THE EFFECTS OF PARENTAL KNOWLEDGE ABOUT THE TRANSITION PROCESS: DOES IT PREDICT AGENCY USAGE AND TRANSITION OUTCOMES?

A Dissertation

by

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Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

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December 2013

Major Subject: Educational Psychology

ABSTRACT

Studies indicate that neither transition meetings nor other parent outreach methods used by schools are preparing parents of students with special needs for the roles they face during transition years and after graduation. Although the Individuals with Disabilities Education Act emphasizes the importance of parental participation in the transition process, parents report that they are not knowledgeable about the transition process or options for post school services. Due to the complex needs of individuals with disabilities and intricate post-school agency systems, parental understanding about the transition process and agency systems is particularly important for parents of individuals with intellectual disabilities. Unfortunately, parental knowledge of the transition process and its effect on agency usage and transition outcomes is not well documented. Therefore, the goal of this study was to understand how parental knowledge of the transition process and human service agencies is related to agency usage and transition outcomes.

This study used the Taxonomy for Transition Programming as a guide to develop a questionnaire for parents of children with an intellectual disability who had graduated from a Texas high school. The survey examined parent's views about transition experiences, agency experiences, transition outcomes, and opinions about the transition process. It was hypothesized that family knowledge about transition and human service agencies that was developed within the transition process would be positively related to agency usage, transition outcomes, and parental opinions about the transition process. In

addition, it was hypothesized that agency usage would be positively related to transition outcomes.

The results of regression analyses failed to find either statistically significant relationships or noteworthy effect sizes for any component of the transition process with agency usage or transition outcomes. In addition, agency usage did not predict transition outcomes. On the other hand, statistically significant results and noteworthy effect sizes were found for the relationship between the family knowledge of the transition process and parental opinions about the transition process. Future research is needed that builds on the findings of this study in order to establish the effect of parental knowledge on agency usage and transition outcomes.

DEDICATION

This dissertation is dedicated to all of the people I have met along the way, especially parents, who fight to make the world a better place for people with disabilities.

ACKNOWLEDGEMENTS

I would like to thank my wife for her patience, hard work, love, and support for me and our family, which allowed me the focus to complete my doctoral program. She was a constant source of encouragement when I faced difficulties and a source of wisdom when I faced challenges. I knew I could count on her to listen to me whenever I was frustrated, to celebrate the many small victories that I have enjoyed, to help me see things more clearly, and to consider my opinions more thoughtfully. It is to her credit that our family is stronger today than it was when we started this journey at Texas A&M.

Next, I want to tell my children how grateful I am to them. Gabriela and Adriana, I am so proud of you both because you are kind, loving people. Your mother and I love and trust you both and believe that this experience has helped you both to grow in ways we have yet to discover. Without your smiles, hugs, and love, this entire experience would have been more difficult, perhaps unbearable. I appreciate your efforts to always try to do the right thing because it will serve you well in the future and because it helped me have the concentration I needed to finish this dissertation.

I would also like to thank my parents and siblings. Mom, thank you for instilling in me the confidence to speak my mind and for creating the environment that supported my belief that I could make a difference in this world. Dad, thank you for giving me the love you have for learning and for keeping me engaged in current events as I was growing up. Thank you both for showing me the value of hard work, determination, and loyalty to family and friends. To my siblings, each of you has given me something that

Finally, I would like to thank the ladies in the Educational Psychology office. Kathy, Kristy, Cathy, Angela, and Teresa, thank you for your calm patience with me. I know I asked a lot from each of you, and I want you to know that I have always been impressed with the friendliness and professionalism with which you work. Even though I could always count on you to get the answers to my questions or the help that I needed, it is the personal interaction that I will remember most. Each of you helped me work through some of the most difficult times of my life, and I would often leave your offices with a renewed sense of optimism. The department is fortunate to have such an accomplished team.

NOMENCLATURE

AAMD   American Association on Mental Deficiency

AI   Auditory Impairment

ANOVA   Analysis of Variance

ARC   Association for Retarded Citizens

AU   Autism

DADS   Department of Aging and Disability Services

DARS   Department of Assistive and Rehabilitative Services

DB   Deaf-Blindness

DV   Dependent Variable

ES   Effect Size

ID   Intellectual Disability

I/DD   Intellectual and Developmental Disabilities

IDEIA   Individuals with Disabilities Education Improvement Act IDEIA

IEP   Individualized Education Program

ITP   Individual Transition Plan

IV   Independent Variable

MD   Multiple Disabilities

MRC   Multiple Regression/Correlation

NCLB   No Child Left Behind

NLTS   National Longitudinal Transition Study

NLTS-2	National Longitudinal Transition Study- 2
OHI	Other Health Impairment
OSERS	Office of Special Education Rehabilitative Services
PARC	Pennsylvania Association for Retarded Citizens
PCA	Principal Components Analysis
SSI	Supplementary Security Income
TSIM	Transition Service Integration Model
VI	Visual Impairment
VR	Vocational Rehabilitation

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CHAPTER I

INTRODUCTION

This study investigated the relationship between parental/family knowledge in the context of the secondary transition process and usage of the Department of Assistive and Rehabilitative Services (DARS) and the Department of Aging and Disability Services (DADS) and post high school transition outcomes. Of particular interest was whether parental knowledge of the transition process was related to agency usage and transition outcomes. This study also study investigated the relationship between agency usage and transition outcomes and examined the relationship between the transition process and parental opinions about the process.

Chapter I establishes the importance of this research study by discussing the purposes of parental involvement in transition as detailed in the Individuals with Disabilities Education Improvement Act 2004 (IDEIA) and by reviewing research into the effects of parental involvement in the transition process on transition outcomes. Before examining transition experiences of parents, a theoretical framework is presented to assist the reader in understanding parental transition experiences. This is followed by an examination of post high school outcomes. The proposed study's problem statement, purpose, research questions, hypothesis and significance follows. The chapter ends with important terms and definitions, delimitations, limitations, and the organizational framework of this study.

The Role of Family in Transition Planning

Transition in IDEIA

The 2004 reauthorization of Individuals with Disabilities Education Act (IDEA), known as the Individuals with Disabilities Education Improvement Act (IDEIA), clarified ideas in transition left ambiguous by previous versions of the act. IDEIA states that transition is a coordinated set of activities for a child with a disability that is designed to be within a "results-oriented process". This definition signals that the intent of transition is post high school success. The focus of the transition process is improving the academic and functional achievement of the youth with a disability to allow a seamless transition from school to post-school activities, which may include post-secondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation. Transition planning should be based on the individual child's needs, taking into account the child's strengths, preferences, and interests. Services may include instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and when appropriate, instruction in the acquisition of daily living skills and functional vocational evaluation. In addition to more carefully defining secondary transition, IDEIA also strengthened the role parents play in the educational process.

How IDEIA Supports Family Involvement

Family involvement in the educational process has taken on greater importance in IDEIA. A. Pleet and Wandry (2009) list some of the ways IDEIA requires parent

participation. For instance, they state that parental safeguards require greater documentation of a school's efforts to ensure parental participation in Individualized Education Program (IEP) meetings. In addition, State Advisory Panels must include a majority of either individuals with disabilities or their parents. State and Local Performance Plans must provide for the joint training of parents and education staff. Furthermore, IEPs can include parent training and counseling as a related service, and school evaluations and improvement plans must include input from parents. A. Pleet and Wandry (2009) also point out that IDEIA includes funding for parent training and information centers in each state to assist parents in gaining the skills necessary to participate in the educational process.

Along with the activities mentioned by A. Pleet and Wandry (2009), the Act mandated states to create plans to improve outcomes; part of the plan requires states to report accountability measures on parent participation. Specifically, Indicator 8 requires data regarding the percentage of parents of children with disabilities who receive services under IDEIA who report that schools "facilitated parent involvement as a means of improving services and results for children with disabilities" [20 U.S.C. 1416(a)(3)(A)]. The intent of Indicator 8 clearly signals that the role of the parent is central in the educational process, including transition. Moreover, IDEIA suggests that understanding how schools facilitate parental involvement and how parental involvement affects outcomes is important.

The following section reviews several studies of parental involvement in the secondary transition process. The first part will review Kohler's series of studies that led

to the Taxonomy of Transition Programming (Kohler, 1993; Kohler, 1996; Kohler, Destefano, Wermuth, Grayson, & McGinty, 1994) followed by an update of substantiated practices by Leena Jo Landmark, Ju, and Zhang (2010). The next section reviews studies (Cobb & Alwell, 2009; D. W. Test, Fowler, et al., 2009; D. W. Test, Mazzotti, et al., 2009), which move away from substantiated practices and toward research and scientifically based standards to examine the effects of transition practices on transition outcomes. The review of parental involvement in transition closes with current studies not included in previous overviews of the subject. The section will demonstrate the importance of family involvement in the transition process as well as the need for further evidence based research to support family involvement in the transition process.

Parental Involvement in the Taxonomy for Transition Programming

Development of the taxonomy. Paula Kohler's (Kohler, 1993; Kohler, 1996; Kohler et al., 1994) seminal works in transition planning reviewed, evaluated, and organized the literature related to the transition of youth with disabilities. She began with an analysis of transition literature that included follow-up studies, theory-based and opinion literature, and quasi-experimental studies conducted between 1985 to 1991 (Kohler, 1993). First, Kohler reviewed 49 documents and separated the literature into research that was substantiated by study results and literature that implied best practices based on recommendations by the author(s). Using Peters and Heron's (1993) criterion that substantiated research be grounded in theory, be internally and externally valid, be related to existing literature, report meaningful outcomes, and be socially valid, Kohler

found substantiated practices, many of which involved parental involvement, in follow-up studies and quasi-experimental studies. Although theory or opinion writings offered no substantiated studies, this literature base suggested that parental involvement was a best transition practice in nine articles. What follows is a discussion of the substantiated research from Kohler. Other articles cited by Kohler (1993) that discuss the importance of family involvement in transition are included in the broader literature review in Chapter II.

