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Relationship of Early Intervention Service Coordination Model to Qualify of Transition and Family Empowerment

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RELATIONSHIP OF EARLY INTERVENTION SERVICE COORDINATION
MODEL TO QUALITY OF TRANSITION AND FAMILY EMPOWERMENT

BY

CANDACE ADAMS

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

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ABSTRACT

The purpose of this study is to examine the relationship that variability in early intervention service coordination model has with the quality of transition from early intervention to preschool special education services and with the degree to which families feel empowered to advocate for their child and families' needs. Eighty-five service coordinator and family pairs in the state of New York were recruited for the study based on their adherence to one of two service coordination models: 1) dedicated service coordination or 2) service coordination plus provision of other developmental services (dual role model). Both service coordinators and families rated the quality of the families' transition from early intervention to preschool special education and families rated their sense of empowerment measured in attitudes, knowledge and behaviors across three dimensions (family system, service system, and community/political system).

Results suggested that both service coordinators and families associated higher quality transitions and a higher sense of empowerment across dimensions when the service coordinator adhered to a dual model. Significantly higher quality transitions were reported by families with a dual model, even after influences of family sense of empowerment were removed. Implications of the

study findings for education and system development as well as
recommendations for future research are discussed.

I extend my
family thanks
Soulback.

With love my
my future

To my parents
Thank you for
Thank you for

To my husband
strength of
excitement

To my daughter
best use of
important
days

I love you

ACKNOWLEDGMENTS

I extend sincere appreciation to all of the service coordinators and families that participated in the project for their valuable time and feedback.

With loving appreciation to my family...my past, my present and my future

To my parents, the most generous and spirited souls I know.
Thank you for being my mentors, my rock, and my best friends.
Thank you for nurturing the individual that I have become.

To my husband Alex, who never ceases to amaze me with his strength of character. Thank you for sharing yourself and for the excitement in your eyes as you continue to watch me grow.

To my daughter Abby, who reminds me that laughter is really the best use of my energy. Thank you for teaching me about what's important and for being the sunshine in each and every one of my days.

I love you all dearly

TABLE OF CONTENTS

Abstract	ii
Acknowledgment	iv
Table of Contents	v
List of Tables	vii
Chapter One: Introduction	
Statement of the Problem	1
Research Questions	4
Chapter Two: Literature Review	
Review of the Literature	6
From Case Management to Service Coordination	6
Transition	18
Empowerment	20
Summary	23
Chapter Three: Methodology	
Participants	26
Instruments	32
Procedure	42
Data Collection	42
Design	45
Chapter Four: Results	
Introduction	47
Analysis	47
Research Question 1	51
Research Question 2	54
Research Question 3	59
Additional Analyses	61

Chapter Five: Discussion

Introduction	68
Findings and Interpretations	70
Study Limitations	76
Educational Implications	79
System Implications	80
Suggestions for Future Research	83
Summary	86
Appendix A: Consent Forms	89
Appendix B: Instruments	92
Bibliography	102

LIST OF TABLES

Table	Title	Page
Table 1	Demographic Data for Pilot Service Coordinators	27
Table 2	Demographic Data for Pilot Families	27
Table 3	Service Coordinator Demographic Data	28
Table 4	Demographic Data for Families by Service Coordination Model	30
Table 5	Demographic Data for Children by Service Coordination Model	31
Table 6	Family Transition Survey Quality Indicator Items	35
Table 7	Service Coordinator Survey Quality Indicator Items	38
Table 8	Inter-item Correlations for the Family Transition Survey	40
Table 9	Inter-item Correlations for the Service Coordinator Transition Survey	41
Table 10	Research Design Matrix	46
Table 11	Means and Standard Deviations for SC Role by Quality of Transition	52
Table 12	Summary Table for MANOVA of Transition Quality as a Function of SC Role	53
Table 13	Summary of Between Subjects Effects of SC Role and Quality of Transition	54
Table 14	Means and Standard Deviations for SC Role by Family Empowerment within Family and Community/Political Dimensions	56

Table 15	Summary of MANOVA of Family Empowerment within Family and Community/Political Systems as a Function of SC Role	57
Table 16	Summary of Between Subjects Effects of SC Role and Family Empowerment within Family and Community/Political Dimensions SC Role	57
Table 17	Means and Standard Deviations for SC Role by Family Empowerment within the Service System Dimension	60
Table 18	Adjusted and Unadjusted Means for Quality of Transition for Two Levels of Service Coordination	60
Table 19	Pooled Within-Cell Correlations among the Three Covariates and the Dependent Variable, Quality of Transition	61
Table 20	Means and Standard Deviations of Quality of Transition for Two Levels of Service Coordination	62
Table 21	Summary Data of Paired t-test Comparisons of 3 Levels of Empowerment	63
Table 22	Summary Data of Paired t-test Comparisons of 3 Dimensions of Empowerment	64
Table 23	Means and Standard Deviations of Overall Success of Transitions and Quality of Relationships	66

CHAPTER ONE

INTRODUCTION

Statement of the Problem

The Program for Infants and Toddlers with Disabilities (Part C of The Individuals with Disabilities Education Act, IDEA, 1997) is a federal grant program that assists States in operating a comprehensive statewide program of early intervention services for infants and toddlers with disabilities, ages birth through 2 years, and their families. Some 230,853 (1.99%) infants and toddlers birth through age two across the country are reported to be receiving early intervention services (Danaher, 2002).

Each State in the United States has agreed to fully implement a statewide system of early intervention for eligible infants and toddlers as mandated by the early intervention legislation of Part C of IDEA. Part C encompasses many services that children and families are entitled to receive through the program. As one of the mandated services provided under Part C of IDEA, early intervention service coordination is perhaps the most complex service feature to conceptualize and deliver (Rosin & Hecht, 1997; Bruder & Bologna, 1996). Service coordination is defined as an active, ongoing process that assists and enables families to access services and assures their rights and procedural

safeguards (Part C of IDEA, 34 CFR 303.1). In response to this service delivery challenge, various models of service coordination are being utilized across different States as well as within individual States. Service coordination models can take many forms, including involving one dedicated early intervention staff member, involving more than one agency with an interagency agreement, or having families serve as their own service coordinator.

With the multitude of benefits for children and families associated with involvement in the Part C service system also comes the confusion and discomfort of transitioning out of this system and into the preschool special education system. Transitions can be stressful for children, parents and the professionals who work with them. Successful transitions are a primary goal of early intervention and early childhood special education (Fowler & Ostrosky, 1994; Rice & O'Brien, 1990). Well planned transitions can be an enabling and satisfying experience. In addition, positive transitions can empower families to continue to advocate for their children and successfully navigate future service systems (Bruder & Chandler, 1996; Dunst, Trivette, & LaPoint, 1992).

There exists a body of literature that links early intervention service coordination and transition to preschool services, but there is a lack of research specifically examining this connection. In addition, there is a lack of research that examines the potential relationship between the quality of a child and family's transitional experience and the degree to which families feel empowered to advocate for their child's needs. Because of the variability in transition-related factors, specifically, the personnel and agencies involved, and the individual State guidelines, it becomes important to take a closer look at the specific factors that may affect the relationship between service coordination, transition, and family empowerment. Specifically, various underlying assumptions associated with different models of service coordination may contribute to the potential variability in the quality of a family's transition from early intervention to preschool special education services, as well as their level of psychological empowerment. For example, a dedicated service coordinator may have more time to devote to service coordination tasks, including transition planning, which may result in a smoother and higher quality transition and a higher degree of empowerment for families. In contrast, an independent service coordinator as a provider may have a more difficult time with interagency collaboration, which may result in a

more fragmented and lower quality transition and a lesser degree of empowerment for families. The relationship between service coordination, transition and family empowerment is certainly enmeshed. For this reason, the current study examined the relationship that variability in service coordination model has with the quality of transition from early intervention to preschool special education services, and the degree to which families feel empowered to advocate for their children's needs. This provides additional insight into the potential relationship of specific within-State differences in service coordination model with the outcomes measures of transition quality and family empowerment. Thus, this study is intended to add to the current research and knowledge base on the potential effects that variation in service coordination model may have on the quality of transition from early intervention services to preschool special education services as well as the potential effect that variation in service coordination model may have on the level of a family's sense of empowerment.

Research Questions

1. What is the relationship between service coordination model and the perceived quality of a family's transition from early intervention services to preschool special education services?

2. What is the relationship between service coordination model and family's perception of how empowered they feel in coping with their child's needs and advocating for services to meet those needs?
3. Are there differences in family ratings of transition quality after adjustment is made for differences in empowerment?

CHAPTER TWO

LITERATURE REVIEW

Over the past 30 years, research has converged and supported the effectiveness of early intervention in promoting positive outcomes for infants and toddlers with disabilities and their families (Erickson & Kurz-Riemer, 1999; Bronfenbrenner, 1986; Campbell & Ramey, 1994; Guralnick, 1993; Guralnick, 1997). Literature in the latter part of the 1990's and into the new millennium has focused on moving beyond the overall effectiveness of the program to examine the complexity of specific program components. Guralnick termed this movement one of second-generation research, proposing a more specific layer of questioning concerning the effectiveness of early intervention (Guralnick, 1993). The focus evolved from general program effectiveness to looking more in-depth at what components of the program lead to positive outcomes for children and families.

From Case Management to Service Coordination

Rooted in the de-institutionalization movement, case management was intended to assist people with the coordination of services as they were integrated back into the community. According to Bailey (1989), the premise of case management is based on two assumptions. The first is that clients are incapable

of effectively managing the services that they receive. The second assumption is that clients are presented with a system of services that is fragmented and uncoordinated. Thus, the focus of case management has historically been on helping clients to function within these fragmented and uncoordinated systems, rather than on changing the systems. Unfortunately, the same is true for service coordination in early intervention. Part C service coordinators are largely focused on assisting families to navigate the uncoordinated system of services available for identified infants and toddlers (Newcomb & Brown, 1996; Rosenkoetter, Haines, & Fowler, 1994). The Task Panel on Deinstitutionalization, Rehabilitation, and Long-Term Care of the President's Commission on Mental Health stated in 1978, "The chronically disabled are made more vulnerable and are singularly disadvantaged by a complex and fragmented service system" (Bailey, 1989, p. 120). The same disadvantage exists today for children and families receiving early intervention services. The role of the Part C service coordinator presents the challenge of advocating for the child and family within the confines of such a system.

Public Law 99-457 specified that the Individualized Family Service Plan (IFSP) "...must include the name of the case manager from the profession most immediately relevant to the infant's and

toddler's or family's needs who will be responsible for the implementation of the plan and coordination with other agencies and persons" (Bruder & Bologna, 1996, p. 106). Although well intentioned, the requirement of case management in early intervention raised many concerns about its implementation, reflecting the awareness of the complexity of this task. The creation and implementation of service coordination guidelines must be informed by research in the areas of collaboration with families and family-centeredness, community-level awareness, teaming with other professionals, and coordination at the systemic level.

Throughout the implementation of Part H and the reauthorization of Part C, the term service coordinator was deemed more appropriate for use than case manager. This change in terminology was largely due to the change in emphasis from the individual client as a "case" to an increased emphasis on creating a system of coordinated services to offer not only eligible children but their families as well. The difference in language is yet another indicator in the shift to more family-centered policies and practices (Haussein, Kaufmann, & Hurth, 1992). In addition to the terminology, the focus of early intervention service coordination has been altered from that of historical case management in that

rather than solely leading the family through a maze of uncoordinated services, the service coordinator is also responsible for interacting with families in such a way that families acquire a sense of control over their own lives and the services that they receive for themselves and for their children (Dunst & Trivette, 1989). The role of the early intervention service coordinator, then, is largely to monitor the implementation of the Individualized Family Service Plan (IFSP) and ensure that the services that the family is receiving are appropriate and that they adhere to family-centered principles. According to federal legislation, service coordinators are responsible for "...coordinating all services across agency lines, and serving as the single point of contact in helping parents to obtain the services and assistance they need" (Bruder & Bologna, p. 114). Specifically, service coordination activities include:

- Coordinating the performance of evaluations and assessments;
- Facilitating and participating in the development, review, and evaluation of IFSPs;
- Assisting families in identifying available service providers;
- Coordinating and monitoring the delivery of available services;
- Informing families of advocacy services;
- Coordinating with medical and health providers; and
- Facilitating the development of a transition plan to preschool services, if appropriate.

