, these four parts comprise current legislation guiding special education policy and practices in the U.S.

Part C of IDEA recognizes the importance of intervention during the first three years of a child's life. It describes how states should implement programs and services for children who are at-risk or are diagnosed with a developmental disability. These issues and the corresponding policy are delineated in IDEA (2004), Part C, Section 631 –

Findings and Policies:

(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 to live independently 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.

Early Intervention in Tennessee

In 1987 the state of Tennessee elected to participate in Part C of IDEA and instituted Tennessee's Early Intervention System (TEIS), a subdivision of the State Department of Education, to comply with the requirements. Over the next five years, TEIS personnel identified, developed, and field-tested fourteen different components required by federal guidelines, including developing a definition of developmental delay, creating Individual Family Service Plan (IFSP) documents, and establishing a family-

centered model for coordinating services for children with disabilities and their families. These components then were used to implement Part C services in Tennessee. For example, the definition of developmental delay was used to generate eligibility requirements for children. These requirements state that a child must have at least a 40% delay in one domain (e.g., fine motor skills) or a 25% delay in two domains concurrently (e.g., speech and language, and self-help skills) in order to receive services. Children also are eligible if they have received a diagnosis such as Down syndrome or spina bifida from a medical professional.

Using these eligibility requirements, TEIS implemented a system of services for the families of infants and toddlers with disabilities in 1993. In order to effectively coordinate services throughout the state, TEIS was divided into nine geographic districts. Eight of the nine districts were located at university sites; the ninth site was located at an area hospital. TEIS districts and corresponding counties are depicted in Figure 1. Currently, TEIS employs over 100 service coordinators that serve approximately 5,000 families of children with disabilities each year.

The model of service coordination used by TEIS is "family-centered" and recognizes the importance of the family in the life of the child. Family-centered approaches to service delivery are based largely on Bronfenbrenner's ecological perspective, which suggests that interactive processes between an individual and people and between an individual and his/her environmental context have a significant impact on development. Furthermore, proximal processes that occur with more frequency and in a more intimate environment are believed to have more significant and enduring influence on the individual then influences that originate in more distal environments and processes

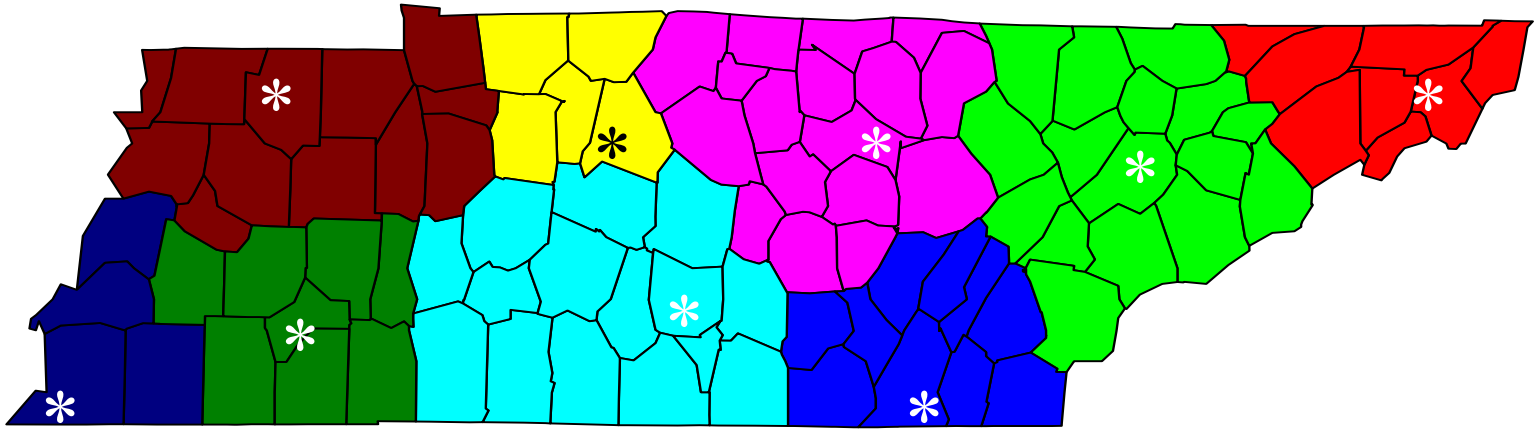


Figure 1. Tennessee Early Intervention System Districts and Office Locations

(Bronfenbrenner, 2005). Consequently, the provision of services that occurs within the context of the family should have a greater impact on a child's development than services provided only in the context of a once per week therapy session in an office or classroom setting.

Family-Centered Service Delivery

Since the enactment of IDEA in 1986, legislation regarding infant and toddler programs requires provision of services not only for the child, but also for the family. Consequently, many practitioners and researchers have discussed the implications of a family-centered philosophy for providing early intervention services (Allen & Petr, 1998; Bailey, Buysee, Smith, & Elam, 1992; Brown, Pearl, & Carrasco, 1991; Larimore, 1993). The family-centered philosophy of service delivery is not new. For example, it has long been the hallmark of the field of social work (Scherz, 1953; Birt, 1956). Since the 1950s, definitions and expostulations about family-centered service delivery have appeared in multiple health and human science fields including nursing (Petersen, Cohen, & Parsons, 2004; Kamienski, 2004), social work (Malone, McKinsey, Thyer, & Straka, 2000; Shannon, 2004), mental health (Mosier et al., 2001; Barreto, Boekamp, Armstrong, & Gillen, 2004), and early intervention/special education (McWilliam, Snyder, Harbin, Porter, & Munn, 2000; McBride, Brotherson, Joanning, Whiddon, & Demmitt, 1993; Sheridan, Warnes, Cowan, Schemm, & Clarke, 2004). After conducting a comprehensive review of relevant literature, Allen and Petr (1998) presented and discussed multiple definitions of family-centered service delivery. These definitions were characterized by ten almost universal characteristics of family-centered service delivery: (a) the focus of service is the family, not the individual focal child, (b) family

decisions concerning services provided to them, (d) communication should be bi-directional between family members and service providers as well as clear and complete, (e) emphasis is placed on family capabilities in order to promote maximum potential, (f) intervention activities and practices should empower families to care and advocate for their children, (g) interactions and activities should be provided in a way that makes families feel normal (non-dysfunctional), (h) services should be individualized to the family and child, (i) providers should respect cultural diversity, and (j) services should be flexible, accessible, noncategorical, and well coordinated. After examining the definitions, Allen and Petr (1998) created the following definition of family-centered service delivery:

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

The importance of this definition is that it provides a basic conceptualization of family-centered service delivery that is not field specific and includes three broad components that seem to be essential to family-centered services: (a) the acknowledged importance of family, (b) family as an informed decision maker, and (c) decisions and services built upon and supporting the family's strengths and resources. It is this definition that served as a conceptual guide for the present research.

Although the concept of family-centered service delivery has been discussed by professionals and is now supported by recent legislation, the actual practice of delivering

family-centered services presents a number of problems (Bruder, 2000). In a time when service providers and agencies are trying to maximize service effectiveness, improve provider efficiency, and minimize costs, the use of any approach that attempts to build partnerships with families, allows families to choose the services they desire, and plans and schedules the desired services at times and in environments preferred by families seems counterproductive. For instance, this type of an approach requires professionals to spend time establishing rapport, assessing not only the needs of the target child but also the needs of the entire family, educating family members on the formal resources available, and training family members how to apply and adapt intervention strategies. These strategies require time and resources that many agencies and individual providers may not have. As a result, some agencies and providers often embrace the family-centered approach only as much as is convenient and cost-effective.

Dunst, Johanson, Trivette, and Hamby (1991) suggested that services can be organized into four categories: "professionally-centered", "family-allied", "family-focused", and "family-centered." On the "professionally-centered" end of the continuum, the professional is seen as the expert who is able to identify family needs and use professional resources to alleviate those needs. The overarching premise is that families are powerless, dysfunctional and passive participants in the intervention process. In the "family-allied" model of service delivery, professionals continue to serve in the role of "experts," people with knowledge and skills who can identify needs and resources. In this model of service delivery, the family is the "agent of change," but members are not able to independently make decisions about services that are needed. What distinguishes this model of services from the "professionally-centered" model is the family's role;

family members, usually the parents, implement the intervention strategies recommended and demonstrated by professionals. Dunst et al. (1991) described a third model of early intervention called "family-focused." In this model, the perception of families is one of "informed consumers" of services; family members are capable of working with professionals in determining their needs, but are not able to do so on their own. In this model, the professional takes on the role of an experienced advisor who guides family members in selecting needed services, most of which are professionally-based. Finally, the "family-centered" model of service delivery is one in which family members are recognized by professionals as fully capable of identifying their needs and making informed decisions for themselves. Professionals are perceived as collaborators acting in unison with families to identify and ensure the delivery of needed services. In addition, intervention strategies are built on the family's strengths and capabilities, using resources and supports to enhance family members' abilities to build formal and informal networks of resources to meet their needs (Dunst et al., 1991).

Although these four different models of service delivery are categorically different, Dunst et al. (1991) argued that service providers generally use practices that are not specific to one category or another, but usually are combinations of practices from two or more categories. What is important about this continuum of service models, however, is it illustrates the roles and underlying suppositions about the relationships between professionals and families. Roles can shift rather dramatically and have very important implications for early intervention practices as professionals increasingly believe that families are capable and effective collaborators.

Family-centered service delivery is now the preferred model in the field of early intervention in part because scholars and practitioners believe that family-centered practices support and enhance family members' perceptions and feelings of empowerment. Family empowerment was specifically addressed in Part C of IDEA, Section 631, Findings: "to enhance the capacity of families to meet the special needs of their infants and toddlers with disabilities". The presumption is that family-centered practices promote parental empowerment. Consequently, it would be important to know whether family-centered service delivery actually has the enhancing effect described in this law.

Family Empowerment

Empowerment is a concept that has garnered much attention over the last thirty years. It has been used in social work case management (Solomon, 1976) and in service provision discourses (Rappaport, 1981; Dunst, Trivette, & Deal, 1988). In her book, *Black Empowerment*, Solomon defines powerlessness "as the inability to manage emotions, skills, knowledge, and/or material resources in a way that effective performance of valued social roles will lead to personal gratification" (Solomon, 1976, p. 16). Conversely, empowerment could be viewed as an individual's ability to manage emotions, skills, knowledge, material, and/or social resources in ways that enhance her or his personal development. In the context of a family-centered approach to early intervention, the enhancing or empowering effects of family-centered practices should be observable in developmental advances of the child with special needs as well as family members' feelings and actions that relate to informed decision-making and effective use

of family and community recourses. Empowerment outcomes are the result of activities that

> (1) Help[ing] the client perceive himself as causal agent in achieving a solution to his problem or problems.
>
> (2) Help[ing] the client to perceive the practitioner as having knowledge and skills he can use.
>
> (3) Help[ing] the client to perceive the practitioner as peer-collaborator or partner in the problem-solving effort.
>
> (4) Help[ing] the client to perceive the "power structure" as multipolar, demonstrating varying degrees of commitment to the status quo and therefore open to influence. (Solomon, 1976, p. 26)

In Solomon's (1976) conceptualization of empowerment, it is clear that the professional acts as an "agent of change" working with an individual so that he/she eventually feels capable of making a difference.

Since Solomon's (1976) work, the concept of empowerment has received attention from researchers in health care and social service fields. An examination of these definitions by Dunst et al. (1988) revealed three almost universal components of empowered individuals (or families): (a) control over access to resources (Brickman, Rabinowitz, Karuza, Coates, Cohn, & Kidder, 1982), (b) ability to make decisions and solve problems, (Hobbs, Dokecki, Hoover-Dempsey, Moroney, Shayne, & Weeks, 1984), and (c) the ability to interact effectively with others to procure resources (Solomon, 1985). When families display these skills, they often have the "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" (Dunst et al., 1988, p. X).

Thus, an early intervention system that promotes family empowerment outcomes should be comprised largely of families who are able to recognize their capabilities while simultaneously advocating through social and professional networks for services to meet the needs of their children with special needs. Such an early intervention system also should have service coordinators who consistently utilize family-centered practices. Service coordinators who promote empowerment outcomes should not be "experts" who know what families need, but rather collaborators who help families develop and implement the IFSP action plan. The relationship between family members and service coordinators, therefore, should be one of partnership and interchange in which the needs of the family are addressed through the provision of resources in a manner consistent with the philosophy of family-centered service delivery. When this kind of relationship consistently characterizes the interactions among service coordinators and family members, the result should be that family members feel more empowered to act confidently and serve the best interests of their children with special needs.

Purpose

The family-centered approach to early intervention seems to parallel the nature and intent of Part C of IDEA. In addition, empowering families to advocate for themselves and their children with special needs is expressly referenced in IDEA. However, the relationship between these two important and integral characteristics has only been explored by a small number of researchers (Dunst, Trivette, & LaPointe, 1992; Trivette, Dunst, Hamby, & LaPointe, 1996; Dunst, Trivette, Boyd, & Brookfield, 1994;

Trivette, Dunst, Boyd, & Hamby, 1996; Trivette, Dunst, & Hamby, 1996a; Judge, 1997; Dempsey, Foreman, Sharma, Khanna, & Arora, 2001; Trivette, Dunst, & Hamby, 1996b; Dempsey & Dunst, 2004). In the few studies that have examined this relationship, the results have demonstrated a very promising trend, suggesting that early intervention service providers who use family-centered practices are likely to empower families. However, the extant research is limited in at least two ways. First, several investigators used a single-item measure of empowerment as a means of demonstrating individuals' control over the help-giving process. Empowerment is a multidimensional concept comprised of several different components. Single-item or single-dimension measures, therefore, can never adequately represent or demonstrate the full effects of family-centered practices. Secondly, the extant research has limited generalizability because the samples of "parents" were comprised only of mothers or a combination of mostly mothers and a very few fathers. In a field supported by legislation that proclaims to be "*family*-centered," it is incumbent on researchers to examine the effects of family-centered practices on multiple members of the family, not just mothers.

The purpose of the proposed research, therefore, is to examine fathers' perceptions of family-centered practices. Additionally, the relationship between family-centered practices and parental empowerment will be explored, also from the perspective of fathers. Although the special needs of the children are the reason why families receive early intervention services, early intervention experts suggest that family outcomes are just as important as child outcomes in the effort to maximize the potential development of the children (Bailey & Bruder, 2005; Early Childhood Outcomes Center, 2004). It is hoped that the proposed research will (a) provide a basis for understanding how fathers

perceive family-centeredness, (b) assess whether fathers feel empowered to act on behalf of their families and children with special needs, (c) assess whether fathers' empowerment can be predicted by family-centered practices, (d) contribute to a statewide training program for TEIS service coordinators, and (d) encourage other investigators to include fathers as well as mothers in future research.

CHAPTER 2

LITERATURE REVIEW

The following chapter examines literature on concepts that are integral to fathers' perspectives about family-centered practices in early intervention. In the first section, family-centered practices are discussed theoretically, followed by a presentation of four areas of research on family-centered practices. Family empowerment is then examined theoretically with specific attention given to empowerment as an outcome. Next, an exhaustive review of empirical studies that examine the relationship between family-centered practices and empowerment is presented. The chapter concludes with a summary of major findings and implications for the proposed research.

Family-Centered Practice

Family-centered service delivery recognizes the centrality of the family in the life of the individual who receives services. In the field of early intervention, this approach builds on the integral nature of family interactions and the implications for children with special needs. Allen and Petr (1998) identified three core elements of family-centered service delivery: (a) the centrality of the family as the child's most influential environment and, as such, the unit of attention for services, (b) family members as informed decision makers, and (c) decisions and services built upon and supporting the family's strengths and resources.

Centrality of Family

The key element of a family-*centered* approach to service delivery is the idea that the family is the central unit to whom and for whom services are delivered. This is especially true in the area of early intervention where the individual with special needs is

a child under the age of 3 years. Because parents are an integral part of the child's life and primarily responsible for rearing their child during the early years of development, they are likely to understand the child's needs better then most professionals. Hobbs et al. (1984) stated that

> Human development, properly understood, focuses not only on individuals and their personal developmental potentials but also on the *contexts* in which individual development occurs. The most influential of these is the family (p. 2).

Furthermore, these investigators suggested that the family is the "critical element in the rearing of healthy competent and caring children" (p. 45). However, in particular situations, some families may need the added assistance of a supportive community (Hobbs et al., 1984). Community supports can be categorized as (a) formal, such as professional and other organized services, or (b) informal, such as kinship and friendship supports. Bosch (1996) proposed that informal and formal supports are important means by which many families with children with disabilities obtain services and resources. Even under these circumstances, though, the family is still the unit of attention; individuals who comprise the social support network only *assist* the family in their endeavor to rear a child with disabilities. To this end, members of formal and informal networks usually perceive the family not only as the central unit of attention, but also its adult members as informed and fully capable decision makers.

Family as an Informed Decision Maker

The family-centered approach to service delivery not only acknowledges the importance of the family as the unit of attention and the context in which the focal child

develops, but also recognizes that family members are fully capable of making decisions concerning services and resources for their child with special needs. Katan and Prager (1986) discussed the role of the consumer participating in human service organizations. They suggested that consumers participation in the decision-making process would not only affect consumers' lives, but would give them a sense of ownership. In the area of early intervention, professionals who utilize the family-centered approach believe that family members who participate in the decision-making process will be better educated about the services and resources available for their child with special needs and also feel more empowered to make decisions that have positive effects on their family and child with special needs.

Informed family decision-making is related to at least three kinds of family-centered practices. First, professionals should respect a family's right to choose the level and nature of their involvement in service provision (Leviton, Mueller, & Kauffman, 1992). Second, informed decision-making implies that information should be shared among family members and service providers. The process should be bi-directional rather than unidirectional in nature (Brown et al., 1991). Finally, Bennett, Nelson, Lingerfelt, and Devenport-Ersoff (1992) suggested that family and child needs should be identified from the perspective of the family, not the service provider. One important outcome of all three practices is that family members establish significant positions of authority in their partnerships with providers and increasingly feel more capable of making informed decisions.

First, providers need to recognize that, as informed decision makers, family members must to be able to choose the level and nature of involvement with the service

delivery system. The level of involvement for each family (and family member) can vary from one of passive observer to equal partner in the exercise of control over services. Leviton et al. (1992) found that parents valued and appreciated the knowledge and expertise professionals had in dealing with children with disabilities. However, the same parents also made it clear that only they had "… the necessary expertise to determine whether professional recommendations can be successfully incorporated into their own family's life style" (Leviton et al., 1992, p. 2).

Second, in order for family members to become informed decision makers, there must be bi-directional communication between them and professionals. Communication should flow not only from professionals to parents in the form of information about diagnoses and services, but also from parents to professionals in the form of sharing information about the familial, religious, and cultural environment in which family members are involved. This exchange of information should result in a *discussion* about the type of resources and services that might match the needs of the family and child. It is from this kind of bidirectional communication process that family members should gradually feel more empowered to exercise control of the early intervention process (Brown et al., 1991).

Finally, family-centered service delivery should begin with a comprehensive identification of needs from the family's perspective. This identification process should not be limited to the focal child's needs, but also include family needs. Bennett et al., (1992) suggested that professionals should assist family members in this task by refocusing need identification away from child to a more comprehensive perspective, one that takes into account the child, family, and context in which family members live. The

goal of family-centered service delivery is not to empower the child with special needs. Rather, the goal is to empower the parents and other family members who are in positions to exercise some kind of responsibility. By identifying and addressing family needs, empowerment outcomes are much more likely to be realized occur compared to an approach that focuses only on the child's needs.

Promoting Family Strengths and Capabilities

The last key component of family-centered service delivery presented by Allen and Petr (1998) is the promotion and use of family strengths and capabilities as building blocks for service and resource planning. In a discussion of family-centered, community-based care for children with special needs, Brewer, McPherson, Magrab, and Hutchins (1989) stated that "within this [family-centered] philosophy is the idea that families should be supported in their natural care-giving and decision-making roles by building on their unique strengths as people and families" (p. 1055). An approach that utilizes, enhances, and expands families' strengths and capabilities was developed by Allen and Petr (1995). This approach included three different processes. First, family members are involved in the process of identifying their strengths, resources, and capabilities (Saleeby, 1992). This process often requires professionals to help family members re-examine themselves and assess their own traits, contexts, and networks in terms of potential strengths and resources that they may not have thought about in this way. Secondly, the approach calls for professionals to promote activities in contexts that allow families to build new strengths and capabilities. Most families have strengths and capabilities that can be easily identified, but often they need some assistance in learning how to use them effectively. One of the key missions of the family-centered professional is to create

opportunities for family members to discover, practice, and apply skills effectively. When this is accomplished, generalization of these skills is more likely to occur. Family members can apply skills and capabilities learned/utilized in one situation to other contexts. One important result of working through these processes is that family members eventually feel more competent and secure in their abilities to solve problems and address needs. As family members learn to identify and build on individual and family strengths, they not only become more empowered to act on behalf of their child with special needs, but they also have less need for crisis intervention (Briar, 1991). Consequently, family-centered practices that build on family strengths and capabilities may benefit professionals as well as family members.

The core elements of family-centered service delivery—centrality of the family, family members as informed decision makers, and promotion of family strengths and capabilities—reflect a number of principles of family-centered service delivery that guide early intervention practitioners. Shelton and Stepanek (1994) describe eight principles of family-centered practices:

- 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.
- Facilitating family-professional collaboration at all levels of hospital, home, and community care.
- Exchanging complete and unbiased information between families and professionals in a supportive manner at all times.

- 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.

- 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.

- Encouraging and facilitating family-to-family support and networking.

- 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.

- 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.

These eight principles and the definition of family-centered service delivery presented by Allen and Petr (1998) suggest ways that professionals might conceptualize the family-centered approach to service delivery, but they lack the behavioral precision that

practitioners need to interact with family members in ways that are consistent with the family-centered philosophy. In an effort to address this problem, Dunst (1997) described 10 behavioral practices that professionals can utilize when interacting with families of young children with disabilities.

- Families and family members are treated with dignity and respect at all times.
- Practitioners are sensitive and responsive to family cultural, ethnic, and socioeconomic diversity.
- Family choice and decision-making occurs at all levels of family involvement in the intervention process.
- Information necessary for families to make informed choices is shared in a complete and unbiased manner.
- The focus of intervention practices is based on family- identified desires, priorities, and needs.
- Supports, resources, and services are provided in a flexible, responsive, and individualized manner.
- A broad range of informal, community, and formal supports and resources are used for achieving family-identified outcomes.
- 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.