Kohler found one follow–up study that substantiated parental involvement as a best practice. Schalock and his colleagues (Schalock et al., 1986) collected data from 108 high school graduates with disabilities, 43 of whom had ID. Parental involvement was defined as High Involvement, in which the parent attended all IEP meetings, annual reviews, and/or assumed an active role in assisting student with vocational plans/needs; Moderate Involvement, which included some characteristics of High Involvement, but not all; and Low Involvement, which meant parents showed little interest in the student's program and/or vocational training or placement. They found that moderate to high family involvement was associated with better wages and more hours worked per week, and parental involvement predicted employment, living, and financial status, as well as employment history, months employed, and total earnings.

Kohler also found two quasi-experimental studies that substantiated parental involvement as a transition best practice and six studies in which parental involvement was implied as a recommended practice. Hudson, Schwartz, Sealander, Campbell, and Hensel (1988) studied 50 successfully employed high school graduates from Florida, 20

of whom were identified as ID. Subjects were interviewed about the strategies or resources they used when seeking education and employment, and descriptive results were reported. Due to the nature of the research questions, this study did not define parental involvement but reported what subjects said about the role of their parents in their post high school lives. Results indicated that although few subjects relied on family members for income (4%) or transportation (16%), support from family was reported as a key to their transition from high school (90%). In addition, 48% of participants reported that they were still living at home, further reinforcing the importance of family

The second quasi-experimental study that substantiated parental involvement was Heal, Gonzales, Rusch, Copher, and DeStefano (1990). This study compared the experiences of 54 matched pairs of people with ID, one had been successfully employed at least 10 hours a week for 6 months or more at minimum wage or greater, and the other had been terminated. The authors sent questionnaires to placement counselors, trainers, or supervisors who reported that parental support was important to successful competitive employment placements because a significant number of parents resisted efforts to place their child in competitive employment. Successful placement in competitive employment was considered important to respondents because it was associated with increased independence by subjects.

Overall, the research cited by Kohler (1993) mentioned parental involvement in over half of the documents analyzed, however, much of the research was not experimental in nature but descriptive. Current federal legislation requires the use of

scientifically based research in education, and recent studies of transition practices, using this stricter standard, do not include the three articles Kohler considered substantiated by research.

Examining the substantiated studies reported by Kohler, one finds that only one study defined parent involvement and the definition was narrow because it included only participation in IEP meetings and assistance in planning vocational issues. This definition does not consider how the level of knowledge a parent possesses influences participation or if parental knowledge is related to transition outcomes. The remaining two studies examined the role of parents and reported descriptive data. The descriptive data indicate that high school graduates continue to rely on parental support and parental support of employment is vital to a successful competitive employment outcome. These findings support the importance of parental knowledge of the transition process and later agency usage. Another noteworthy fact about the three studies is that every study reported aspects of employment but no study examined all three outcomes that are typically reported in current literature, employment, post-secondary education, and independent living.

Later, Kohler and her colleagues (Kohler et al., 1994) reviewed evaluation reports that were carried out to identify "best practices" of "exemplary programs." To be included in the study, reports must have described the methods used to determine a program's effectiveness and include an account of materials and practices used. Of the over 40 reports that the team reviewed, 15 documents met inclusion criteria and 13 included secondary education. Kohler et al. (1994) noted that few exemplary programs

reported serving individuals with ID. Analysis of the documents revealed 42 variables were used to deem a program exemplary, which Kohler et al. (1994) organized into seven categories. One category, Program Content, included parent involvement as a best practice in two studies. Kohler et al. also determined that 107 key activities were associated with exemplary programs, which were organized into 14 categories. The next major component was named Systematic Interdisciplinary Transition Planning, which cited parental involvement in transition planning in 10 documents, and parental involvement as part of the transition team was cited in eight documents. Kohler et al. concluded that parental involvement was associated with exemplary programs.

Finally, Kohler (1996) engaged a group of over 200 experts in the field of transition from across the United States to review best transition practices in order to establish social and construct validity for a model of transition planning. The result of this process was a transition model, the Taxonomy for Transition Programming that tied research to practice and organized transition activities into five categories: Student Planning, Student Development, Interagency Collaboration, Program Characteristics, and Family Involvement. Kohler divided Family Involvement into three clusters: Family Involvement, Family Empowerment, and Family Training. Activities in the category of Family Involvement were supported in other categories of the taxonomy as well. For example, under Student-focused planning, experts rated planning decisions driven by student and family among the most important practices. Under Interagency Collaboration student- and family-centered approach to planning and service delivery was the second highest rated practice in that category. Finally, under Program Structures

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and Attributes, the highest rated practice was student/family role in program planning. Therefore, despite the lack of a strong research base, the three studies together established that family involvement has a strong theoretical and practical base in transition.

Kohler's taxonomy replicated. Leena Jo Landmark et al. (2010), using Kohler's (1993) standard for substantiated practices, reviewed the transition literature from 1991 to 2009 to identify and summarize empirical studies conducted since Kohler's 1993 study. Leena Jo Landmark et al. (2010) found that of seven substantiated transition practices parental involvement was the third most substantiated practice with four additional articles meeting the inclusion criterion. The first study involved 175 Texas graduates or dropouts with a learning disability (Fourqurean, Meisgeier, Swank, & Williams, 1991). Originally, the study combined student absences and parent participation in IEP meetings to form a student/parent involvement set to predict two outcomes, employment status (unemployed, unskilled labor, or skilled labor) and employment stability (months of full time employment, months of part time employment). Parental participation was defined as the percentage of IEP meetings attended by the parent in the student's 11th and 12th grade years. Results indicated that student absences did not predict either outcome but parent involvement predicted both employment status and employment stability. The second study examined the employment and living status of 298 students special education graduates of a rural education program, 109 of whom were ID (Schalock, Holl, Elliott, & Ross, 1992). This study defined parental involvement as attending IEP/ITP (Individual Transition Plan)

and related meetings and/or assuming an active role in assisting the student with vocational plans and needs. Schalock et al. (1992) determined that parental involvement was a predictor of time employed, hours worked per week, and yearly salary. Of the 298 individuals in the study 109 were labeled as mild ID. In addition, family involvement was a "potential predictor" of living outcomes. The third study cited in Leena Jo Landmark et al. (2010) studied the post school outcomes of employment and community adjustment of 30 individuals with significant emotional disturbance (Sample, 1998). Parental involvement was defined in three levels as parents did not attend IEP/ITP meetings, parents attended at least one IEP/ITP meeting, and parents attended at least one IEP/ITP and at least one other meeting or planning session. Sample found that students with high parental involvement were more likely than their peers were to achieve community adjustment one year after graduation. Sample defined community adjustment as employment, residential stability, fiscal autonomy, leisure interests, and citizenship behavior. The final substantiated study that Leena Jo Landmark et al. (2010) added to Kohler's previous work was L. E. Lindstrom and Benz (2002) who performed a case study of six females with LD who had graduated from high school and had entered the workforce. They labeled career development as one of three phases: unsettled, exploratory, and focused. An unsettled career phase was marked by unstable employment status and unclear career goals, the exploratory phase was denoted by stable employment status but unclear career goals, and women in the focused career phase had both stable employment status and clear career goals. Analysis of the cases revealed that, "parental expectations and support were key influences on career choices" (L. E.

Lindstrom & Benz, 2002, p. 77), such that women in the unsettled category more often had parental conflict regarding career goals. Women in the exploratory and settled categories reported family support during the career decision-making process. Family support consisted of high expectations for adult success, parental encouragement, and parental advocacy. In addition, on the job or vocational training influenced career development.

Leena Jo Landmark et al. (2010) added to the body of research on parental involvement in several ways. Firstly, the literature review for the study revealed that the articles in Leena Jo Landmark et al. (2010) that included family involvement reported family involvement as attendance it IEP/ITP meetings in 75% of the time, a two thirds increase from studies cited in Kohler (1993). The increased research focus on parental behavior in IEP/ITP meetings suggests a need for more research into the two additional subcategories of Family Involvement, Family Training and Family Empowerment, or at least a more comprehensive manner of defining parental involvement. Family Training had the highest mean cluster rating in Kohler's 1996 study, which means that experts rated it as more important than Family Involvement. The fact that experts rated training higher than involvement indicates that the construct of Family Involvement may have greater predictive utility if it is defined as more than IEP/ITP participation in future studies.

Leena Jo Landmark et al. (2010) also added to parental involvement research by showing that current studies provide a more comprehensive examination of transition outcomes. All family involvement research cited by Landmark et al. included the three

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outcome areas measured by the federal government, employment, education, and independent living. Research has expanded its focus from employment to other important areas in the lives of individuals with disabilities. Similarly, Leena Jo Landmark et al. (2010) extended the research by Kohler that indicated that parental involvement is associated with improved employment and independent living outcomes. However, it should be noted that family involvement was not related to postsecondary education (PSE) in any of the studies cited in Landmark et al., and when it was examined, vocational training was usually mentioned as the educational experience. For example, Fourqurean et al. (1991) determined that verbal IQ was related to postsecondary educational success, and of the 32 subjects who had postsecondary education, 21 had attended a college or university, and 11 had attended technical or vocational school. In addition, Sample's (1998) questionnaire included three questions related to PSE but did not report any analysis of the items. This suggests that more research into the relationship of family involvement and postsecondary educational outcomes is necessary.

Finally, Leena Jo Landmark et al. (2010) add to family involvement research by showing that recent substantiated research has often not included individuals with ID. Only one article examined subjects with ID (Schalock et al., 1992). Individuals with ID have among the poorest postsecondary outcomes when compared to others with disabilities (Newman et al., 2011), and one way to improve transition outcomes is to focus research on the lowest performing groups.

Current Research into Parental Involvement in the Taxonomy

Literature on secondary transition practices that relate family involvement suggest that the effect of family involvement is positive but as the discussion above demonstrates, few family involvement studies that meet the research standards set by Peters and Heron (1993). However, research in the field of transition has shifted away from this research standard in response to the No Child Left Behind Act of 2001 ("No Child Left Behind Act,")(NCLB) and IDEIA, both of which called for scientifically-based research. As a result, current research has re-examined parental involvement with this new perspective.