(Part C of IDEA, 34 CFR Part 303.23)

The role of service coordinators can be viewed in several different layers. As mentioned above, their role includes the assurance of the implementation of the IFSP, among other responsibilities. Depending on the child and family's needs, the IFSP could include services to be delivered by a single agency or by multiple agencies providing a variety of separate but interrelated services and supports. The service coordinator must assure that there is communication between all providers involved, within and often across agencies, and must also ensure that services are being delivered in the most effective manner, without duplication. Thus, the service coordinator is responsible for overseeing the delivery of services at the family level (i.e., adhering to family-centered principles) as well as at the community level (i.e., coordinating services across agency lines) and the system level (i.e., ensuring the procedural safeguards of the Part C program) (Roberts, Rule, & Innocenti, 1998). Each of these levels of coordination present unique challenges for the early intervention service coordinator.

Coordination at the family level requires the service coordinator to not only be familiar with family-centered philosophy but be skilled in the delivery of services that adhere to family-centered principles. Research supports the notion that practices that are family-centered have the greatest positive influence on

families because they are supportive of families and respond directly to what families consider to be in their own best interest (Dunst, Trivette, Gordon, & Starnes, 1993; Roberts, Rule, & Innocenti, 1998; Rosin & Hecht, 1997; Rosin, Green, Hecht, Tuchman, & Robbins, 1996; Stepanek, Newcomb, & Kettler, 1996; Bruder, 2000; Dunst & Trivette, 1989). Dunst et al. (1993) define family support principles as "...statements or beliefs about how supports and resources ought to be provided so that they have competency-enhancing effects" (p. 90). These are the principles that operationally define family-centered intervention. The service coordinator is instrumental in the implementation of the family-centered philosophy of IDEA. The role of the service coordinator is thus to facilitate the true intent of the law: to support families in their care-giving role (Dunst & Trivette, 1989).

In addition to delivering family-centered services, research suggests that a strong collaborative relationship between the service coordinator and the family is an essential component of early intervention (Bailey, 1989; Dinnebeil, Hale, & Rule, 1996; Bruder & Bologna, 1993; Roberts, Rule, & Innocenti, 1998; Rosin, Green, Hecht, Tuchman, & Robbins, 1996). The focus of service coordination should be on consultation to the family in response to their identified priorities, rather than on the provision of

“expertise.” However, research has documented several barriers to establishing a collaborative relationship between a service coordinator and a family, including personal characteristics, philosophical beliefs, and professional knowledge base (Dinnebeil, Hale, & Rule, 1996; Rosin, Green, Hecht, Tuchman, & Robbins, 1996).

Service coordination at the community level requires specific skills in working with others in teams and understanding the various help-giving practices of each agency involved. Families with children with disabilities often interact with a multitude of agencies and programs in order to meet the unique intervention needs of their child (Bruder & Bologna, 1993). It falls on the shoulders of the service coordinator to oversee the implementation of these services and the communication across agency and program lines. In addition, the service coordinator should serve as the single point of contact for the family in accessing community resources. Regardless of the number of service providers involved with a family, the providers must adopt a team model to ensure effective service delivery. Literature has shown that the success of the intervention depends on the manner in which the team functions (McCollum & Hughes, 1988; Dinnebeil, Hale, & Rule, 1996; Kilgo, Richard, & Noonan, 1989; Roberts, Behl, & Akers,

1996) and the service coordinator is in a unique position for facilitating this teaming process. There are several barriers to effective teaming, including practical issues such as time, provider knowledge base, and specific agency constraints. The lack of systemic level collaboration makes it difficult for the providers within these systems to effectively team for service delivery. Bruder and Bologna (1993) suggest that barriers to interagency collaboration include competition between agencies, lack of organizational structure for coordination, technical factors such as time, and personnel factors such as staff attitudes.

Coordinating services at the system level requires the coordinators to be familiar with the overall Part C program as well as their State's unique interpretation of the program. At this level, the coordinator is required to internalize State identification criteria, such as the inclusion of children at risk, State specific regulations for the involvement of multiple agencies with a family and other unique interpretations of Part C in their State. It is also at this level that variations in the model of service coordination may affect the specific role of the service coordinators and their associated responsibilities.

When asking the question, "who can be a Part C service coordinator?" the answer depends on the specific State or territory

in which the question is posed. As each State in the country agreed to participate in early intervention and was mandated to carry out service coordination, it was also allowed the freedom to develop a model of service coordination that it believed would be most effective in that State. Federal legislation for Part C does not establish discipline-specific requirements for service coordinators but instead provides general guidelines and leaves the rest up to the discretion of the individual State or territory (Part C of IDEA, 34 CFR Part 303.23).

Historically, there have been proponents for different models of service coordination. Some hold that the service coordinator should be the same person who is the primary therapist or interventionist for the child. This dual role of service coordinator and primary interventionist should allow the service coordinator to be more familiar with the family, the child's needs and be able to view the whole child. Proponents of this model argue that this arrangement is better than one in which the service coordinator has no specialized training in a therapy or treatment strategies (Bailey, 1989). Although the assumption within this model is that the service coordinator will know the child well because she/he provides other services to the family, it also may be that because the provider has to perform a dual role she/he will have less time

to devote to specific service coordination tasks. Others have argued that the service coordinator should be dedicated to that role and not provide other services (Bailey, 1989). Proponents of a dedicated model of service coordination suggest that the provider would have more time to devote to specific service coordination responsibilities and, thus, those outcomes that are associated with quality service coordination would be more positive. In addition, it is suggested that if a service coordinator only provides this service she/he may have more time and a more positive attitude toward acquiring the skills spoken about above to provide quality service coordination.

The variation among as well as within States that exists in implemented models of service coordination presents an interesting area of research that has not been explored in the literature. The current literature on Part C service coordination focuses on the role of the service coordinator and strongly supports the importance of this role in the delivery of high quality services to children and families. The literature has not explored potential differences in the quality of services and the outcomes of services that may be affected by variations in the model of service coordination being implemented. The current study looks at this potential relationship to go beyond the established research that

simply indicates that there are different models, to looking at the relationship of various models on service outcomes for children and families.

There has been some attempt in the past to define various models of service coordination, although the models have not been sufficiently exhaustive (Hurth, 1998; Whitehead, 1996a).

Whitehead (1996a) proposed five service coordination models: 1) Early intervention program model – either one dedicated staff member or an individualized team decision; 2) Community-level Transagency or Interagency Model – an interagency agreement in the event of multiple agency involvement with the family. The agency with the greatest involvement in meeting the needs of the family is selected to coordinate services; 3) Consumer and Advocacy Model- in this case a consumer or advocacy organization is responsible for coordinating services. It is specified that the organization could exist within or outside of the early intervention system; 4) Levels of service coordination – this model divides service coordination responsibilities between the State and local level functions. Under this model the family could have separate service coordinators for each State service they receive; and 5) Co-service coordination – in this model parents work collaboratively with a paid professional to coordinate services for their family.

The drawback to previous attempts in describing various models of service coordination is their lack of comprehensiveness. Service coordination models need to be viewed on two different levels, the State level and the personnel level. Because there are such differences in the structure of early intervention programs across States, the first layer of service coordination model accounts for State level differences. For example, there can be various lead agencies responsible for the delivery of early intervention. In addition to differences in lead agency, differences exist among States in the agency deemed responsible for overseeing service coordination, which may or may not be the lead agency. The second layer of service coordination model describes the personnel differences in who actually provides service coordination services. As mentioned above, the service coordinator may function as just a service coordinator or may provide other services as well. In addition, the agency that employs the service coordinators may vary within as well as across States. Although Whitehead (1996) begins to discriminate between the two layers of service coordination, the models proposed are not sufficiently exhaustive to give credit to the complexity of this issue.

The lack of consistency in models of service coordination and the potential effect on the quality of the service coordination across

the country is just beginning to be examined in research (Bruder, Gabbard, & Harbin, 1999).

Transition

Current research is also just beginning to explore the relationship between service coordination model and various outcome measures of early intervention. The connection between coordination and outcomes has become a more prominent one since governments at the local and federal level have begun to demand outcomes-based approaches to planning as well as to highlight program accountability [e.g., Government, Performance and Results Act of 1993 (PL 103-62)]. Philosophically, it seems that service coordination services are relied upon more heavily and have more of an impact at times that represent typical benchmarks in the system for families. This is evident in the design of the seven federally-mandated service coordination responsibilities and supported by research (Rosin, Green, Hecht, Tuchman, & Robbins, 1996; Stepanek, Newcomb, & Kettler, 1996). Thus, the quality of service coordination at system entry, IFSP creation and implementation, and upon exiting the early intervention system may have an effect on the overall quality of services at these crucial times for families.

Although each of the aforementioned stages of service delivery represents a daunting navigational task for families, there is ample literature to support the difficulties that families often experience in the transition from early intervention services to preschool special education services. All transitions represent times of change and opportunities for growth and positive outcomes as well as frustration and negative outcomes. The transition from early intervention to preschool services is a critical period because it represents the family's first formal experience with a school system and sets the stage for the manner in which the family will trust and interact with school personnel for the remainder of their child's school years (Diamond, Spiegel-McGill, & Hanrahan, 1988). The inclusion of a parent-school partnership in the National Educational Goals explicitly points out the importance of this partnership on positive outcomes for children. Goal eight states, "every school will promote partnerships that increase parent participation in facilitating the social, emotional and academic growth of children" (National Education Goals Panel, 1998). Thus, the transition from early intervention to preschool services represents an opportunity for creating positive relationships with families that will have equally positive effects for

children. In order for this to happen, many obstacles and potential difficulties specific to this transition period need to be overcome.

Specific difficulties surrounding the early intervention to preschool transition include apprehensiveness about moving from home-based to center or school-based services (Bennett, Raab, & Nelson, 1991), lack of a clear transition plan and interagency collaboration between the sending and receiving programs (Fowler, Hains, & Rosenkoetter, 1990; Bruder & Chandler, 1996; Fowler & Ostrosky, 1994), feelings of a loss of control by the family as services move from family-centered to more child, educationally-centered (Bruder & Chandler, 1996; Newcomb & Brown, 1996), ensuring the provision of services that are inclusive in nature and implementation of the least restrictive environment (Fowler, Hains, & Rosenkoetter, 1990), and the move away from transdisciplinary services to more interdisciplinary services (Fowler & Ostrosky, 1994). As Rosenkoetter, Hains, and Fowler (1994) state, bridging early services for children with special needs and their families requires good planning, communication, and parental empowerment.

Empowerment

Empowerment is a dynamic process involving interactions between people and their social context that produces changes in

both their individual lives as well as their social contexts. The empowerment process can be described in terms of three important levels, 1) an individual level of attributions and skills that an individual or family bring to a particular situation (Zimmerman, 1986, 1995); 2) a context level that includes resource availability and the context responsiveness to the needs of the individual (Florin & Wandersman, 1990; Maton & Salem, 1995; Turnbull & Turnbull, 1990); and 3) a transactional level that results from the interactions of the person with the context and produces behaviors and outcomes aimed at changing either the person or the context (Akey & Turnbull, 1996; Jones et al., 1995). In looking at the intended purpose of service coordination within early intervention, the service coordinator represents the second level of the empowerment process at the context level. The service coordinator's responsiveness to the needs of the family has an effect on their sense of empowerment. Thus, the model of service coordination utilized, which may have an effect on the service coordinator's availability to a family, is likely to have a relationship to the family's sense of empowerment to meet the needs of their children.

The current study examines the relationship between variation in service coordination model on a family's sense of

empowerment, thus concentrating on the individual level of empowerment. This individual level of empowerment has been described as "psychological empowerment" (Zimmerman, 1986, 1995; Zimmerman & Rappaport, 1988). Psychological empowerment is a construct that consists of three interrelated dimensions: 1) an intrapersonal dimension consisting of cognitive appraisals of control, competence, motivation, and self-esteem (Cochran, 1992; Dunst, Trivette, & LaPoint, 1992; Ozer & Bandura, 1990); 2) an interactional dimension consisting of critical skills and knowledge (Cochran, 1992; Heller, 1990; Jones, 1994; Turnbull et al., 1993); and 3) a dimension reflecting participatory, change-oriented behaviors in formal and informal contexts and organizations (Florin & Wandersman, 1984; Jones et al., 1995; Maton & Salem, 1995). Thus, it is likely that if families have a higher sense of empowerment they will experience a higher quality transition from early intervention services to preschool special education services. This study examines the possible relationships that the variation in model of service coordination has on a family's sense of empowerment as well as the related effect of the quality of their transition experience.