- Practitioner—family relationships are characterized by partnerships and collaboration based on mutual trust and respect.

- Practitioners employ competency-enhancing and empowering help-giving styles that promote and enhance family functioning and have family strengthening influence (p. 79).

The key behavioral practices that Dunst (1997) listed correspond well with the principles delineated by Shelton and Stepanek (1994) and both support the conceptual definition presented by Allen and Petr (1998).

Measures of Family-Centered Practices

The concept of family-centeredness has been examined empirically using a variety of different measures. It is not the purpose of this review to present a comprehensive description of all the instruments that have been developed to measure family-centered practices. Rather, the intent is to provide illustrative examples of these instruments with particular attention given to those used in research that examined the relationship between family-centered practices and empowerment. Murphy, Lee, Turnbull, and Turbiville (1995), for example, described 12 instruments that measure various aspects of family-centered service delivery. Some of the instruments included the Parent Satisfaction Survey (Kovach & Kjerland, 1989), Enhancing Quality (Epstein et al., 1989), Brass Tacks (McWilliam & Winton, 1990), and the Family Involvement Survey (Burton, 1992). These instruments, all of which consisted of parental and/or

professional self-report items, generally used Likert-type and true-false response sets that ranged from 12 to 157 items and generally had respondents rate either frequency, quality, or importance items. Murphy et al., not only presented information regarding the psychometric properties of the measures, but also included any subscales (i.e., factors). More recently, Dunst, Trivette, and Hamby (1996) developed the Helpgiving Practices Scale (HPS) to measure family-centered practices. This 25-item instrument measures respondents' perceptions of providers' attitudes, beliefs, and behaviors. Items specifically examine provider skills and personality features. This scale was used in several of the studies that examined the relationship between family-centered practices and empowerment, which will be reviewed in a later section of this chapter.

Research on Family-Centered Practice

The concept of family-centeredness and its related practices are well known among researchers and practitioners in the field of early intervention. Recently, investigators tried to establish empirical support for using a family-centered approach to service provision. The following section presents four areas of research that leading investigators in the field of early intervention have examined. These lines of research demonstrate the widespread acceptance and understanding of the family-centered model of service delivery across the United States and the importance that researchers and providers place in it in the delivery of early intervention services. The first line of research addresses intervention policies and practices and the extent to which they are family-centered. In the second line of research, investigators explore professionals' perceptions of and barriers to family-centered services. The third line of research focuses on parents' perceptions of the implementation of Part C of IDEA, including the parent-

provider partnership and other family needs that should be addressed by these services. The last line of research focuses on parents' satisfaction with the services they and their children are receiving.

Dunst et al. (1991) utilized a multimethod approach to examine the extent to which federal and state policies and programs were family-centered. Data were collected from two sources: (a) seven pieces of federal legislation and (b) questionnaires completed by state-level policy makers, service professionals, and family members who served on Interagency Coordinating Councils (ICC; IDEA, Part C) in 25 states. Each federal document was rated by the investigators on 30 different family support principles using a 7-point scale to determine the extent of adoption. In addition, ICC council members responded to 42 statements using a 5-point scale to determine the extent to which the policies and programs in their state were family-centered. Results of ANOVAs suggested that the policies and programs at the national, state and local levels were consistent with family-centered principles. Furthermore, responses by ICC members suggested that family-centered policies and practices were being adopted by early intervention agencies and service providers across the country. According to Dunst et al., the adoption of these policies and practices was having a positive influence on families' abilities to care for their children with special needs.

In another study, Garrett, Thorp, Behrmann, and Denham (1998) interviewed local ICC members about the importance of IDEA, Part C. The results revealed that, the most important and valued aspect of the legislation from the point of view of ICC members was the family-centered approach to service delivery. Taken together, Dunst et al. (1991) and Garrett et al. (1998) suggest that current federal legislation promotes

family-centered service delivery in programs for young children with special needs or in special circumstances. However, it is important to note that neither study specifically addressed the concept of the *family* in the legislation as it relates to the inclusion of fathers or other family members in *family*-centered service delivery.

The second line of research on the family-centered model of service delivery is illustrated by the work of Bailey, Buyssee, Edmondson and Smith (1992). They examined the opinions of early intervention (IDEA, Part C) professionals (direct service providers and agency administrators) about the family-centeredness of their programs as well as barriers to family-centered service delivery. One hundred and eighty professionals from four states completed four scales that measured four dimensions of family involvement: (a) parent involvement in assessment decisions, (b) parent involvement in assessment, (c) parent involvement in decision-making and team planning, and (d) parent involvement in provision of services. Each item was rated on a 10-point scale that ranged from 1-professionals control services to 9-parents control services. Participants rated items both for program operation and their ideal conception of services. If there was a difference between the typical and the ideal ratings, professionals then identified barriers that hindered the provision of more desirable services. It was found that professionals rated most of the services moderately family-centered, and suggested that, ideally, family members should have higher levels of involvement. As for program barriers, professionals' responses were divided into four categories: (a) family, (b) system, (c) professional, and (d) testing. Family and system barriers accounted for over 70% of responses. Family barriers consisted largely of a lack of knowledge or skills to fully participate in assessment, planning, or decision-making.

Also, some families were not interested in full participation. Alternatively, system barriers included lack of administrative support, inadequate resources, entrenched program patterns, and philosophical differences between administrators and practitioners. The primary implication of these findings was that, although professionals understood and acknowledged that high levels of family participation were beneficial, full family participation in early intervention services was not likely to be attained. Realization of this goal may only occur after systemic, professional, and familial attitudes toward participation change and families develop skills and knowledge that permit them to engage early intervention systems more effectively.

Other investigators have examined professionals' perspectives about family-centered practices and found that the shift from child-focused to family-centered service delivery was evolving but had not been achieved (McWilliam, Tocci, & Harbin, 1998). Specifically, providers stated that they felt more comfortable working with the child than other family members (Bailey, Palsha, & Simeonsson, 1991), but they also reported a desire to have more parent participation in service delivery (Campbell & Halbert, 2002). In summary, from providers' perspectives, early intervention services are still in the midst of a paradigmatic shift from child- to family-centered service delivery. However, provider training, parent lack of knowledge, and rigid organizational systems seem to be barriers to fully adopting a family-centered approach to service delivery. Unfortunately, investigators did not ask providers about father participation or inclusion in the service delivery systems and so the implications of these findings for father involvement were not described.

Parent views related to the implementation of IDEA, Part C (Part H at the time of the article) were explored by Able-Boone, Sandall, Loughry, and Frederick (1990). Mothers and fathers in 30 families were interviewed about their family, child with special needs, and the infant-toddler program in which all had participated or were participating. An unstructured interview format was used to gather parents' perspectives on the implementation of Part C services. A qualitative data analysis revealed two important implications for early intervention services: (a) parents felt they "need[ed] to become more knowledgeable about their child and about available services … [and (b) parents] stressed the importance of professionals' relaying information and empowering families to become their child's informed decision maker" (p. 110). These findings corresponded very well with the conceptualization of family-centered practices as delineated above. Although data were collected from mothers and fathers, no separate thematic analyses seem to have been conducted.

The majority of other studies that focused on parents' perspectives regarding the implementation of family-centered service delivery examined parent-professional partnerships. These studies generally focused on responses from both parents and professionals. Investigators found that good interpersonal and collaborative relationships between parents and professionals were key to practical and useful early intervention services (Minke & Scott, 1995; King, Law, King, & Rosenbaum, 1998; Dinnebeil, Hale, & Rule, 1999). In a few of these studies, investigators noted that professionals' technical knowledge and skills were important aspects of family-centered services (Wehman & Gilkerson, 1999). However, King et al. (1998) found that the transfer of this knowledge from professionals to family members was not well implemented. This line of research

suggests that the relationship aspect of family-centered service delivery is often implemented quite well, but more practical, participatory activities (e.g., provision of information) may need to be implemented better. This research also is interesting because efforts were made to include fathers, but because mother and father data were combined rather than analyzed separately, no conclusions were drawn about similarities and differences in mother-father views.

Finally, parents' satisfaction with early intervention services was explored by McWilliam, Lang, Vandivere, Angell, Collins, and Underdown (1995). Responses to a 30-item questionnaire were received from 539 (35% response rate) family members. As a follow-up, six families were chosen to participate in semi-structured interviews that consisted of questions regarding: the child and family, services received, treatment of the family by professionals, inclusion, and other topics described by the family. The quantitative results indicated that family members were very satisfied with early intervention services. The qualitative analysis revealed three themes: (a) good experiences, (b) bad experiences, and (c) needs, concerns, priorities, and resources. Good experiences specifically related to family member support provided by *individual* service professionals. Bad experiences related to the frustration and struggle parents experienced when seeking appropriate services. The third theme concerning the needs, concerns, priorities, and resources addressed the potential benefits of segregated learning experiences (i.e., classes that only consisted of children with disabilities) as opposed to inclusive learning experiences (i.e., classes that combined children with and without disabilities). Taken together, these findings suggested that family members generally

were satisfied with services as well as their relationships with professionals, but parents also felt appropriate services needed to be more accessible and better coordinated.

Similar findings were reported by Romer and Umbreit (1998) and Campbell, Croll, and Ouvrier (1995). Romer and Umbreit (1998) found that parents were more satisfied with services when a family-centered approach was fully implemented. Campbell et al. (1995) evaluated an early intervention program with multiple components and found that parents generally were satisfied with the usefulness of the family-centered support programs. Together, these studies suggested that family members were satisfied with family-centered practices, and more satisfied overall with early intervention services when a family-centered approach was fully implemented. Only Romer and Umbreit (1998) identified parents who participated in the research; only one father was involved. Consequently, nothing was said about fathers' satisfaction with services.

Summary of Research on Family-Centered Practices

In combination, these studies suggest that the family-centered approach to service delivery has been adopted at the national, state, local, and family levels. It is clear, however, that family-centered service delivery has not yet been fully implemented in early intervention and that system administrators and service providers need more training and time to fully employ this approach. When fully and appropriately implemented, it seems that both providers and parents are likely to be satisfied with early intervention services.

One reason a family-centered approach to early intervention may be receiving broad, general acceptance is because its core elements (i.e., family is central, family as decision maker, focus on families strengths and capabilities) promote family

empowerment outcomes that improve the quality of family life and promote parental autonomy. This possibility is suggested by anecdotal information provided by parents. For example, one parent stated, "I don't want promises, I don't want them [professionals] to do for me, I want to learn how to get my family back to where we are in control again" (Duwa, Wells, & Lalinde, 1993, p. 95). Overall, the purpose of family-centered practices is to support families of children with special needs and empower them to rear and advocate for their children in ways that are consistent with family priorities and values and also promote a greater sense of control over family life.

Family Empowerment

Family empowerment is a multidimensional concept that Dunst et al. (1988) have described as the "ability [of the family] 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). In an effort to conceptualize family empowerment, Dunst, Trivette, and LaPointe (1992) proposed that empowerment is comprised of six conceptually different but interrelated elements: (a) philosophy, (b) paradigm, (c) process, (d) partnership, (e) performance, and (f) perception. Dunst et al. (1992) integrated these elements into a unified framework that consists of ideologies (philosophy and paradigm), activities (process and partnership), and outcomes (performance and perception). Ideology refers to the beliefs, values, and attitudes that professionals and family members have regarding the capabilities and strengths of individual family members and their ability to make meaningful decisions and choices that affect the wellbeing of their family. Activities, or what Dunst, Trivette, and Snyder (2000) eventually called "participatory experiences", are opportunities or events that promote

existing capabilities of family members and also foster the acquisition of new capabilities through experiences and interactions with professionals that are reciprocal and mutually beneficial. Dunst et al. (2000) suggested that these experiences should contribute to a sense of partnership between family members and service providers if they are going to promote empowerment outcomes. Empowerment as an outcome refers to strengths and capabilities that emerge as a result of participatory experiences. Empowerment outcomes consist of family members' positive perceptions of their capabilities and the belief that they have control over important life situations and events (Dunst et al., 2000).

The empowerment framework that Dunst and his colleagues (1992) proposed encompasses the entire service delivery process, from the underlying principles and beliefs about family members' competencies and resources to practices that enable family members to gain greater control over events that affect child development and family functioning. An examination of Dunst's conceptualization of empowerment ideology and participatory experiences reveals that these concepts and practices are quite similar to the family-centered approach to service delivery. Indeed, Dunst and his colleagues have characterized family-centered service delivery in terms of this ideology and actually described participatory experiences that are supposed to promote various empowerment outcomes (Trivette et al., 1996b; Trivette et al., 1996; Dunst et al., 1992).

Empowerment as Performance

The concept of empowerment and its relationship to performance refers to the strengths and capabilities that individual family members can utilize to address needs and solve problems. Some of these abilities include flexibility, critical thinking, and collective action and have been described as "the ability to initiate resource exchanges

independently with other social support network members (without the assistance of a professional) in order to procure desired resources" (Dunst et al., 1992, p. 118). Consequently, empowered family members (from the performance view) should be able to coordinate personal and social support resources and utilize them to address child and family problems without much or any assistance from service providers.

Empowerment in the context of performance also included behaviors such as advocacy and control. Singh, Curtis, Ellis, Nicholson, Villani, and Wechsler (1995) and Koren, DeChillo, and Friesen (1992) found that parents advocated at both the service system and government level for legislation, policy, and services for their children with special needs. Another form of the performance aspect of empowerment is control over resources and life circumstances. Control over resources suggests that (in early intervention) parents can manipulate the support received from sources both internal (e.g., emotional, caregiving, problem-solving) and external to the family (e.g., early intervention services, respite programs). Control over life circumstances can be described as self-efficacy or competence as a parent of a special needs child. Both forms of control have been presented as examples of empowerment outcomes in the early intervention literature (Dunst et al., 1994; Trivette et al., 1996; Judge, 1997).

Empowerment as Perception

Another component of empowerment is perception. Using the adage that "perception is reality," Dunst et al. (1992) emphasized that in order for family members to feel empowered, not only must they have the strengths and capabilities to perform, but also they must *feel* and *view* themselves as having a sense of control over their lives. Empowerment as perception has been conceptualized in a variety of ways including

internal locus of control (families exercise control over the course of their lives) and political efficacy (the belief that the family can affect the service system in which it is participating). Empowering perceptions are specific kinds of attributions that family members make concerning their strengths, resources, and capabilities. Dunst et al. (1994) suggested that the more family members participate actively in the service delivery system (i.e., enabling experiences), the more efficacious they should feel compared to family members who simply receive services prescribed and delivered by providers. Service delivery practices that encourage family members to participate in identifying their needs, planning intervention strategies, and implementing these strategies should empower them by promoting a greater sense of control and mastery over their lives.

Dunst et al. (1992) described the characteristics of a service system that should promote empowerment outcomes. A service delivery system that empowers families not only should help individual family members make informed decisions that benefit them and the child with special needs, but also help them recognize their capacity to do so. The professional's role in this kind of empowerment framework, therefore, is to continually assess the needs, strengths, and resources of the family and act as a partner/collaborator who helps family members learn how they can better ensure that child and family needs will be addressed in a timely and effective manner.

Relationship between Family-Centered Practices and Empowerment Outcomes

An exhaustive review of the current early intervention literature yielded only nine articles that specifically address the relationship between family-centered practices and family empowerment outcomes. The studies in these articles all included parental self-

report measures of family-centered practices and empowerment outcomes. Parent samples generally consisted only of mothers, or a mixture of mothers and fathers. The children with disabilities in these studies received services either from government-sponsored or private programs. It is also important to note that terms like "enabling practices" and "help-giving practices and traits" were used to refer to family-centered practices. In addition, several of the studies included not only children under the age of three (who were eligible for Part C services), but also children over the age of three. Consequently, it often was not possible to draw conclusions that could be generalized specifically to infants and toddlers with disabilities.

In addition to sampling difficulties, there were differences among the studies in the types of self-report instruments that were used to assess parents' perceptions of family-centered practices and empowerment. It was decided, therefore, to organize the articles into two groups for the purpose of highlighting these differences. In the first group of articles, measures of empowerment generally focused on a single dimension of empowerment (i.e., control). In the second group, investigators utilized instruments comprised of multiple items in order to examine empowerment as a multidimensional concept. The second group of articles was subdivided such that studies of U.S. samples of families are described first, followed by studies that included families from other countries as well as the U.S.

Studies that Focused on Empowerment as a Unidimensional Concept

Dunst et al. (1994) reported findings from a series of three studies in which the relationships between human service program model types, help-giving practices, and parent self-efficacy appraisals were examined. All parents who participated in the studies

received services from one of the following agencies: (a) early intervention/family support programs, (b) departments of public health, or (c) departments of social services in either North Carolina or Pennsylvania (Dunst et al., 1994).

In all three studies, family members completed the Professional Helpers Characteristics Scale (HCS; Trivette & Dunst, 1990) and a single-item measure of empowerment. The HCS measures attitudes, beliefs and behaviors related to different help-giving practices. Respondents choose from a list of 5 behaviors (specific to the item) that described the actions of the target help-giver (staff member who worked with the family on a regular basis as part of the services received). Two forms of the instrument were utilized in the studies: (a) the long form, which had 26 items (α=.92) and (b) the short form which had 5 items (α=.86). Perceived control was measured using the Perceived Control Appraisal Scale (PCAS; Affleck, Tennen, & Rowe, 1991). The PCAS is a single item measure that asks the parent, "On the 10-point scale below, where a 1 is *very little control* and 10 is *a lot of control*, how much control do you have in obtaining the kind of help and assistance you need from this helper?" Because the scale was only a single item measure, no internal consistency results were reported. According to Trivette et al. (1996a), the scale positively correlated (r=.70) with a multiple item measure of perceived control, but no specific scale name was mentioned (Dunst et al., 1994).

In addition to the HCS and PCAS measures, the service delivery programs in studies 1 and 2 were classified as "family-centered", "family focused" (i.e., direct guidance), or "professionally-centered" (see discussion in Chapter 1). Specifically, in study 1, early intervention/family support (EIFS) programs were classified family-

centered, department of public health (DPH) programs were classified family-focused, and department of social services (DSS) programs were classified professionally-centered. In study 2, all of the programs provided early intervention services, but they were classified according to their overarching philosophies of service delivery. In study 3, all programs were *supposed* to be family-focused. Consequently, they were differentiated by ages of the children: birth to 24 months, 24 to 36 months, and 36 to 60 months. Investigators believed that programs for the youngest children were more family-focused in nature, but included some elements of the family-centered model. Programs for school-aged children were administered by public school systems and considered (by the investigators) more professionally-centered. Finally, children in the middle-aged group received interventions that seemed to fall between family-focused and professionally-centered strategies (Dunst et al., 1994). No empirical data were presented, however, to support the program categorizations.

Respondents in study 1 consisted of 107 mothers of preschool children who participated in one of the three types of the programs listed above. No fathers were included in study 1. The mothers, on average, had completed approximately 11 years of formal schooling and generally lived in low socioeconomic households. The average age of the mothers was 25.22 years. However, the investigators found that mothers in the EIFS sample were approximately 5 years older, on average, than the DPH and DSS groups. No demographic (age, gender, or disability type) data were reported for the children with special needs (Dunst et al., 1994).

Study 2 respondents were 141 parents (mostly mothers, but the percentages of mothers and fathers were not reported) who had children participating in early

intervention programs. The average age of the parents was approximately 34 years, and they had completed approximately 14 years of formal education. Neither the children's mean age nor their age range was reported. Using the Hollingshead socioeconomic criteria for determining socioeconomic class, the parents were classified into upper-middle income groups. No significant demographic differences were reported among parents of children in the different types of programs (Dunst et al., 1994).

In study 3, 1,110 parents participated, but no information was provided regarding respondents' genders. Respondents' average age was 33 years, and they had completed an average of 14 years of formal education. Child age data were not reported. This group of parents was classified upper middle class according to the Hollingshead socioeconomic criteria. No significant demographic differences were found among parents of children who received services from the different types of programs (Dunst et al., 1994).

The investigators used chi-squared statistics to examine differences between proportions of families who (a) rated staff as effective help-givers with respect to program type and (b) rated themselves as more self-efficacious with regard to help-giving (family-centered) practices. Results of studies 1 and 2 were consistent. Parents in both studies rated professionals associated with family-centered programs more help-giving than those associated with either the family-focused or professionally-centered programs. Additionally, investigators found that professionals in family-focused programs also were rated significantly more help-giving than those in professionally-centered programs. Results from the third study were similar but not as strong as those in studies 1 and 2. This was due probably to the ambiguity involved in classifying programs by the ages of

children. Nevertheless, findings for empowerment were very similar in all three studies. Parents who received more help-giving (i.e., family-centered) services reported feeling more control over the service delivery system (study 1: $\chi^2 = 23.32$, $p < .0001$; study 2: $\chi^2 = 57.52$, $p < .0001$; study 3: $\chi^2 = 277.72$, $p < .00001$; Dunst et al., 1994).

In a related study, Trivette et al. (1996) examined the responses of 280 parents (98% mothers) from North Carolina (NC; n=150) and Pennsylvania (PA; n=130) concerning the relationship between help-giving practices and control over early intervention services. Questionnaire return rates were not presented because the total number of parents who were invited to participate in the project was not known. Consequently, Trivette et al. suggested that the sample of parents should be considered a convenience sample and, as such, probably was not representative of parents receiving services. In addition, the two state samples were different with respect to parent age (NC averaged 26 years; PA averaged 34 years), parent education (NC averaged 11 years of formal education; PA averaged 14 years), and socioeconomic class (NC 26.4—low to middle class; PA 37.8—middle to upper-middle class). Also, more parents in PA worked outside of the home and more were living with a spouse or permanent partner than those living in NC. Ages of the children ranged from birth to five years, but their average age was not reported. The only demographic variable that was not significantly different between the state samples was race of the respondents. The majority of the parents and children were Caucasian (Trivette et al., 1996).

Programs in which the families were involved were similar to the ones described in Dunst et al. (1994). In North Carolina, services were provided by 5 departments of public health (DPH), 5 departments of social services (DSS), and 4 early

intervention/family support (EI/FS) programs. The philosophical model of each program was rated on a 7-point scale from 1 (*professionally-centered*) to 7 (*family-centered*). The philosophical features of the NC programs were rated by 4 different individuals. Interrater reliability was .96. In Pennsylvania, services were provided by 7 private provider programs, 5 preschool/intermediate units, and or 4 child development rehabilitation programs. Three individuals rated the philosophical features of these programs. Interrater reliability was .93 (Trivette et al., 1996).