The definition of scientifically based research can be found in NCLB. NCLB states that scientifically based research:

(i)   at minimum, employs systematic, empirical methods;

(ii)   involves rigorous data analyses that, when relevant to the line of inquiry or purpose of the investigation, are adequate to test a stated hypothesis and to justify general conclusions drawn;

(iii)   relies on measurements or observational methods that provide reliable and valid data from the investigators and observers involved in the study, and provides reliable and valid data from multiple measurements used, and observations made in the study; and

(iv)   uses every opportunity to conduct experimental or quasi-experimental designs in which individuals, entities, programs, or activities are assigned

to different conditions and with appropriate controls to evaluate the

effects of the condition of interest (§9101(37)).

In response to the recent movement toward "experimental" studies, the journal

Exceptional Children published a special issue that argued that different research

questions required different research methods, and although random controlled studies

are the gold standard, research must exist on a continuum (Odom et al., 2005).

Therefore, the journal issued quality indicators for special education group experimental

research (Gersten et al., 2005), correlational research (Thompson, Diamond, McWilliam,

Snyder, & Snyder, 2005), single-subject research (Horner et al., 2005), and qualitative

studies (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005). Research that

met the quality indicators would be considered evidence-based. This gave researchers of

parental involvement a continuum of methods to use in their studies.

Evidence-based practices. Test and his colleagues (D. W. Test, Fowler, et al.,

2009; D. W. Test, Mazzotti, et al., 2009), used these new standards to review the

transition literature to determine which transition practices were evidence-based and

which practices were associated with transition outcomes. D. W. Test, Fowler, et al.

(2009) included experimental studies that met criteria based on Horner et al. (2005) for

single subject studies and Gersten et al. (2005) and Horner et al. Also included were

literature reviews and meta-analysis studies that met the standards of a checklist that was

developed by a panel of special education researchers. Test, Mazotti et al. reviewed

correlational literature to determine in-school predictors for post-school outcomes.

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Studies were included if they met the standards of a checklist developed from Thompson et al. (2005).

These two articles on transition practices stated that parental involvement research in transition was not strong and cited a need for more rigorous research. Test's team found only one study related to family involvement that met the evidence-based standard (D. W. Test, Fowler, et al., 2009). Boone (1992) trained parents about transition to determine if the training sessions increased parent participation in transition meetings and increased knowledge about transition. Boone measured Parental Involvement based on three criteria: (a) offering information, (b) asking questions, and (c) stating preferences and opinions. When compared to a control group, parents who participated in training were more involved in the meeting and displayed better knowledge about the transition planning process. Boone also measured post conference opinions and satisfaction but noted no significant difference between the groups. Test et al. concluded that parental involvement has a moderate level of support as a transition evidence-based practice, and stated that a strong evidence base required the following: 1 high-quality group experimental study, or 4 acceptable-quality group experimental studies, or 5 high-quality single subject studies.

The second study by Test and his colleagues (D. W. Test, Mazzotti, et al., 2009), using a "quality indicator checklist" for correlational literature based on criteria from Thompson et al. (2005), found only one rigorous study that suggested parental involvement was related to improved employment outcomes (Fourqurean et al., 1991) but found no evidence to suggest that parental involvement was associated with

improved PSE or independent living outcomes. Test labeled parental involvement as potentially supported by the correlational transition literature.

       Scientifically-based research. Cobb and Alwell (2009) reviewed the transition literature using the definition of scientifically-based research standards from the Education Sciences Reform Act of 2002, which states that

> The term "scientifically-based research standards" means research
>
> standards that—(i) apply rigorous, systematic, and objective methodology
>
> to obtain reliable and valid knowledge relevant to education activities and
>
> programs: and (ii) present findings and make claims that are appropriate
>
> to and supported by the methods that have been employed. (p. 4)

Cobb and Alwell concluded that there were not enough studies that met the inclusion standard to assess the effect of family involvement, but reported that the literature review revealed that parents and extended family influence career choices and job acquisition.

Other Parental Involvement Research

       The review of substantiated practices in family involvement in the two studies by Kohler (1993) and Leena Jo Landmark et al. (2010) represent a general overview of past and current research structured around the Taxonomy for Transition Programming using the standards from Peters and Heron (1993) for substantiated research. The studies by Test and his colleagues (D. W. Test, Fowler, et al., 2009; D. W. Test, Mazzotti, et al., 2009) and Cobb and Alwell (2009) represent a current view of transition research, still structured around Kohler's taxonomy, that uses the stricter standard of evidence-based

research and scientifically-based research. These four studies cite nine research articles that meet standards for substantiated and evidence-based research, which may seem to imply that family participation in transition rests on tenuous grounds. However, caution should be exercised in interpreting the lack of research. One may believe that the practices in the above studies lead to the best outcomes or are the most effective practices, but as Leena Jo Landmark et al. (2010) point out, the number of studies supporting a practice does not imply the practice is superior to other possible practices, only that a particular practice has been carefully studied and is related to positive outcomes.

Other studies not included in the aforementioned research demonstrate that parental involvement leads to positive outcomes for individuals with disabilities. For example, Kraemer, McIntyre, and Blacher (2003) found that both parental involvement in transition planning and parental knowledge of adult services were positively associated with measures of their child's quality of life. Reiter and Palnizky (1996) determined that parental characteristics of cooperation, support, encouragement, planning and interest were related to post-high school employment, and other research indicates that parental expectations have been found to be associated with post school outcomes (Carter, Austin, & Trainor, 2012; Wagner, Blackorby, Cameto, & Newman, 1993). Also, the National Longitudinal Transition Study- 2 (NLTS-2) compared parental expectations in 1987 and 2001 and found that parents have developed higher expectations for their children with ID than had previously been reported (Wagner, Cameto, & Newman, 2003). For instance, data indicated a significant difference in

parents' expectations that their child would graduate from a 2-year college and get a paid job. Conversely, there were no changes in parents' expectations that their child would attend a 4-year university or live independently. The lack of change in university attendance and independent living suggest that perhaps programs that support these outcomes are unfamiliar to parents or educators and receive little discussion in transition meetings.

The literature on parental involvement in the transition process has concentrated on either theory that explains how to improve parental involvement, parental actions during transition meetings, or reports of parental experiences with the transition process. Neither studies that examined the relationship between parental knowledge of the transition process and agency usage nor studies that examined parental knowledge and transition outcomes were found in the literature review for this study. This research adds to the knowledge base of parental involvement in the transition process by examining whether parental involvement in the transition process produces knowledge that parents of individuals with ID can use to improve agency usage and transition outcomes.

Family Participation Theoretical Framework

Research into family involvement in transition planning has benefited from the work of the Director of the Center on School, Family, and Community Partnerships at John Hopkins University, Joyce Epstein. For example, Epstein and her team found that parental involvement could improve reading (Joyce L. Epstein & Sheldon, 2006) and math scores (Sheldon & Epstein, 2005). The 2006 literacy study found that the school's design and implementation of "quality parent involvement activities targeted at giving

parents skills to support their child's literacy skills acquisition" (A. Pleet & Wandry, 2009, p. 7) was critical. The 2006 math study concluded that when parent engagement incorporates "goals and specific actions to promote targeted parent engagement, with support and technical assistance from the district, these activities are more likely to be conducted and gains in student achievement are more likely to be found." (A. Pleet & Wandry, 2009, pp. 7-8). In addition, research indicated that schools and communities want increased partnerships but lack the knowledge to make it happen (Joyce L. Epstein, 1995, 1996; A. M. Pleet, 2000). Although Epstein's research does not focus on transition, the studies suggest that schools must take the lead in developing parental involvement activities and that parent involvement can improve academic outcomes.

Epstein developed Six Types of Parent Involvement (Joyce L. Epstein, 1995; Joyce L. Epstein & Salinas, 2004) that were adapted for transition by A. M. Pleet (2000).

1. *Parenting activities* develop parent's knowledge so parents can support their children through the transition years. For example, these activities may assist parents in understand adult agency system such as DARS or DADS.

2. *Communication activities* should be two-way, regular, and meaningful. An example of a communication activity is a school's progress report related to a student's on site job training.

3. *Volunteering activities* are ways the parent can support the school's missions. Parents may invite a group of students to visit their worksite to explain the skills needed to maintain successful employment, for instance.

4. *Learning at home activities* are designed to engage parents in the learning process with their children. For example, a homework assignment may ask students to discuss with their parents how parents can support their child's self-determination.

5. *Decision making activities* involve parents as leaders and representatives. One type of decision making activity is serving on an advisory panel that makes district level recommendations.

6. *Collaborating with community activities* might consist of attending a transition fair or arranging a field trip to an support agency

This model is based on Epstein's "overlapping spheres of influence", in which schools, communities, and parents each contribute to outcomes. In fact, Epstein has recommended that family involvement be renamed "school, family, and community partnerships". This research will refer to either family involvement or parent involvement to represent the same idea.

The survey was developed based on the theory of overlapping spheres of influence. Survey items asked parents to rate their level of agreement with statements about the transition process, agency usage, transition outcomes, and the usefulness of the transition process. The theoretical perspective of overlapping spheres suggests that parents who reported that they were active in the transition process and that schools and

agencies helped them understand the transition process and agency usage should report

better post school outcomes and greater satisfaction with DARS or DADS than parents

who report any of the aforementioned elements were missing. In other words, if any of

the spheres of influence (parents, educators, or agencies) are missing or lack overlap,

post school outcomes are more likely to be poor and satisfaction with agency services is

likely to be less.

<center>**Parental Perspectives of Transition**</center>

Understanding the role of parental involvement in postsecondary outcomes is

especially important for parents of youth with ID because parents take on a central,

challenging role as their children with ID navigate their post high school lives

(Timmons, Whitney-Thomas, McIntyre Jr, Butterworth, & Allen, 2004). For parents

with typically developing children, high school graduation usually signals a time that

parental involvement begins to wane as their children take on increased responsibilities

(Tobin, 2003). However, for parents of individuals with disabilities, this transition

period marks a time of increased involvement requiring greater support of their child

(Loyd, Wehmeyer, & Davis, 2004; Meyers, Borthwick, & Eyman, 1985; Todd &

Shearn, 1996) for an extended and uncertain amount of time (Brotherson, Berdine, &

Sartini, 1993; Hanley-Maxwell, Whitney-Thomas, & Pogoloff, 1995). Another parental

challenge is that individuals with ID often have complex support needs (Nicholas J.