Many of the difficulties found to be common within transitions can be modulated with quality service coordination. As

mentioned previously, facilitating the development of a transition plan to preschool services is one of the mandated activities of the early intervention service coordinator. In facilitating the transition plan, the service coordinator has the opportunity to ensure that various indicators of quality are maintained throughout the transition. Research has indicated that quality transitions are marked by a written interagency agreement, sufficient timelines, ongoing communication and collaboration between the sending and receiving programs, involvement and empowerment of the family, awareness of community resources and programming options, and adequate preparation of the child for the transition (Bruder & Chandler, 1993; Fowler, Schwartz, & Atwater, 1991; Fowler, Hains, & Rosenkoetter, 1990; Fowler & Ostrosky, 1994). The service coordinator is in the unique position to serve as the single point of contact throughout the transition and, thus, have a relationship to its quality (Rosin et al., 1996; Wolery, 1989).

Summary

Early intervention is composed of many required components, one of which includes the provision of service coordination to families enrolled in the service system. Service coordinators are responsible for overseeing the delivery of services to children and families. It is crucial that service coordinators

possess knowledge of family-centered principles and skills in delivering family-centered services so that they can support families and enhance their capacity to meet the special needs of their infants and toddlers.

If families' capacity to meet the needs of their children is enhanced, families feel more empowered and experience more positive outcomes, such as higher quality transitions from early intervention to preschool special education services. This transition has been reported in research often to be a time both of stress and of uncertainty for families. Transitions can also go smoothly and be an opportunity for growth and positive outcomes. Research supports the effectiveness of early intervention in promoting positive outcomes for infants and toddlers with disabilities and their families. In a more outcome-focused era of human service delivery, it is essential to examine the potential relationship of service delivery system design to child and family outcomes.

The current study examines the relationship between two specific models of service coordination in New York State and the outcomes of quality of transition to preschool services and level of family empowerment. The two models examined included a dedicated model, in which service coordinators provide only

coordination to families, and a dual role model, in which they also provide other developmental services to families. Thus, the current study aims at increasing professional knowledge concerning variability in early intervention service delivery models and two identified family outcomes.

CHAPTER THREE

METHOD

Participants

A total of 10 service coordinators and 8 families participated in the pilot phase of the project. Consent forms and protocols for the pilot data collection can be found in appendix A. Of the 10 service coordinators who participated in the pilot phase, the average age was 35.7, average number of years in early intervention was 6.8 and the average number of years as a service coordinator was 6.2. Fifty percent of the pilot service coordinators had a 4-year college degree, 20% had some graduate work and 30% had attained a graduate degree. Half of the service coordinators provided only service coordination service to families and the other half provided other developmental services in addition to service coordination. Demographic data for pilot service coordinators can be found in Table 1.

Of the 8 families that participated in the pilot phase, the mean age of the children was 39 months. Families reported that the average length of time their children received early intervention services was 34.88 months and that they received an average of 11.75 hours of service per month. Family demographic information, such as parental age and education was not reported

for the pilot phase due to a large amount of missing data for these variables. Demographic information for pilot families can be found in Table 2.

Table 1

Demographic Data for Pilot Service Coordinators (N=10)

	Mean	Standard Deviation	Range
Age	35.70	4.79	29-45
Years as SC	6.20	3.58	2-12
Years in EI	6.80	4.16	2-15
<hr/>			
	Number	%	
Educational attainment			
College (4 year)	5	50 %	
Some Graduate	2	20 %	
Graduate Degree	3	30 %	
<hr/>			
	Service coordinator role		
SC only	5	50 %	
SC +	5	50 %	

Table 2

Demographic Data for Pilot Families (N=8)

	Mean	Standard Deviation	Range
Child's age in months	39.00	.76	38-40
Total months in EI	34.88	12.09	5-40
Total hrs of service per month	11.75	10.33	2-30

Pilot participants were not used in the project data collection phase of the project. For the project phase, a total of 125 service coordinators were recruited, 67 providers of service coordination only (SC only) and 58 providers of service coordination plus other early intervention services (SC +). Each of the service coordinators was asked to include a family pair to participate in the study as well.

Out of the 125 recruited pairs, 85 successfully responded (38 SC only pairs and 47 SC + pairs), representing a return rate of sixty-eight percent. The return rate is determined to be good due to the personal contact between the principal investigator and the service coordinators. Demographic information for the full sample (n=85) of service coordinators can be found in Table 3.

Table 3

Service Coordinator Demographic Data (N=85)

	Mean	Standard Deviation	Range
Age	36.18	4.84	27-45
Years as SC	6.00	2.84	2-12
Years in EI	6.85	3.67	2-15
Educational attainment			
	Number	%	
College (4 year)	35	41.2 %	
Some Graduate	8	9.4 %	
Graduate Degree	42	49.4 %	

Service coordinators in the study averaged 36.18 years of age and had spent six years working in the role of service coordinator. Approximately half of service coordinators had obtained a graduate degree (49.4%).

Families participating in the study averaged a three person household (SC only 3.24, SC+ 3.13). The majority of parents in the SC only group had at least completed high school and a smaller number had post college education. Within the SC+ group, all of the parents had completed high school and a fair number had college level education. The average age of mothers reporting their age was 29.17 for the SC only group and 34.86 for the SC+ group. Mean father's age was 29.33 for the SC only group and 38.61 for the SC+ group. Further details on family demographics can be found in Table 4.

Children in the study had an overall average age of 37.84 months and spent an overall average of 8.15 months receiving a variety of early intervention services. All of the children in the SC only group received speech and language therapy and the majority of the SC+ group received speech services (80.9%). Services categorized as other services received included family support and social work. Further information on the demographic characteristics of children in the study is listed in Table 5.

Table 4

Demographic Data for Families by Service Coordination Model

Family Data				
	Valid N	SC only model (N = 38) Mean	Standard Deviation	Range
# in household	38	3.24	1.10	2-5
Mother's age	24	29.17	3.41	25-35
Father's age	12	29.33	5.55	23-36
		SC + model (N = 47)		
# in household	47	3.13	.82	2-4
Mother's age	42	34.86	6.55	25-45
Father's age	33	38.61	6.79	27-49
Parental educational attainment				
	#	%	#	%
SC only model (N = 38)				
	Maternal (valid N = 34)		Paternal (valid N = 18)	
Some high school	4	11.8	4	22.2
H.S. grad	19	55.9	14	77.8
Some college	7	20.6	-	-
College grad	4	11.8	-	-
Post-college	-	-	-	-
SC + model (N = 47)				
	Maternal (valid N = 47)		Paternal (valid N = 38)	
Some high school	-	-	-	-
H.S. grad	19	40.4	4	10.5
Some college	9	19.1	10	26.3
College grad	15	31.9	15	39.5
Post-college	4	8.5	9	23.7

Table 5

Demographic Data for Children by Service Coordination Model

	SC only (N = 38)			SC + (N = 47)		
	Child Data					
	Mean	SD	Range	Mean	SD	Range
Child's age in months	37.95	1.37	36-40	37.74	.92	36-39
Total months in EI	7.84	2.73	3-14	8.40	7.11	3-27
Total hrs of service per month	17.58	9.47	8-37	18.81	8.58	12-40
	EI services received					
	#	%	#	%		
Physical therapy	8	21.1 %	13	27.7 %		
Occupational therapy	12	31.6 %	14	29.8 %		
Special education	19	50.0 %	29	61.7 %		
Speech therapy	38	100 %	38	80.9 %		
Other	4	10.5 %	-	-		

Preliminary analysis was completed on the data to determine if there were significant demographic differences between the service coordinator and family pairs according to the service coordination role (SC only versus SC+). Father's education, mother's age and father's age were eliminated from the inquiry due to significant missing data for these variables. Mother's education for those mothers in the SC+ group ($M = 3.09$) was found to be

significantly greater than the educational level of those mothers in the SC only ($M = 2.32$) group ($f(1, 80) = 12.36, p < .001$). However, the strength of the association between mothers educational attainment and service coordination role was found to be fairly low ($\eta^2 = .135$). No other significant differences existed within demographic indicators.

Instruments

Three survey instruments were utilized to collect information from both families and service coordinators. The Family Empowerment Scale (Koren, DeChillo, & Friesen, 1992) was utilized, along with two surveys developed by the principal investigator. The Family Transition Survey and the Service Coordinator Transition Survey were empirically developed based on the quality indicators of transition highlighted in the DEC recommended practices (Bruder & Chandler, 1993). Items contained in the surveys are modified versions of the recommended practices indicators in the transition strand.

The Family Empowerment Scale (FES) is a 34-item scale that is based in a two-dimensional framework of empowerment. One dimension reflects empowerment with respect to the family, service system, and larger community-political environment; the other dimension reflects levels of the expression of empowerment as

attitudes, knowledge, and behaviors. Scoring of the instrument yields three sub scores that represent the three dimensions of Family System (12 items), Service System (12 items), and Community/Political System (10 items). The survey instrument, as well as a breakdown of items that load onto each of the three dimensions can be found in appendix B. Reliability and Validity indicators of the FES are good. Internal Consistency and test-retest coefficients of the three dimensions are as follows: Family System (.88, .83); Service System (.87, .77); and Community/Political System (.88, .85). Validity studies included item ratings using inter-rater agreement as well as agreement on item classification within the three dimension scale. Inter-rater agreement coefficients averaged .77 and classification agreement coefficients averaged .83 for the three dimensions. In addition, factor analysis of item responses provides general support for the correspondence of items to the three dimensions described in that the factors accounted for 52 percent of the variance and only two individual items had factor loadings of less than .40.

The second instrument, the Family Transition Survey was designed for families of children who have transitioned from early intervention services to preschool special education services within six months of the data collection period. The purpose of the

Family Survey was to assess family's perceptions of the quality of their transition between service delivery systems and their perceptions of the level of involvement that their early intervention service coordinator had in the transition process. The Family Transition Survey also asked families to report on various demographic indicators, including the parent's ethnicity, education, occupation and age. In addition to parental demographic information, the survey also asked for information regarding the child who transitioned, including their age, primary disability, level of intensity of early intervention services, and type of preschool special education services currently receiving.

The Family Survey contained 16 items requiring a Yes/No response. These items were directly adapted from the DEC empirical transition quality indicators and measured the presence or absence of each of the quality indicators during the family's transition. Total measures of each family's quality of transition were taken by summing each of the "Yes" items endorsing the presence of a quality indicator. All items were phrased in a positive tone. Two items were follow up items from previous indicators and were only responded to if the preceding item was affirmative. Items covered quality topics such as the timeline of the transition, the family's knowledge and receipt of information

during the transition, the collaboration between the sending and receiving programs, and the extent of the service coordinators' involvement in the transition. The 16 quality indicator items from the Family Survey are listed in Table 6. Two overall questions requested families to rate the overall success of the transition and their overall relationship with their service coordinator on a scale from 1 to 4. The entire Family Survey instrument can be found in appendix B.

Table 6

Family Transition Survey Quality Indicator Items

Items
1. My child's transition planning began at least 3 months prior to his/her third birthday.
2. I received information about the steps of the transition process.
3. My child had a written transition plan.
3a. My child's written transition plan included dates and timelines for changing programs.
4. I received information about my child's options for preschool services.
5. I had an opportunity to visit the preschool program and talk to the staff prior to the transition.
6. I had an opportunity to talk with other families enrolled in the preschool program during the transition.

Table 6 continued

7. I had a joint meeting with my early intervention service providers and the preschool staff.

7a. My early intervention service coordinator was at that meeting.

8. I had one person throughout the transition that was the primary contact person for the transition process.

8a. The primary contact person was my early intervention service coordinator.

9. Preschool services for my child began immediately after early intervention services ended.

10. I had adequate time to prepare for my child's transition from early intervention to preschool services.

11. My early intervention service coordinator was knowledgeable about the various preschool service options in my community.

12. My early intervention service coordinator helped to develop a plan for my child to learn the skills necessary to transition to preschool services.