In this study, the relationship between help-giving (family-centered) practices and perceived control was examined while taking into account the frequency of contact between parents and providers as well as program model type. The Helpgiving Practices Scale (HPS; Dunst et al., 1996) was used to measure family-centered practices. The HPS was described earlier in this chapter (see p. 11). It is a 25-item instrument that measures respondent's perceptions of a focal professional's attitudes, beliefs, and behaviors. For example, items measure provider skills and personality features such as active listening, help-giver honesty, trustworthiness, competency enhancement, and solution-based help-giving. Parents responded to the items by selecting from one of five behaviors designed to measure a continuum of help-giving practices. Dunst et al. reported that both spilt half reliability and Cronbach alpha were .96. In addition, respondents completed the PCAS and also reported the frequency of contact per month with a specific help-giver (Trivette et al., 1996).

Investigators were interested in first determining if demographics, program characteristics (i.e., type) or frequency of contact had an impact on help-giving practices. They then examined whether demographics, program characteristics, frequency of

contact, and help-giving practices were related to perceived control. Data were analyzed using a hierarchical multiple regression by sets. Results of the first regression analysis showed that program type and frequency of contact were significant predictors of help-giving practices for both the NC and PA samples. In addition, child age had a significant influence on help-giving practices, but only in the NC sample. Overall, the predictor variables in the initial models accounted for 18.1% and 18.7% of the variance of help-giving practices in NC and PA, respectively. Specifically, it was found that participants who had more frequent contact with help-givers from family-centered programs were more inclined to rate providers as more help-giving (Trivette et al., 1996).

In the second regression analysis, investigators found that only program type, frequency of contact, and help-giving practices accounted for significant amounts of variance in perceived control. The resulting models accounted for 36.4% and 50.8% of the variance of perceived control in NC and PA respectively. These findings suggested that parents who were involved in more family-centered programs, worked with professionals who used help-giving practices, and had more frequent contact with professionals on a monthly basis felt they had more control over the service delivery system compared to parents who were involved in less family-centered programs, worked with professionals rated less help-giving, and had fewer contacts with their providers per month (Trivette et al., 1996).

Trivette et al. (1996a) utilized the same methodology in another study of 107 mothers of preschool-aged children. No fathers were included in this analysis and the children's mean age and age range were not reported. Like the previous study, questionnaire return rates were not reported because the total number of mothers who

were invited to participate in the project was not known. Participation in human service programs was, for the most part, voluntary (92.5%); the other 7.5% of mothers were court-ordered to participate. Mothers and their children participated in one of three programs: (a) department of public health (DPH; n=32), (b) department of social services (DSS; n=35), and (c) early intervention/family support program (EI/FS; n=40). The only significant demographic difference was that mothers involved in EI/FS groups were approximately 5 years older than mothers who were involved in the other two programs. No significant differences among the groups were found for average years of formal education (12), average family size (4), or SES status (lower class). The majority of the mothers were European American, married, and unemployed (Trivette et al., 1996a).

Programs were rated on a 7-point scale from 1 (*professionally-centered*) to 7 (*family-centered*) by 4 investigators and 2 professionals. Only the professionals were naïve about the purpose of the research. Median interrater reliability among the investigators was .94, .90 between the naïve professionals, and .92 among the investigators and professionals. Programs were categorized (based on rating scores) family-centered (mean = 5.75), family-allied (mean = 2.92), and professionally-centered (mean = 1.68) (Trivette et al., 1996a).

Mothers completed the HPS and the PCAS. The investigators thematically identified four subscales on the HPS instrument: (a) *empowerment ideology*—8 items that measured help-giver beliefs and attributions about help-seekers (α=.97), (b) *participatory actions*—8 items that measured help-giving processes used to promote parent knowledge and competencies within collaborative relationships (α=.98), (c) *help-giver traits*—5 items that measured a professional's "clinical skills" (e.g., active

listening, honesty, empathy; α=.97), and (d) *help-seeker reactions to aid*—5 items that measured the consequences of accepting or refusing help (e.g., indebtedness, professional supportiveness, reciprocity; α=.91) (Trivette et al., 1996a).

ANCOVA and MANCOVA were used to examine group differences for both help-giving practices and perceived control scores. Program type was used as the grouping variable with mother's age and family SES/income as covariates in MANCOVA that used the four help-giving practice subscales as dependent variables. Results indicated that the family-centered programs had providers who utilized help-giving practices more often than providers in family-allied or professionally-centered programs. In addition, mothers who participated in family-allied programs reported that providers in these programs used more help-giving practices than providers in the professionally-centered programs (Trivette et al., 1996a).

In the second analysis, a 3 (program type) x 2 (help-giving practice total score divided by a median split) ANCOVA was performed using perceived control as the dependent measure. There were significant findings for both main effects. Program type was related to perceived control ($F(2,95) = 5.72$, $p < .005$), and help-giving practices also were related to perceived control ($F(1, 95) = 14.69$, $p < .001$), but the interaction between program type and help-giving practices was not significant. The findings suggested that mothers and children who received services from providers associated with family-centered programs tended to feel more in control over the service delivery system than mothers who were involved with providers associated with family-allied or professionally-centered programs. Similarly, mothers and children who interacted with help-giving practitioners felt more in control over the services they received than those

who interacted with providers who received lower help-giving ratings (Trivette et al., 1996a). In general these results suggest that there is a continuum of services from professionally-centered to family-centered and that the more family-centered services are, the more mothers are likely to feel control over the services they and their children receive.

Judge (1997) evaluated the views of 69 parents (88% mothers) of children who ranged in age from birth to 5 years. The children either had a known disability or were classified at-risk for poor developmental outcomes. The children were receiving services from one of eight programs that included public preschool programs, rehabilitation programs, and early intervention programs. Demographic information was reported for both mothers and fathers. Mothers, on average, were 30 years old and had completed 12 years of formal education. Fathers, on average, were 33 years old and had completed 14 years of formal education. The children participating in the EI programs were, on average, 37 months of age and had diagnoses that included speech-language delays, cerebral palsy, physical/sensory problems, and developmental delays. Seventy-seven percent of the respondents were married and the large majority was Caucasian (96%). Thirty-eight percent of the mothers worked outside the home. No information was provided about the employment status of fathers. Additionally, the families were middle class (according to the Hollingshead SES index) and approximately 75% of both mothers and fathers had received a high school diploma (Judge, 1997).

In contrast to the studies described previously, Judge (1997) classified service delivery programs by the age group of the children (birth-to-3 years and 3-6 years) and also by the service location (home-based or centered-based). The majority of children

participated in birth-3 year programs (62%), and a majority also received center-based services (61%). Although within-category attributes were mutually exclusive (i.e., children in home-based and center-based were different), between-program categories were not (i.e., children in birth-to-three programs could be in either home-based or center-based programs) (Judge, 1997).

The purpose of the study was to determine how (a) demographic and program characteristics related to the delivery of help-giving practices and (b) demographics, program characteristics, and help-giving practices related to perceived control. Like Trivette et al. (1996a), Judge (1997) used the HPS (short form) to assess help-giving practices and the PCAS to assess perceived control. In addition, respondents completed the Early Intervention Control Scale (EICS; Boyd & Dunst 1994), a 5-item scale that measures the extent to which a respondent perceives control over the timing and type of early intervention services. EICS items were rated on a 5-point scale from 1 (*rarely true*) to 5 (*almost always true*). Inter-item reliability for the scale was α=.76. The correlation between PCAS and the EICS was modest (r=.34) indicating that they shared only 12% of the variance. This suggested that the PCAS and the EICS measured different aspects of control. Finally, respondents estimated the frequency of contact they had per month with a target professional (Judge, 1997).

Data were analyzed using two hierarchical regression models. Data from fathers and mothers were analyzed together; consequently no information on differences between fathers' and mothers' perspectives was reported. The first model regressed the dependent variable, help-giving practices, on the following predictor variables entered in order: parent characteristics (age and years of education), family characteristics (SES), child

characteristics (age and diagnosis), program characteristics (service location and service group), and frequency of contact. The only predictor variable that accounted for significant variance (8%) in help-giving practices was child age. Partial correlations between predictor and outcome variables also were computed. It was found that home-based services ($r=.251$, $p<.05$) and programs that served birth to 3-year-old children ($r=.273$, $p<.02$), as well as frequency of contact ($r=.318$, $p<.01$) were significantly and positively correlated with help-giving practices (Judge, 1997).

The second model regressed the dependent variables, program control (EICS) and self-efficacy (PCAS) on the predictor variables in the following order of entry: parent characteristics, family characteristics, child characteristics, frequency of contact, and help-giving practices. In this analysis, neither demographic variables (parent, child, and family characteristics) nor program characteristics (service location and service group) were significant predictors. Both frequency of contact and help-giving practices accounted for significant variance for both program control (30.2%) and self-efficacy (34.1%). Partial correlations demonstrated that the type of service program was significantly correlated with program control ($r=.238$, $p < .05$). Parents who were involved in birth-to-three programs reported greater program control than parents who were involved in 3-to-6 programs. Service location also was significantly correlated with self-efficacy ($r=.271$, $p < .02$). Parents who were involved with home-based programs reported more efficacy than parents who were involved in center-based programs. These findings suggested that parents of children who received help-giving practices and also were in more frequent contact with their provider per month felt they had more control over their children's services than parents who received services in a less help-giving

manner and fewer times a month. In addition, the findings also indicated that birth-to-three programs were associated more with parents' perceptions of control over services; while home-based programs were associated more with parents' feelings of self-efficacy. Judge (1997) did not speculate on why parents who participated in birth-to-three programs felt they had more control over the program than parents who participated in three-to-six programs. Judge did suggest that parents who received services at home may have felt more empowered than parents who received center-based services because professionals in the home environment may feel they have more opportunities to use family-centered practices that would empower family members, and that family members may feel more competent in their home environment.

In a second article by Trivette et al. (1996b), two studies were presented for the purpose of examining possible predictors of perceived parental control over services for children who were diagnosed with or were at-risk for developmental disabilities and were involved in an early intervention/family support (EI/FS) program. Study 1 included 128 parents, and study 2 included 81 parents. Ninety-eight percent of the all participants were mothers. Parents in both studies were asked to complete a packet of self-report measures that related to their children's services. Response rates for returned questionnaires were 56% and 57% for study 1 and 2, respectively. Respondents' ages ranged from 15 to more than 40 years. A majority of respondents were between 21 and 30 years old, Caucasian, had a high school diploma, and were in the low to lower middle income groups. Although no information was reported concerning the children's ages, child diagnoses were reported in both studies. In study 1, the majority of children had an identified

diagnosis and mild to profound degrees of retardation. Children in study 2 were either at-risk for or had a developmental delay (Trivette et al., 1996b).

Questionnaire packets for the two studies were different. In the first study, packets included the HPS long form and the PCAS. In study two, packets consisted of the HPS short form (a 16-item version with Cronbach α=.95), the PCAS, and the EICS. Parents used the HPS to rate help-givers who were assigned to work regularly with the family as part of their participation in the EI/FS program. A factor analysis was conducted on the HPS and resulted in a two-factor solution: (a) *participatory involvement*, which consisted of items that emphasize active participation of the parents in making decisions about the content and focus of the helping relationship, and (b) *help-giver traits*, which included items associated with good clinical practice (e.g., active listening and empathy) (Trivette et al., 1996b).

Hierarchical multiple regression was used to examine the relationship between parent and child demographic variables, EI practitioner characteristics, help-giving practices and self-efficacy (PCAS). Self-efficacy was regressed on the following variables in order of entry: parent characteristics (age and education), family characteristics (SES and income), child characteristics (developmental quotient as determined by the Griffith's Mental Development Scales (1970) and diagnosis), EI practitioner characteristics (age, education, and years of experience), EI practitioner discipline (e.g., social work, nursing), and help-giving practices (participatory involvement and help-giver traits). Results of the first study indicated that EI practitioner discipline and help-giving practices were significant predictors of self-efficacy. A follow-up examination of partial correlations revealed that parents had higher control

ratings when they worked with a social worker compared with other disciplines (specifics unknown). In addition, the partial correlations demonstrated that the *participatory involvement* factor on the HPS was significantly and positively related to changes in self-efficacy, but the *help-giver traits* factor was not related significantly to the self-efficacy measure (Trivette et al., 1996b).

Regression analyses also were performed in study 2. The first analysis was identical to the one conducted in study 1, but in the second analysis, program control (EICS) was the dependent variable. Help-giving practices was the only significant predictor of both self-efficacy (PCAS) and program control (EICS). EI practitioner discipline was a significant predictor of program control but not of self-efficacy. This finding was not consistent with the results reported in study 1. An examination of the partial correlations demonstrated once again that *participatory involvement* was significantly and positively associated with changes in the perceived control measures, but the *help-giver traits* was not related significantly to the perceived control measures. In addition, parents who worked with social workers or nurses had higher ratings on both self-efficacy and program control compared with parents who worked with providers from other disciplines (Trivette et al., 1996b).

Summary of Studies using Unidimensional Measures of Empowerment

The studies in the five articles described above have several similarities, a few differences, and some important implications for early intervention programs and professionals as well as future research. All of the studies included the same dependent variable (PCAS) and four of the five included program as well as professional variables. In some instances, programs were categorized according to their philosophical features

(i.e., family-centered, family-allied, family-focused, professionally-centered), but in other instances they were categorized according to children's age groups and locations of service delivery. Regardless, programs that were based on a family-centered philosophy and providers who used family-centered practices tended to serve parents who expressed greater control over their life situations and the services they were receiving compared to parents who participated in programs that were professionally-centered or had providers who used more direct instructional practices. In one study (Trivette et al., 1996b), investigators described two dimensions of family-centered practices, *participatory involvement* and *help-giver traits*, but found that only *participatory practices* related to parental empowerment (i.e., perceived control over services). Help-giver traits were not significantly related to parental empowerment, which failed to support the theoretical notion that social-emotional features of the parent-provider relationship make important contributions to empowerment outcomes.

In general, the results of the studies provide fairly strong support for the empowering effects of family-centered practices. Parents did seem to feel more in control over their life circumstances and the early intervention system when they interacted with providers who utilize family-centered practices. Other variables, including frequency of contact and provider discipline, seemed to have some limited influence on parents' perceptions of control. Also, it seemed that only certain kinds of help-giving practices were related to control outcomes. Participating practices, for example, appeared more important then certain provider personality and relational features for promoting control outcomes. These findings were quite limited, however, because parental empowerment was measured in each of the above studies on a single

dimension—control. Theoretically, empowerment is a multidimensional concept of which control is only one of many dimensions. In addition, fathers were included in some of the studies, but the numbers were so small that gender analyses could not be done. Nothing can be said, therefore, about father perceptions of family-centered practices or their relationship to empowerment outcomes.

Studies that Focused on Empowerment as a Multidimensional Concept

There are four studies in which the relationship between family-centered practices and multiple item/multiple factor measures of empowerment has been examined. Two studies were conducted in U.S. and the other two were conducted with samples from both the U.S. and other countries. All four studies used either the Parent Empowerment Survey (PES; LaPointe, Trivette, & Dunst, 1990) or the Family Empowerment Scale (FES; Koren et al., 1992), both of which are multiple item and multidimensional scales that measure parental empowerment.

Dunst et al. (1992) asked 74 mothers of young children who were involved in an EI/FS program to complete the Helpgiving Practices Scale (HPS) and the PES. These mothers were, on average, 33 years old. Most were married and worked outside of the home. They also were in the lowest SES group according to the Hollingshead index. Data from fathers were not collected. The Professional Helpers Characteristics Scale (HCS) was described above, but in this study, the investigators identified 13 of the original items that related thematically to the philosophy, paradigm, process and partnership aspects of family-empowerment. The inter-item reliability for these 13 items was $\alpha = .86$. The PES was developed to assess a respondent's sense of control over different life events. In this study, it consisted of 32 items that were rated on a 5-point

scale from *disagree a lot* to *agree a lot*. Internal consistency was measured using coefficient alpha, which for the full scale was .93 and .92 for the 21 items that specifically addressed empowerment components (i.e., performance and perception) (Dunst et al., 1992).

Responses were analyzed using Pearson correlations on two levels: (a) between individual empowerment elements (i.e., *philosophy*, *paradigm*, *process*, *partnership*, *performance*, and *perception*) and (b) between framework constructs (i.e., *ideology*, *participatory activities*, and *outcomes*; see above descriptions). It was found that correlations among all empowerment components were positive, most at the .05 level, with the exception of correlations between *paradigm* and *performance* and between *paradigm* and *process*, which were not significant ($p > .05$). Additionally, the correlations among the framework constructs (i.e., *ideology, participatory activities*, and *outcomes*) correlated at the .05 level or better. These findings provided empirical support for the unified framework of empowerment proposed by Dunst et al. (1992). The findings also suggested that parental empowerment, especially as it related to coping with their (parents') situations, was influenced by parent participation in programs that were guided by a family-centered model of services and by service providers who created opportunities for parents to be involved as partners in decision-making and treatment for their child with special needs (Dunst et al., 1992).

Trivette et al. (1996) also examined the ratings of 74 mothers whose children were involved in an early intervention/family support (EI/FS) program. These mothers had an average age of 32 years and had completed 12 years of school. A majority were married and worked outside the home (at least part time). Their families were classified

into the lowest three socioeconomic strata for SES on Hollingshead scale. Children's average age was approximately 50 months and ranged from birth to 11 years of age. In addition, 62% of the children were boys and 77% were diagnosed with mental retardation or developmental delay. Twelve percent were diagnosed with physical disabilities and 11% were classified at risk for developmental delay. Approximately 32% of the children were profoundly delayed, 38% were mild to moderately delayed, and 30% were mildly delayed or at-risk for delay (Trivette et al., 1996).

Each of the parents completed two inventories: (a) Helpgiving Practices Scale (HPS; long form) and (b) PES. Although the HPS long form was used, the investigators only used 16 items that were included on the short form and classified the items into thematic groupings according to the *philosophical, paradigmatic, procedural*, and *partnership* features described above. Cronbach alpha was not reported for any of the four groupings, but alpha for all 16 of the short form items was .89. The remaining items of the HPS were discarded because the investigators did not think they would be related to the PES measures. The PES consisted of 40 items (α=.93). Half of the items constituted measures of the two empowerment outcomes, *performance* (α=.87) and *perception* (α=.85) that were described by Dunst et al. (1992). Performance items were divided into two subtypes of behavioral competence: (a) *knowledge* and (b) *behavioral actions*. Alternatively, Perception items were grouped into three scales: (a) *efficacy expectations*, (b) *efficacy attributes*, and (c) *self-concept*. The remaining 19 items on the PES were discarded (Trivette et al., 1996).

The data were analyzed first using Pearson correlations on all scales to determine if the scales were interrelated. Correlations between scales on the same instrument (e.g.,

philosophy—paradigm, paradigm—partnership, performance-*knowledge*—perception-*efficacy attributions*) were all significant at the $p < .0001$ level. The following correlations of scales between instruments (i.e., HPS and PES) were significant at the .05 level or greater:

Philosophy	*Knowledge*
	Behavioral Actions
	Efficacy Expectations
	Efficacy Attributions
	Self-Concept
Paradigm	*Efficacy Expectations*
Process	*Behavioral Actions*
	Efficacy Expectations
	Efficacy Attributions
	Self-Concept
Partnerships	*Knowledge*
	Behavioral Actions
	Efficacy Expectations
	Efficacy Attributions

(Trivette et al., 1996)

These correlations suggested that the individual components of helpgiving practices and empowerment as measured by the HPS and PES were significantly related to each other.

In the second set of analyses, canonical correlations were performed on the superordinate dimensions of empowerment (i.e., ideology, participatory activities, outcomes). The results demonstrated that there was a significant relationship between ideology and participation activity measures ($R=.83$, $\chi^2 = 81.65$, $p < .0001$). In addition, correlations between the two outcome measures, performance and perception were significant ($R=.86$, $\chi^2 = 92.82$, $p < .0001$). Finally, canonical relationships between all four independent measures (philosophy, paradigm, process, and partnership) and the five

dependent variables (behavioral action, knowledge, efficacy expectations, efficacy attributions, and self-concept) were significant to the .001 level (Trivette et al., 1996). These findings suggested that the philosophy and practices of the family-centered approach to service delivery were related to parents' performance and perceptions of empowerment.

Finally, the investigators conducted a structural analysis (SEM) to examine the theorized relationships that comprised the unified empowerment framework proposed by Dunst et al. (1992). The SEM model is presented in Figure 2. Goodness of fit statistics were above .92 and all relationships except the one between participation activities and parental perceptions were significant. These findings suggested that programs based on family-centered philosophies were positively related to provider participatory practices, and in turn, related to the knowledge and behavioral dimensions of empowerment. Parents' performance also positively influenced their empowerment perceptions (Trivette et al., 1996).