Certo et al., 2003; Morningstar, Kleinhammer-Tramill, & Lattin, 1999) that may change

over time and often require the involvement of more than one agency. In addition,

parents take on more than just the role of collaborators with agencies. They are also role

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models, mentors, instructors, trainers, decision makers, evaluators, and system change agents (Bianco, Garrison-Wade, Tobin, & Lehmann, 2009; A. Pleet & Wandry, 2009).

Parental Opinions of the Transition Process

Despite the great responsibility borne by parents, transition meetings can be a confusing and discouraging experience for parents. For instance, parents report that transition meetings are often a passive experience for them (Collet-Klingenberg, 1998; Gallivan-Fenlon, 1994; Gillan & Coughlan, 2010; Halpern & Benz, 1987; Hetherington et al., 2010; Zhang & Stecker, 2001). In addition, parents also say that educational jargon is a barrier (deFur, Todd-Allen, & Getzel, 2001) and that they are not knowledgeable about the transition process or options for post school services (Chambers, Hughes, & Carter, 2004; Collet-Klingenberg, 1998; Kingsnorth, Gall, Beayni, & Rigby, 2011; Martinez, 2012).   These barriers and others reduce opportunities for parents to participate (Kraemer & Blacher, 2001). Parents also thought that the school environment was not welcoming (deFur et al.), and meetings were not family centered but focused on professional needs (Kraemer & Blacher). Moreover, Cooney (2002) found that parents reported feeling powerless during high school transition meetings as well as helpless when faced with unfamiliar procedures and unexpected barriers in the adult service world.

The stress caused by the aforementioned barriers is exacerbated by the fact that parents report that service delivery systems are often inconsistent, complex, and unresponsive (Timmons et al., 2004) . Additionally, parents also expressed that they were concerned about the appropriateness and availability of post-school services

(Chambers, Hughes, & Carter, 2004; Cooney, 2002; Hanley-Maxwell, Whitney-Thomas, & Pogoloff, 1995; Whitney-Thomas & Hanley-Maxwell, 1996). Research on post high school experiences of parents of youth with ID is especially problematic given that, unlike typically developing youth, youth with ID rely even more on the assistance of their families after high school (Loyd et al., 2004).

Thus, despite legislative support for family involvement in the transition process, as well as support from theoretical and empirical research that suggests parental involvement improves transition outcomes, meaningful parental participation in transition activities remains elusive (Hetherington et al., 2010), especially for families with cultural and language differences (Geenen, Powers, & Lopez-Vasquez, 2001; Leena Jo Landmark, Zhang, & Montoya, 2007).

I assert that meaningful parental participation in the transition process could be increased by training families about the transition process. Specifically, I hypothesized that parents who said that the transition process helped them to understand the agency systems of DARS or DADS would report better post school outcomes and have greater satisfaction with DARS and DADS than parents who said the transition process had not helped them to understand the transition process. This hypothesis implies that parents who possessed more knowledge about the transition process and agencies could use the agencies more effectively than parents who did not possess such knowledge. Since research on parental involvement in the transition process has mostly focused on parent's actions during transition meetings and not on how parental involvement is

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related to agency usage, this paper will add to the understanding of the benefits and importance of parental involvement.

Post-Secondary Transition Outcomes for Youth with ID

Despite the sustained and ever increasing focus on post school outcomes, research has revealed less than satisfying outcomes for students with disabilities. Most studies reveal consistently poor transition results for individuals with ID (Blackorby & Wagner, 1996; Grigal, Hart, & Migliore, 2011; Hasazi, Gordon, & Roe, 1985; McDonnell, Wilcox, & Boles, 1986; Mithaug, Horiuchi, & Fanning, 1985; National Organization on Disability, 2004; Neel, Meadows, Levine, & Edgar, 1988; Newman et al., 2011; Wagner, Newman, Cameto, & Levine, 2005). For example, the NLTS, an examination of more than 8,000 youth who were ages 13 to 21 and in special education in secondary school in 1985, revealed that, overall, students with disabilities lagged behind their typical peers, and individuals with ID has among the worst outcomes in all transition areas when compared to other students with disabilities (Blackorby & Wagner, 1996).

Recent employment analyses find that individuals with disabilities between the ages of 18 to 29 are underemployed by 15% when compared to their peers without disabilities (National Organization on Disability, 2004). The NLTS-2, which reported differences in outcomes between a 1987 cohort and a 2003 cohort, found no statistically significant changes for employment for individuals with ID and 41% had worked for pay since high school and 25% reported to work for pay in 2003 (Wagner, Newman, Cameto, & Levine, 2005). Data regarding independent living was similarly unchanged

across time. The same report found that that approximately 73% of youth with ID from the recent cohort continue to live with their parents after high school but fewer individuals with ID said they lived in an institution or facility (Wagner, Newman, Cameto, & Levine, 2005). The statistics on PSE show that about 30% of students with ID attend postsecondary education, usually vocational/technical school or two year college, which is represents a 26% lower rate of enrollment compared with other students with disabilities (Grigal et al., 2011). Although enrollment in PSE has increased between 1987 and 2003, the small positive changes between cohorts were not statistically significant (Wagner, Newman, Cameto, & Levine, 2005).

I assert that poor transition outcomes could be improved through effective family involvement through family knowledge about the transition process and the agency systems that will provide support for their children following graduation. That is to say that parents who possess an understanding about agency requirements and programs because of their involvement in the transition process are in a better position to use the agency system than parents whose transition experiences did not develop their understanding of the post high school agency systems that support their children in meeting their adult goals. Further, effective use of the agency system should lead to improved transition outcomes for individuals with disabilities. No research to date has studied the connection between parental involvement and agency usage, so this study will increase our understanding of how parental involvement in transition is related to agency usage.

Problems

Studies indicate that transition meetings and other parent outreach methods used by schools are not preparing parents of students with special needs for the roles they face in ITP meetings and after graduation. Data from the National Longitudinal Transition Study 2 indicate that only 11.5% of parents attend transition trainings offered by schools, however over 85% of parents who attend training say they find the information helpful. Moreover, parents report that schools offer minimal training (Cooney, 2002; Gallivan-Fenlon, 1994; Tarleton & Ward, 2005). The limited research on training of parents about transition has focused on how the training has increased parent participation in and satisfaction with ITP meetings (Boone, 1992) or parent knowledge about the ITP process (Rowe & Test, 2010).

Transition models recognize that to function successfully in their communities after high school, individuals with ID often need continuing services and supports such as those provided by their families, their communities, and agencies like DARS and DADS. Due to the complexity of post-school agency systems, parental involvement in the transition process and afterwards is particularly important for individuals with ID (Kohler & Field, 2003; Ludlow, Turnbull, & Luckasson, 1988). However, although some studies have examined parental training about transition and understanding of the transition process, no studies have examined the relationship between parent training and preparation to use post-high school systems of support, such as state agencies that serve people with disabilities.

Purpose

The main purpose of this study was to investigate the relationship between parent's knowledge about the transition process developed within a transition framework and both agency usage and transition outcomes. Another purpose of the study was to explore how agency usage affects transition outcomes. Thirdly, this study examined the relationship between parental knowledge of the transition process and parental opinions about the usefulness of the transition process. This study surveyed parents of youth with ID who had graduated from a Texas high school to answer the research questions.

Research Questions

To achieve this study's aims, the investigation was designed to answer the following research questions:

1) Within a transition framework, what is the relationship between family knowledge of transition and agency usage after graduation?

2) Within a transition framework, what is the relationship between family knowledge of transition and transition outcomes?

3) What is the relationship between agency usage and transition outcomes?

4) What is the relationship between the transition process and parent's opinion of the transition process?

Hypotheses

I hypothesized that as family knowledge about the transition process functioning within a transition framework increases parents would report better agency usage. I also posited that as family knowledge increases transition outcomes, including parental

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opinion about their transition experiences will improve. In addition, I conjectured that as

agency usage responses increased, transition outcomes would increase. Finally, I

hypothesized that parental opinion about their transition experiences will be positively

related to both agency usage and transition outcomes.

Significance of the Study

This study will extend the research base on transition outcomes for individuals

with ID and address gaps in the research about parental involvement. Kohler (1996)

showed that parental training was rated by experienced transition professionals as the

most important aspect of family involvement and includes training about both the

transition process in addition to training about agencies and services. Although studies

suggest that parental involvement is important to transition success and that parental

involvement is a predictor of employment outcomes, few studies have studied the effect

of training on transition outcomes (Boone, 1992; Rowe & Test, 2010) but have focused

on how knowledge affects meeting behavior or level of knowledge. Since research has

not examined how transition knowledge may affect outcomes, there is a gap in our

knowledge of effective transition practices. This gap in the research is especially

troubling since IDEIA and other disability rights laws call for family participation,

including training, and parents report they are not familiar with the transition process or

post high school options (Collet-Klingenberg, 1998; Martinez, 2012).

Key Terms and Definitions

Intellectual disability: "significantly subaverage general intellectual functioning, existing

concurrently [at the same time] with deficits in adaptive behavior and manifested

during the developmental period, that adversely affects a child's educational performance" (IDEA, 2004, 20 U.S.C. 1401(3) - 1401(30)).

Results-oriented process-

Transition- a coordinated set of activities for a child with a disability that

(1) Is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation;

(2) Is based on the individual child's needs, taking into account the child's strengths, preferences, and interests; and includes

(i) Instruction;

(ii) Related services;

(iii) Community experiences;

(iv) The development of employment and other post-school adult living objectives; and

(v) If appropriate, acquisition of daily living skills and provision of a functional vocational evaluation. (20 U.S.C. 1401(34))

Delimitations

This study used Epstein' overlapping spheres of influence (parent, school, community) (Epstein, 2001) to frame parental involvement. This theoretical framework, which was used in the development of the survey instrument, may not accurately reflect parental experiences. For example, parents may be more likely to rate training activities found on their own as more valuable than training activities offered by the school or parents may not be aware of training opportunities offered by the school. Furthermore, this study only includes the experiences of parents of students with ID who had graduated from Texas high schools.