13. I feel as if I had a say in my child's preschool program and services.

14. The preschool staff worked with the early intervention staff and my family to ensure a smooth transition.

The third instrument, the Service Coordinator Transition Survey, was designed to be able to be administered in several different formats in order to increase the response rate. A telephone protocol was developed to introduce the topic to service coordinators by telephone first. The service coordinator survey

was then able to be administered by phone and recorded by the principal investigator or mailed, faxed or emailed to participants in a survey format. This survey examined early intervention service coordinators perceptions of a family's transition to preschool special education services. Similarly to the Family Survey, the Service Coordinator Survey was specifically designed to examine the presence or absence of various quality indicators of transition and potential barriers to effective transition.

The survey contained 12 quality indicator statements that requested a Yes/No response. Items covered areas of quality such as interagency collaboration, extent of involvement in the families' transition process, and service coordinator knowledge and understanding of the transition process. These 12 items are listed in Table 7. In addition, two overall questions asked participants to rate the success of the transition and their relationship with the family on a scale of 1 to 4. The service coordinator survey also asked participants to record demographic information, including the educational background and early intervention experience of the respondents, as well as their ethnicity and age. A copy of the telephone protocol can be found in appendix A and the instrument can be found in appendix B.

Table 7

Service Coordinator Survey Quality Indicator Items

Items

1. A written interagency agreement was developed between the early intervention providers and the preschool providers for the transition.
 2. A written timeline was followed during the transition.
 3. There was adequate time to plan and prepare for the transition.
 4. There was a structure for on-going communication within the early intervention providers as well as communication between the family, early intervention and preschool providers during the transition.
 5. There was sufficient interagency collaboration to avoid duplication of services (such as assessment).
 6. I had the opportunity to visit potential preschool programs in preparation for the transition.
 7. I served as the families' single point of contact during the transition.
 8. I had a clear understanding of the roles and responsibilities of all the providers involved in the transition.
 9. I feel that I had the support and training necessary to carry out the roles and responsibilities of preparing the child and family for transition.
 10. I had sufficient information about various program options to offer the family during transition.
 11. I maintained communication with the child and family and preschool program after the transition.
 12. There was a formal mechanism for evaluating the transition.
-

Logical construct validity of both the Family Transition Survey and the Service Coordinator Transition Survey was established at the time of the development of the DEC transition strand through extensive review of the literature. The transition indicators established by DEC were not sufficiently altered for the purposes of the aforementioned surveys to jeopardize their validity. Reliability for the two instruments was established using Cronbach's Alpha. Inter-item correlations for both instruments demonstrate sufficient independent information from each of the items. Approximately one third of the items from the Family Survey (36.26%) had a moderate correlation ($r = .4$ or higher). Two of the 91 inter-item correlations were considered to be high ($r = .8$ or higher). Of those items with a moderate to high correlation, relationships were found between logistical items, such as beginning the transition process at least three months prior to the transition and having sufficient time to prepare and visit preschool programs. In addition, correlations were present among items that measured the amount of contact with others that families had through the transition, for example, the opportunity to talk with other families, have joint meetings with the sending and receiving programs and visit preschool programs. The two sets of items with high correlations included families having one person as a primary

contact throughout the transition and receiving information on the steps of the transition; and having one person as the primary contact and feeling as if they had a say in the preschool services. Overall Cronbach's Alpha for the Family Transition Survey was .88, suggesting good internal reliability for the instrument. Table 8 lists inter-item correlations for the Family Transition Survey.

Table 8

Inter-item Correlations for the Family Transition Survey

	1	2	3	4	5	6	7
1	1.00						
2	.38	1.00					
3	.59	.54	1.00				
4	-.01	.52	.20	1.00			
5	.68	.19	.43	.11	1.00		
6	.26	.17	.31	.15	.39	1.00	
7	.18	.12	.21	.10	.27	.68	1.00
8	.27	.86	.63	.43	.28	.20	.13
9	.01	.25	.37	.09	.02	.20	.14
10	.54	.25	.43	.41	.52	.20	.14
11	.03	.57	.17	.76	.28	.20	.14
12	.32	.24	.53	.43	.70	.34	.24
13	.38	.68	.54	.17	.44	.17	.16
14	.60	.39	.33	.34	.50	.44	.30
	8	9	10	11	12	13	14
8	1.00						
9	.43	1.00					
10	.17	-.11	1.00				
11	.46	.17	.43	1.00			
12	.34	.30	.59	.57	1.00		
13	.86	.25	.25	.27	.24	1.00	
14	.22	.24	.46	.45	.41	14	1.00
Number of cases = 85				Cronbach's Alpha = .8769			

Nine of the fifty-five inter-item correlations for the Service Coordinator Survey (16.36%) had moderate correlations (range .41 - .79). These correlations can be found in Table 9.

Table 9

Inter-item Correlations for the Service Coordinator Transition Survey

	1	2	3	4	5	6	7
1	1.00						
2	.24	1.00					
3	.24	.44	1.00				
4	.60	.56	.18	1.00			
5	.00	.14	-.20	.40	1.00		
6	.39	.25	.25	.45	.30	1.00	
7	-.16	-.10	-.10	-.18	.49	.25	1.00
8	.44	-.07	-.07	-.12	-.14	.17	-.07
9	.13	.33	.33	.08	.33	.32	.79
10	.14	.28	-.04	.00	-.11	.46	.28
11	.25	-.24	.16	-.25	-.19	.14	.16
	8	9	10	11			
8	1.00						
9	-.09	1.00					
10	.19	.35	1.00				
11	.11	.20	.09	1.00			
Number of cases = 85				Cronbach's Alpha = .6876			

Investigation of the similarities between these moderately correlated items revealed relationships between system issues, such as interagency agreements, sufficient training and structures for communication. In addition, relationships were moderate for those variables that measured level of contact during the transition, such as visiting preschool programs, having ongoing

communication, maintaining communication after the transition and acting as the families' single point of contact during the transition. Overall Cronbach's Alpha for the Service Coordinator Transition Survey was .69, suggesting good internal consistency reliability for the instrument.

Procedure

Data collection

In order to hold constant any differences in State level service coordination model, participants (service coordinators and families) were all recruited from New York State, in the central and upstate regions. Selection criteria included participants that had experienced a transition from early intervention to preschool special education services within six months prior to data collection. Families who experienced a transition but whose child was discharged from services at that time were excluded, in order to examine data related to the transition between early intervention and preschool special education service systems exclusively.

Ten service coordinators and 8 families volunteered to participate in a piloting of the Service Coordination Survey and the Family Transition Survey, in order to provide feedback on the utility and clarity of the instruments. Participants for the pilot phase were recruited at a training in the Albany area and assured

that their feedback would be kept anonymous. A separate informed consent form for the pilot stage was utilized for participants and data collection occurred at the time of contact. University of Rhode Island IRB approval was obtained for both the pilot stage and study procedures on January 16 2003.

Service coordinators were recruited for the project phase based on information provided from the State Part C office regarding their service provider responsibilities. A sample of service coordinators who adhered to each of the two models of service coordination was somewhat randomly selected. The more systematic selection criteria included extending an invitation for participation to those service coordinators that had a prior professional connection to the principal investigator. Approximately half of the sample of service coordinators representing each of the two models fell into this more systematic selection procedure. The remaining half of participants was randomly selected from neighboring areas of New York. Service coordinators were contacted by phone in order to secure their participation. A telephone protocol was used to describe the study to the coordinators and determine the manner in which the data would be collected. During the initial telephone contact, service coordinators were asked to briefly describe the model of service

coordination that they adhere to, so as to confirm the validity of their data as representative of a specific service coordination model. Service coordinators were also given a choice of phone, fax, email, or mail to receive and return their data. Each of the service coordinators was asked to choose a family that they had worked with in a transition to preschool special education services to respond to the family components of the data collection. Families were given the data collection instruments through the service coordinators, by fax, email or mail and instructed to return data directly to the principal investigator through the preferred means of communication. Service coordinator data collection instruments were color coded to indicate their service coordination role (SC only or SC +) for ease of data entry upon return. In addition, service coordinator and family data collection instruments were given matching unique identifier numbers so as to match the pairs upon receipt and ensure anonymity in participants' responses. Service coordinators received a follow-up phone call reminder two weeks after initial contact and agreement to participate in the study. Data collection was discontinued four weeks after initial contact of participants. All identifying information (i.e., service coordinator phone numbers, addresses, emails) was destroyed following data collection.

Design

The study utilized a between subjects design with one independent variable representing the service coordinator's role in providing services to families. The variable had two levels: 1) provision of service coordination only to families (SC only) and 2) provision of service coordination in addition to other developmental or therapeutic early intervention services to families (SC +). There were five dependent variables utilized in the study. The first dependent variable was the quality of transition from infant and toddler services to preschool services as described by families (Family Transition). The dependent measure of quality was defined on a continuous scale according to the number of quality indicators that families endorsed on the Family Transition Survey as being present throughout their transition. The second dependent variable was a measure of the quality of transition from early intervention to preschool special education services as described by service coordinators (SC Transition). This variable was defined on a continuous scale according to the number of quality indicators that service coordinators endorsed on the Service Coordinator Transition Survey. The third, fourth and fifth dependent variables were an overall measure of the family's sense of empowerment. This variable was measured with the use of the

Family Empowerment Scale (FES) and the three empowerment subscales that the scale yields, being empowerment within the Family System (FS), Service System (SS), and Community/Political System (C/PS). Table 10 displays a matrix of the research design.

Table 10

Research Design Matrix

		Independent variables	
		SC role	
Dependent variables		SC only	SC+
SC transition quality			
Family transition quality			
Family system empowerment			
Service system empowerment			
Community/political empowerment			

In addition to the five dependent variables described above, two general questions utilizing a four-point rating scale were included in the project design. The two questions examined families' and service coordinators ratings of overall quality of transition as well as the relationship existent between the pairs of families and service coordinators.

CHAPTER FOUR

RESULTS

Introduction

The purpose of the current study is to contribute information to the field regarding specific differences in quality of transition from early intervention to preschool special education services as well as levels of family empowerment that could be attributed to variation in a service coordination model. A series of 4 separate analyses were completed in order to address the three research questions proposed in this study. Descriptive and qualitative analyses were reviewed in order to examine additional interesting relationships among variables and provide further insight into participants' reported feelings regarding transition from early intervention to preschool special education services.

Analysis

Data collected from service coordinators and families was entered into a program using SPSS software (Statistical Package for the Social Sciences). Preliminary analysis was conducted to describe the population of participants. Missing data in the sample was minimal and was replaced using a series mean analysis. Following preliminary analysis, a series of two Multivariate Analyses of Variances (MANOVA) and one Univariate

Analysis of Variance (ANOVA) were conducted in order to address the first two research questions presented in the study.

Preliminary analyses of the covariance between the five dependent variables as well preservation of assumptions of homogeneity and singularity revealed threats to the assumption of singularity and potential risks to the robustness of the results due to multicollinearity. Thus, the analysis was broken down into a series of separate analyses in order to preserve the robustness of the results by decreasing the level of redundancy of dependent variables within an analysis. The potential high level of distortion was evidenced by several significant Box's M tests ($p < .001$), suggesting a high degree of redundancy among dependent variables. Box's M is considered to be a highly sensitive measure of homogeneity of variance-covariance matrices. Following the rule that the more numerous the number of dependent variables and the greater the discrepancy in cell sizes, the greater the potential distortion in alpha levels, it was determined necessary to complete separate analyses. In addition, the separation of the analyses yielded more reliable information because it decreased the redundancy of the dependent variables that was evident by examining the covariance matrices. The risk of increasing the amount of error presented with multiple analyses was considered

to be outweighed by the risk of multicollinearity present with the pooling of all five dependent variables (Cohen & Cohen, 1975). In addition, more stringent measures of preserving robustness were necessary due to unequal sample sizes, whereas if the sample sizes had been equal, robustness of significance would be expected. All other assumptions were preserved after adjustment of the analyses.

The independent categorical variable in all three analyses described service coordinator's service provision role at two levels (SC only or SC +). The five dependent variables consisted of 1) ratings of family transition via the Family Transition Survey, 2) ratings of family transition via the Service Coordinator Transition Survey, 3) family sense of empowerment within Family Systems, 4) family sense of empowerment within Service Systems and 5) family sense of empowerment within Community/Political Systems. The first MANOVA examined the first two dependent variables. The second MANOVA examined the family sense of empowerment within the Family System and Community/Political System. The final ANOVA examined the relationship between service coordination role and the Service System dimension of family empowerment. In looking at Box's test of equality of covariance matrices, the Service System dimension was determined to be

highly correlated with the Family dimension, $F(3, 81) = 14.61$, $p < .001$ and moderately correlated with the Community/Political dimension, $F(3, 81) = 6.68$, $p < .001$, disconfirming homogeneity of variance-covariance matrices. However, the Family dimension and the Community/Political dimensions were not determined to be redundant, $F(3, 81) = 5.03$, $p > .001$.