Dempsey et al. (2001) conducted a study using parents of children with special needs in Australia and India. Australian parents participated in either a system advocacy organization that promoted the inclusion of students with disabilities in regular schools (n=59; response rate of 42%), or were part of a stratified random sample drawn from special schools and regular schools in New South Wales (NSW). The latter schools had support classes for children with disabilities (n=46; response rate of 18%). The advocacy group was comprised of parents who either attended an advocacy training program or solicited advice from program staff during a telephone conversation. No information was reported on the type of parent involvement that characterized the NSW group. Indian

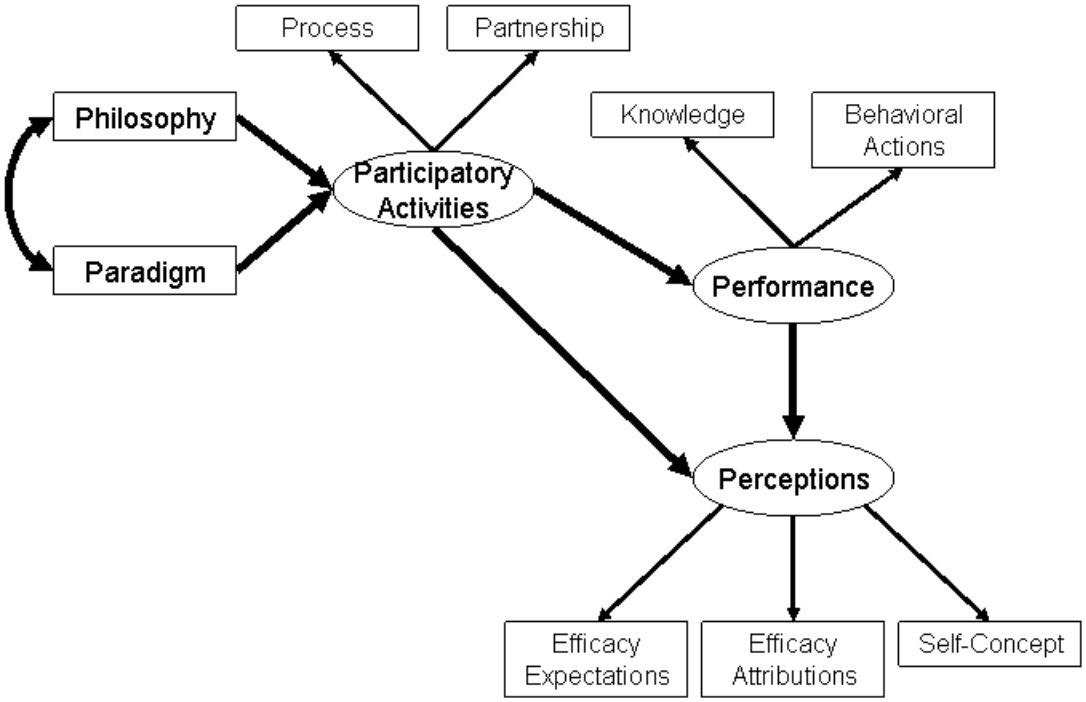


Figure 2. Structural Equation Model used by Trivette et al. (1996) to examine the proposed unified empowerment framework.

parents either had a child or adolescent with a disability (n=100). Half of the Indian parents had children who attended government-run special schools; the other half had children in non-government programs for children with disabilities. No information was given on the type parent of involvement that characterized the Indian sample. Most of the 205 participants were mothers. Only 27 fathers (13%) participated in the study as the only respondent from their family. In another 8 families both fathers and mothers participated as respondents. The majority of respondents were between 30 and 49 years of age. Children in the advocacy and Indian groups were generally older than 13 years, but children in the NSW group were, on average, younger than 12. Parents in the advocacy group had a higher SES status than parents in the Indian group, based on educational qualifications and employment status variables (Dempsey et al., 2001).

Participants in Australia completed the Enabling Practice Scale (EPS; Dempsey, 1995) and the Family Empowerment Scale (FES; Koren et al., 1992). Parents in India completed the same instruments but in an interview format to ensure participants understood the meaning of the individual items. The EPS was designed by Dempsey (1995) to assess parental perceptions of service providers' collaboration and support. It consists of 24 items that are thematically classified into three distinct factors: (a) relational comfort between parents and service providers, (b) extent of collaboration that exists between parents and service providers, and (c) amount of autonomy perceived by parents in their relationships with service providers. The alpha coefficients for these scales ranged from .70 to .93. Participants also were asked to complete the FES, which was initially designed to examine empowerment levels in parents of children with behavioral and emotional problems. Koren et al. (1992) developed the FES conceptually

using a 3 (level) by 3 (expression) matrix of empowerment items. The levels were: as *individual*, *service*, or *community/political*, and expressions were**:** *attitudes*, *knowledge*, and *behaviors*. The resulting instrument consisted of 34 items drawn from cells in the matrix. The initial factor analysis produced four factors: (a) *community/political*, (b) *service system – knowledge*, (c) *family*, and (d) *service system – attitudes/behaviors*. Singh et al. (1995) conducted an exploratory factor analysis that also produced four factors but were somewhat different from those presented Koren et al. (1992). The four factors were: (a) system advocacy, (b) knowledge, (c) competence, and (d) self-efficacy. Dempsey et al. (2001) did not further analyze the FES.

Data were analyzed using mean comparison and multiple regression methods. Mean EPS and FES scores were compared across groups. Participants in the Indian group reported significantly higher EPS scores than participants in the advocacy group, and participants in the advocacy group reported higher FES scores than participants in the NSW group. These findings suggested that, even though participants in the advocacy group did not feel they received family-centered services, they still felt more empowered over their life situations (Dempsey et al., 2001).

Regressions were performed separately for each group. For all groups the full scale FES scores were regressed on the following predictor variables: parent age, socio-economic status, satisfaction with services, frequency of contact, locus of control (in Australian samples only), and enabling practices. No reasons were given to explain why individual factors were not analyzed. Full regression models accounted for 11% to 38% of the variance in empowerment. A significant relationship between the family-centered and empowerment measures was found for the NWS and Indian groups but not for the

advocacy group. In addition, respondent age and socio-economic status were significant predictors of empowerment in the NWS group. Alternatively, locus of control was the only significant predictor of empowerment for the advocacy group. Taken together, the findings for the relationship between family-centered practices and empowerment outcomes were difficult to interpret. They suggested that family-centered practices may be important in terms of some parental empowerment outcomes, but might be attenuated in some situations by certain group features such as amount, type (i.e., phone call, one-on-one meeting, or workshop), and purpose of contact (i.e., educational or participatory) (Dempsey et al., 2001). No differences were reported between mothers and fathers because of the small number of fathers who participated in the study.

Dempsey and Dunst (2004) conducted the most recent study of the relationship between family-centered practices and empowerment outcomes. In this study, samples were drawn from parents of children with disabilities who participated in the Family, Infant, Preschool Program (FIPP) in North Carolina, and from parents in Australia whose children with disabilities attended an early intervention program twice a week. One hundred and forty-one parents participated, 67 in the U.S. sample (30% response rate) and 55 in the Australian sample (47% response rate). An examination of the demographic data shows that over 80% of returned questionnaires were submitted by mothers alone and that more than 90% of the respondents for both samples were either satisfied or very satisfied with the services they received. Respondents in Australia were generally older, had obtained trade/diploma qualifications, and were generally contacted by their service provider once a week or more, in contrast to the US sample in which contact with service providers usually occurred between once a week and once a month.

Additionally, children in the Australian sample were more likely to be over 3 years old, while children in the US sample were generally under the age of 3 (Dempsey & Dunst, 2004).

The EPS and FES instruments were completed by the participants. Reliability scores were not computed for subscales on the EPS instrument. Rather, they were based on previous analyses using a different sample of parents. These subscales were labeled *comfort* (with service staff), *collaboration* (between parents and staff as well as parents and informal support network), and *autonomy* (in their relationship with service staff). Coefficient alphas for the subscales ranged from .60 to .94. The FES was factor analyzed, but investigators only reported that the resulting factors did not correspond to the ones produced by Koren et al. (1992). Consequently, only the total score on the FES was used in the analysis. Internal consistency for the full FES scale was α=.93 (Dempsey & Dunst, 2004).

The relationship between family-centered practices and the empowerment measures was analyzed using stepwise regression. The model regressed the total FES score onto the following predictor variables in a stepwise fashion: respondent characteristics (age, employment, and education), child age, frequency of contact with service professional, locus of control, and family-centered practices. The regression was performed separately for each of the samples. Results demonstrated that the predictor variables (i.e., respondent characteristics, child age, frequency of contact, locus of control, and family-centered practices) accounted for 39.3% and 36.4% of the variance of empowerment for the US and Australian samples, respectively. The largest percentage of the variance was explained by family-centered practices in both samples. In addition, the

family-centered practices variable was the only significant predictor in the regression model. It is not clear if the investigators used a composite of the EPS items or the individual subscales in the regression model. However, standardized regression coefficients (how they were obtained was not reported) were listed for the EPS (i.e., *comfort*, *collaboration*, and *autonomy*) and suggested that *comfort* and *autonomy* practices had a greater impact on empowerment outcomes then collaborative practices did. These findings suggested that family-centered practices were more important predictors of parental empowerment than the demographic variables. The findings also indicated that, of the family-centered practices, comfortable relationships and parental autonomy empowered family members more than providers' collaboration with family members seemed to empower them (Dempsey & Dunst, 2004).

Summary of Studies using Multidimensional Measures of Empowerment

The four studies described above had several similarities, a few differences, and some important implications for the proposed research. Three of the four studies included multiple dimensions of family-centered practices as independent variables. All four studies used measures (i.e., PES or FES) to tap multiple dimensions of empowerment. However, the findings revealed that different types of family-centered practices influence specific aspects of empowerment in various ways. For example, investigators in one study (Trivette et al., 1996) demonstrated that family-centered partnership was highly correlated with parental knowledge, which is a performance measure of empowerment. Family-centered partnership was not correlated with self-concept, however, which is a perceptual measure of empowerment. In another study

(Dunst et al. 1992) correlations between family-centered partnership and both performance and perceptual empowerment measures were significant.

Family-centered practices were not conceptualized in the same way either. Trivette et al. (1996) used family-centered practices that were categorized as philosophy, paradigm, partnership, and process. However, in another study (Dempsey et al., 2001) they were categorized as comfort, collaboration, and autonomy. In addition, these dimensions generally seem to be imposed on the measures conceptually. Only one of the four studies included a factor analysis, and when the results did not match previous factor analyses, they were not reported, and only the full scale measure was used. Therefore, although the intent in each study was to evaluate the relationship between family-centered practices and multidimensional components of empowerment, the analyses never included measures of more than one "dimension", namely, total empowerment. It was not clear, therefore, what the empowerment dimensions were or whether any individual dimensions (other than control) were related to family-centered practices.

In general, the results of these four studies not only provided evidence for the relationship between family-centered practices and empowerment outcomes, they also suggested that empowering effects generalize across cultures. Precisely how family-centered practices empower parents, however, cannot be determined. With respect to the proposed research, the studies did not provide any empirical findings that were relevant for fathers. Fathers were included in only two of these studies, and when they were included, no gender analyses were performed.

Father Research

Research focusing on fathers and their experiences and involvement in the life of their children has become a major theme in the study of families. In the past 15 years, investigators in this area not only expanded upon previous research, but also have developed new and diverse lines of research. Current topics in fatherhood research focus on societal and cultural definitions and representation of fathers, paternal identity, father involvement, father-child relationships, and the well-being and development of fathers (Marsiglio, Amato, Day, & Lamb, 2000). In addition to these areas of fatherhood, another focus of the literature included special populations of fathers, such as fathers of children with special needs (Lamb & Lauman-Billings, 1997), nonresident fathers (Marsiglio et al., 2000), and gay fathers (Silverstein & Auerbach, 1999).

The current study focuses on the experiences of fathers of children with special needs and the family-centered approach to early intervention. Previous research on fathers of children with special needs has, for the most part, examined their perceptions of stress and coping skills. Generally these studies compared mothers' and fathers' perceptions of stress. The results of these studies suggested that mothers and fathers both experience more stress when parenting children with special needs than parents of typically developing children do. When comparing mothers and fathers, results seem to be mixed concerning who perceives more stress and is complicated by the ways in which stress is experienced (see Lamb & Lauman-Billings, 1997 for an expanded review).

Father involvement with early intervention programs has been a topic of discussion for a few investigators. Davis and May (1991) and Turbiville, Turnbull, and Turnbull (1995) recognized that fathers were not participating in early intervention

services for their children and suggested strategies and activities for involving men. Some of these strategies included "defin[ing] a child's family as those persons who physically and emotionally touch the child through the care they offer," (Davis & May, 1991, p. 91), communicating directly with fathers, and incorporating play-based activities into teaching and/or therapy (Turbiville et al., 1995). Markowitz (1984) and Turbiville and Marquis (2001) provided empirical support for these strategies and activities. The investigators in both studies analyzed responses from fathers about the characteristics of early intervention programs that promoted their (fathers') involvement. Characteristic responses from both studies included flexible scheduling of activities so that fathers could participate around their work schedules, group activities that included multiple members of the family (e.g., fathers and mothers or fathers and child), and specifically inviting fathers to participate in activities, evaluations, and needs assessments (Markowitz, 1984; Turbiville & Marquis, 2001). Overall, these findings suggested that fathers did want to participate in the lives of their children, but the invitation to participate must be specifically offered to them.

The few studies that examined fathers' experience with early intervention generally deal with their involvement with specific programs or workshops and not the birth-to-three system as a whole. Moreover, the relationship between fathers and individual service providers was not examined, nor was fathers' perceptions of the service model (i.e., family-centeredness). Murray and McDonald (1996) compared three studies that addressed differing levels of father involvement in specific early intervention programs. Father involvement in the studies ranged from non-invited (early intervention program was for mothers and their children, but fathers were asked to complete the same

assessment as mothers), to absence (in which assessment examined the difference between families with participating fathers and absent fathers), to father-centered programming (early intervention program was for fathers and their children). Taken together, the results of the studies suggested that that increases in fathers' participation in programs concerning their children with special needs had a positive impact on child rearing attitudes and treatment maintenance effects. The results also indicated that early intervention programs that did not include fathers may have fostered negative attitudes such as resentment.

In summary, although research on fatherhood continues to expand and diversify, the majority of studies at this time focus on fathers of typical children. While fathers in special situations (e.g., fathers of children with special needs, nonresident fathers, gay fathers) have received some attention, much more research is needed to provide a better understanding not only of these populations, but of all fathers. In the area of fathers of children with special needs, several studies examined fathers' experience of stress and their ability to cope. However, only a few studies examined fathers' experiences with their children's early intervention system or programs. In these studies, there was no evidence to support differential paternal and maternal experiences. The best implication for the present study was that fathers' perceptions of the relationship between family-centered practices and empowerment should not be different from the perceptions described in the review above.

General Summary

The family-centered approach to service delivery is now the model of choice in every state in the country. This model focuses on three core elements: centrality of the

family, family as the decision maker, and the promotion of family's strengths and capabilities. Both scholars and practitioners have argued that family-centered practices are causally related to family empowerment (Dunst, 1997; Dempsey & Dunst, 2004). There is some empirical support for this relationship at least for mothers, but only in terms of parental control outcomes. Furthermore, some studies demonstrated that to some extent family-centeredness and empowerment are multidimensional concepts. However, specific features of these dimensions have not been broadly established, in any empirical sense. Moreover, empirical support for the relationship between family-centered practices and empowerment remains somewhat problematical. First, the findings are difficult to generalize to early intervention (birth-to-three) programs because of the range of child ages and program types. In general, the majority of participants were parents of preschool-age children, or older. For example, Dempsey et al. (2001) included parents of adolescents with disabilities in their sample. In fact, none of the nine studies utilized a parent sample in which all of the children were under the age of three. Consequently, generalization of the findings to Part C programs is not possible.

Secondly, most of the participants in all nine studies were mothers, and several studies included only mothers. When fathers were included, their numbers were too small to examine their responses separate from mothers. In addition, investigators never addressed the potential confounding effects (e.g., fathers responses may have influenced, to a small degree, strength of regression or correlation relationships either positively or negatively) of including fathers in the samples. Thus, nothing can be said about paternal perceptions of family-centered practices, family empowerment, or the nature of the relationship between the two. It remains to be seen how fathers feel about family-

centered practices and whether these practices promote empowerment outcomes in ways that are similar or different from mothers.

Because nothing is known about fathers' experiences with family-centered early intervention service delivery systems and because the fathering literature in general does not offer much information that is relevant to this area, the proposed study will be exploratory in nature. The intent is not to test specific hypotheses. Rather, it is to describe father perceptions of family-centered practices and empowerment, and then determine if there might be a relationship between the two constructs. Previous research that involved mothers would suggest that that there will be a positive relationship between family-centered practices and empowerment. There is no evidence in related early intervention literature which suggests that a difference between mothers and fathers should be evident. In an effort to truly explore fathers' perceptions, a rigorous methodological process must be employed not only to examine the relationship between family-centered practice and empowerment, but also to examine the concepts themselves. Consequently, an effort will be made to identify paternal dimensions of family-centered practices and empowerment outcomes using a very conservative and rigorous set of statistical procedures. Measures of both constructs will be factor analyzed to identify their dimensions from fathers' perspectives. In addition, correlational and structural analyses will be performed to examine the relationships between the dimensions of both constructs, thus allowing for differential prediction of empowerment outcomes. In this respect, the proposed study should be more rigorous than the studies described above. Finally, findings will be related to the maternal literature in this area and implications for Tennessee's Early Intervention System also will be presented.

CHAPTER 3

METHODS

Participants

Father participants were drawn from active TEIS cases (IDEA, Part C) across the state of Tennessee. In this study, active cases were identified as families of children with special needs between birth and three years of age (after the age of three children transition to school-based special education services), in which the family had completed at least an initial Individualized Family Service Plan (IFSP). Participants were excluded only for the following reasons: (a) parents were under 18 years old; (b) parents did not speak English fluently; (c) the designated service coordinator for the family was not a member of the TEIS staff; and (d) the focal child was in foster care. Approximately 1,000 families were invited to participate using a (geographically) stratified random sampling procedure. The sample was drawn proportionally by district based on the percentage of families served in the district compared with families served across the state as a whole. For example, because District A served 20% of all families participating in the state, 20% of the sample was drawn from District A. The number of fathers who were contacted to participate in the study was 424, of this number 158 (37%) declined. The remaining 266 fathers signed an informed consent, and 137 (32% of all fathers, 52% of those agreeing to participate) have returned completed questionnaires. Fathers are still being contacted and encouraged to complete the questionnaire.

Because the distribution of the questionnaire was staggered throughout the state with TEIS programs in the eastern districts of the state beginning the distribution process before the middle and western districts, the sample that was used in the present study was

not representative of the state as a whole and did not include racially and culturally diverse areas of the state. The sample was approximately 91% Caucasian. The majority of participants (83%) were the biological father of the target child with disabilities. Sixty-three fathers (49%) reported that more than half their time was spent caring for their child with special needs. In addition, 75 fathers (55%) reported they attended the first IFSP meeting. Approximately two thirds of the participants had some college experience and were, on average, 37 years old. Demographic information that pertains to fathers is presented in Table 1. The focal children with disabilities were, on average, 28.5 months old and approximately 66% were boys. Child demographic information is presented in Table 2.

Data Collection Procedures

Participants received a packet of questionnaires which was delivered by the family's TEIS service coordinator during a meeting in the participant's home. The service coordinators met with fathers and mothers, described the project, obtained informed consent, and left the questionnaire packets. Each family who met with a service coordinator received a $5 gift card to Wal-Mart. Fathers and mothers independently completed and returned the packets directly to the investigators using self-addressed stamped envelopes.

Measures

Questionnaire packets included a number of instruments that examined family-centered services and family functioning. The current study focuses on the first two self-report instruments in the packet, the Family-Centered Program Rating Scale (FamPRS; Murphy et al., 1995) and the Family Empowerment Scale (FES; Koren et al., 1992).

Table 1

Demographic Characteristics of Fathers

Characteristics	#	%
Race		
Caucasian	124	90.5
African American	4	2.9
Asian	2	1.5
Other	3	2.2
Marital Status		
Single –Never Married	4	2.9
Married	98	71.5
Separated/Divorced – Single	3	2.2
Remarried	29	21.2
Education Level		
Did not complete high school	13	9.5
High school diploma	30	21.9
Some college or Associate/Technical degree	44	32.1
Bachelors degree and above	46	33.6
Family Income (annual)		
Less than $15K	17	12.4
$15K - $30K	18	13.1
$30K - $45K	24	17.5
$45K - $60K	20	14.6
$60K - $75K	16	11.7
More than $75K	28	20.4
Employment Status (last 6 months)		
Full-time	104	75.9
Part-time	12	8.5
Unemployed	14	10.2
Residence Type		
Urban	32	23.4
Suburban	51	37.2
Rural	50	36.5

Table 2

Ages and Diagnoses of Target Children

Characteristics	#	%
Ages		
Birth – 12 months	10	7.3
12 – 24 months	29	21.2
24 – 36 months	64	46.7
36 months and older	25	18.2
Diagnoses		
Autism	7	5.1
Cerebral Palsy	8	5.8
Developmental Delay	27	19.7
Down Syndrome	9	6.6
Speech/Hearing Disorder	32	23.4
Spina Bifida	3	2.2
Other	40	29.2

Family-Centered Program Rating Scale (FamPRS)

The FamPRS was originally developed by Murphy et al. (1995). Using information derived from previous research on the IFSP planning process (Summers et al., 1990), Murphy et al. generated more than 70 items related to the concept of family-centeredness. Each item was examined by parents, professionals, and leading experts in the early intervention field. Eventually, the instrument consisted of 59 items. Each item was rated on two scales: (a) performance and (b) importance. Performance items required respondents to rate their experience with the services and the staff members as: *poor, okay, good,* or *excellent.* Participants also rated the importance of the experiences described by the items as: *not important, somewhat important, important,* or *very important.* Two versions of the FamPRS were developed, one for parents and one for service providers. All items on the two versions were the same; only referent words were different (e.g., parent—"Our family's TEIS service coordinator", service providers—"As a service coordinator I").

The final form of the FamPRS was field tested using parents (n=322) and professionals (n=383; 280 mothers; 103 fathers) in early intervention programs located in 10 states. Murphy et al. (1995) conducted a factor analysis using principal components extraction and varimax rotation. This analysis was only performed on the Importance scale items. It produced 11 factors that had Cronbach alphas ranging from .71 - .84 for parents. In terms of validity, the researchers argued that the FamPRS rigorous development process attested to its content validity, and the reported principal components analysis and ensuing reliability analyses on the factors established the instruments' statistical independence and, therefore, construct validity (Murphy et al.,

1995). Aside from the initial field test, this instrument has not been used in other early intervention studies.

In the present study, a few minor changes were made to the instrument. The FamPRS items were originally organized into four sections that begin with one of the following stems: “In this program”, “This program”, “Staff members”, and “My family.” These stems were changed to, “In Tennessee’s Early Intervention System”, “Tennessee’s Early Intervention System”, “Our Family’s TEIS Service Coordinator”, and “My Family”, respectively, to help ensure that participants responded with the TEIS system and their individual service coordinators in mind. Because these changes often required participants to focus their responses on individual TEIS service coordinators, it was anticipated that some findings might be different than the findings reported by Murphy et al. (1995). These differences were anticipated because the revised formatting placed greater emphasis on the parent-service coordinator relationship, which was not emphasized in the original instrument. The changes were made because the DOE, as well as the investigators, wanted to focus primary attention on TEIS service coordinators rather than the system or staff as a whole. Although much of the family-centered literature stressed the relationship between parents and providers, very few investigators have examined the relationship empirically.