Limitations

The results of this study should be interpreted with caution for the following reasons. 1) This study only had 60 subjects and thus may not reflect the experiences of most parents of students with ID who are Texas high school graduates. 2) Subjects were not selected randomly and thus subjects may not reflect the general population under study. 3) Parents were asked to self-report their transition experiences, so their memories may not represent an accurate picture of the transition process.

Organization of the Dissertation

Chapter I includes a review of IDEIA and of transition studies that include parental involvement measures, both of which establish the importance of parent involvement in the transition process. The study's theoretical underpinnings, problem statement, purpose, research questions, hypothesis, and significance are also described in this chapter. This chapter also includes important terms and definitions. Lastly,

delimitations, limitations, and the study's organizational framework are presented.

Chapter II includes a literature review that provides a background of the problem to be

addressed, as well as the study's significance, theoretical framework, research questions

and hypothesis. Chapter III discusses the research design and methods, which include a

description of the subjects, research design, survey instrument, procedures, variables,

and analysis. Chapter IV presents the results, and Chapter V presents a discussion of the

implications of the results.

CHAPTER II

LITERATURE REVIEW

Historical Background

Beginning in the 1960s, the philosophy of normalization was the impetus for many changes that occurred for Americans with ID. However, before this time people with cognitive disabilities lived in large institutions to receive the services that their doctors deemed appropriate. These institutions were often located away from the families' community, and families were not involved in making any decisions about any part of their children's lives in these institutions. This situation began to change with the introduction of the philosophy of normalization into the United States, which led parents of individuals with ID to demand the release of their children from institutions and demand that their children be educated in their local schools.

Normalization and the Changing View of ID

The view of how to treat individuals with ID varied in the 19th century. At the turn of the century, people with ID were objects of intense investigation by scientists studying intelligence (Shapiro, 1993), so although these children were educated separately from the general population, educational opportunities were available. However, with the coming of the Great Depression, attitudes changed and individuals with ID were mostly placed in large institutions (Groce, 1996) with no purposeful training. This situation lasted through the mid-19th century when children with disabilities began to receive educational services in special schools and training

programs, often started by their parents, under the assumption that people with disabilities were best served separately from the "normal" population (Pennell, 2001).

By the 1950s, the ideas of normalization were being introduced into the United States. The main principle that underlies normalization is that people with intellectual and developmental disabilities (I/DD) have the same rights as citizens without disabilities (Nirje, 1972). Nirje stated that normalization meant "making available to the mentally retarded patterns and conditions of everyday life which are as close as possible to the norms and patterns of the mainstream of society" (1969, p. 181). For Nirje, this meant that the patterns of the day, year, and life for people with ID should be similar to those without ID. For example, since most people have a 9 to 5 job from Monday to Friday, relax on weekends, and vacation for two weeks a year, individuals with ID should live a similar life. It is important to note that Nirje was advocating these rights for all individuals with ID, from the mild to profound (Kebbon, 1997).

The implications of normalization were important to individuals with ID, their parents, the public, and those who worked with individuals with ID according to Nirje. He believed that moving individuals with I/DD into the community would result in broad attitude changes across society because normalization requires society to extend regular human relations and understanding to the individual with I/DD. When society accepts a person with ID, this individual can continue to develop skills necessary for social integration. Furthermore, in viewing the individual as capable of living a normal life, Nirje held that the role of those working with individuals with disabilities changes from caregiver to teacher, which leads to higher self-respect for the individual with a

disability and greater efficiency and effectiveness of service provision. He also thought

that giving parents the right to choose an appropriate setting rather than having the

anguish of placing their child in an institution would change parent's attitudes toward

their children with I/DD.

Wolf Wolfensberger developed the ideas behind normalization into a cohesive

philosophy to guide human service providers (W. Wolfensberger, 1972). He defined

normalization as the "utilization of means which are as culturally normative as possible,

in order to establish and/or maintain personal behaviors and characteristics which are as

culturally normative as possible" (p. 28). His definition suggests that individuals

identified as I/DD must learn communication, social, and vocational skills, among other

skills, to achieve a lifestyle commensurate to their community in order to be accepted by

the community (Chadsey-Rusch, 1985).

Deinstitutionalization

The movement of individuals out of institutions and into the community,

deinstitutionalization, began in the 1950s for patients diagnosed with mental illness.

Mills and Cummins (1982) describe three events that made deinstitutionalization

possible for this population. First, advances in medicine made it possible to control

many key symptoms of mental illness. Second, Medicaid, Medicare, and Supplementary

Security Income (SSI) funded care for individuals with mental illness living in the

community. Finally, courts gave individuals with mental illness the right to treatment in

an environment less restrictive than an institution.

The rights gained by individuals with mental illness initially excluded those with I/DD. The fear and the paternalistic attitude of the time toward those with I/DD ensured a place for institutions, but by the 1960s, people in the United States had begun to focus on personal rights and self-sufficiency. This focus encouraged parents who understood normalization precepts to advocate for community living and public education for their children with I/DD.

Social factors that influenced deinstitutionalization. Parents were not the only group that demanded the release of people with ID from institutions. Other forces in the 1960s began to shape the fight for disability rights. For instance, the civil rights movement fostered a societal attitude that emphasized individual rights and personal autonomy, which inspired disability advocates to begin the campaign to remove individuals from institutions (DiPolito, 2007).

Another sign of change occurred in 1962 when President Kennedy formed the President's Panel on Mental Retardation. The panel called for many farsighted recommendations such as research into the cause and prevention of ID, improvement of the social conditions for those with ID, improved education for students with disabilities, personnel training to work with individuals with I/DD, and the development of community based services for these individuals (Crissey, 1975). The following year President Kennedy used the recommendations from this panel to convene a special session of congress where he publicly announced the recommendations. These recommendations implied drastic changes to the way the federal government viewed individuals with ID. Along with the President's actions, the demands and expectations

of a growing middle class contributed to an "environment that sought to empower all its citizens" (Furman, 1996, p. 181).

Finally, a consumer movement helped parents became more familiar with the systems designed to help them, which led to parents gaining first experience then respect (Bersani, 1996). The consumer movement viewed the family as a consumer of services, which allowed parents began to speak on behalf of their children with ID and demand their child's removal from an institution. Parental advocacy led to greater choice regarding services, and in the 1960s, parents of children of differing disabilities started to demand the right to public education (Burch, 2009).

The parent's movement and deinstitutionalization. Through the 1950s, medical professionals were in control of decision making for individuals with ID (Bersani, 1996). The American Association on Mental Deficiency (AAMD), the first professional organization in the field of developmental disabilities, was an organization "by professionals, for professionals, and the assumptions of the time were clear: People with disabilities are defined by their disabilities (mental deficiency), and skilled researchers and scientists will lead the way" (Bersani, p. 259). During this time, people believed that psychotherapy, counseling, and psychoanalysis could solve many of the problems experienced by individuals with disabilities and the general public as well (Wolf Wolfensberger, 1999). Parents were to follow orders issued by professionals and had no role in decisions made for their children.

Families soon began to challenge the professional control of their children. The parents movement began after World War II and strengthened in the 1950s (Williams &

Shoultz, 1982). One reason parent organizations became more potent was because in the late 1940s parents spilt with the AAMD to form their own national organization (Furman, 1996). Other disability specific national parent organizations soon followed. In 1949, United Cerebral Palsy was formed, in 1950, both the Muscular Dystrophy Association and the National Association of Parents and Friends of Mentally Retarded (later renamed the Association for Retarded Citizens (ARC)) were founded (Burch, 2009).

The reality of deinstitutionalization. Although early advocacy was ineffectual (Goode, 1998), the American public, through the works of parent advocates and other advocates such as, U. S. Attorney General Robert Kennedy, author Burton Blatt, and journalist Geraldo Rivera, began to learn what institutionalization meant to the lives of those with ID. Parent groups, which had begun forming in the 1940s and 1950s had proliferated into disability specific organizations that competed for donor funding and suffered from duplication of administrative duties (Groce, 1996), which caused them to be ineffective as advocated for change. Although Robert Kennedy was an outspoken critic of conditions of New York's mental health institutions during the 1960s, public officials denied Kennedy's assessment and accused him of misleading the public. The 1966 publication of "Christmas in Purgatory" by Burton Blatt, with its images of overcrowded, naked individuals in sparsely furnished rooms, exposed the public to the dehumanizing conditions of large institutions (Taylor, 2006). However, major changes in public perception occurred in 1972 only after Geraldo Rivera broadcast a television series exposing the conditions at Willowbrook, an institution in New York designed to

hold 2,000 but housing 6,000 (Goode, 1998). The number of individuals with I/DD did not decline until 1965, about twelve years after the deinstitutionalization movement for the mentally ill began (Braddock, 1981), and the number of individuals with ID in institutions peaked in 1967 (Landesman & Butterfield, 1987), but institutions continued and continue to operate.

As the public began to understand see the deplorable conditions inside of institutions, the medical model of disability was questioned. The medical model of disability, developed from the disease model, which identifies disability as a "condition" in need of "treatment" (Llewellyn & Hogan, 2000). However, as parents forming organizations compared their experiences, they found that beyond the capacity to diagnose a particular condition, medical professional, did not understand how these children would develop or function as adults (Groce, 1996). A more recent view of disability is the social model of disability wherein people with disabilities are oppressed by the societal view of "normal" and this view impacts the degree of a person's disability (Llewellyn & Hogan, 2000). Although a social view of disability allows parents to challenge medical authorities, parents instead formed alliances with the professionals and advocated for monies dedicated to disability research and the training of disability professionals (Groce).