In order to follow up the initial series of analyses and to more specifically answer the third research question posed in the study, an analysis of covariance was conducted. The categorical independent variable remained two levels of service coordination role (SC only and SC +). The continuous dependent variable was family's ratings of their transition quality, as measured by the Family Transition Survey. Three continuous independent variables of empowerment (Family Systems, Service Systems and Community/Political Systems) were co-varied out. The follow up analysis was able to provide further information into the specific relationship of service coordination model and family transition, as rated by families, without the interference of differences of family sense of empowerment in the equation. Thus, the series of the two MANOVAs and the ANOVA analyses were designed to examine which dependent variables changed according to variation in service coordination model. The ANCOVA was used as a follow up

in order to more specifically examine how the groups differed in quality after controlling for empowerment.

Additional descriptive and qualitative analyses were conducted to examine families' and service coordinators' overall ratings of the success of the transition, facilitators and barriers to the transition, and overall ratings of each population's perception of the relationship among each family and service coordinator.

Research Question 1

What is the relationship between service coordination model and the perceived quality of a family's transition from early intervention services to preschool special education services?

In order to address this question, a MANOVA was conducted using the independent variable of service coordination model (SC only and SC+) and two dependent variables consisting of family ratings of transition quality and service coordinators ratings of transition quality. The mean number of quality indicators that service coordinators adhering to the SC only role endorsed was 7.42 (SD = 1.95) and the mean number of quality indicators endorsed by SC+ coordinators was 9.94 (SD = 1.42). For families, the mean number of indicators endorsed by the SC only group was 6.08 (SD = 3.28) and the mean number of quality indicators endorsed by the SC+ group was 11.4 (SD = 3.19). Means and

standard deviations for service coordination role by ratings of transition quality are listed in Table 11.

Table 11

Means and Standard Deviations of Ratings of Quality of Transition by Service Coordinators and Families for Two Service Coordinator

SC Role	Mean	SD	N
SC quality of transition			
SC Only	7.42	1.95	38
SC+	9.94	1.42	47
Family quality of transition			
SC Only	6.08	3.28	38
SC+	11.40	3.19	47

Results of the MANOVA according to Wilks' criterion revealed a significant relationship between variation in service coordination model and the combination of families' and service coordinator's perceptions of the quality of the transition, $F(2, 82)=38.72$, $p<.001$. The results reflected a moderately strong association between service coordination role (SC only and SC+) and the linear combination of dependent variables, $\eta^2 = .49$. Data providing the strength of the multivariate analysis is listed in Table 12. Data listing the between subjects' effects can be found in Table 13.

Table 12

Summary Table for MANOVA of Transition Quality as a Function of SC Role (N=85)

Test Name	Value	F	Hypothesis DF	Error DF	P
Pillai's Trace	.486	38.715	2	82	.001
Wilk's Lambda	.514	38.715	2	82	.001
Hotelling's Trace	.944	38.715	2	82	.001
Roy's Largest Root	.944	38.715	2	82	.001

Each of the dependent variables appeared to contribute equally to the main effect, as examined separately. In order to more fully examine the relationship of each dependent variable to service coordination role and determine at which level differences exist, individual ANOVA's were examined for each of the dependent variables. Since the independent variable did not have more than 2 groups, follow up analysis to determine where differences were noted was not necessary. According to sample means, it was evident that both families and service coordinators reported higher levels of transition quality associated with a SC+ model of service coordination. Thus, service coordination in addition to provision of other developmental services to families was associated with higher

levels of transition quality by families as well as the service coordinators.

Table 13

Summary of Between Subjects Effects of SC Role and Quality of Transition for Service Coordinators and Families (N=85)

Source of variation	SS	DF	MS	F	P
SC quality of transition					
SC Role	132.92	1	132.92	47.13	.001
Error	234.07	83	2.82		
Family quality of transition					
SC Role	595.87	1	595.87	57.10	.001
Error	866.08	83	10.44		

Research Question 2

What is the relationship between service coordination model and families' perception of how empowered they feel in coping with their child's needs and advocating for services to meet those needs?

In order to investigate this relationship, two separate analyses were conducted in order to add robustness to the individual analyses and avoid confounds presented by high variable correlations. A between subjects Multivariate Analysis of Variance (MANOVA), in addition to a between subjects ANOVA were conducted. Each analysis consisted of one independent variable with two levels. The independent variable was service coordination model, defined as

either a service coordinator providing service coordination services only to a family (SC only) or providing service coordination plus other developmental services to a family (SC+). The MANOVA consisted of two dependent variables, defined as families' ratings of empowerment on the family dimension of the Family Empowerment Scale (FES) and families' ratings of empowerment on the Community/Political dimension of the FES. The separate ANOVA considered the relationship between the independent variable of SC model and families ratings on the Service System dimension of the FES. Families in the SC only group reported a mean empowerment score for items within the family dimension to be 3.46 (scale of 1-5; SD = .40). Families in the SC+ group reported an average empowerment score within the family dimension of 4.23 (SD = .64). Mean scores reported from the SC only group in the community/political dimension were 2.071 (SD = .57) and mean scores for the SC+ group in that dimension were 3.113 (SD = .95). Means and standard deviations are listed in Table 14. The Service System dimension was separated due to its high degree of shared variance with both the Family and Community/Political dimensions.

Table 14

Means and Standard Deviations of SC Role by Family Empowerment within Family and Community/Political Dimensions (N=85)

SC Role	Mean	SD	N
Family dimension			
SC Only	3.46	.39	38
SC+	4.23	.64	47
Community/Political dimension			
SC Only	2.07	.57	38
SC+	3.11	.95	47

Results from the MANOVA, as determined by Wilks' criterion, revealed a significant relationship between variation in service coordination model and the combination of families' perception of how empowered they feel in response to working within family and community/political systems, $F(2, 82) = 20.54, p < .001$. The results reflect a significant association between service coordination role (SC only and SC+) and the linear combination of dependent variables, $\eta^2 = .33$. Data from the strength of the multivariate analysis is listed in Table 15. Data covering between subjects' effects can be found in Table 16.

Each of the dependent variables appeared to contribute equally to the main effect, as examined separately. Individual

ANOVA's were again examined in order to more fully examine the relationship of each dependent variable to service coordination role and determine at which level differences exist.

Table 15

Summary of MANOVA of Family Empowerment within Family and Community/Political Systems as a Function of SC Role (N=85)

Test Name	Value	F	Hypothesis DF	Error DF	P
Pillai's Trace	.33	20.54	2	82	.001
Wilk's Lambda	.66	20.54	2	82	.001
Hotelling's Trace	.50	20.54	2	82	.001
Roy's Largest Root	.50	20.54	2	82	.001

Table 16

Summary of Between Subjects Effects of SC Role and Family Empowerment within Family and Community/Political Dimensions (N=85)

Source of variation	SS	DF	MS	F	P
Family dimension					
SC Role	12.51	1	12.51	41.57	.001
Error	24.98	83	.301		
Community/Political dimension					
SC Role	22.80	1	22.80	35.17	.001
Error	53.81	83	.64		

According to sample means, it was evident that families reported feeling more empowered in relation to advocating within

their family system and their community/political system when associated with the SC+ model of service coordination. Thus, service coordination in addition to provision of other developmental services to families was associated with higher levels of empowerment in family and community/political systems, as perceived by families.

The remaining dimension of family empowerment assessing families' perceptions of empowerment within their service system was entered into an ANOVA to determine its relationship with SC model. Families within the SC only group reported a mean level of empowerment within the service system dimension of 3.553 (SD = .462) and those in the SC+ group reported a mean empowerment level of 4.257 (SD = .68). Results of the ANOVA revealed a significant relationship between service coordination model and empowerment within the service system dimension, $F(1, 83) = 29.64, p < .001$.

Analysis of the means indicated that families reported a higher feeling of empowerment within their service system associated with the SC+ model of service coordination. Thus, those families whose service coordinator provided other developmental services to their family reported feeling more

empowered to advocate for their family and child in the service system.

Research Question 3

Are there differences in family ratings of transition quality after adjustment of differences in empowerment are removed? In other words, does a families' experience of transition vary according to service coordination model, despite the effect of their level of empowerment?

In order to examine this question, a between subjects ANCOVA was performed utilizing the two levels of service coordination model as the independent variable (SC only and SC+) and measuring family ratings of the quality of their transition. The three variables representing the three dimensions of empowerment (Family, Service System, and Community/Political) were entered as covariates in order to adjust for their potential effect on the dependent variable.

The mean quality of transition as reported by families for the SC only group when empowerment variables were co-varied was 6.08 (SD = 3.28) and the mean for the SC+ group was 11.4 (SD = 3.19). Results from the ANCOVA revealed a significant main effect of quality of transition as a function of service coordination model after holding constant any influence of levels of family

empowerment, $F(1, 80) = 22.07, p < .001$. Data from the ANCOVA can be found in Table 17. Families' quality of transition was significantly higher when they had a service coordinator who provided more than just service coordination services to their family.

Table 17

Summary Table of ANCOVA of Family Transition Quality (N=85)

Source of variation	SS	DF	MS	F	P
SC Role	130.49	1	130.49	22.07	.001
Covariates					
FES Family	41.82	1	41.82	7.07	.009
FES Service System	56.57	1	56.57	9.56	.003
FES	74.12	1	74.12	12.53	.001
Community/Political					
Error	472.99	80	5.91		

The adjusted marginal means, as displayed in Table 18, show that families' quality of transition was significantly higher when they had a service coordinator who provided more than just service coordination services to their family.

Table 18

Adjusted and Unadjusted Mean Quality of Transition for Two Levels of Service Coordination

SC Role	Adjusted Mean	Unadjusted Mean
SC Only	7.33	6.08
SC +	10.39	11.40

All three covariates were significantly correlated to the dependent variable ($r = .706, .728, .747$) and all provided reliable unique adjustment to ratings of quality of family transitions. Pooled within-group correlations among covariates and quality of transition rated by families are shown in Table 19.

Table 19

Pooled Within-Cell Correlations among the Three Covariates and the Dependent Variable, Quality of Transition

	Family transition quality	SC transition quality	FES family	FES service system	FES C/P
Quality of transition Family	1.00				
SC	.59	1.00			
FES family	.70	.47	1.00		
FES service system	.72	.49	.93	1.00	
FES C/P	.74	.53	.94	.89	1.00

Additional Analyses

Further analyses were conducted in order to provide additional information on relationships existent within the populations studied. The three levels of expression of empowerment yielded from the Family Empowerment Scale were

examined in order to determine whether families were most empowered in their 1) attitudes, 2) knowledge or 3) behaviors. In general, families reported being more empowered in their attitudes or feelings ($M = 3.81$, scale of 1 to 5) than they did in their knowledge ($M = 3.37$) and ability to perform behaviors that displayed a sense of empowerment ($M = 3.33$). Means for each of the levels and dimensions of family empowerment can be found in table 20.

Table 20

Means and Standard Deviations of Empowerment Scores across 3 levels and 3 dimensions

Level	Dimension			Total
	Family	Service System	Community/ Political	
Attitudes	3.90	4.31	3.23	3.81
Knowledge	3.87	3.67	2.57	3.37
Behaviors	3.89	3.93	2.16	3.33
Total	3.89	3.97	2.65	

Families in the SC+ group reported feeling significantly more empowered across all three dimensions of attitudes, $F(1, 83) = 40.19$, $p < .001$; knowledge, $F(1, 83) = 30.79$, $p < .001$; and behaviors, $F(1, 83) = 34.70$, $p < .001$ than did families in the SC

only group. Paired samples t-tests were conducted to determine if significant differences existed within the population of families on their reported attitudes, knowledge and behaviors. Results indicated that families felt significantly more empowered in their attitudes than in either their knowledge ($t = 18.68, p < .001$) or their behaviors ($t = 18.92, p < .001$). There was no difference in families' sense of empowerment within knowledge and behaviors. Summary data from the t-tests can be found in Table 21.