The instrument was pilot tested with eight families who had transitioned from TEIS into school-based special education programs. Feedback from these parents demonstrated a need to add two response options on the FamPRS performance items: (a) N/A (not applicable/available) and (b) Don’t Know/Unsure. In the original instrument, it was not possible for respondents to indicate that either services had not been offered to

them, or that they were unaware of the availability of services. Additionally, item 43 from the original scale, "Staff members get to know my family and let us get to know them," was split into two different items to clarify the item's meaning. The resulting items were, "My TEIS service coordinator gets to know my family" and "My TEIS service coordinator lets us get to know him or her." The initial combined item had a double meaning, which forced participants to respond to one or the other part of the item. For example, if a parent felt that the service coordinator got to know family members but did not allow family members to get to know him/her, the respondent often was not sure how to respond the item. Consequently, the item was changed. No other substantive changes were made to the original instrument.

Family Empowerment Scale (FES)

Koren et al. (1992) developed the FES to explore parents' feelings of empowerment with regard to parenting children with serious emotional disorders. The FES was originally based on a framework that consisted of two dimensions of empowerment: level and expression. Level of empowerment referred to the influence over which the respondent felt some control and included the family, service system, and community/political arena. The second dimension, expression, specifically identified the form in which empowerment could be expressed or demonstrated and included attitudes, knowledge, and behaviors. Using a 3 x 3 matrix of dimensions, Koren et al. (1992) generated a pool of items that was assigned to each cell (e.g., family level attitudes, behaviors in the service system, knowledge about how to work with political leaders). After conducting a pilot study and follow up interviews with focus groups, Koren et al. (1992) revised the instrument. The final version included 34 items that were rated either

never true, rarely true, sometimes true, often true, or *always true.* The items can also be combined to form subscales for family (12 items), service system (12 items), and community/political (10 items) forms of empowerment.

The FES was subsequently field tested with parents (n=440; 414 mothers; 26 fathers) in an effort to assess its reliability and validity. Internal consistency was reported using Cronbach's alphas which ranged from .87 to .88 for the three subscales. In addition, test-retest reliability was measured using correlations between respondents' scores over a period of one month. Correlations ranged from .77 to .85 for the three subscales. Validity was demonstrated in two ways. First, professionals who were blind to the development process were asked to classify items into the aforementioned empowerment matrix. Koren et al. (1992) argued that the high agreement (kappa coefficients between .70 and .83) suggested the presence of latent variables and, as such, demonstrated content validity. Second, Koren et al. (1992) performed a factor analysis using principal components extraction and varimax rotation to determine whether response patterns would be similar to the underlying constructs of the FES and the contribution of items to the constructs. The factor analysis produced four factors that appeared to correspond to the level subscales (i.e., family, service system, community/political) with the understanding that the service system construct seemed to be divided into two factors identified somewhat by expression type—knowledge and behaviors. Koren et al. (1992) suggested that the factors provided some support for the content validity of the FES.

The psychometric properties of the FES also were examined by Singh et al. (1995). Responses from 288 parents (198 mothers; 29 fathers) of seriously emotionally

disturbed children were factor analyzed (exploratory) using principal components extraction and varimax rotation methods. Singh et al. (1995) found that both a four and five factor model were mathematically and conceptually meaningful, but after comparing the factors, suggested that the four factor model was conceptually more meaningful. The factors were labeled (a) system advocacy, (b) knowledge, (d) competence, and (d) self-efficacy. The internal consistency of each factor was measured using Cronbach alpha coefficients. These were .89, .89, .85, and .78, respectively. Singh et al. (1995) also performed a split half estimate of reliability on the FES full scale. The reliability estimate was .93. Correlations then were performed to examine the independence of the factors. All correlations between factors were greater than .62 and significant at the .001 level which suggested that the factors were not independent. The conclusion was that an underlying construct of empowerment was measured by the FES. However, this construct was multidimensional in nature and included at least four distinct but conceptually-related dimensions.

In addition to the field test conducted by Koren et al. (1992) and the factor analysis by Singh et al. (1995), the FES has been used in the field of early intervention by Dempsey et al. (2001), Dempsey and Dunst (2004), and Thompson, Lobb, Elling, Herman, Jurkiewicz, and Julleza (1997). Only Dempsey and Dunst (2004) conducted a factor analysis on the FES, but because the results of the factor analysis did not correspond with the one reported by Koren et al. (1992) they did not report it.

Data Analyses

Factor Analysis

In order to assess the relationship between family-centered practices and empowerment outcomes, both the FamPRS and FES instruments first needed to be factor analyzed. These analyses were done because neither instrument had been factor analyzed often enough to provide confidence in their factor structures, and because neither instrument had been factor analyzed using a sample of fathers.

FamPRS

Before the factor analysis results from the FamPRS instrument are presented, it is important to note that (a) a factor analysis has never been performed on the performance scale of this instrument and (b) the participant-to-item ratio was approximately 2:1. The size of this ratio is important because, as Costello and Osborne (2005) found, the smaller the ratio in EFA the larger the chance of misclassifying items and the larger the average error in eigenvalues and factor loadings. Item frequencies were computed to determine if there were any items that seemed problematic because of missing or non-substantive data (i.e., don't know/unsure and not applicable responses). Sixteen items were found that had more than 20% missing or non-substantive data. More specifically, most of these items had a large number of responses that were non-substantive, and therefore, believed to be not universally applicable to this sample of fathers of children with special needs. These items are listed in Appendix A.

After the sixteen items were deleted, all remaining non-substantive and missing data for the 44 remaining FamPRS items were imputed using SPSS© Expectation Maximization method. An exploratory factor analysis was conducted using unweighted

least squares extraction and promax rotation methods. Unweighted least squares extraction was chosen because it was felt that the items may violate the assumption of multivariate normality. Promax rotation was chosen because it is an oblique method that allows factors to be correlated. The scree plot was used to determine the number of factors in the data. After determining the number of factors, the pattern matrix was used to identify items that had a secondary loading within .10 of the highest factor loading. These items were removed from the analysis one at a time. This process was repeated until a simple structure was achieved (no items loaded highly on multiple factors) and all items loaded on one factor at least at the .30 level. Factor structures were then examined conceptually for face validity. Finally, the factor structure was assessed using confirmatory factor analysis (CFA) in AMOS© to determine goodness of fit between the model and the data. Resulting item factor structures, goodness of fit statistics for the measurement model, and Cronbach's alphas for each scale is reported in the Results section.

FES

The same analytic procedures were used to analyze the FES. No item had more than five percent missing data; therefore, no items were removed. All of the missing data were imputed using the SPSS© Expectation Maximization procedure. An exploratory factor analysis was conducted using unweighted least squares extraction and promax rotation methods. The scree plot was used to determine the number of factors in the data. Using the pattern matrix, items that co-loaded on two or more factors within .10 were removed from the analysis one at a time. This process was repeated until simple structure was achieved (no items co-loaded highly on multiple factors) and all items loaded on one

factor at least to the .30 level. In addition, the factor-item structure was examined for face validity. As for the FamPRS, the resulting factor structure was validated using a confirmatory factor analysis. Results are reported along with Cronbach alphas for each scale in the Results section.

Univariate Analyses

After identifying the different factors on the FamPRS and FES, scales scores were created by averaging the items making up each factor. This method of combining items retained the original scale of the items and the anchors (i.e., 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*)). Means and standard deviations were computed as measures of central tendency and variability and were used to determine (a) how family-centered fathers believe the services received from TEIS and its service coordinators were and (b) how empowered fathers felt about their lives and in their roles as parents of children with special needs.

Bivariate Analyses

Relationships among the FamPRS and FES scales were examined using Pearson correlations. The bivariate correlations are reported in the Results section.

Multivariate Analyses

Correlational Analyses

Correlations among the latent factors were examined using AMOS©. These correlations were different than the bivariate correlations, because they accounted for the within measure factor correlations. In addition, latent variables were analyzed because they take into account measurement error.

Structural Analyses

The multivariate relationship between family-centered practices and empowerment outcomes were examined using structural equation modeling (SEM) techniques. West, Sandler, Pillow, Baca, & Gersten (1991) suggested that "structural equation modeling refers to a family of statistical procedures for testing whether obtained data are consistent with a theoretical model (and) are particularly useful when the phenomenon under investigation involves a complex system of interrelationships among variables" (p. 460). Specifically, this method allows researchers to examine covariance and regression relationships between manifest (observable) items or scales and/or latent (unobservable) constructs while simultaneously identifying measurement error and latent construct disturbance (i.e., error; Bryne, 2000; Hox & Bechger, 1998). The SEM findings also are presented in the Results section.

CHAPTER 4

RESULTS

Factor Analyses

FamPRS

The scree plot was examined for the FamPRS items. Figure 3 presents the scree plot and the line that suggests the number of factors. It was clear from the scree plot that there was 1 factor driving family-centered practices. However, close examination of the scree criteria with an interest to examine the dimensionality of family-centered practices resulted in four factors above the criteria line suggesting a four factor model of family-centered practices. After determining the number of factors, items that were highly loaded on two or more factors were removed to achieve simple structure. These items and the high loadings are reported in Appendix B. Conceptual examination of these factors resulted in the following labels: *Respectful Communication, Strengths-Focused Support, Sensitive Service Delivery,* and *Collaboration.* Overall, these factors accounted for approximately 55.9% of the variance of family-centered practice. Items, factor eigenvalues, and percent of the variance are reported in table 3. Internal consistencies were all above .87 and are reported in table 4. Although it had a good reliability coefficient, *Collaboration* was problematic because there are only two items in the factor. This factor-item structure was then entered into a confirmatory factor (CFA) model. The best fitting model CFA model is presented in figure 4. This measurement model still did not fit the data well ($\chi^2(392) = 1005.64$, $p < .001$, CFI = .78, RMSEA = .11, AGFI = .65). In this regard, it is important to note that with a sample of only 137 fathers, there may not be enough statistical power to permit a good fit to the conceptual model.

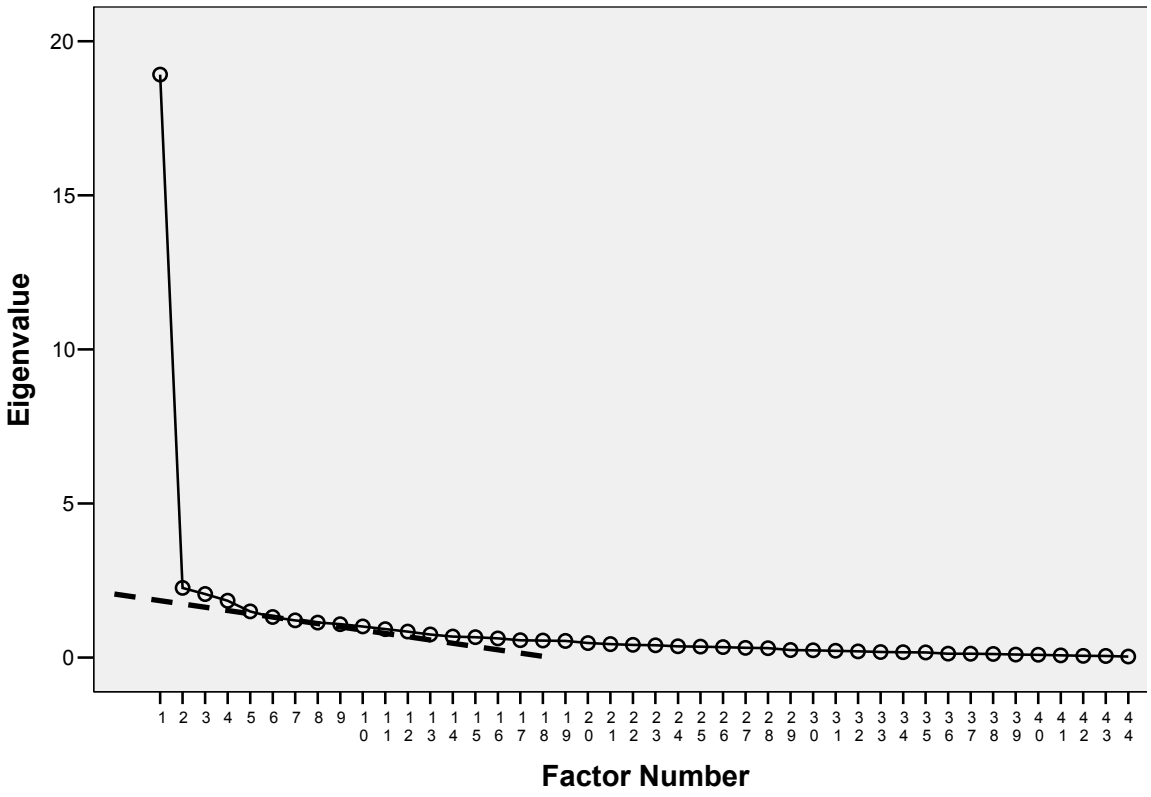


Figure 3. Scree plot of FamPRS Eigenvalues and Potential Factors with Criteria Line.

Table 3

Summary of Exploratory Factor Analysis Results for Family-Centered Program Rating Scale Using Unweighted Least Squares Estimation (N = 137)

	Factor Loadings			
Item	Respectful Comm.	Strengths Focused Support	Sensitive Service Delivery	Collaboration
Our family's TEIS service coordinator does not act rushed or in a hurry when he or she meets with my family or me	**.84**	-.34	.05	.19
Our family's TEIS service coordinator is honest with family	**.71**	-.02	.12	.03
Our family's TEIS service coordinator gives clear and complete information about my family's rights	**.63**	.04	.07	.11
Our family's TEIS service coordinator is friendly and easy to talk to	**.61**	.30	-.06	-.10
Our family's TEIS service coordinator helps my family learn how to teach our child with special needs particular skills	**.60**	.17	-.02	.08
Our family's TEIS service coordinator helps my family feel more confident about working with professionals	**.58**	.34	-.15	.10
Our family's TEIS service coordinator enjoys working with my family and our child with special needs	**.57**	.08	-.08	.07
Our family's TEIS service coordinator does not ask my family to repeat information that is already in my child's file	**.54**	.12	.04	-.04
Our family's TEIS service coordinator gives my family time to talk about our experiences and things that are important to us	**.52**	.30	-.04	.00
Our family's TEIS service coordinator gives my family clear and complete information about our child's special needs	**.47**	.02	.29	-.04
Our family's TEIS service coordinator gives my family clear and complete explanations in matters relating to our child with special needs	**.46**	.18	.23	-.03
Our family's TEIS service coordinator gives my family information about how children usually grow and develop	-.22	**.81**	.12	.13
Our family's TEIS service coordinator helps my family see what we are doing well	.14	**.74**	-.09	-.09
Our family's TEIS service coordinator helps my family see the good things we are doing to meet our child's needs	-.14	**.66**	.26	.05

Table 3—Continued

Item	Factor Loadings			
	Respectful Comm.	Strengths Focused Support	Sensitive Service Delivery	Collaboration
Our family's TEIS service coordinator regularly asks my family about how well TEIS is doing and what changes we might like to see	.15	**.66**	.03	.06
Our family's TEIS service coordinator helps my family feel more confident that we are experts on our child with special needs	.06	**.59**	.06	.19
Our family's TEIS service coordinator considers my family's strengths and needs when planning ways to meet our child's needs	.26	**.59**	.08	-.15
Our family's TEIS service coordinator explains how information about my child with special needs and family used	.21	**.56**	-.28	.30
Our family's TEIS service coordinator lets us get to know him or her	.21	**.51**	.20	-.06
TEIS helps my family expect good things in the future for ourselves and our child with special needs	.38	**.49**	-.01	-.16
Our family's TEIS service coordinator does not ask my family about personal matters unless it is necessary	.18	-.06	**.78**	-.23
In TEIS services are planned with my family's transportation and scheduling needs in mind.	.20	-.04	**.66**	.08
Our family's TEIS service coordinator respects whatever level of involvement my family chooses in making decisions	-.26	.35	**.66**	.03
Our family's TEIS service coordinator does not rush my family to make changes	.17	.16	**.58**	-.03
In TEIS services change quickly when my family's or child's needs change.	-.27	.22	**.54**	.11
In TEIS a service coordinator can help my family get services from other agencies and service providers.	.13	-.09	**.51**	.21
In TEIS meetings family are scheduled when and where they are most convenient for us.	.32	-.06	**.49**	.00
My family receives complete copies of all reports about us and our child with special needs	.15	-.18	**.43**	.31
My family is included in all meetings about us and our child with special needs	.07	.06	.01	**.87**

Table 3—Continued

	Factor Loadings			
Item	Respectful Comm.	Strengths Focused Support	Sensitive Service Delivery	Collaboration
My family is an important part of the team when our IFSP is developed, reviewed or changed	.00	.12	.09	**.75**
Eigenvalues	13.06	1.98	1.80	1.58
% of variance	42.08	6.60	5.99	5.26

Note: Factor loadings above .40 appear in bold.

Table 4

Family-Centered Practice Scales: Descriptive Statistics (N=137)

Scales	*M*	*SD*	Range	α
Respectful Communication	3.42	.48	1 - 4	.91
Strengths-focused support	3.16	.59	1 - 4	.91
Sensitive Service Delivery	3.42	.47	1 - 4	.87
Collaboration	3.49	.65	1 - 4	.87

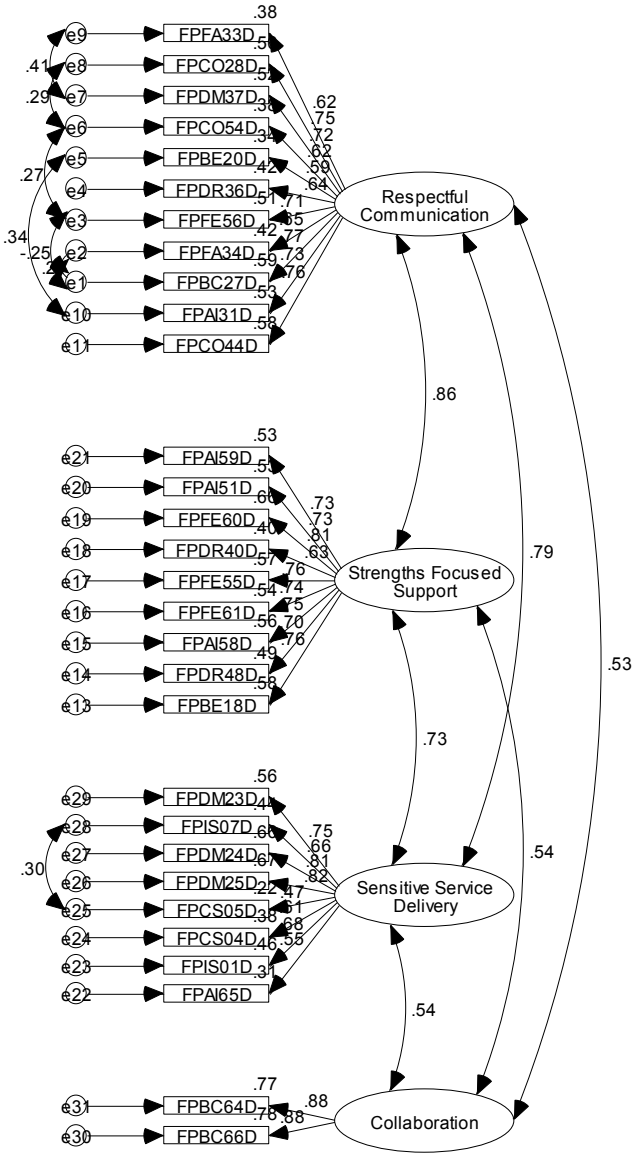


Figure 4. Confirmatory Factor Model of Family-Centered Practice Dimensions. ($\chi^2(392) = 1005.64$, $p < .001$, CFI = .78, RMSEA = .11, AGFI = .65)

FES

The scree plot of the FES eigenvalues is presented in figure 5 and was used to determine the number of factors. After determining that the FES consisted of three factors, items that loaded highly on two or more factors were removed one at a time until simple structure was achieved. Items that were removed are reported with their high loadings in Appendix C. Conceptual examination of these empowerment factors resulted in the following labels: *Competence, System Advocacy,* and *Initiative.* Overall, these factors accounted for 46.9% of the variance of empowerment. Items, factor eigenvalues and percent of the variance explained are reported in table 5. Internal consistencies were all above .79 and are reported in table 6. The factor structure was then entered into a CFA model using AMOS©. The best fitting measurement model is presented in figure 6. It had a good fit ($\chi^2(318) = 578.90$, $p < .001$, CFI = .85, RMSEA = .08, AGFI = .72).

Univariate Analyses

Factor item scales for the FamPRS and FES instruments were computed by averaging the scores on corresponding items. Means and standard deviations for the family-centered practice scales are presented in table 4, and those for empowerment are presented in table 6. The mean ratings on all FamPRS factors (*relational communication*, *strengths-focused support*, *sensitive service delivery*, and *collaboration*) were between 3 (*good*) and 4 (*excellent*). The mean ratings for the *Competence* and *Initiative* empowerment factors were both between 3 (*often true*) and 4 (*always true*). However, the *System Advocacy* factor of empowerment only had a mean between 1 (*rarely true*) and 2 (*sometimes true*).