Parental Roles in Education and Transition

Parents played a vital role in the development of educational rights of individuals with disabilities (Weintraub, Abeson, Joseph, & LaVor, 1976). The parent organizations that formed in the 1950 began to demand that their children receive

education in public schools, but it was not until these organizations brought lawsuits that changes were made. The lawsuits led to educational legislation that clarified both the rights of individuals with disabilities to receive a free, appropriate public education and the right for parents to be included as part of the team making educational decisions for their child.

A Short History of Parents as Educational Advocates

Emboldened by the philosophy of normalization in the 1950s and inspired by the civil rights movement of the 1960s, parents began to demand a right to public education for their children with ID (Burch, 2009) and took a central role in the development and implementation of the first federal law that required education for all children with disabilities (Newman, 2005). Two lawsuits led by parents were crucial to the development of educational rights for children with ID.

In 1971, the Pennsylvania Association for Retarded Citizens (PARC), a parent led group, sued Pennsylvania public school for excluding children with I/DD from public education. *PARC v. Pennsylvania* established that children with ID had the potential to benefit from education and training. The decision also emphasized that "education" includes more than academics, schooling should be in the least restrictive environment, and education should be individualized.

Also in 1971, *Mills v. Board of Education*, another suit led by parents, established the educational practices of the time denied "exceptional" students their constitutional protection under the equal protection clause of the 14th amendment. Thus, the decision compelled public schools to provide free appropriate public education

(FAPE) to all students with disabilities, from the ages of 6 through 21 (Gollnick & Chinn, 2006).

These lawsuits established that children with ID should be educated in public schools and led to the Education for All Handicapped Children Act (EHA) of 1975 (Burch, 2009), the first legislative statute to address the educational rights of youth with disabilities.

Normalization in Education

Normalization had at least three important educational implications for individuals with ID. First, people with ID had the right to be integrated into their communities. Disability advocates adopted normalization tenets to justify the release of people with ID from institutions to have their needs met in the community (DiPolito, 2007). One consequence of this idea was that youth with ID received instruction in public schools. Although they were no longer in institutions, they typically remained separated from and did not interact with the general population of the school.

Second, the philosophy of normalization led to mainstreaming, inclusion, and individualized instruction of individuals with ID in public education (Kohler & Field, 2003). Mainstreaming and inclusion meant that students with ID were no longer educated only with other students with disabilities but received the supports they needed to function successfully in the general education along with their peers without disabilities. Third, normalization implied that people with ID, like other citizens, had a civil right to explore and choose their own career paths (Field, Martin, Miller, Ward, & Wehmeyer, 1998). Thus, vocational education programs in the 1970s went from

teaching only general education students to including all students (D. Test, Aspel, & Everson, 2006).

Parental Rights in Education

Parental advocacy ensured that mandates protected the educational rights of families who had children with disabilities. For example, the Education for All Handicapped Children Act of 1975, the initial law formalizing the educational rights of students with disabilities, emphases parental rights (Mead & Paige, 2008). Parental rights can be classified in four categories: notice of actions, consent of testing and placement, participation in the IEP, and the right to challenge decisions (Martin, Martin, & Terman, 1996; Mead & Paige, 2008). Despite the newly won rights, educational system struggled, and as research suggests, still struggle, to determine the most appropriate methods to ensure positive outcomes for students with special needs and how to include parents in the educational process. The next section reviews the literature related to the development of theoretical models of parental involvement in general education and transition. The development of educational models will reflect a growing understanding of the role of families in the educational process.

<p align="center">**Literature Review of Parental Involvement**</p>

The history of parental advocacy and disability rights demonstrates that families with children with ID and the individual with ID are affected by the ideas and beliefs held by the general public about disability. Parent advocates and self-advocates worked to change public perceptions in order to gain basic civil rights, such as the right to be educated in and live in their communities. Likewise, education history of general

education demonstrates that parental advocacy by disability advocates was a key to gaining educational rights in all settings for their children with ID. Since it appears that the general (e.g., public education) must be shaped by the special interest (e.g., disability advocates), the next section will first review the literature related to theoretical basis for parental involvement in general education followed by a literature review of parental involvement in special education.

Parent Involvement in General Education

General education models. Early education theories demarcated the boundaries between schools and families. The relationship between the two was almost totally separate. These models viewed parents as in charge child development at home and educators as in charge of child development at school. Later models included parental responsibilities in education as theory began to emphasize the influence that the interaction between the two environments, home and school, has on a child's learning.

Early models. *The Sociology of Teaching* by Waller (1932) represents the view that the relationship between parents and teachers are in conflict because parents are concerned about the entire development of their child and are personally invested while teachers focus on the child's intellectual development in an impersonal relationship. In other word, two separate worlds with two different foci and approaches. Waller states that,

> It may be that the child develops better if he is treated impersonally in the
> schools, provided the parents are there to supply the needed personal

attitudes; that is at least the theory upon which the school practice of our

time has been based. (p. 69)

Similarly, Parsons (1959) drew a sharp distinction between school and family.

He described the role of the parent as one of attending to a child's needs, whereas a

teacher must be oriented toward performance.

Both Waller and Parsons state that one role of the parent is to support decisions

made by the school. Aside from the support of the teacher and school, parents do not

have an educational role. The model represented by Parsons and Waller might have the

school in one box and the family in another connected by a faint line representing the

potential for communication in extreme cases (Joyce L. Epstein, 1990).

Another early theoretical model of family-school interaction may be called the

critical stages model, which may be seen as a ladder because each step requires the

previous one. This model proposes three stages. In the first stage, parents teach their

children skills that prepare them to enter schools, whereupon the education system takes

over in preparation for the third step, the young adult taking responsibility for future

education and training. One source for this theory was Piaget and Inhelder (1969) who

believed that human developmental stages are contingent on preceding stage. Likewise,

Bloom (1964) lent this theory support when he noted that the environment in which a

child is raised can affect the later stages of a child's development. In addition, Freud's

theories stated that experiences in very early childhood influenced actions far into the

future (Freud, 1937). Thus, the critical stages model placed responsibility on parents for

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the child's future development by the educational system. If a child had difficulty

learning, these models placed blame on a child's early development with the family.

 Ecology theory in education. The previous three views of the parent's role in

education emphasize separateness. Parents and schools had separate goals, and the

parents' goal are to ready their children for future educational experiences. The family

and educational system had not been viewed as necessarily interrelated. However,

Bronfenbrenner's ecological theory of education (1976) states that learning is a function

of the interrelations of the learner's environment, such as within the family, school,

community or peer group, and other possible environments. Bronfenbrenner viewed

environments as nested, one environment subsumes another. The basic environment is

described as a micro-system, the setting containing the learner, such as the school or the

home. The environment that subsumes the micro-system is called the meso-system,

which contains the interrelations between a person's environment. For example, the

interactions between school and family reside in the meso-system according to

Bronfenbrenner. The next level, which subsumes the two lower levels was called the

exo-system, which contains social structures such as education agencies, the world of

work and communication and an adult's circle of friends. The exo-system is external to

the developing person and influences the interaction between environments. An

example of the exo-system is that schools may not require parents to attend meeting on

weekends (education agency policy), therefore parent trainings are usually held on

weeknights, which may conflict with other parental priorities. Lack of parental

attendance at trainings may mean that parents will be ineffective at helping with

homework, for instance. The highest level, named the macro-system, carries the

institutions of culture such as economic, social, educational, legal and political.

Bronfenbrenner's ecology theory might say that FAPE was accepted due to changes in

the macro-system. Social, legal, political, and educational changes were made to include

people with ID in their schools because of environmental interactions between parent

advocates and politicians in the meso-system. At the micro-system level, parent

advocates may have taken action due to their own experiences with schools regarding

the denial of education to children with ID. Although this theory recognizes the

interaction between school and family in the development of a child, Epstein (1990)

believed that the model failed to address how multiple environments cause changes in

the actors, which led her to develop her own theory.

Overlapping spheres of influence. Epstein's model is based on a social

organizational perspective she called overlapping spheres of influence (1990), which

extends the ideas in Bronfenbrenner's model. The idea of overlapping spheres of

influence stresses the interaction between family, school, community and peers, with the

child in the center. Epstein (1995) distinguishes between external and internal spheres

of influence. External spheres are represented by the family, the school, or the

community. Internal spheres, represented by individual actors from the family, school,

or community, are where interpersonal relationships are developed. Further, Epstein

states that internal spheres can overlap at an institutional level, a school wide meeting for

example, or at an individual level, such as a parent-teacher conference.

The family and school having a shared sense of responsibility is an example of how spheres may overlap to influence student learning and development.   To share responsibility at an external level means that educators should create family-like schools by recognizing the uniqueness inherent in each child and ensuring each child is valued and included. Likewise, parents should create school-like families by reinforcing the importance of school, homework and other activities that build skills necessary for success (Joyce L. Epstein, 1987, 1995). At an individual level, the school and parents communicate what a child may need to achieve at an acceptable level. This model predicts that more overlap between family-school leads to improved outcomes over models in which families and schools are each concerned with unrelated goals.

According to Epstein (1990), three forces determine the extent and amount of family-school overlap. The first force is time, which accounts for student changes such as age, grade, and historic influences. The next two things that effect sphere overlap are the philosophies, policies, and practices of the school and family. For example, this model predicts that if a family of a youth with ID is receiving transition services, has been with a school for an extended period of time (age, grade); is pleased with the schools efforts (historic influences); agrees with the school's inclusion philosophy, community based learning, and vocational counseling (school philosophies, policies, and practices); and the parents involve their child in community activities and help the child to develop career interests (family philosophies, policies, and practices), then the spheres should possess a large overlapping area and the result should be successful educational outcomes. Conversely, if time factors are negative, if parents move to a new school

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because of problems with a previous district, and parent and school philosophies differ, outcomes suffer since spheres possess little overlap.

Another important contribution to family-school interaction developed by Epstein in a series of studies (1995, 2001; Joyce L. Epstein & Salinas, 2004) was a framework for parent involvement. This framework identifies six types of parental involvement and was adapted for transition by A. Pleet and Wandry (2009).

1. *Parenting activities* develop parent's knowledge so parents can support their children through the transition years. For example, these activities may assist parents in understand the adult agency system.