Table 21

Summary Data of Paired t-test Comparisons of 3 Levels of Empowerment

Pair	Mean	Paired Samples Test		t	Sig.
		Upper	Lower		
Knowledge-Behavior	3.17	-2.31	8.65	1.15	.25
Attitudes-Knowledge	.44	.39	.49	18.68	.001
Attitudes-Behavior	.48	.43	.53	18.92	.001

When looking specifically at the three levels of empowerment (attitudes, knowledge and behaviors) across the three dimensions of empowerment (family, service, and community/political systems), it was noted that families reported having less of a sense of empowerment in their attitudes, knowledge and especially

behaviors within the community/political dimension ($M = 2.65$). T-tests were conducted to determine if significant differences existed across the three dimensions of family empowerment. Results indicated that families felt significantly more empowered within both their family ($t = 28.98, p < .001$) and service system ($t = 25.81, p < .001$) than within their community/political system. No significant difference existed between feelings of empowerment within family and service systems. Summary data from the t-tests can be found in Table 22.

Table 22

Summary Data of Paired t-test Comparisons of 3 Dimensions of Empowerment

Pair	Mean	Paired Samples Test		t	Sig.
		95% CI			
		Upper	Lower		
Family-Service	-5.51	-.11	-2.26	-2.07	.06
Family-C/P	1.24	1.15	1.32	28.98	.001
Service-C/P	1.29	1.19	1.39	25.81	.001

Families as well as service coordinators were asked to rate the overall success of their transition on a scale of 1 to 4 (1 = not at all successful to 4 = very successful). The overall mean for the families was 2.68. Families adhering to the SC+ model of service

coordination reported significantly higher ratings of overall transition success ($M = 3.32$) than those adhering to the SC only model ($M = 1.89$), $F = 127.32$, $P < .001$ ($\text{Eta}^2 = .605$). Service coordinator ratings of overall success of the transition were similar, in that those adhering to the SC+ model reported significantly greater overall success ($M = 3.64$) compared to the SC only group ($M = 2.76$), $F = 56.31$, $p < .001$.

Participants were also asked to rate their relationship (between family and service coordinator) on a scale from 1 to 4 where 1 = poor and 4 = excellent. Families reported a mean relationship rating of 2.84, with those adhering to the SC+ model reporting significantly greater quality relationships with their service coordinator ($M = 3.60$) than those in the SC only group ($M = 1.89$), $F = 136.76$, $p < .001$ ($\text{Eta}^2 = .622$). Service coordinators reported a mean relationship rating of 3.29, with those in the SC+ group reporting significantly better relationships with families ($M = 3.72$) than those in the SC only group ($M = 2.76$), $F = 72.19$, $p < .001$. In general, service coordinators reported higher quality transitions and better relationships than did families. In addition, families' overall rating of the success of their transition was significantly correlated with their rating of their relationship with their service coordinator (Pearson = .899). Descriptive data on

overall success of transitions and quality of relationships can be found in Table 23.

Table 23

Means and Standard Deviations of Overall Success of Transitions and Quality of Relationships

SC Role	Overall success (family rating)	Relationship w/SC	Overall Success (SC rating)	Relationship w/family
SC only (N=38)				
Mean	1.89	1.89	2.76	2.76
SD	.69	.83	.59	.59
SC+ (N=47)				
Mean	3.32	3.60	3.64	3.72
SD	.47	.50	.49	.45
Total (N=85)				
Mean	2.68	2.84	3.25	3.29
SD	.92	1.08	.69	.70

Families were asked what types of things facilitated a smooth transition from early intervention to preschool special education. Responses included comments reflecting being able to talk to other families, having been through the system before, knowing the provider well to answer questions, and having a good relationship with the provider. Barriers that families identified to a smooth transition included a lack of preschool program options, lack of information and knowledge of providers, lack of clarity in

the roles of people, and not being able to get a psychological evaluation done on time, which is a New York State requirement for all children identified as a preschool child with a disability. No significant differences were noted on responses by SC model. Service coordinators that adhered to the SC+ model were asked what effects, if any, providing other services for the family had on the service coordination services that they provided. Responses included that it is easier to connect with families, that they feel in closer contact with families, and that they feel it makes the transition for families smoother.

CHAPTER FIVE

DISCUSSION

Introduction

All life transitions represent times of change and opportunities for growth and positive outcomes. Family transitions within and between educational service systems are just one example of such an opportunity. In order to seize the opportunity for positive growth, it is imperative for families to feel empowered and supported through the change. The importance of providing resources and supports to families that adhere to family centered principles and have competency-enhancing effects has been reaffirmed many times (Dunst & Trivette, 1989; Roberts, Rule, & Innocenti, 1998; Newcomb & Kettler, 1996). Personnel that possess the skills to break down barriers existent in establishing positive relationships with families and navigating uncoordinated service systems are a commodity in the field of early intervention. The transition that families experience at that time sets the stage for the manner in which the family will trust, interact with and experience positive outcomes within future educational systems as their child grows.

The current study explored the relationship between two models of service coordination at the personnel level and the

quality of a families' transition as well as their level of empowerment in navigating systems and advocating for their child's needs. Past research has argued in favor of both a dedicated model of service coordination, in which service coordinators perform only that function and a model in which service coordinators also provide other developmental services to a child and family, sometimes referred to as a primary interventionist model (Bailey, 1989). Assumptions suggest that a dedicated service coordinator may have more specialized knowledge in tasks related to the role as well as more time to devote to those tasks, resulting in higher quality service coordination outcomes, including the delivery of services that empower and support families in their care-taking role and quality transitions. Further assumptions suggest that a service coordinator who provides other services to the child and family may have more consistent contact with the family and thus a more supportive relationship with them. In addition, the knowledge base of a therapist or special educator may be more philosophically based on family-centered principles than the knowledge base of service coordinators who do not necessarily have a background in early intervention theory. In order to increase the general

knowledge base of the field regarding these assumptions, the following questions were explored in this study:

1. What is the relationship between perceived service coordination model and the quality of a families' transition from early intervention services to preschool special education services?
2. What is the relationship between service coordination model and families' perception of how empowered they feel in coping with their child's needs and advocating for services to meet those needs?
3. Are there differences in family ratings of transition quality after adjustment of differences in empowerment are removed?

Findings and Interpretations

In response to research question 1, data indicated that both families and service coordinators reported significantly higher levels of transition quality associated with a model in which service coordinators provided additional developmental service to the family. In response to research question 2, families reported a higher sense of empowerment across three levels, associated with family systems, service systems and community/political systems when their service coordinator provided additional developmental

service to their family. Research question 3 was designed to tease out variance associated with family empowerment associated with transition quality in order to look more clearly at the service coordination model effects. Results suggested that families' experience of transition quality varies as a function of service coordination model, despite their level of empowerment. Specifically, families reported higher quality transitions when their service coordinator provided additional services to their family.

Thus, results of the study suggest that a primary interventionist or dual model of service coordination rather than a dedicated model contributes to more positive outcomes for families, in that they experience higher quality transitions when exiting the early intervention system and report a higher sense of empowerment when advocating for their child and family within their family system, service system, and within their community and larger political system structure.

Results are incongruent with the assumption posed that dedicated service coordinators may have more time and specific knowledge base in their role to contribute to more positive outcomes for children and families. There are several explanations that may assist in interpreting these results. As described earlier in the paper, service coordination must be performed adeptly at

various levels, including the family level, community level, and the system level. It is possible that dedicated service coordinators are more skilled at operating within the community and system levels of coordination and devote their time in navigating these more systemic areas. Due to this focus, dedicated service coordinators have less mastery in coordination at the family level. Although they may be knowledgeable and skilled in family-centered philosophy and theory, the lack of time and consistency spent with families may impact their skill in implementing family-centered practices. Thus, it is possible that the level at which they contribute to the educational and community systems at large may be more beneficial than the level at which they contribute to a families' experience of a quality transition and acquisition of empowerment.

When looking closely at the data from the Family Empowerment Scale, it was noted that families felt more empowered within their family and service systems than they did within their community and political structure. In addition, it was noted that families were more empowered in their attitudes, than in their knowledge and behaviors. Thus, it is more likely for families to feel that they have rights, but less likely for them to take actions to ensure that their rights are being respected within

the system. The more skilled a service coordinator is in not only family-centered philosophy and practices, but in supporting families to expand in informal supports in the community and advocate within the larger political structure, the more likely it is that a family will feel empowered to take advocacy action (Koren, Dechillo, & Friesen, 1992; Odom & McLean, 1996; Dunst et al., 1993). Family empowerment is increasingly seen as a central goal of efforts to improve services for families whose children have disabilities. In fact, empowerment is beginning to emerge as a common value across disciplines. Research has suggested both a process for empowerment of families as well as a state of being empowered (Koren et al., 1992). According to study results, a relationship exists between the help-giving professional in the role of service coordinator and empowerment theory in both the process of a family becoming empowered and the amount of action people take while in a state of empowerment.

Results of the study suggest that it is less critical for service coordinators to have expertise within the service system than it is for them to have a good relationship with the family. According to study results, families that had service coordinators who provided other services to their child and family reported significantly higher levels of overall success of the transition. Service coordinators who

adhered to the dual role model also reported significantly higher levels of transition quality. In addition, when asked to rate their relationship with one another, both families and service coordinators who adhered to dual role model reported better relationships. Interestingly, service coordinators reported generally better overall success of transitions and better relationships with families than was reported by families themselves. It is likely that service coordinators perceive the process at a higher success level than families due to their investment in their role and discomfort with performing unsatisfactorily.

When examining qualitative responses from families and service coordinators regarding contributing factors to a smooth transition, two interrelated strands of comments were noted. Firstly, families endorsed that when their service coordinator provided other service to their family they had more consistent contact with them, which contributed to better collaboration. Secondly, families endorsed that a contributing factor to a smooth transition was a good relationship with their provider, which was more likely when consistent contact was maintained. Thus, it becomes difficult to separate a positive relationship with a provider and unique contributions of service coordinator model to positive outcomes for families. It appears that a dual provider role

contributes to more positive relationships, which is a key factor in enhancing positive outcomes. In addition, dedicated service coordinators are not required to have a specific early childhood degree, but are only required to have State level service coordinator training. Thus, as research suggests, an additional possible barrier for dedicated service coordinators in establishing a collaborative relationship with families may be their lack of knowledge in early childhood educational theory.

Consistent with the above statement that dedicated service coordinators may be more knowledgeable and skilled at the service system level rather than the family level, it is likely that they are viewed in a more systemic light than service coordinators who are providers as well. Dedicated service coordinators that are employed by counties are inherently viewed somewhat as "gatekeepers" because it is the county that allocates the funding for services. Thus, as counties are told to cut back on services, it becomes incumbent on the role of the service coordinator to carry out the desire to be more restrictive in services to families. Dual role providers are more likely to see the child and families service needs on a more personal level and may be less restrictive in allocating services.

As also noted in the descriptive statistics, mother's educational attainment was significantly higher for those families that were in the SC+ group, suggesting that even when looking at the quality of transition with empowerment effects removed, effects such as more beneficial demographics may have contributed to higher levels of quality in the transition.

Study Limitations

Several limitations to the study are noteworthy. First, as with most data collection, and certainly with survey data collection, the sample of participants is self-selected. The protocol in this study included recruitment of families through service coordinators. Thus, the selection of service coordinators was a self-selected sample and the selection of families underwent the filtering process from the service coordinators. Service coordinators who chose to participate in the study were more likely to have positive experiences with families so as not to experience the discomfort of reporting about negative experiences and potential threats to their knowledge base and job related skills. In addition, service coordinators were likely to choose family pairs to participate with them with whom they had a good relationship in order to preserve their feelings of comfort as well as to secure family participation. So, it is likely that the overall relationships

and positive experiences of the study population were slightly more positively skewed than the general population. In addition, those families that chose to participate and were selected by their service coordinator may have been more vocal in the system or more comfortable advocating for their child and family. Thus, the family levels of empowerment for the study sample may be slightly more positively skewed than the general population as well, limiting the generalizability of the results.