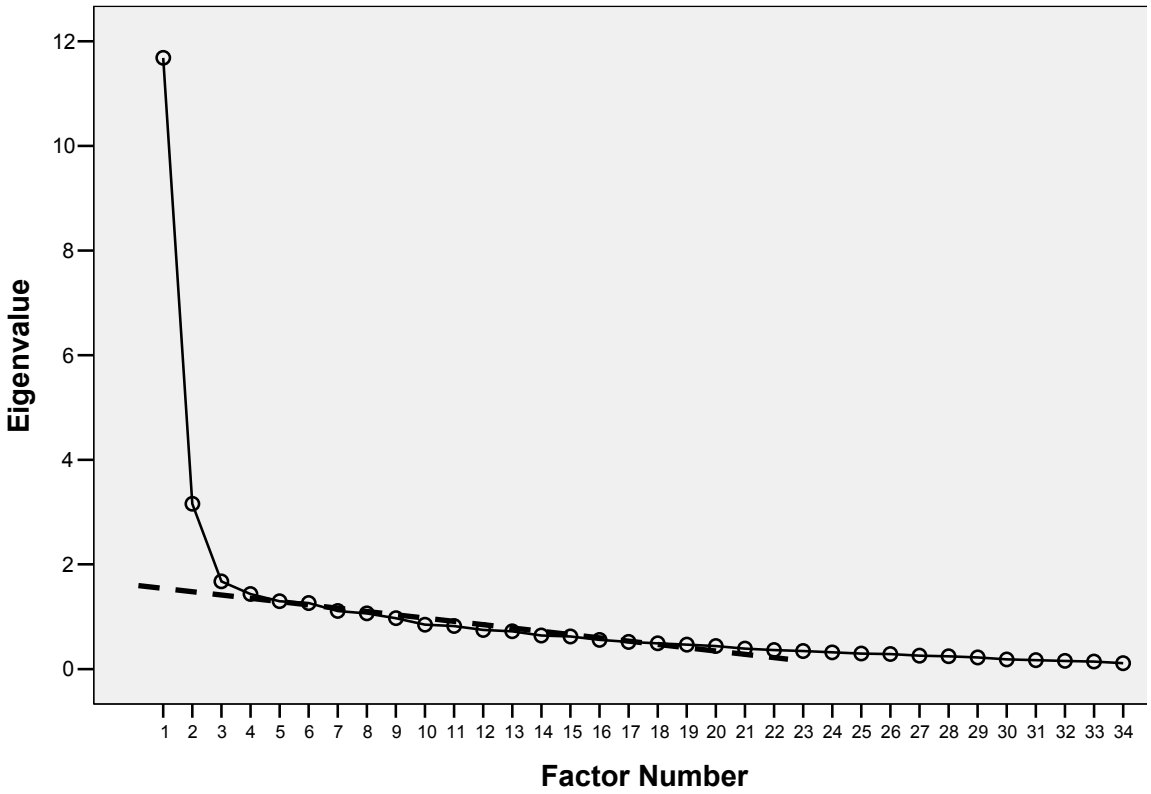


Figure 5. Scree plot of FES Eigenvalues and Potential Factors with Criteria Line.

Table 5

Summary of Exploratory Factor Analysis Results for Family Empowerment Scale Using Unweighted Least Squares Estimation (N = 137)

	Factor Loadings		
Item	Competence	System Advocacy	Initiative
I believe I can solve problems with my child when they happen	**.83**	-.07	-.06
I know what to do when problems arise with my child	**.79**	-.02	-.05
I am able to make good decisions about what services my child needs	**.78**	-.03	.06
I know the steps to take when I am concerned my child is receiving poor services	**.74**	.14	-.17
I feel I am a good parent	**.73**	-.03	-.12
I feel my family life is under control	**.71**	-.11	-.07
I know what services my child needs	**.65**	.25	-.11
I have a good understanding of my child's special needs	**.62**	-.08	.21
When problems arise with my child, I handle them pretty well	**.53**	-.08	.30
My opinion is just as important as professionals' opinions in deciding what services my child needs	**.51**	.16	-.05
I feel confident in my ability to help my child grow and develop	**.51**	-.20	.36
When faced with a problem involving my child, I decide what to do and then do it	**.50**	.07	.22
I am able to work with agencies and professionals to decide what services my child needs	**.48**	-.02	.34
When dealing with my child, I focus on the good things as well as the problems	**.46**	.00	.28
I am able to get information to help me better understand my child	**.40**	.20	.15
I tell people in agencies and government how services for children can be improved	-.31	**.71**	.16
I know how to get agency administrators or legislators to listen to me	.12	**.66**	-.11
I have ideas about the ideal service system for children	-.05	**.63**	.00
I get in touch with my legislators when important bills or issues concerning children are pending	-.14	**.61**	.06
I know the rights of parents and children under the special education laws	.14	**.55**	.07
I feel that my knowledge and experience as a parent can be used to improve services for children and families	.32	**.52**	-.05
I help other families get the services they need	-.05	**.51**	.17
I feel I can have a part in improving services for children in my community	.12	**.44**	.11
I believe that other parents and I can have an influence on services for children	.25	**.41**	-.10

Table 5—Continued

Item	Factor Loadings		
	Competence	System Advocacy	Initiative
When necessary, I take the initiative in looking for services for my child and family	-.15	.22	**.79**
I make efforts to learn new ways to help my child grow and develop	.22	-.07	**.70**
I make sure I stay in regular contact with professionals who are providing services to my child.	-.06	.14	**.66**
Eigenvalues	9.71	2.99	1.48
% of variance	34.10	9.05	3.79

Note: Factor loadings over .40 appear in bold.

Table 6

Empowerment Scales: Descriptive Statistics (N=137)

Scales	*M*	*SD*	Range	α
Competence	3.17	.55	0 - 4	.92
System Advocacy	1.87	.72	0 - 4	.83
Initiative	3.00	.86	0 - 4	.79

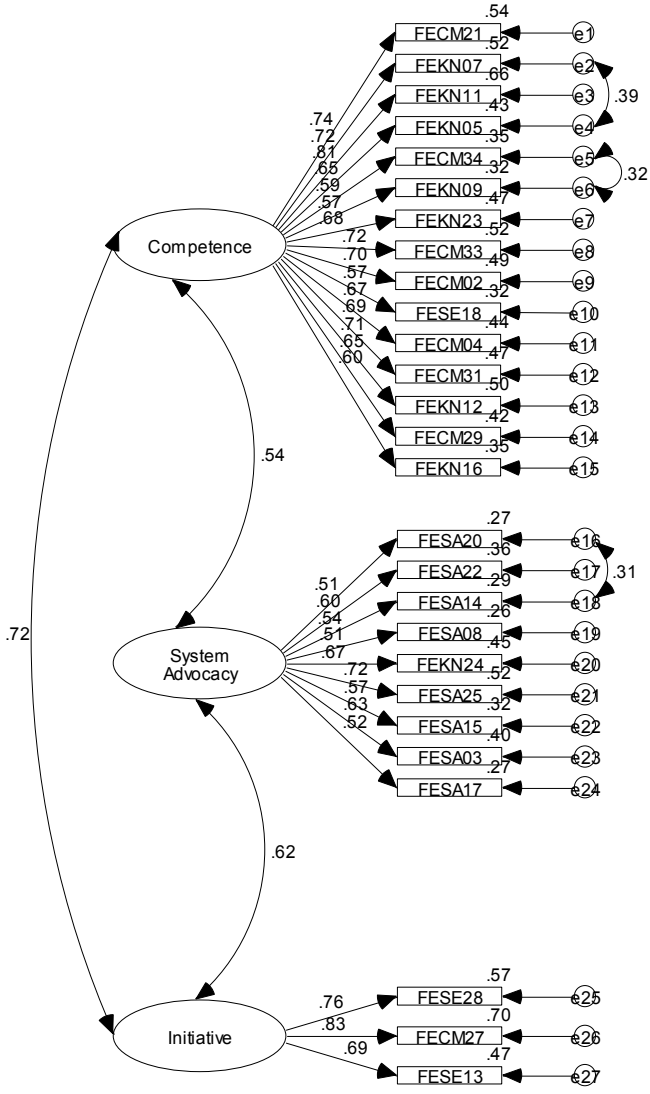


Figure 6. Confirmatory Factor Model of Empowerment Dimensions.
($\chi^2(318) = 578.90$, $p < .001$, CFI = .85, RMSEA = .08, AGFI = .72)

Bivariate Analyses

Pearson correlations among family-centered practice scales and empowerment scales are presented in table 7. As expected, scales within measures were all significantly associated. In terms of correlations between measures, *strengths-focused support* was significantly and positively related to all three empowerment outcomes. Both *respectful communication* and *sensitive service delivery* were significantly and positively correlated with *competence* and *initiative* but not with *system advocacy*. Alternatively, *collaboration* was positively related to *competence* and *system advocacy* but not related to *initiative.*

Multivariate Analysis

Correlational Analysis

Using AMOS©, correlations between latent factors were examined. These correlations account for the error variance and the relationships among the other latent factors and the ones of interest. All correlations between factors are reported in table 8. The pattern of the correlations was the same as the one that characterized the bivariate correlations presented above.

Structural Equation Analysis

A structural model was formed from the FamPRS and FES CFA models. The initial structural model correlated all family-centered practice latent factors and the disturbance terms for the empowerment factors. In addition, this initial model regressed all empowerment dimensions on family-centered practice dimensions. The data did not fit the a priori model well ($\chi^2(1508) = 2586.50$, $p < .001$, CFI = .77, RMSEA = .07, AGFI = .59) and are presented in figure 7. However, several of the regression estimates between family-centered and empowerment dimensions were non-significant and,

Table 7

Family-Centered Practices and Empowerment Outcomes: Zero-order Correlations (N = 137)

	Variables	1	2	3	4	5	6	7
1	Respectful Communication	—						
2	Strengths-focused support	.76**	—					
3	Sensitive Service Delivery	.67**	.63**	—				
4	Collaboration	.47**	.48**	.50**	—			
5	Competence	.28**	.34**	.26**	.18*	—		
6	System Advocacy	.13	.31**	.08	.19*	.45**	—	
7	Initiative	.23**	.31**	.23**	.14	.58**	.52**	—

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

Table 8

Family-Centered Practices and Empowerment Outcomes: Multivariate Correlations (N = 137)

Variables		1	2	3	4	5	6	7
1	Respectful Communication	—						
2	Strengths-focused support	.86***	—					
3	Sensitive Service Delivery	.79***	.73***	—				
4	Collaboration	.53***	.54***	.54***	—			
5	Competence	.31***	.36***	.29**	.19*	—		
6	System Advocacy	.18	.37***	.15	.25*	.54***	—	
7	Initiative	.26**	.35***	.29**	.15	.72***	.62***	—

Note: These correlations account for the relationships between other factors and the focal factors and for measurement error.
*$p < .05$. ** $p < .01$. ***$p < .001$

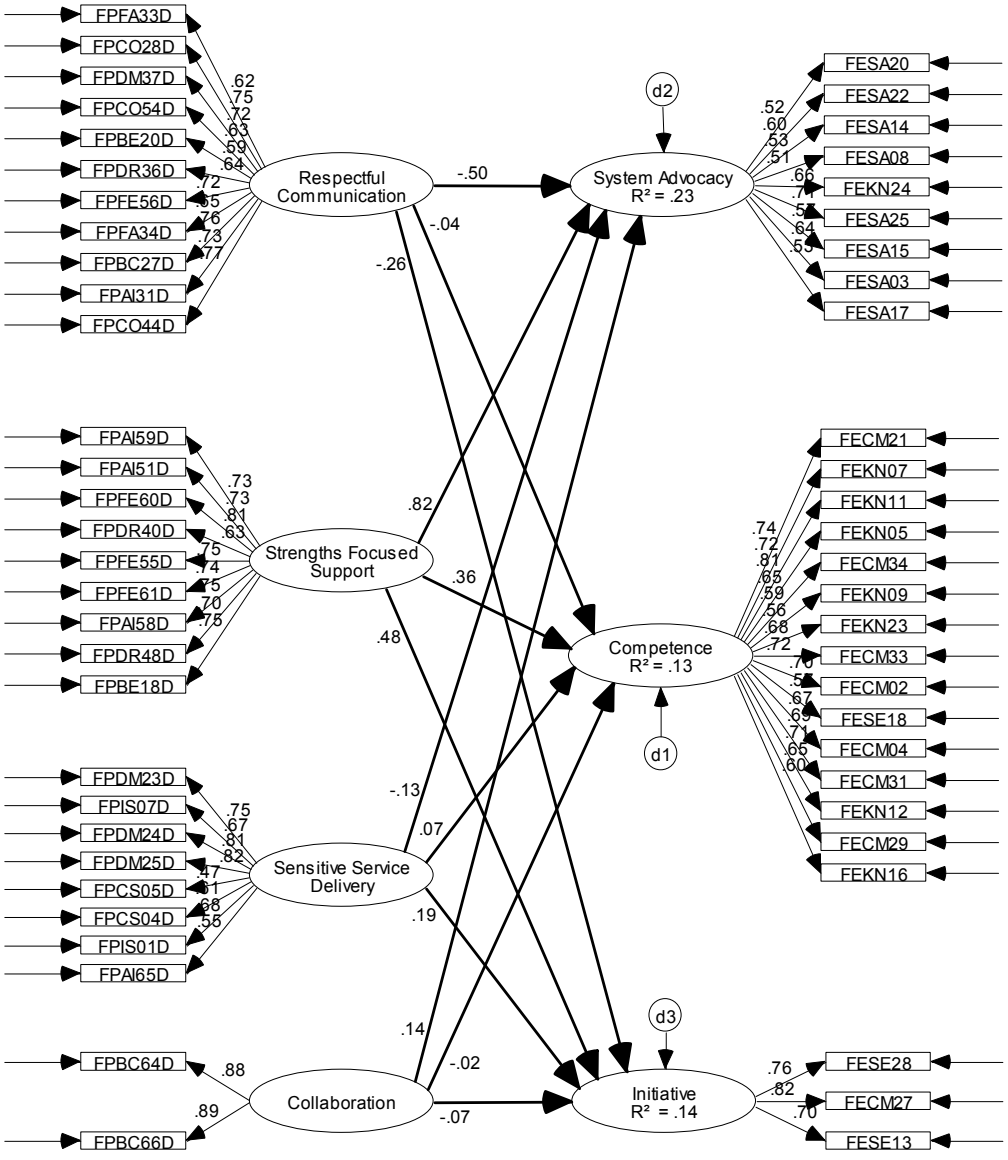


Figure 7. Structural Model with all Empowerment Factors Regressed on Family-Centered Factors. ($\chi^2(1508) = 2586.50$, $p < .001$, CFI = .77, RMSEA = .07, AGFI = .59)

therefore, removed. The trimmed model is presented in Figure 8 and had the following goodness of fit statistics, $\chi^2(1017) = 1677.38$, $p < .001$, CFI = .82, RMSEA = .07, and AGFI = .62. It is important to note that in this model there was a significant negative regression weight ($\Gamma = -.52$) between *respectful communication* and *system advocacy.* Theoretically and statistically, this negative relationship did not make sense, considering there was no zero order correlation between the two. In addition, the regression weight between *strengths-focused support* and *system advocacy* seemed to be overly strong and positive ($\Gamma = .82$). Maassen and Baaker (2001) suggested that these finding could represent a suppression effect if the correlation between the two exogenous variables was very strong, which it was ($\phi = .87$). Using their conceptualization, this series of relationships suggested that *respectful communication* acts as suppressor in the relationship between *strengths-focused support* and *system advocacy.*

Because the correlation between *strengths-focused support* and *respectful communication* was very strong, the structural model was examined with a single factor of family-centered practices. The single latent factor (*family-centered practice*) was created by including the items for both *strengths-focused support* and *respectful communication* as indicators of one exogenous variable. This model had a regression coefficient between *family-centered practice* and *system advocacy* that appeared consistent with the regression weights and correlations between *family-centered practice* and *competence* and *family-centered practice* and *initiative*. This model is presented in figure 9 and had acceptable, but not good fit ($\chi^2(1019) = 1736.92$, $p < .001$, CFI = .80,

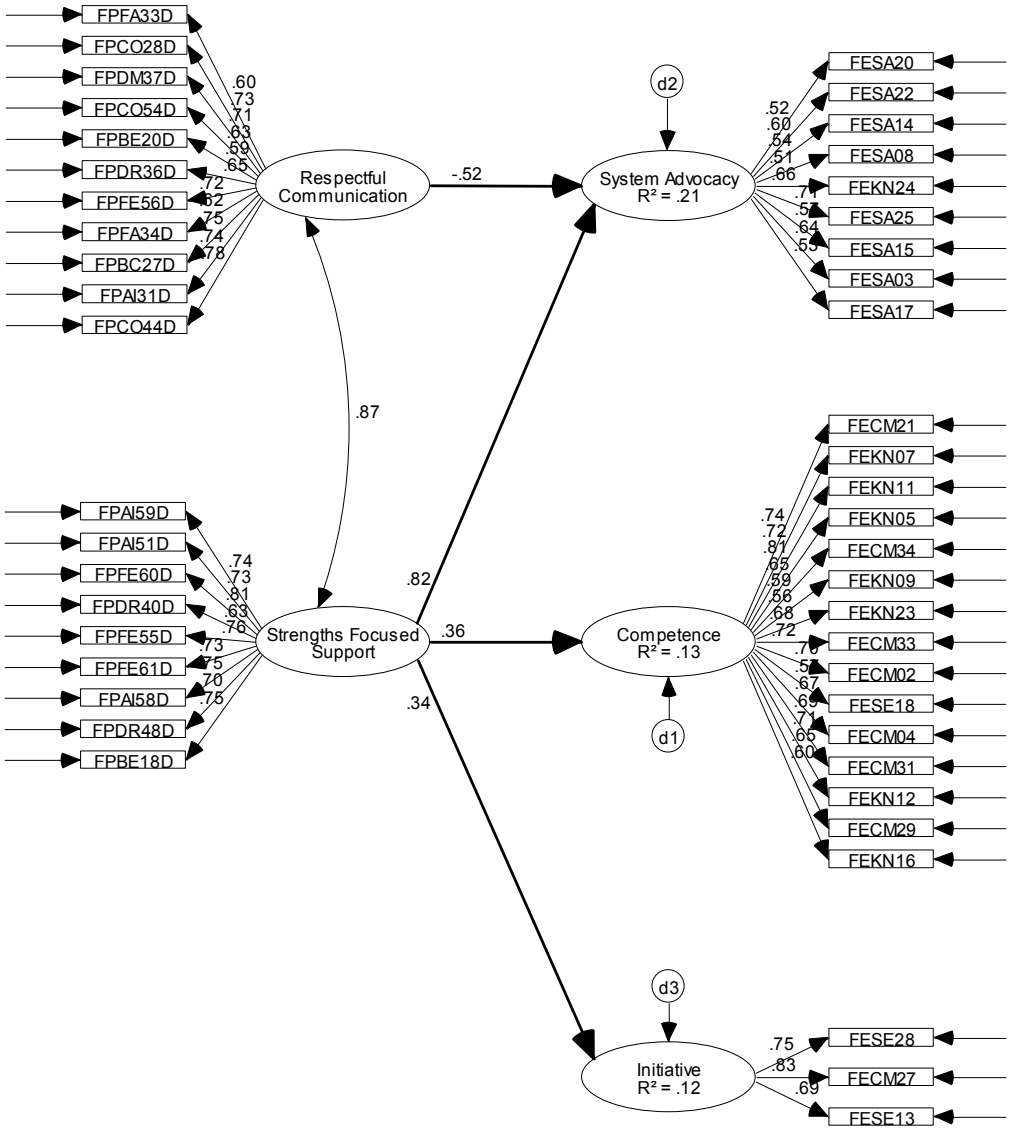


Figure 8. Trimmed Structural Model showing Negative Suppression Relationship. ($\chi^2(1017) = 1677.38$, $p < .001$, CFI = .82, RMSEA = .07, AGFI = .62)

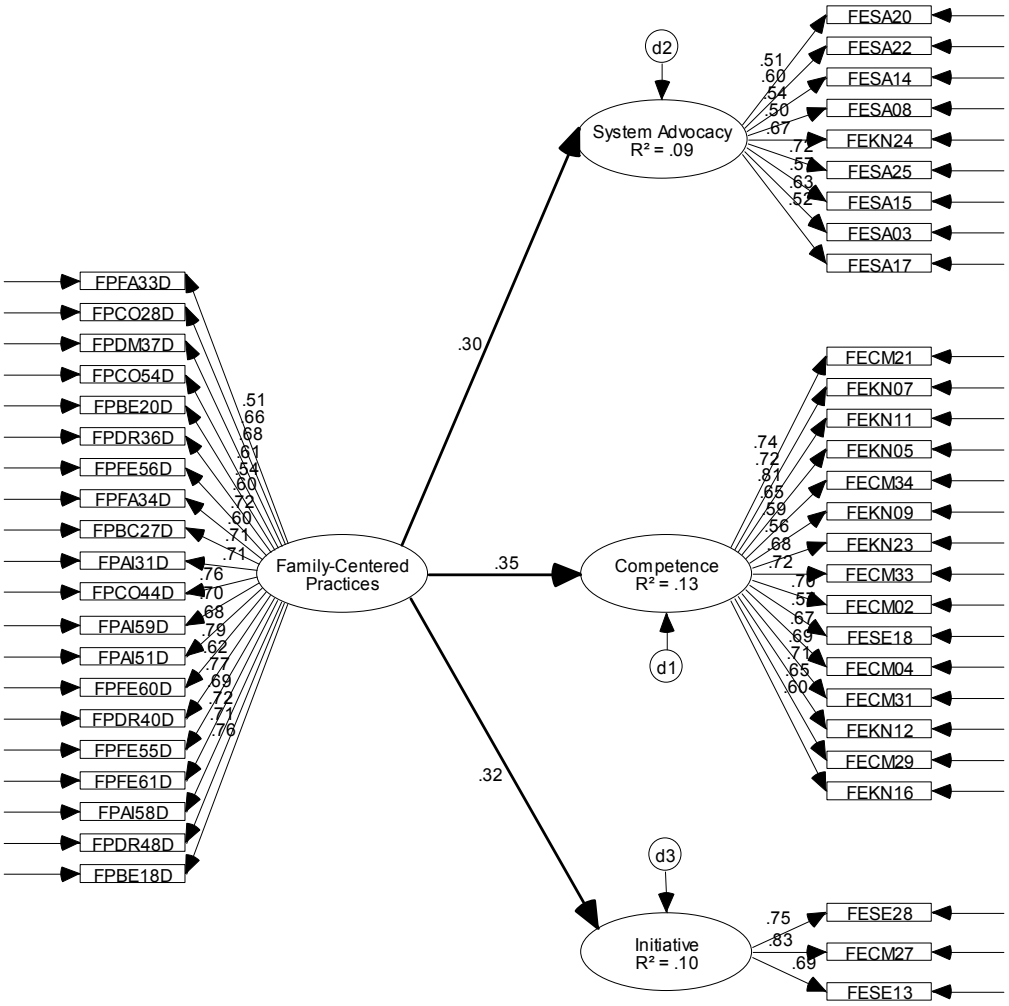


Figure 9. Single Combined Factor (Family-Centered Practice) Model. ($\chi^2(1019) = 1736.92$, $p < .001$, CFI = .80, RMSEA = .07, AGFI = .62)

RMSEA = .07, AGFI = .62). Using this model, the single combined latent factor of *family- centered practice* explained 9%, 13%, and 10% of the variance in *system advocacy, competence,* and *initiative*, respectively. In addition to using a single latent factor (combined from items of *respectful communication* and *strengths-focused support*), Maassen and Baakker (2001) suggested that the negative suppression model be examined after removing the suppressor variable. This model consisted of all the empowerment factors being regressed onto *strengths-focused support* and is presented in figure 10. The resulting model had a better fit ($\chi^2(585) = 951.65$, $p < .001$, CFI = .85, RMSEA = .07, AGFI = .69) than the single combined factor model and *strengths-focused support* explained more of the variance in *system advocacy* (14%) and *initiative* (12%) than the combined factor did. Unstandardized and standardized regression estimates along with their significance values for this model are presented in table 9. The regression estimates suggest that *strengths-focused support* has a unique effect on all the dimensions of empowerment beyond the other dimensions of family-centered practices. In addition, this factor accounted for 13% of the variance in *Competence*, 12% of the variance in *Initiative*, and 14% of the variance in *System Advocacy*. The regression weights were all positive suggesting that the better family-centered practices were perceived to be performed, the more fathers felt empowered in terms of their *competence* as a parent, their *initiative*, and their ability to *advocate* for their child.