2. *Communication activities* should be two-way, regular, and meaningful. An example of a communication activity is a school's progress report related to a student's on site job training.

3. *Volunteering activities* are ways the parent can support the school's missions. Parents may invite a group of students to visit their worksite to explain the skills needed to maintain successful employment, for instance.

4. *Learning at home activities* are designed to engage parents in the learning process with their children. For example, a homework assignment may ask students to discuss with their parents how parents can support their child's self-determination.

5. *Decision making activities* involve parents as leaders and representatives. One type of decision making activity is serving on an advisory panel that makes district level recommendations.

6. *Collaborating with community activities* help parents to understand what types of supports are available in the community, so a school could sponsor a transition fair to allow the family to interact with service providers that serve the community.

Epstein's theoretical model and framework are the most widely used approaches for developing effective parental involvement-school activities (Deslandes, Royer, Potvin, & Leclerc, 1999).

The theoretical grounding of family involvement is more important than ever since current educational legislation requires family involvement. In order to establish effective parental involvement in schools, education professionals should understand what research supports theoretical models of effective parental involvement since research indicated that parental involvement is beneficial to educational outcomes.

Effects of parental involvement in general education. Parental involvement has been widely studied in the general education setting and has been correlated to several positive school outcomes. Of particular interest is the question of how parental involvement influences academics. Several studies found the parental involvement is correlated to higher test scores test scores (Henderson & Mapp, 2002; Hill & Craft, 2003; Hill & Tyson, 2009; Jeynes, 2003; Miedel & Reynolds, 1999; Sui-Chu & Willms, 1996; Wang, Wildman, & Calhoun, 1996), improved student grades (Deslandes et al., 1999; Joyce L Epstein, Simon, & Salinas, 1997; Fan & Chen, 2001; Grolnick & Slowiaczek, 1994; Gutman & Midgley, 2000; Henderson & Mapp, 2002; Hill & Tyson, 2009; Jeynes, 2003), student achievement (Joyce L Epstein et al., 1997; Fan & Chen,

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2001; Frome & Eccles, 1998; Izzo, Weissberg, Kasprow, & Fendrich, 1999; Sénéchal & LeFevre, 2002), general knowledge acquisition (Grolnick, 2000), fewer years in special education (Miedel & Reynolds, 1999), higher graduation rates (Henderson & Mapp, 2002), and enrollment in PSE (Henderson & Mapp, 2002).

Other studies have found parental involvement associated with student and teacher perceptions in addition to student behavior. For instance, parental involvement was found to relate to student self-efficacy for learning (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Brody, Flor, & Gibson, 1999), perceptions of self-control, and perceptions of self-regulatory skills (Brody et al., 1999; Grolnick, Kurowski, Dunlap, & Hevey, 2000). In addition, teachers viewed the students of involved parents as more competent (Joyce L. Epstein & Van Voorhis, 2001). Parental involvement is also correlated to student behaviors such as improved social skills (McWayne, Hampton, Fantuzzo, Cohen, & Sekino, 2004), attitudes (Joyce L Epstein et al., 1997; Jeynes, 2003), school attendance (Henderson & Mapp, 2002), general behavior(Henderson & Mapp, 2002), academic behavior (Jeynes, 2003), lower retention rates (Miedel & Reynolds, 1999), and lower dropout rates (Rumberger, 1995).

Studies of parental involvement in general education suggest its importance; however several issues remain to be worked out in future research. For example, parental involvement is measured either as parent involvement in school activities or home activities. Research suggests that parent involvement is multidimensional and should be studied across both settings (K. J. Anderson & Minke, 2007; Fan & Chen, 2001; Hong & Ho, 2005), especially since parental involvement for minority groups may

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be underestimated if parental involvement is measured only at school (Altschul, 2011; Jackson & Remillard, 2005; Lawson, 2003).

Parent Involvement in Transition

   Transition models and parental involvement. In response to the poor employment outcomes of high school graduates with disabilities, Madeline Will (1983) developed Office of Special Education Rehabilitative Services (OSERS) Transition Model, also known as the "Bridges" model of transition. While acknowledging the conceptual value of the OSERS Transition model, Halpern criticized Will's model as having a narrow focus and proposed an alternative model (1985). Both models recognized that individuals with disabilities graduated from high school with different levels of need, but Will's model emphasized transition to employment, while Halpern's model emphasized transition to the community. Paula Kohler's (1993, 1996, 1998) early studies of demonstration sites and research indicated that a majority of recommended practices were implied by the researcher and fewer were substantiated by research. Her work led her to develop a taxonomy based on research and recommendations from transition professionals that arranges transition practices around five categories of school related services: Student-Focused Planning, Student Development, Interagency and Interdisciplinary Teaming, Collaboration, and Service Delivery, Program Structure and Attributes, and Family Involvement. Kohler's model recognized the important contribution to the transition process made by families. What follows is a fuller explanation of each transition model and how parent involvement is defined in the model.

OSERS transition model. In 1984, Madeleine Will, the acting Assistant

Secretary of Special Education for the U. S. Department of Education, proposed a model

of transition that changed the provision of services from the Department of

Rehabilitation. Will's groundbreaking article, "OSERS (Office of Special Education

Rehabilitative Services) Programming for the Transition of Youth with Disabilities:

Bridges from School to Working Life" (1983), redefined the provision of rehabilitative

services from services that were provided for a set time and only to people who could

"benefit from services" to services that were ongoing. As a result, many individuals

with disabilities who were not eligible for rehabilitative services previously became

eligible under Will's model.

Will's model of transition proposed that there would be three bridges from

school to working life. The first bridge was for people who needed no special services

to find employment. Individuals who did not need special services graduated and either

sought employment or further education using either their own resources or those of

their family or personal contacts. The second bridge represented time limited services,

such as those that were provided by Rehabilitation Services, which would lead to

employment. These services were designed for individuals that counselors thought were

capable of finding and maintaining employment, which often excluded students with

severe disabilities. The third bridge of Will's transition model was labeled "ongoing

special services". Will stated that

Unlike the first two alternatives, this bridge represents a fundamental

change in much current policy and practice. At present, ongoing adult

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services are typically designed to be non-vocational, either providing

lifelong custodial care or preparing consumers for later vocational

services. The lack of significant movement from these programs to

rehabilitation and employment, however, has meant that they actually

serve as an alternative to work, functionally excluding participants from

both work related services and employment opportunities. Consistent

with the assumptions defined earlier, the alternative proposed here is

employment, with whatever ongoing support is necessary to maintain that

employment. (p. 7).

Will's model of transition defined transition as an "outcome-oriented process"

that included varied services and experiences that would lead to employment. She

stressed that transition required a sound secondary education, support at graduation, and

opportunities for further education or employment with appropriate supports after

graduation. Further she stated that the model rested on three assumptions. First, post

school options must be, of necessity, complex to serve the varied needs of individuals

with disabilities. Second, transition is designed to encompass all students with

disabilities. Third, the goal of transition is employment. Will admits that social,

personal, and social aspects of adult life are important but argues that employment is the

proper goal because employment is an objective way to measure transition success. Will

states that another measure of transition success is community integration but discusses

community integration in relation to employment.

Family involvement was not addressed in Will's model, but she was aware of the need for improvement in the area. Despite the inclusion of parental rights in P. L. 94-142, Will stated that the parents often had to resort to adversarial tactics to gain services for their children in addition to the fact that bureaucratic elements of special education did not make parents feel that that schools had their child's best interest in mind (1986). Will recommended that schools should have parental advisory boards to ensure that parents would be involved in their child's education. Still, her transition model reflects an emphasis on professional educators responsible for teaching children skills that lead to employment if given the appropriate level of support.

Revised transition model. The next model of transition, presented by Halpern (1985), acknowledged that special education was the basis for a sound transition, retained the three bridges of support, but Halpern argued that the target outcome must be more than employment. Halpern claimed that the OSERS transition model suggested that "nonvocational dimensions of adult adjustment are significant and important only in so far as they contribute to the ultimate goal of employment" (p. 480) and that success in employment leads to success in other areas.

Halpern proposed that community adjustment, living successfully in one's community, should be the outcome of the transition process. He cited evidence that showed that employment was not correlated other important outcomes such as satisfaction with work, neighborhood quality and safety, or family or social support. In other words, having a job was not necessarily related to positive residential or social outcomes and could not be assumed to successful community integration. Halpern's

research suggests that a transition model that strives for community adjustment produce satisfactory social relationships and an agreeable living environment, in addition to a good job. Halpern stated that

> … successful programmatic efforts aimed at a single dimension of community adjustment are not necessarily going to produce improvements along the other dimensions. If our three-dimensional model is correct, this also means that success along only one or even two dimensions is not likely to be sufficient to support the desired goal of community adjustment. Programs will need to be directed specifically toward each dimension, with client needs determining the selection of specific services. (p. 482)

Halpern specified that the theoretical changes he was suggesting required transition programs to extend their focus beyond employment into the areas of interpersonal relationships and residential environments.

Parental involvement was not included in Halpern's model. He accepted Wills premise that the path to the "bridges" of support was the responsibility of the secondary educational system not families. Although not included in Halpern's model, Halpern was actively studying parental perspectives on transition. He reported that less than 50% of their children received vocational preparation, functional living skills, home living skills, community skills, or functional academics. Also, only 20% of parents acknowledged agency participation in the transition process. The disjointed transition process led to unclear parental expectations about their child's future and confusion

regarding their child's future residential independence. To improve the transition process, Halpern recommends, among other things, transition training for administrators, teachers, and parents, and that parents have input regarding future directions in transition policies in local schools.

Three-stage vocational transition model. The three-stage transition model proposed by Wehman, Kregel, and Barcus (1985), agrees with Will's model that employment is the outcome goal for transition but emphasizes the process which leads to successful employment Kohler (1996). According to Wehman et al. (1985), transition should occur in three stages. The first stage was labeled Input and Foundation, the second stage labeled Process, and the third stage labeled Employment Outcome.