Additionally, this study was based on perceptions of importance for each individual respondent. These perceptions are subject to individual experiences and local contextual influences. The IFSP process, general model of service delivery, and availability of resources are not uniform across counties of New York. Many individual county differences were not accounted for in reporting the results of this study. Data collection occurred only in the State of New York in order to hold constant any potential confounds that might exist outside of the State level of service coordination. However, just as differences exist within States, differences also exist among States and the limitation of the data collection to New York may have masked valuable information which contributes to positive outcomes for families.

Several study limitations were also noted in the analysis of the data. A few of the variables used in the analyses had very high correlations, indicating that they share discriminant weights and affect the combination of dependent variables measured. In order to attempt to control some of the error associated with violations of assumptions, the analyses were broken down into separate analyses whenever very high correlations were present. For example, the measures of empowerment on the family dimension and on the community dimension were very significantly correlated as was the service system dimension with the community/political dimension. Thus, the service system dimension was separated and entered into an individual analysis. Although the possibility of Type I error increased as the number of analyses increased, it was determined that there was less risk present in the increase of Type I error than there was in the risk of multicollinearity present in pooling the variables. However, some high variable correlations still may have functioned to decrease the strength of the statistical results. For example, with ANCOVA, it is more desirable to have a small number of covariates, all correlated with the dependent variable but not correlated with each other. Although there were only three covariates, and they were highly correlated with the dependent variable, moderate correlations were also found among

them. This may have limited the adjustment of the dependent variable and increased the degrees of freedom for error in the particular analysis.

Educational Implications

Several educational and training implications were suggested through this study. It is quite possible for pre-service training to take place within programs that are preparing professional therapists and special educators to work with infants and toddlers and their families. Many training programs, however, still lack thorough training on family-centered philosophy and practices that enhance the capacity of families and have competency-enhancing effects (Dunst et al., 1993; Dinnebeil, 1996; Bruder & Bologna, 1993). Since many training programs are still lacking in their preparation of personnel for early intervention best practices, much of the training that occurs is in-service level training. The question arises, can early intervention professionals be "taught" to embrace family-centered values? If teaching is transmitting knowledge, the answer is no, but if teaching is facilitating the construction of knowledge, then perhaps we can "teach" values. Certainly those engaged in early intervention efforts should try to influence others to adopt family-centered values.

In addition to provider training and education, it is imperative that families have opportunities to receive training and education at a pace that is acceptable to them. For example, various seminars and workshops on Part C in general, development and implementation of an IFSP, and transition should be extended to families within the service system. Additionally, families should be extended the opportunity to more formally learn about family-centered principles and practices within the scope of their service delivery and their rights in the system.

System Implications

This study suggests that the role of dedicated service coordinator may actually represent more of a conflict than the dual role model due to the possible propensity of becoming more administrative and exercising more “gatekeeping” strategies than family-centered practices. Service coordinators and families in this study endorsed the efficacy of a service coordination model that is a dual role or primary interventionist model, by suggesting that this model leads to more positive outcomes for children and families. It is important for systems to continue to look at the various conflicts of interest present with different roles of service coordination in order to persist with continuous quality

improvement of the Part C system at various different levels across and within States.

It is imperative for systems to embrace that families must be involved from the beginning of system entry in order to meet our outcomes and goals in the field of early intervention. Specifically, family empowerment has been identified as a desirable and positive family outcome for the early intervention program. The current study suggests that families may feel as if they have rights within the early intervention system but may not feel as if they possess the knowledge or skills to take action in advocating for those rights. Because the goal for many human service agencies is the well-being of children and families, the family (as stakeholder) must be integrally involved from the beginning as a full partner. Business or other corporate cultures survey consumers over time to determine whether the company or business partnership is moving in the right direction in meeting its goal; the consumer has no role in the production. This is in direct contrast to human services agencies, which must ensure that families are leading the collaborative process because they are active participants in the process, not consumers of the product. Thus, State and county systems must work to ensure that they are adhering to a model in which explicitly voluntary membership, joint decision making, and

agreed on rules for the interactive process are the foundations of collaboration. In the face of current educational budget cuts and threats to increased funding of service systems such as early intervention, systems must use this opportunity to integrate and coordinate. One description of collaboration is "using someone else's resources to get your job done" (Roberts, Rule, & Innocenti, 1998).

Additionally, it is critical to continue to evaluate system design and its effects on child and family outcomes, such as transition quality. At the federal level, the Early Intervention Program and the Preschool Incentives Grant Program are administered through the Office of Special Education (OSEP) in the U. S. Department of Education. At the State level however, these programs may reside in different agencies. Indeed, in New York, the Preschool Incentives Program is located in the State department of education and the Early Intervention Program is located in the State department of health. To further disjoint the system organization, early intervention at the county level is located with different lead agencies as well. This system structure is likely to contribute to a higher degree of stress in transitioning between the systems.

Because the system can be so inherently disjointed by design, it becomes crucial for service coordinators to enforce the development of local interagency agreements and support families in expanding on their formal and informal community linkages, which in turn supports their developing sense of empowerment. Local interagency agreements can take the form of written interagency agreements or memorandums of understanding between sending and receiving programs within a transition. Many times, programs may have such agreements, but service coordinators and thus, families, are unaware of the parameters of them. It becomes a systems issue, as well as a training issue to enforce the development and awareness of such agreements.

Suggestions for Future Research

Since the focus of service systems, including early intervention, has begun to prioritize outcomes rather than process, it becomes imperative for future research efforts to continue to explore the relationships between existing structures and models of service delivery and positive outcomes for children and families. Extending the above discussion of the limitations of the current study, it will be critical for future research to expand samples and replicate the current findings. The current study examined two specific service coordination models. Further research on the

impact of other system designs is needed. Future research is needed to explore the impact of service coordination on outcomes for children and families in other states, as well as encompassing other models of service delivery. Because transition is defined as any change and is an opportunity for positive growth, future research should also broaden the sample to examine all types of transitions, not just those between Part C and Part B systems exclusively. For example, as mentioned in the educational implications, it is important for families to be empowered to create informal linkages in their community. For families that exit early intervention and their child is either not eligible to receive preschool special education or they choose not to receive further services, what characterizes their transition and what positive outcomes can be identified for this population?

The data from the Family Empowerment Scale suggest that families feel more empowered not only in their attitudes than in their knowledge and behavior, but that they are much less apt to engage in empowering behaviors within the larger community and political structure. Thus, it would be interesting for future research to investigate further any relationships that exist between specific family training programs and the families' sense of empowerment to act within their social and political system. For

example, some States organize “partners in policy making” or similar programs for families to acquire more systemic knowledge and advocacy skills. Additionally, it would be important to examine whether differences in transition experiences and outcomes are related to the type of programs and level of restriction that families experience in the Part B system. There is a wide variety of inclusive programming that is being implemented across the country, and looking more specifically at those factors as they relate to transition quality and family empowerment would be beneficial to the field. Due to the importance and inherent confound of relationship quality between families and service coordinators on positive outcomes for families, future research efforts should further examine the construct of this relationship and its impact on outcomes and indicators of program quality.

Continued research on the relationship between early intervention program components and family empowerment is needed. The current study suggested that families whose service coordinators provided additional developmental services to their family reported higher quality transitions and a higher level of empowerment. It was also noted that when the influence of empowerment on transition quality was removed, the connection between service coordination model and transition quality

remained significant but was weakened. This suggests that both service coordination model and empowerment have influences on the quality of transition that a family experiences and that families that feel more empowered may have higher quality outcomes. Future research needs to continue to explore the enmeshed relationship between empowerment theory and system outcomes.

Related to system implications, future research should examine more specific characteristics of a dual role model of service coordination as opposed to a dedicated model. It becomes imperative to examine logistical factors in implementing system changes that are correlated with positive outcomes. For example, which model is more economical to establish and maintain for states? Does it cost more to decrease provider caseloads in order to allow time for service coordination duties or does it cost systems more to employ dedicated service coordinators? Future research needs to continue to explore the impact of various models on the system at large as well as the sustainability of various models.

Summary

Some 230, 853 infants and toddlers receive early intervention services across the country. Service coordination is perhaps the most complex service feature in this system to conceptualize and deliver. As we continue to progress into an era

of accountability and outcomes focused intervention, it becomes critical to examine specific features of the Part C program as they relate to child and family outcomes. This study examined the relationship between two specific models of early intervention service coordination and the relationship each model has to family outcome measures including quality of transition from the Part C to the Part B service systems and families' sense of empowerment across three dimensions of empowerment. Results suggest that those service coordinators and families that experience a service coordination model in which the service coordinator provides other developmental service to the family endorsed higher quality transitions from both of their perspectives as well as a higher family feeling of empowerment in their family system, service system, and community system. It is hypothesized that service coordinators who have a more consistent relationship with families have more positive opportunities to establish a collaboration that affects the outcomes examined. Thus, the quality of the relationship between service coordinators and families and variables that may contribute to relationship quality and positive program outcomes should continue to be explored in future research. As reported, transitions represent times of change and opportunities for positive growth. Positive growth potential is

present not only for families, but for service providers, service systems, and communities as well. It is imperative to embrace these opportunities for growth as we continue to redefine best practice in achieving positive outcomes for children and families.

APPENDIX A

Service Coordinator Pilot Study Consent Form

Dear Service Coordinator,

It was a pleasure speaking with you on the phone. Thank you for agreeing to participate in a special piloting of a survey that will be used to complete a research project. As we spoke about, enclosed is a survey that service coordinator's participating in the research project will be asked to complete. By completing the survey and sending it back to me you are agreeing to the following guidelines:

- ☐ All information that you provide to the project will be anonymous and your name will not be connected to the data in any way.
- ☐ You have the right to request a copy of any results from the project.
- ☐ If you have questions at any time, please do not hesitate to contact me by phone at 518-233-0935 x473 or by email at car@nycap.rr.com
 - o You may also contact Janet Kulberg, Project Principal Investigator, at (401) 874-4611 or Vice Provost for Graduate Studies, Research and Outreach, at (401) 874-4328.

Please fill out the survey as well as utilize the survey form to make any suggested corrections, additions, or deletions to the content. In addition, please feel free to utilize the space below to include further comments about the general clarity of the survey, or any additional information that may be helpful in revising it.

Please use the postage paid envelope to return the survey to me with your comments. Thank you for your help and enjoy the rest of your school year!

Candace Adams
School Psychologist

ID: _____

Protocol for Service Coordinator Phone Interview

INTRODUCTION:

HI, MY NAME IS CANDACE ADAMS, I AM A GRADUATE STUDENT IN PSYCHOLOGY AT THE UNIVERSITY OF RHODE ISLAND. I AM COMPLETING MY DOCTORAL DISSERTATION ON THE EFFECTS THAT VARIOUS MODELS OF EARLY INTERVENTION SERVICE COORDINATION HAVE ON THE QUALITY OF A FAMILY'S TRANSITION TO PRESCHOOL SPECIAL EDUCATION SERVICES. YOUR NAME HAS BEEN IDENTIFIED BY THE STATE OF NEW YORK AS A SERVICE COORDINATOR. I'D LIKE TO ASK YOU A FEW QUESTIONS CONCERNING YOUR BACKGROUND AND YOUR EXPERIENCE WITH TRANSITIONING FAMILIES TO PRESCHOOL SERVICES. IT SHOULD TAKE APPROXIMATELY 5-10 MINUTES. BY AGREEING TO RESPOND TO THESE QUESTIONS YOU ARE AGREEING TO BE A PARTICIPANT IN THE PROJECT. YOU CAN BE ASSURED THAT YOU HAVE BEEN ASSIGNED A UNIQUE IDENTIFICATION NUMBER AND ALL IDENTIFYING INFORMATION WILL BE DESTROYED FOLLOWING OUR CONVERSATION. IN ADDITION, ALL PROJECT RESULTS WILL BE REPORTED IN AN AGGREGATE MANNER RATHER THAN ON INDIVIDUAL PEOPLE'S DATA. YOU ALSO HAVE THE RIGHT TO REQUEST A COPY OF ALL PROJECT RESULTS. DO YOU HAVE A FEW MINUTES NOW?

If they are available, provide them with contact information for questions: Janet Kulberg (401) 874-4611 or Vice Provost for Research (401) 874-4328.