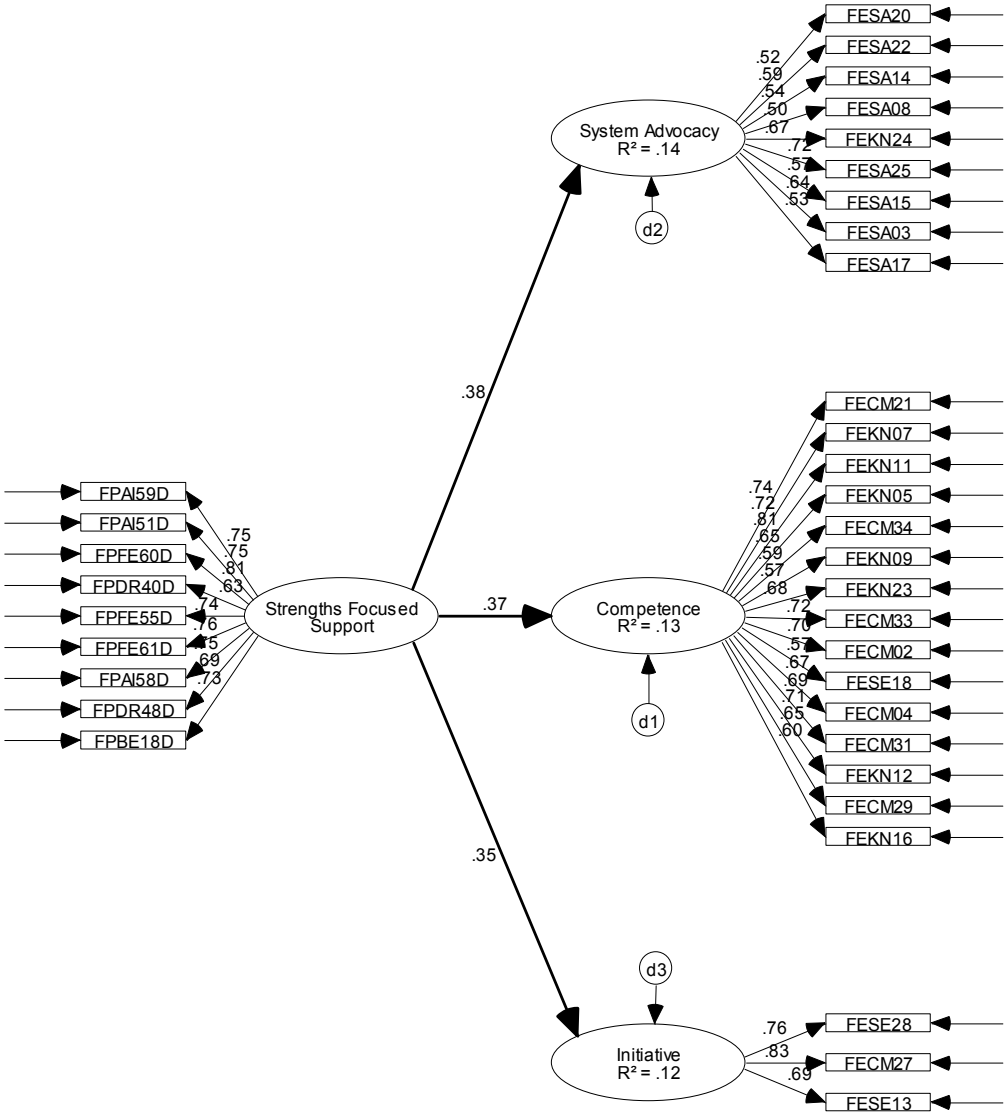


Figure 10. Single Factor (*Strengths-Focused Support*) Model. ($\chi^2(585) = 951.65$, $p < .001$, CFI = .85, RMSEA = .07, AGFI = .69)

Table 9

Unstandardized and Standardized Regression Weights and Significance Levels for Structural Model in Figure 10 (Standard Errors in Parentheses; N=137)

Parameter Estimate	*Unstandardized*	*Standardized*	*p*
Strengths-focused support → System Advocacy	.22 (.06)	.38	.00
Strengths-focused support → Competence	.21 (.05)	.37	.00
Strengths-focused support → Initiative	.31 (.09)	.35	.00
Covariance of System Advocacy & Competence Residuals	.13 (.04)	.47	.00
Covariance of System Advocacy & Initiative Residuals	.24 (.07)	.56	.00
Covariance of Competence & Initiative Residuals	.29 (.06)	.68	.00

CHAPTER 5

DISCUSSION

This study explored family-centered practices by examining both its dimensions and its relationship to family empowerment outcomes and for the first time using fathers' (as opposed to mothers' or an undifferentiated combination of mothers' and fathers') perspectives of *family*-centered early intervention services. This chapter describes how the results of the study complement previous research on family-centered practices, family empowerment, and the relationship between these two constructs. In addition, implications for future research and practice are presented.

Family-Centered Practices

Results of the current study indicated that from the fathers' perspective, family-centered practices was a multidimensional construct that was comprised of one very strong factor and three additional factors that were as important but not as powerful. Labeled *respectful communication, strengths-focused support, sensitive service delivery,* and *collaboration,* all four seemed to correspond well to the three core components identified in the definition of family-centered practices proposed by Allen and Petr (1998): centrality of the family, family as an informed decision maker, and promotion of family strengths and capabilities. In particular, the items in the *strengths-focused support* factor seemed to specifically address the way service coordinators promote families' capabilities. For example, the items "Our family's TEIS service coordinator helps my family see the good things we are doing to meet our child's needs" and "Our family's TEIS service coordinator considers my family's strengths and needs when planning ways

to meet our child's needs" specifically focused not only on the services needed, but the strengths and capabilities the family had already demonstrated.

In addition to corresponding to Allen and Petr's (1998) definition, these factors also were similar in some ways to those proposed by Dunst et al. (2000). These investigators described two dimensions of family-centered practices: participatory and relational, which were derived almost exclusively from a sample of mothers. Participatory practices are action-oriented and generally involve family members in exchanges with service coordinators and providers that strengthen existing capabilities and promote new competencies. Relational practices are comprised loosely of good clinical skills, such as active listening and shared communication or attributes of coordinator-parent exchanges such as honesty and trustworthiness. Both types of practices can be seen in items that constitute the factors found in this study. For example, an item in the *sensitive service delivery* factor, "In TEIS services are planned with my family's transportation and scheduling needs in mind", and an item in the *collaboration* factor, "My family is included in all meetings about us and our child with special needs" were both action-oriented and involved the family in services. Alternatively, in *respectful communication,* "Our family's TEIS service coordinator is honest with family" and in *strengths-focused support,* "Our family's TEIS service coordinator lets us get to know him or her" demonstrated Dunst's et al. (2000) relational practices. These examples illustrated that the maternally-based concepts of participatory and relational practices described by Dunst et al. (2000) were found throughout the paternal family-centered practice factors, and therefore were important from fathers' perspectives but did not cluster into the same two-dimensional structure that Dunst et al. found for mothers.

Perhaps this finding will change once the father sample is large enough to allow a better statistical examination of paternal responses. What was most important was that many of the FamPRS items that remained in the item pool after factor analyses were completed were remarkably similar to the concepts and illustrations described by Dunst et al (2000), even though they did not cluster in precisely the same way.

The similarities between the family-centered factors found in this study (with fathers) and those in previous research (generally with mothers) suggested two possible explanations for the father responses. First, as demonstrated by the demographic information, fathers described themselves as responsible for as much as 49% of their children's care. In addition, fathers also self-selected to participate in the study which suggested they may have been more involved in their children's lives than fathers who chose not to participate. Taken together, the demographic findings suggested that father participants were actively involved in most aspects of their children's care, including decision-making and early intervention activities, which in turn, suggested that the findings were the result of direct interactions with TEIS service coordinators.

Alternatively, fathers may have responded to the FamPRS items on the basis of knowledge and feelings related to them by their children's mothers. This possibility also was supported by demographic data which showed that a majority (76%) of fathers worked full time (see table 1). Thus, the FamPRS factors may be the result of a kind of "hearsay effect," where fathers' perceptions of family-centered practices were largely shaped over time by spousal statements and experiences. A "hearsay effect" could have occurred when fathers were at home after work or on weekends and communication with their spouses was most likely to occur. According to this point of view, fathers would

have adopted and internalized the beliefs presented by their spouses rather than form them from interactions with TEIS coordinators or direct participation in early intervention activities. Although it was difficult to know which of these explanations might be most valid at this phase of the data analysis, future analyses that examine mother responses would cast empirical light on one or the other possibility. For example, the "hearsay effect" hypothesis would be supported if mother factors emerged from a FamPRS analysis that closely corresponded to the father factors. On the other had, if correspondence was weak, then an argument could be made for a distinct set of factors based on fathers' direct involvement with the service delivery system. Of course, it is possible that mothers and fathers could develop the same set of perceptions based on very similar experiences. This does not seem very likely, given the literature on gender differences and role expectations in both caregiving and division of labor (Baruch & Barnett, 1986; Bristol, Gallagher, & Schloper, 1988; Heller, Hsieh, & Rowitz, 1997; Konstantareas & Homatids, 1992; Simmerman, Blacher, & Baker, 2001; Young & Roopnarine, 1994). One way to examine this possibility is to compare paternal and maternal ratings of involvement with the same ratings provided by TEIS service coordinators. Correspondence across ratings would support the "direct involvement" hypothesis. Another way to test both hypotheses would be to examine maternal and paternal estimates of spousal involvement with TEIS service coordinators and activities. For example, if mothers estimate that fathers participate in meetings with service coordinators and attend other activities at about the same rate that they (mothers) do, then the correspondence argument would be supported and a "hearsay effect" explanation would not.

Empowerment

Findings on the FES also suggested that fathers perceived empowerment as a multidimensional concept. The resulting factors were *competence, system advocacy,* and *initiative.* Again, these factors did not specifically relate one-to-one with the Dunst et al. (1992) conceptualization of empowerment outcomes. However, a number of items in each of the factors share much in common with Dunst et al.'s performance and perception constructs. For example, items that demonstrate performance were, "When problems arise with my child, I handle them pretty well", which was included in the *competence* factor, and "I tell people in agencies and government how services for children can be improved, which is an item in the *system advocacy* factor. Also, these two factors have items that have qualities related to the perceptual features of empowerment. "I feel confident in my ability to help my child grow and develop" (*competence*) and "I feel I can have a part in improving services for children in my community" (*system advocacy*) are good examples of these kinds of items. The items in the *initiative* factor, however, seem only to reflect performance, for example, "I make efforts to learn new ways to help my child grow and develop". In the present study, therefore, items did not divide precisely into factors comparable to performance and perception as the Dunst et al. (1992) findings suggested. Moreover, it was not immediately clear why paternal factors would be different from maternal factors of empowerment.

The empowerment factors found in the present study did, however, correspond very well with some of the FES factors found by Singh et al (1995). Using a sample which largely consisted of mothers (198 mothers; 29 fathers), Singh et al. identified four

factors: competence, system advocacy, knowledge, and self-efficacy. When comparing items, all items in the factor that Singh et al. labeled system advocacy were in the *system advocacy* factor produced in this factor analysis. All of these items seemed to relate to fathers' ability to advocate for their children within the services system and at the government level. In addition, seven of the eight items that Singh et al. labeled competence were in the *competence* factor in this study. The items in the other two factors that Singh et al. found (i.e., knowledge and self-efficacy) were split between the *competence* and *initiative* factors in the present study. All items in the *competence* factor seemed to relate to fathers' beliefs about their ability to function well as a parent and their knowledge about being a parent of a child with special needs. All three items that made up *initiative* dealt with fathers actively making efforts to obtain services and other assistance for their child. The present findings supported Singh et al.'s identification of competence and system advocacy as dimensions of empowerment. The close correspondence between maternally and paternally generated factors in the two studies suggested that these factors may not be gender specific so much as they were a product of shared family experiences. The lack of correspondence between knowledge and self-efficacy and *initiative* may be a reflection of more conservative statistical procedures, or it may suggest mothers and fathers perceive some aspects of empowerment differently. In this case it may be that fathers did not feel as confident about their ability to function as effectively as mothers when it came to parenting and advocating for their children with special needs.

Relationship between Family-Centered Practices and Empowerment Outcomes

Previous literature on the relationship between family-centered practices and empowerment outcomes was divided into two groups: (a) studies that used a single dimension of empowerment generally conceptualized as control and (b) studies that examined multiple item/dimension versions of empowerment. Using a variety of methods (i.e., parent report, categorizing programs philosophically), measures (e.g., HPS; HCS; EPS), and statistics (e.g., chi-square tests, MANOVAs, hierarchical regression), the previous literature consistently found a positive relationship between family-centered practices and various aspects of empowerment. The findings of the present study also demonstrated a significant and positive relationship between family-centered practices and empowerment outcomes.

Additionally, six of the previous studies identified different dimensions of family-centered practices. The findings in these articles generally demonstrated that there was some differential prediction of empowerment outcomes. For example, Trivette et al., (1996b) identified participatory involvement and helpgiver traits as dimensions of family-centered practice but found that only participatory involvement was significantly related to perceived control. In another study, Dempsey and Dunst (2004) found that two of three dimensions of family-centered practices (comfort with relationship, autonomy of the parent) had a greater impact on empowerment (using the FES full scale), than collaboration between parents and service coordinators did. The same type of differential prediction also was present in the current findings. *Strengths-focused support* was a significant predictor of all three empowerment outcomes (*competence*, *system advocacy*, *initiative*) while the other dimensions of family-centered practices (*respectful*

communication, sensitive service delivery, collaboration) were generally related to *competence*. Furthermore, *respectful communication* and *sensitive service delivery* were related to *initiative,* but did not have a significant association with *service delivery.* Alternatively, *collaboration* was related to *system advocacy* but was not related to *initiative.*

As mentioned previously, there were only four studies that used multi-item, multi-dimensional measures of empowerment in the examination of the relationship between family-centered practices and empowerment. For the most part, empowerment dimensions were defined conceptually as performance and perception. Trivette et al. (1996) found no direct relationship between participatory activities (process, partnership) and empowerment perceptions but did report an indirect relationship between the two through performance empowerment. The results of the present study seemed to challenge previous findings because the statistically identified factors of family-centeredness were all related to some dimension of family empowerment. Correlational analyses revealed that all dimensions of family-centered practice were significantly and positively related to *competence.* In addition, *strengths-focused support* and *collaboration* were significantly and positively related to *system advocacy*. *Respectful communication, strengths-focused support,* and *sensitive service delivery* also were positively related to *initiative.*

The results of the structural equation further substantiated the multidimensionality of both family-centered practices and empowerment outcomes and the relationship between the two constructs. Correlational analyses suggested that all family-centered practices factors were significantly related to at least two empowerment outcome

dimensions, but the structural analysis demonstrated that only *strengths-focused support* differentially predicted each of the empowerment outcomes. In addition, the final trimmed structural model revealed that *strengths-focused support* accounted for different amounts of variance in each dimension of empowerment (*competence, system advocacy, initiative*). The final structural model also affirmed the relationship between family-centered practices and empowerment outcomes in terms of significant relationships between at least one family-centered factor (*strengths-focused support*) and empowerment factors (*competence, system advocacy, initiative*). Thus, the bulk of the findings provided strong support for the conclusion that family-centered practices and empowerment were multidimensional constructs from the point of view of fathers and were indeed positively related, just as previous research has shown for mothers.

Potential explanations for the differential relationships generally seemed to relate to how active fathers were in the dimension of family-centered practices and the recognition and support of their current strengths and capabilities. As determined earlier, *competence* was related to all factors of family-centered practices. This relationship suggested that fathers' perceptions of their ability to care for their child as a parent may be positively influenced by any type of family-centered helpgiving activity. Fathers' perceptions of their ability to obtain services seemed to be influenced more when fathers' feel that service coordinators were listening to them and their concerns, but not in the collaborative sense. An explanation of this finding possibly may be that in *respectful communication* and *sensitive service delivery* dimensions, there seemed to be bi-directional communication between parents and service coordinators, but the active role in the constellation of items was generally performed by the service coordinator, which

allowed family members to be more passive. Alternatively, it seemed that fathers needed to be actively involved with their children's services to influence their ability to advocate for their children at the system and government levels. In addition, it seemed that recognizing fathers' existing capabilities and utilizing their resources in planning for the future not only supported their confidence in their parenting skills, but also promoted their ability to advocate for their children. In summary, the findings suggestrd that all types of family-centered practices (*respectful communication, strengths-focused support, sensitive service delivery, collaboration*) had a positive influence on fathers' perceptions of their empowerment outcomes (*competence, system advocacy, initiative*).

General Strengths & Limitations

Strengths

The current study was most important because it not only examined fathers' perceptions of family-centered practices, but also their perceptions of empowerment. As previously mentioned, there have been several researchers who investigated paternal stress and coping in families of children with special needs. However, very few studies included fathers in the examination of the relationship between family-centered practices and empowerment. Moreover, in those that did, the father samples were too small to allow mother and father responses to be analyzed separately. The current study not only gathered information from over 100 father respondents, but also analyzed it separately from mothers.

In addition to focusing on fathers, the sample in the present study consisted entirely of families involved in a state birth-to-three early intervention system. All the previous studies had samples that included programs for children over the age of three

years. Moreover, the role of the focal professional in these studies was not clearly identified (i.e., therapist, coordinator, educator, etc.). In the current study, TEIS service coordinators were responsible for *coordinating* services for the families and their children with special needs and fathers were asked to evaluate family-centered practices with their individual service coordinators in mind. This aspect of the evaluation was very important because it permitted an analysis of the practices—empowerment relationship based on father perceptions of experiences they had with a single, known professional rather than a more amorphous "agency", "discipline", or "staff member". Consequently a specific, identifiable provider—parent relationship was loosely the unit of analysis in the present study, unlike previous studies that failed to identify the individual providers whose behaviors were rated by parents. As a result, it was possible to draw conclusions about the impact of practices on empowerment that not only likely emerged from this relationship, but more important, had direct implications for TEIS service coordinators.

The present study also was performed using rigorous analytical procedures. Because of the small number of studies in early intervention that examined family-centered practices, especially in conjunction with family empowerment, very little was known previously about the dimensions of family-centered practices or empowerment. In addition, the instruments that were used in previous studies should have been factor analyzed but usually were not. This was particularly important because dimensions of family-centered practices and empowerment had been conceptually identified. Had factor analyses been conducted, it might have been possible to validate these concepts statistically. In addition, the relationship between dimensions of family-centered practices and empowerment were examined in the present study not only using a

correlational analysis, but also using a structural analysis that allowed an examination of the relationship between the latent dimensions while accounting for measurement error. Utilization of this strategy strengthened the findings considerably.

Finally, the most important strength of the study was its implications for research and practice. The results not only inform the scientific community about fathers' perceptions of family-centered practices and their relationship to empowerment, but also provide administrators, programmers, and coordinators with specific information about the types of enabling practices and interactions that fathers believe are beneficial for themselves and their children with special needs.

Limitations

The design of the study had a number of limitations. It was cross-sectional in nature and examined responses from a single source. All the data for the current study were collected between November 2003 and August 2005. It is important to note that between the time the sample from each district was drawn and the time a family was contacted, the child with special needs may have transitioned into Part B services, and therefore, the data may have reflected some temporal distortions. For example, a family who may have had a positive experience in early intervention (Part C) services, but has now transitioned and is receiving special education (Part B) services in which they are having a more difficult experience, may report overly positive ratings for TEIS and their service coordinators.

In addition, all data were provided by fathers in response to likert-type items. Although all fathers were told that their responses were confidential, it is possible that fathers responded to items in a socially desirable way. Some fathers may have felt that

they should be very involved with their families and especially their children with special needs. Consequently, they may have over-estimated their knowledge and behaviors in regards to family-centered practices and empowerment.

Another limitation of the study was the sample size. Although a sample of 137 participants is often considered adequately sized, the number of parameters that were estimated made it inadequate (e.g., the 2:1 ratio of participants to items on the FamPRS instrument). This small ratio could have affected the exploratory factor analysis and could also explain why the data in the confirmatory factor analysis did not fit any model particularly well. The small sample size also may have influenced the fit of the structural model (e.g., lack of significant paths).

Finally, it is important to note that the FamPRS instrument needs some significant analytical work before it can be generally useful with regard to service coordination activities. In discussions with the authors (A. P. Turnbull, personal communication, November 15, 2004), the instrument has not been re-examined since it was initially field tested (Murphy et al., 1995). In the current study, it was important to note that a significant percentage of respondents (23% - 60%; see Appendix 1) were not able to answer several of the items and chose instead to mark "Not Applicable", "Don't Know/Unsure", or did not respond at all. The apparent lack of fathers' ability to answer all the items on the FamPRS may have limited the extent to which a comprehensive analysis could be conducted on the concept of family-centered practices and its relationship to empowerment outcomes.

Despite these shortcomings, the present research is an important first step toward understanding how service providers might work effectively with fathers of children with

special needs. Although there were some legitimate limitations to the study, it clearly identified some aspects of family-centered practices that warrant further investigation and that practitioners probably should utilize in their efforts to serve families of children with special needs.