If they are unavailable at the time, ask them if they would rather schedule a time to talk by phone or have the questions mailed, faxed or emailed to them. Get mail, fax or email information:

Family Pilot Study Consent Form

Dear Parent,

It was a pleasure speaking with you on the phone. Thank you for agreeing to participate in a special piloting of two surveys that will be used to complete a research project. As we spoke about, enclosed are two surveys that families participating in the research project will be asked to complete. By completing the surveys and sending them back to me you are agreeing to the following guidelines:

- ☐ All information that you provide to the project will be anonymous and your name will not be connected to the data in any way.
- ☐ You have the right to request a copy of any results from the project.
- ☐ If you have questions at any time, please do not hesitate to contact me by phone at 518-233-0935 x473 or by email at car@nycap.rr.com
 - ☐ You may also contact Janet Kulberg, Project Principal Investigator, at (401) 874-4611 or Vice Provost for Graduate Studies, Research and Outreach, at (401) 874-4328

Please fill out the surveys as well as utilize the survey forms to make any suggested corrections, additions, or deletions to the content. In addition, please feel free to utilize the space below to include further comments about the general clarity of the surveys, or any additional information that may be helpful in revising them.

Please use the postage paid envelope to return the surveys to me with your comments. Thank you for your help and enjoy the rest of your school year!

Candace Adams
School Psychologist

APPENDIX B

Dear Parent,

Hi and Happy New Year! I am a graduate student in Psychology at the University of Rhode Island and I am completing my doctoral dissertation. I received your name with the assistance of _____ and I understand that you have a child that recently turned three years old and made the transition from early intervention services to preschool special education services. Congratulations, I hope that your first school experience has been a wonderful one! I know how busy you are and I would greatly appreciate you spending 10-15 minutes sharing your experiences with me by completing the enclosed two surveys.

I am interested in looking at how your early intervention service coordinator was involved in your transition to preschool services for your child and how successful you think the transition was. Your early intervention service coordinator was the person that met with your family to develop goals for your child and may also have provided other direct services to your child. If you are unsure of who this person was for your family, please refer to your most recent IFSP (Individualized Family Service Plan).

By completing and returning the enclosed two surveys you are agreeing to participate in this project according to the following guidelines:

- ☐ All information that you provide to the project will be anonymous and your name will not be connected to the data in any way.
- ☐ You have the right to request a copy of any results from the project.
- ☐ If you have questions at any time, please do not hesitate to contact me by phone at 518-233-0935 x473 or by email at car@nycap.rr.com
 - o You may also contact Janet Kulberg, Project Principal Investigator, at (401) 874-4611 or Vice Provost for Graduate Studies, Research and Outreach, at (401) 874-4328

Please use the enclosed addressed and postage paid return envelope to return your survey to me by _____ (date)

Thank you so much for your time and valuable input on such an important topic for so many families. Have a wonderful school year!

Candace Adams
School Psychologist

SERVICE COORDINATOR TRANSITION SURVEY

Please think about a family that you have helped transition to preschool special education services within the last six months. Please read the following statements and circle Y if the statement represents something that happened during the transition and N if the Statement represents something that did not happen during the transition.

1. A written interagency agreement was developed between the early intervention providers and the preschool providers for the transition.	Y	N
2. A written timeline was followed during the transition.	Y	N
3. There was adequate time to plan and prepare for the transition.	Y	N
4. There was a structure for on-going communication within the early intervention providers as well as communication between the family, early intervention and preschool providers during the transition.	Y	N
5. There was sufficient interagency collaboration to avoid duplication of services (such as assessment).	Y	N
6. I had the opportunity to visit potential preschool programs in preparation for the transition.	Y	N
7. I served as the families' single point of contact during the transition.	Y	N
8. I had a clear understanding of the roles and responsibilities of all the providers involved in the transition.	Y	N
9. I feel that I had the support and training necessary to carry out the roles and responsibilities of preparing the child and family for transition.	Y	N
10. I had sufficient information about various program options to offer the family during transition.	Y	N
11. I maintained communication with the family and preschool program after the transition.	Y	N
12. There was a formal mechanism for evaluating the transition.	Y	N

Overall, I would rate the success of the transition for the family from early intervention to preschool services to be:

1 = not at all successful

2 = fairly unsuccessful

3 = fairly successful

4 = very successful

Overall, I would rate the quality to the relationship that I had with the family as:

1 = poor

2 = adequate

3 = good

4 = excellent

.....

DEMOGRAPHIC INFORMATION

Please tell me a little about yourself

Ethnicity: _____

Age: _____

Professional Discipline: _____

Years as Service Coordinator: _____

Years in Early Intervention: _____

Highest level of education completed:

☐ High School

☐ Some College / Certificate

☐ College

☐ Some graduate work

☐ Graduate degree (Please list) _____

Please tell me what other early intervention services, if any, that you provide to families in addition to service coordination:

Please tell me what effects, if any, providing other early intervention services has on the service coordination service you provide:

FAMILY TRANSITION SURVEY

Please read the following statements and circle Y if the statement represents something that happened during your transition and N if the Statement represents something that did not happen during your transition.

1. My Child's transition planning began at least 3 months prior to his/her third birthday.	Y	N
2. I received information about the steps of the transition process.	Y	N
3. My child had a written transition plan.	Y	N
3a. (If #3 was Y, then please respond) My child's written transition plan included dates and timelines for changing programs.	Y	N
4. I received information about my child's options for preschool services.	Y	N
5. I had an opportunity to visit the preschool program and talk to the staff prior to the transition.	Y	N
6. I had an opportunity to talk with other families enrolled in the preschool program during the transition.	Y	N
7. I had a joint meeting with my early intervention service providers and the preschool staff.	Y	N
7a. (If #7 was Y then please respond) My early intervention service coordinator was at that meeting.	Y	N
8. I had one person throughout the transition that was the primary contact person for the transition process.	Y	N
8a. (If #8 was Y then please respond) The primary contact person was my early intervention service coordinator.	Y	N
9. Preschool services for my child began immediately after early intervention services ended.	Y	N
10. I had adequate time to prepare for my child's transition from early intervention to preschool services.	Y	N
11. My early intervention service coordinator was knowledgeable about the various preschool service options in my community.	Y	N
12. My early intervention service coordinator helped to develop a plan for my child to learn the skills necessary to transition to preschool services.	Y	N
13. I feel as if I had a say in my child's preschool program and services.	Y	N
14. The preschool staff worked with the early intervention staff and my family to ensure a smooth transition.	Y	N

Overall, I would rate the success of my child's transition from early intervention to preschool services to be:

1 = not at all successful 2 = fairly unsuccessful 3 = fairly successful 4 = very successful

Overall, I would rate the relationship that my family had with our early intervention service coordinator as:

1 = poor 2 = adequate 3 = good 4 = excellent

What are some of the things that made your child's transition from early intervention to preschool services smoother?

What are some of the things that got in the way of a smooth transition to preschool services for your child?

Is there anything else about your child's transition from early intervention to preschool services that you would like to share?

DEMOGRAPHIC INFORMATION

Please tell me a little about yourself and your child

Relationship of person filling out survey to the child:

Who else lives in the home with the child?

Name _____ Age _____

Child's Date of Birth: _____

Why did your child receive early intervention?

Length of time in early intervention:

_____ Years/ _____ Months

Tell me about your early intervention services:

Early Intervention Service Profile	
Services Received (i.e., PT, OT, Teacher, Speech)	How Often? (i.e., 1 X week, 1 X month)

Mother's Ethnicity: _____ Father's Ethnicity: _____

Mother's Education: _____ Father's Education: _____

☐ Some high school

☐ Some high school

☐ High School Graduate

☐ High School Graduate

☐ Some college

☐ Some college

☐ College graduate

☐ College graduate

☐ Post-college

☐ Post-college

Mother's Occupation: _____ Father's Occupation: _____

Mother's Age: _____ Father's Age: _____

What types of preschool services is your child now receiving (Speech, Special Education, OT, PT)?

Where does your child receive these services (home, daycare, preschool)?

When did your child transition (month/year)? _____

If your child is in a preschool special education program are they in the same class with children that do not have disabilities?

Yes / No (please circle)

Family Empowerment Scale

Below are a number of statements that describe how a parent/caregiver of a child with a disability may feel about his or her situation. For each statement, please circle the response that best describes how the statement applies to you.

Questions	Ratings				
1. I feel that I have the right to approve all services my child receives.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
2. When problems arise with my child, I handle them pretty well.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
3. I feel that I have a part in improving services for children in my community.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
4. I feel confident in my ability to help my child grow and develop.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
5. I know the steps to take when I am concerned my child is receiving poor services.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
6. I make sure that professionals understand my concerns about what services my child needs.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
7. I know what to do when problems arise with my child.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
8. I get in touch with my legislators when important bills or issues concerning children are present.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
9. I feel my life is under control.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
10. I understand how the service system for children is organized.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
11. I am able to make good decisions about what services my child needs.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
12. I am able to work with agencies and professionals to decide what services my child needs.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
13. I make sure that I stay in regular contact with professional who are providing services to my child.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
14. I have ideas about the ideal service system for children.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
15. I help other families get the services they need.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
16. I am able to get information to help me better understand my child.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True

17. I believe that other parents and I can have an influence on services for children.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
18. My opinion is just as important as professionals' opinions in deciding what services my child needs.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
19. I tell professionals what I think about services being provided to my child.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
20. I tell people in agencies and government how services for children can be improved.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
21. I believe that I can solve problems with my child when they happen.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
22. I know how to get agency administrators or legislators to listen to me.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
23. I know what services my child needs.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
24. I know what the rights of parents and children are under special education laws.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
25. I feel that my knowledge and experience as a parent can be used to improve services for children and families.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
26. When I need help with problems in my family, I am able to ask for help from others.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
27. I make efforts to learn new ways to help my child grow and develop.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
28. When necessary, I take the initiative in looking for ways to help my child grow and develop.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
29. When dealing with my child, I focus on the good things as well as the problems.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
30. I have a good understanding of the service system that my child is involved in.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
31. When faced with a problem involving my child, I decide what to do and when to do it.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
32. Professionals should ask me what services I want for my child.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
33. I have a good understanding of my child's disorder or needs.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True
34. I feel that I am a good parent.	Not true at all	Mostly not true	Somewhat True	Mostly True	Very True

Conceptual framework and item stems for Family Empowerment Scale
(adapted from Koren, Dechillo, & Friesen, 1993).

	Dimension		
Level	Family	Service System	Community/Political
Attitudes	<ul style="list-style-type: none"> • I feel confident in my ability to help my child grow and develop. • I feel my family life is under control. • I believe I can solve problems with my child when they happen. • I feel I am a good parent. 	<ul style="list-style-type: none"> • I feel that I have a right to approve all services my child receives. • My opinion is just as important as professionals' opinions in deciding what services my child needs. • Professionals should ask me what services I want for my child. 	<ul style="list-style-type: none"> • I feel I can have a part in improving services for children in my community. • I believe that other parents and I can have an influence on services for children. • I feel that my knowledge and experience as a parent can be used to improve services for children and families.
Knowledge	<ul style="list-style-type: none"> • I know what to do when problems arise with my child • I am able to get information to help me better understand my child. • When I need help with problems in my family, I am able to ask for help from others. 	<ul style="list-style-type: none"> • I know the steps to take when I am concerned my child is receiving poor services. • I am able to make good decisions about what services my child needs. • I am able to work with agencies and professionals to decide what services my child needs. 	<ul style="list-style-type: none"> • I understand how the service system for children is organized. • I have ideas about the ideal service system for children. • I know how to get agency administrators or legislators to listen to me.

	Dimension		
Level	Family	Service System	Community/Political
	<ul style="list-style-type: none"> • I have a good understanding of my child's disorder. 	<ul style="list-style-type: none"> • I know what services my child needs. • I have a good understanding of the service system that my child is involved in. 	<ul style="list-style-type: none"> • I know what the rights of parents and children are under the special education laws.
Behaviors	<ul style="list-style-type: none"> • When problems arise with my child, I handle them pretty well. • I make efforts to learn new ways to help my child grow and develop. • When dealing with my child, I focus on the good things as well as the problems. • When faced with a problem involving my child, I decide what to do and when to do it. 	<ul style="list-style-type: none"> • I make sure that professionals understand my opinions about what services my child needs. • I make sure I stay in regular contact with professionals who are providing services to my child. • I tell professionals what I think about services being provided to my child. • When necessary, I take the initiative in looking for services for my child and family. 	<ul style="list-style-type: none"> • I get in touch with my legislators when important bills or issues concerning children are pending. • I help other families get the services they need. • I tell people in agencies and government how services for children can be improved.

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