Implications for Research and Practice

Future Research

The current study focused on fathers' perspectives of family-centered practices in early intervention. The results were generally exploratory and only informed by previous research on mothers' perceptions of this relationship and on fathers' involvement and role responsibilities in the family. Future research should focus on replicating these findings using a larger sample of fathers. It also will be important to replicate the study using different measures of family-centered practices (e.g., the Helpgiving Practices Scale) and empowerment (e.g., the Early Intervention Control Scale). A multiple measurement approach should help identify the core elements of family-centered practices that are most likely to promote parental empowerment outcomes and also serve as guides for providers as they work to help parents, particularly fathers, meet family needs. Because of the size of the sample and the very limited use of the FamPRS instrument, it is important for future research to verify the dimensions of family-centered practice found in the present study and also validate the relationship between these dimensions and empowerment outcomes. Only then can the findings be generalized with some degree of confidence. In addition, replication of the results with a more refined FamPRS instrument may help to better clarify the dimensions that were found in the present study.

Investigators in future studies also should examine how the relationship between family-centered practices and empowerment is affected by qualifying variables. Variables such as frequency of contact that parents have with service coordinators (Dempsey et al., 2001; Trivette et al., 1996; Judge, 1997) and the professional discipline of providers (Trivette et al., 1996b) have been shown to differentially predict empowerment outcomes. In addition, family variables such as the length of time a child has been receiving services, the amount of perceived stress felt by the parent, and the availability of social support resources also may affect the relationship between family-centered practices and parental empowerment outcomes. Service coordinator variables such as caseload, length of time in the helpgiving relationship, and gender also may have important moderating effects on the relationship between family-centered practices and empowerment outcomes. Analyses of these and other qualifying variables may help researchers and practitioners better understand the family-centered practices—empowerment relationship and, as a result, better serve families of children with special needs, especially from fathers' perspectives.

Although this study examined fathers as a primary caregiver, new family types are emerging in which there are two primary caregivers of the same gender (e.g., lesbian and gay couples; single mothers who live with the child's grandmother; Silverstein & Auerbach, 1999). New research needs to examine similarities and differences between dual-gender parent families and single-gender parent families. The results of these studies should help researchers understand better gender differences in how parents "parent".

Finally, a new direction for research might take the form of examining father and mother data together using techniques that focus on the couple as the unit of analysis. Such an approach could help researchers better understand how *family*-centered practices affect the *family* as a whole, and in particular, the parental relationship. Under these circumstances, factor structures might emerge that bear some similarities to those for individual parents, but also may be very different in ways that could have important conceptual as well as applied implications.

Practice

The present findings showed that TEIS service coordinators were using a host of family-centered practices in ways that enable fathers to feel empowered to act effectively on behalf of their children with special needs. Moreover, service coordinators who communicated respectfully, focused on family strengths and capabilities, and delivered services in a manner sensitive to family needs were likely to promote fathers' abilities to obtain services and assistance for themselves, their families, and their children with special needs. Furthermore, the results suggested that service coordinators who focused primarily on families' strengths and capabilities and collaborated with family members were more likely to promote fathers' ability to advocate for their child, not only with at the system level, but also at the level of government, which was an area of empowerment that many fathers seemed to find difficult to enact. The present research also suggested that the more service coordinators focus on a family's strengths and capabilities, the more impact they will have on fathers' feelings of competence as a parent, ability to advocate for their children, and ability to obtain needed services.

Finally, the results suggested that all dimensions of family-centered practice were important predictors of paternal empowerment and should be included as major components in TEIS's new service coordinator training program. However, if training resources are limited and need to be directed to specific practices that benefit fathers the most, the present findings suggest that service coordinators should utilize strengths-focused practices, because it is these practices that seem to have the broadest impact on paternal empowerment outcomes (competence, advocacy, initiative).

REFERENCES

REFERENCES

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

Affleck, G., Tennen, H., & Rowe, J. (1991). *Infants in Crisis: How Parents Cope with Newborn Intensive Care and Its Aftermath.* New York: Spinger-Verlag.

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

Bailey, D. B., Jr. & Bruder, M. B. (2005, January). *Family outcomes of early intervention and early childhood special education: Issues and considerations* (Early Childhood Outcomes Center). Retrieved November 7, 2005, from http://www.fpg.unc.edu/~eco/ pages/publications.cfm

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

Bailey, D. B. Jr., Buyssee, V., Smith, 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.

Bailey, D. B. Jr., Palsha, S. A., & Simeonsson, R. J. (1991). Professional skills, concerns, and perceived importance of work with families in early intervention. *Exceptional Children, 58*, 156-165.

Barreto, S. J., Boekamp, J. R., Armstrong, L. M. , & Gillen, P. (2004). Community-based interventions for juvenile firestarters: A brief family-centered model. *Psychological Services, 1*, 158-168.

Baruch, G. K. & Barnett, R. C. (1986). Fathers' participation in family work and children's sex role attitudes. *Child Development, 57,* 1210-1223.

Bennett, T., Nelson, D., Lingerfelt, B., & Devenport-Ersoff, C. (1992). Family-centered service coordination. In T. Bennett, D. Nelson, & B. Lingerfelt (Eds.), *Facilitating Family-Centered Training in Early Intervention* (pp. 143-171). Tucson, AZ: Communication Skill Builders.

Birt, C. J. (1956). Family-centered project of St. Paul. *Social Work, 1*, 41-47.

Bosch, L. A. (1996). Needs of parents of young children with developmental delay: Implications for social work practice. *Families in Society: The Journal of Contemporary Human Services, 77*, 477-487.

Boyd, K., & Dunst, C. J. (1994). *Early Intervention Control Scale.* Unpublished instrument, Child and Family Studies Program, Allegheny-Singer Research Institute, Pittsburgh, PA.

Brewer, E. J. Jr., McPerson, M., Magrad, P. R., & Hutchins, V. L. (1989). Family-centered, community-based, coordinated care for children with special health care needs. *Pediatrics, 83* , 1055-1060.

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., Rabinowitz, V. C., Karuza, J. Jr., Coates, D., Cohn, E., & Kidder, L. (1982). Models of helping and coping. *American Psychologist, 37*(4), 368-385.

Bristol, M. M., Gallagher, J. J., & Schopler, E. (1988). Mothers and fathers of young developmentally disabled and nondisabled boys: Adaptation and social support. *Developmental Psychology, 24,* 441-451.

Bronfenbrenner, U. (2005). *Making Human Beings Human: Bioecological Perspectives on Human Development* . Thousand Oaks, CA: Sage.

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

Bruder, M. B. (2000). Family-centered early intervention: Clarifying our values for the new millennium. *Topics in Early Childhood Special Education, 20*, 105-115, 122.

Burton, C. B. (1992). Defining family-centered early education: Beliefs of public school, child care, and Head Start teachers. *Early Education and Development, 3*, 45-59.

Byrne, B. M. (2000). *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming* . Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Campbell, J., Croll, J., & Ouvrier, S. (1995, September). *Families First: Learning from parents through evaluation.* Paper presented at the European Conference on the Quality of Early Childhood Education, Paris, France.

Campbell, P. H., & Halbert, J. (2002). Between research and practice: Provider perspectives on early intervention. *Topics in Early Childhood Special Education, 22*, 213-226.

Costello, A. B. & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research, & Evaluation, 10*(7). Available online: http://pareonline.net/getvn.asp?v=10&n=7

Davis, P. B. & May, J. E. (1991). Involving fathers in early intervention and family support programs: Issues and strategies. *Children's Health Care, 20,* 87-92.

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. J. (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., 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 Bulletin, 29*(2), 113-131.

Dinnebeil, L. A., Hale, L., & Rule, S. (1999). Early intervention program practices that support collaboration. *Topics in Early Childhood Special Education, 19*, 225-235.

Dunst, C. J. (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 (pp. 75-91). Washington, DC: American Psychological Association.

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

Dunst, C. J., Trivette, C. M., Boyd, K., & Brookfield, J. (1994). Help-giving practices and the self-efficacy appraisals of parents. In: C. M. Trivette, & C. J. Dunst (Eds.), *Supporting & Strengthening Families, Vol.1: Methods, Strategies, and Practices* (pp. 212-220). Cambridge, MA: Brookline Books.

Dunst, C. J., Trivette, C. M., & Deal, A. G. (1988). *Enabling and Empowering Families: Principles and Guidelines for Practice*. Cambridge, MA: Brookline Books.

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

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

Dunst, C. J., Trivette, C. M., & Snyder, D. M. (2000). Family-professional partnerships: A behavioral science perspective. In M. J. Fine, & R. L. Simpson (Eds.), *Collaboration with Parents and Families of Children and Youth with Exceptionalities* (2nd ed., pp. 27-48). Austin, TX: Pro-Ed.

Duwa, S. M., Wells, C., & Lalinde, P. (1993). Creating family-centered programs and policies. In: M. A. Graham, & D. M. Bryant (Eds.), *Implementing Early Intervention: From Research to Effective Practice* (pp. 92-123). New York: Guilford Press.

Early Childhood Outcomes Center. (2004, April). *Considerations related to developing a system for measuring outcomes for young children with disabilities and their families.* Retrieved November 7, 2005, from http://www.fpg.unc.edu/~eco/pages/publications.cfm

Epstein, S. G., Taylor, A. B., Halberg, A. S., Gardner, J. D., Walker, D. K., Crocker, A. C. et al. (1989). *Enhancing Quality* . Boston, MA: Massachusetts Health Research Institute, Inc.

Garrett, J. N., Thorp, E. K., Behrmann, M. M., & Denham, S. A. (1998). The impact of early intervention: Local perceptions. *Topics in Early Childhood Special Education, 18*, 183-190.

Griffiths, R. (1970). *The abilities of young children* . London: Child Development Research Centre.

Heller, T., Hsieh, K., & Rowitz, L. (1997). Maternal and paternal caregiving of persons with mental retardation across the lifespan. *Family Relations, 46,* 407-415.

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

Hox, J. J., & Bechger, T. M. (1998). An introduction to structural equation modeling. *Family Science Review, 11*, 354-373.

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

Kamiensky, M. C. (2004). Emergency, family-centered care in the ED. *American Journal of Nursing, 104*.

Katan, J., & Prager, E. (1986). Consumer and worker participation in agency-leve decision-making: Some considerations of their linkages. *Administration in Social Work, 10*, 79-88.

King, G. A., Law, M., King, S. M., & Rosenbaum, P. L. (1998). Parents' and service providers' perceptions of the family-centeredness of children's rehabilitation services. *Physical & Occupational Therapy in Pediatrics, 18*, 21-40.

Konstantareas, M. M. & Homatids, S. (1992). Mothers' and fathers' self-report of involvement with autistic, mentally delayed, and normal children. *Journal of Marriage and the Family, 54,* 153-164.

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

Kovach, J., & Kjerkland L. (1989). *Final Report: Project Dakota 1983-1986.* Eagan, MN: Project Dakota Outreach.

Lamb, M. E. & Lauman-Billings, L. A. (1997). Fathers of children with special needs. In M. E. Lamb (Ed.), *The Role of the Father in Child Development* (3rd ed., pp. 179-190). New York: John Wiley & Sons, Inc.

LaPointe, N., Trivette, C. M., & Dunst, C. J. (1990). *Parent Empowerment Survey*. Unpublished Scale, Center for Family Studies, Western Carolina Center, Morganton, NC.

Larimore, W. L. (1993). Family-centered birthing: A style of obstetrics for family physicians. *American Family Physician, 48*, 725-728.

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

Maassen, G. H. & Bakker, A. B. (2001). Suppressor variables in path models: Definitions and interpretations. *Sociological Methods & Research, 30,* 241-270.

Malone, D. M., McKinsey, P. D., Thyer, B. A., & Straka, E. (2000). Social work early intervention for young children with developmental disabilities. *Health & Social Work, 25*, 169-180.

Markowitz, J. (1984). Participation of fathers in early childhood special education programs: An exploratory study. *Journal for the Division of Early Childhood, 8,* 119-131.

Marsiglio, W., Amato, P., Day, R. D., & Lamb, M. E. (2000). Scholarship on fatherhood in the 1990s and beyond. *Journal of Marriage and the Family, 62,* 1173-1191.

McBride, S. L., Brotherson, M. J., Joanning, H., Whiddon, D., & Demmitt, A. (1993). Implementation of family-centered services: Perceptions of families and professionals. *Journal of Early Intervention, 17*, 414-430.

McWilliam, P. J., & Winton, P. (1990). *Brass Tacks: A Self-Rating of Family-Focused Practices in Early Intervention*. Chapel Hill, NC: Frank Porter Graham Center, University of North Carolina.

McWilliam R. A., 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,* 43-60.

McWilliam, R. A., Snyder, P., Harbin, G. L., Porter, P., & Munn, D. (2000). Professionals' and families' perceptions of family-centered practices in infant-toddler services. *Early Education and Development, 11*, 520-538.

McWilliam, R. A., Tocci, L., & Harbin, G. L. (1998). Family-centered services: Service providers' discourse and behavior. *Topics in Early Childhood Special Education, 18*, 206-221.

Minke, K. M., & Scott, M. M. (1995). Parent-professional relationship in early intervention: A qualitative investigation. *Topics in Early Childhood Special Education, 15*, 335-352.

Mosier, J., Burlingame, G. M., Wells, M. G., Ferre, R., Latkowski, M., Johansen, J. et al. (2001). In-home, family-centered psychiatric treatment for high-risk children and youth. *Children's Services: Social Policy, Research, and Practice, 4*, 51-68.

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

Murray, J., & McDonald, L. O. (1996). Father involvement in early intervention programs: Effectiveness, obstacles, and considerations. *Developmental Disabilities Bulletin, 24*(2), 46-57.

Petersen, M. F., Cohen, J., & Parsons, V. (2004). Family-centered care: Do we practice what we preach? *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 33*, 421-427.

Rappaport, J. (1981). In praise paradox: A social policy of empowerment over prevention. *American Journal of Community Psychology, 9*(1), 1-25.

Romer, E. F., & Umbreit, J. (1998). The effects of family-centered service coordination: A social validity study. *Journal of Early Intervention, 21*, 95-110.

Saleeby, D. (1992). Biology's challenge to social work: Embodying the person-in-environment perspective. *Social Work, 37*, 112-118.

Scherz, F. H. (1953). What is family-centered casework? *Social Casework, 34*(8), 343-349.

Shannon, P. (2004). Barriers to family-centered services for infants and toddlers with developmental delays. *Social Work, 49*, 301-308.

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 Children's Health.

Sheridan, S. M., Warnes, E. D., Cowan, R. J., Schemm, A. V., & Clarke, B. L. (2004). Family-centered positive psychology focusing on strengths to build student success. *Psychology in the Schools, 41*, 7-17.

Silverstein, L. B. & Auerbach, C. F. (1999). Deconstructing the essential father. *American Psychologist, 54,* 397-407.

Simmerman, S., Blacher, J. & Baker, B. L. (2001). Fathers' and mothers' perceptions of father involvement in families with young children with a disability. *Journal of Intellectual & Developmental Disability, 26,* 325-338.

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

Solomon, B. B. (1976). *Black Empowerment: Social Work in Oppressed Communities.* New York: Columbia University Press.

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

Summers, J. A., Dell'Olivery, C., Turnbull, A. P., Benson, H. A., Santelli, E., Campbell, M. et al. (1990). Examining the Individualized Family Service Plan process: What are family and practitioner perferences? *Topics in Early Childhood Special Education, 10*, 78-99.

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

Trivette, C. M., & Dunst, C. J. (1990). Professional Helpers Characteristics Scale. Unpublished Scale, Center for Family Studies, Western Carolina Center, Morganton, NC.

Trivette, C. M., Dunst, C. J., Boyd, K., & Hamby, D. W. (1995). Family-oriented program models, helpgiving practices and parental control appraisals. *Exceptional Children, 62*(3), 237-248.

Trivette, C. M., Dunst, C. J., & Hamby, D. W. (1996a). Characteristics and consequences of help-giving practices in contrasting human services programs. *American Journal of Community Psychology, 24*, 273-293.

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

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

Turbiville, V. P. & Marquis, J. G. (2001). Father participation in early education programs. *Topics in Early Childhood Special Education, 21,* 223-231.

Turbiville, V. P., Turnbull, A. P., & Turnbull, H. R., III, (1995). Fathers and family-centered early intervention. *Infants and Young Children, 7,* 12-19.

Wehman, T., & Gilkerson, L. (1999). Parents of young children with special needs speak out: Perceptions of early intervention services. *Infant-Toddler Intervention, 9*, 137-167.

West, S. G., Sandler, I., Pillow, D. R., Baca, L., & Gersten, J. (1991). The use of structural equation modeling in generative research: Toward the design of a preventive intervention for bereaved children. *American Journal of Community Psychology, 19*, 459-480.

Young, D. M., & Roopnarine, J. L. (1994). Fathers' childcare involvement with children with and without disabilities. *Topics in Early Childhood Special Education, 14,* 488-502.

APPENDICES

Appendix A

Items Removed and Percentage Missing & Non-Substantive Data

Item	Percentage Missing	Unsure	N/A
In TEIS there is a comfortable way to work out disagreements between families and service coordinators	2.9	17.5	24.1
TEIS helps my family when we want information about basic family needs such as, jobs, money, counseling or housing	2.2	20.4	37.2
TEIS gives the other children in family support and information about their brother or sister's special need	.7	8.8	37.2
TEIS gives us information on how to meet other families of children with similar needs	2.9	16.8	15.3
TEIS offers special times for parents to talk with other parents and with service providers	1.5	21.2	16.1
TEIS offers information in a variety of ways (written, videotape, cassette tape, workshop, etc.)	4.4	17.5	9.5
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	2.9	14.6	11.7
Our family's TEIS service coordinator gives information to help my family explain our child's needs to friends and other family members	1.5	14.6	14.6
Our family's TEIS service coordinator helps my family plan for the future	4.4	10.2	8.0
Our family's TEIS service coordinator helps my family feel more comfortable when asking for help and support from friends and other family members	2.2	15.3	19.7
Our family's TEIS service coordinator offers ideas on how my family can have fun with our children	.7	21.2	7.3
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	1.5	11.7	12.4
Our family's TEIS service coordinator helps my family use problem-solving skills for making decisions about ourselves and our child with special needs	1.5	13.1	14.6
Our family's TEIS service coordinator gives information that helps my family with our child's everyday needs, (feeding, clothing, playing, health care, safety, friendships, etc.)	1.5	10.9	18.2
Our family's TEIS service coordinator respects differences among our children, other families, and our family's way of life	2.2	8.8	21.2
Our family's TEIS service coordinator helps my family to have a normal life	2.9	7.3	15.3

Appendix B

FamPRS items that loaded highly on two or more factors.

	Factor Loading			
Items	Respectful Comm	Strengths Focused Support	Sensitive Service Delivery	Collab
Our family's TEIS service coordinator does not try to tell my family what we need or do not need	.44		.40	
Our family's TEIS service coordinator offers to visit my family in our home	.39		.32	
In TEIS the service coordinator makes my family feel comfortable when we have questions or complaints.	.37		.33	
Our family's TEIS service coordinator tells my family what he or she has learned right after our child's evaluation	.31	.40		
Our family's TEIS service coordinator helps my family feel we can make positive differences in our child's life		.39	.33	
Our family's TEIS service coordinator treats my family as the true experts on our child with special needs when planning and providing services	.28	.34		
Our family's TEIS service coordinator gives my family clear and complete information about available services	.43		.45	
In TEIS the IFSP is used as a *plan of action* for my child with special needs		.32	.41	
Our family's TEIS service coordinator asks my family's opinion and includes us in the process of evaluating our child with special needs	.30		.38	
In TEIS a service coordinator can help my family communicate with all the other professionals serving us and our child with special needs.		.33	.38	
Our family's TEIS service coordinator gets to know my family	.36	.41		
Our family's TEIS service coordinator does not overwhelm us with too much information		.25	.21	
In TEIS the information service coordinators give my family helps us make decisions about our child with special needs.	.21		.25	.21
Our family's TEIS service coordinator creates ways for my family to be involved in making decisions about services	.22		.20	.30

Note: Only high loadings are reported.

Appendix C

FES items that loaded highly on two or more factors.

Items	Competence	System Advocacy	Initiative
I have a good understanding of the service system that my child is involved in	.36		.28
I make sure that professionals understand my opinions about what services my child needs	.30	.22	
I understand how the service system for children is organized	.45	.49	
Professionals should ask me what services I want for my child		.22	.14
I tell professionals what I think about services being provided to my child		.35	.39
When I need help with problems in my family, I am able to ask for help from others		.25	.32
I feel that I have the right to approve all services my child receives	.25		.15

VITA

William Bryan Higgins, a native of Manassas, Virginia, was born April 28, 1973. He graduated from Riverview Academy High School as salutatorian in May, 1991. He, then, received his Bachelor of Science in Psychology with a Minor in Family and Child Development at Virginia Polytechnic Institute and State University in May, 1995. In the fall of 1995, Bryan enrolled in the Masters of Social Work at the University of South Carolina in Columbia. While there, he worked with both the Juvenile Justice System and the Child and Adolescent Outpatient Unit at William S. Hall Psychiatric Hospital.

Upon graduation, he took a job with Litton PRC in McLean, Virginia as a computer engineer. During this time, Bryan worked on internal research and development projects and military and government projects. His principle duties included program development and integration, testing, and marketing the integrated technologies that were developed.

He left Litton PRC to attend the Ph.D. program in Human Ecology at the University of Tennessee. His specialization is in the area of Child and Family Studies focusing primarily on program evaluation in Tennessee's Early Intervention System. During this time, he has managed the daily operations of the Pathways to Family Empowerment Project (P.I.: Dr. Vey M. Nordquist), and co-authored several presentations including two presentations to the Oxford University Round Table: "The Pathways Research Project: An Evaluation of Tennessee's Early Intervention System" and "False Allegations of Child Sexual Abuse That Occur in the Context of Custody/Visitation Disputes: A Review of the Literature and Implications for Research and Practice". In addition, he has served as President of the Child and Family Studies

Department Graduate Student Organization, Program Chair of the Southeastern Symposium for Child and Family Development, Secretary of the University of Tennessee's Graduate Student Senate, Chair of the Graduate Student Professional Development Fund Committee and member of both the Faculty Senate Instruction with Technology Subcommittee, and Faculty Senate Teaching Council.

On October 27, 2001, Bryan married Lisa Dawn Utterback of Nokesville, Virginia. She is certified as a NK-8 teacher and currently teaches 7th grade math. They have returned to the Northern Virginia area to be close to family and friends.