Each stage had several constituent parts. For instance, Input and Foundation consisted of elements of a functional curriculum, integrated school environment, and community based service delivery. Stage two, Process, consisted of an individualized plan that started early in a student's secondary experience to formalize transition responsibilities. This plan was to be developed by parents, students, and various community agencies, which included the school and other post school service agencies, such as the rehabilitation agencies or vocational-technical centers. Stage three, Employment Outcomes, consisted of employment options, such as competitive employment, work crews, or sheltered employment. Another important part of the model was following up with students to ensure successful outcomes and determine where improvements in the transition process were possible.

The three-stage transition model places parents in a central role in transition

planning. Wehman et al. (1985) indicated that informed parent participation was critical

to the process. This model called for parents to be provided the opportunity to

understand the transition process in order to participate more effectively and be made

aware of the various employment alternatives. Wehman et al. (1985) stated that

> Public schools should initiate parent education activities to provide
>
> consumers with background information. Systematically planned parent
>
> education programs will improve the effectiveness and durability of
>
> parent involvement in the vocational transition process. Parent education
>
> activities should begin at least by the time the student reaches the age of
>
> 16. Content should be based on problems and concerns identified
>
> through needs assessment activities (p. 30).

Even though parents are active members in planning transition goals in this model,

planning is the only area in which parental participation was encouraged.

Taxonomy for transition programming. Kohler believed that previous transition

models were not research based but focused on theory and conceptualization. Her goal

in developing a transition model was to link the transition theory to transition practices

research in a way that met the needs of the end-user, education professionals (Kohler,

1996). She developed her model based on four studies. Her first study reviewed the

transition literature to determine which practices were substantiated by research and

which were implied (Kohler, 1993). She found that, along with vocational training and

interagency collaboration, parental involvement was mentioned in over half of the

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articles reviewed. The second study analyzed exemplary transition programs (Kohler et al., 1994). Parental involvement was found to be associated with exemplary transition programs. Next, Kohler and her colleagues (Rusch, Kohler, & Hughes, 1992) examined the final reports of 42 employment-focused transition programs. Among the findings were that projects provided transition information to the public, and conducted public relation activities and training related to transition. Each of these activities supports parental involvement in transition. Finally, Kohler (1996) used the three previous studies to conceptualize a transition model.

In her 1996 study, Kohler surveyed 207 people with transition expertise from across the nation using a three step process to assist her in creating her conceptual model. Experts who participated in the survey were authors of transition studies used in Kohler's previous transition studies, OSERS-funded model transition project directors, state directors of special education, state transition systems change project directors, Regional Resource Center directors and transition specialists, staff of relevant information clearinghouses, and research faculty at the Transition Research Institute.

In Phase I of the three step process, the 207 transition experts reviewed the relevant transition practices gathered from previous the three previous studies in order to socially validate the practices. Kohler organized into the transition practices found in the previous studies into five categories: (a) Career and Vocational Development; (b) Student-Focused Systematic Planning; (c) Interagency and Interdisciplinary Teaming, Collaboration, and Service Delivery; (d) Parent Involvement in Planning, Education, and Service Delivery; and (e) Program Structure and Attributes. The survey asked subjects

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to place a mark next to any practices they felt should be included in a comprehensive list of best practices and list any other practices they felt were not listed but should be included. Practices selected by fewer than 50% of respondent were deleted.

In the next phase, respondents were asked to rate practices for importance, sort practices into groups, and form a concept map of practices. Although only 91 people from Phase I participated, statistical analysis indicated no significant differences between phase subjects. A participant rated practices on a 4-point scale where 1 was least important and 4 was most important. In addition, they were asked to sort practices into conceptual groups by color code, band each group together and return the cards with the survey. This process allowed Kohler to understand the how experts viewed the importance of each practice and how they viewed clusters within each category. Clusters varied from four to six for each category

Phase III of the study consisted of social validation and analysis of external validity. Materials were sent to the original 207 participants and 91 responded. Participants were given a map with the categories and importance ratings developed from the previous phase and asked to rate on a 5-point scale (1=low, 5= high) their agreement with the following questions in each category: did the organization make sense, did the maps form a good working model, do you agree with the importance ratings, were the results useful, and do you agree with cluster names. In addition, open-ended questions were included. Responses to the open ended questions led to renaming come clusters and reducing the number of subcategories in Student Planning and Family Involvement from five to three.

The three phases led to the Taxonomy for Transition Programming, organized around five categories. The first category was labeled Student Development, consisted of 47 practices in the following six clusters: Life skills instruction, Employment skills instruction, Career and vocational curricula, Structured work experience, Vocational assessment, and Accommodations and support. The next category was named Student-focused Planning, which contained 43 practices organized around the following three clusters: IEP development, Student participation, and Accommodations and planning. The third category was called Interagency Collaboration and was composed 39 practices in the following clusters: Individual-level planning, Interorganizational framework, Collaborative service delivery, Organization-level Planning, and Human resource development. The fourth cluster was named Program Structure and Attributes, had 49 practices, and was organized using the following clusters: Program philosophy, Program policy, Strategic planning, Program evaluation, Resource allocation, and Human resource development. The final cluster was labeled Family Involvement and consisted of 34 practices in the following clusters: Family training, Family involvement, and Family empowerment.

Although Family Involvement formed its own category, it is important to note that family involvement was found throughout the model. For example, under the category of Student Development identification and development of natural supports, a family is one example of a natural support, is among the practices rated highest. Two of the highest rated practices under the category of Student-focused Planning are ensuring the transition planning meeting is held at a time conducive to student and family and

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decisions are driven by family. Interagency Collaboration lists its most important cluster as Individual-level planning, and the highest rated practices under this cluster are that the transition team includes parents and the planning and service delivery approach is family-centered. The category of Program Structures and Attributes was rated as the most important category by experts and lists student/family role in programming as the most important aspect of a transition program. In addition, it is noteworthy that when the transition experts were polled about the transition categories, Family Involvement was rated second highest when asked if the organization made sense and rated highest when asked if the concept was useful for transition planning, evaluation and research; if there was agreement regarding the importance of the category; and whether the results of the study would be useful. Kohler's investigation into transition research to practice leaves little doubt about the importance of family involvement in all aspects of transition planning. Below is an examination of the category Family Involvement and its three constituent clusters.

Family involvement in Kohler's taxonomy. The category of Family Involvement is composed of three clusters: Family participation and roles, Family empowerment, and Family training. Importantly, the highest rated cluster was parent training, which plays an important part in the hypothesis of this research. Below is an explanation of the category of Family Involvement, how each of the three clusters was developed, and what practices constitute each cluster.

Kohler's transition studies led her to develop the Family Involvement clusters of: Family involvement, later renamed Family participation and roles (Kohler & Field,

2003), Family empowerment, and Family training. Overall, the category of Family

Involvement contained 34 practices. The category yielded a Chronbach's alpha range

of.81 to .87.   Chronbach's alpha is a measure of internal consistency or correlation

between items on a scale (Bland & Altman, 1997). The alpha range of Family

Involvement was not only the highest but also the most restricted, indicating that the

practices in this category displayed the highest correlation of all categories. Post hoc

analyses of Family Involvement also indicated no significant difference between

categories. Each cluster will be covered in more detail below.

Participation and roles. Interestingly, the subcategory of Family Participation

and Roles was rated least important by transition experts but contained two of the top

three rated practices and the greatest number of practices. The five highest rated

practices in the subcategory in order of importance were attendance at IEP meeting,

participation in the transition process, decision making, evaluation of individual level

transition planning, and role in natural support network. The next five practices were

involvement in student assessment, responsibilities relative to transition planning

specified, participation in program evaluation, evaluation of community-level transition

planning, and participation in policy development. The final five practices were

participation in service delivery, family members as trainers, family members as

mentors, participation in staff development, family members as volunteer service

providers.

Empowerment. The second ranked subcategory was family empowerment,

which had 12 practices. The most important practice was that information was provided

in ordinary language, followed by parents presented with choices, flexible meeting times, interpreters provided, and support network. The other practices were transition information provided before child is 14, pre-IEP planning, structured method to assess family needs, respite care, directory of services, and child care for planning meetings.

Training. The final subcategory was family training, which was rated as most important by transition experts. The most important practices were training in promoting self-determination, agencies and services, empowerment, and advocacy. Other family training practices were transition related planning process, natural supports, and legal issues. Of interest is that experts felt that understanding the agency system was more important than understanding the transition process. This review of the theoretical underpinnings of transition with a focus on Kohler's taxonomy supports the underlying assumptions of this study regarding the importance of family involvement and agencies in the transition process.

Research on parental involvement in transition. This section will begin an examination of the literature on the benefits of parental involvement in transition. The importance of the parental role in transition will be covered first. This will be followed by a review of the substantiated and evidence-based practices discussed in Chapter I. Next, research into the connection between parent involvement and achievement of students receiving special education services will be discussed, followed by an analysis of the NLTS-2 report on family involvement. The NLTS-2 is a longitudinal study with a sufficient sample size to generalize to other families who have children with ID. The next two sections are an overview of parental barriers to the transition process and

positive factors reported by parents. The subsequent sections will examine

recommendations in the transition literature about how to improve parental involvement

in the transition process and will summarize the chapter.

  Benefits of parental involvement in transition. According to parents, their

involvement during transition is vital, but more so when the disabilities are significant

(Geenen et al., 2001; Neece, Kraemer, & Blacher, 2009). Young adults with ID often

continue to live with their families after high school (Kim & Turnbull, 2004), and

parents report that they not only assist in job searches but often make the initial contact

with agencies, which requires parents to develop networks in their communities and act

as mediators for their child (Dixon & Reddacliff, 2001). In addition, families have a

greater influence then a youth's peer group on job and career selection (L. Lindstrom,

Doren, Metheny, Johnson, & Zane, 2007) and not only influence career choice and job

acquisition (Cobb & Alwell, 2009) but also help them to maintain the jobs once they

have been hired (Luft, 2008). Although parents defined transition as going from school

to work, they were more concerned with residential and social issues, and when

discussing the future, parent concerns focused on three themes that fostered their

children's independence: a safe fulfilling residential situation, strong social networks,

and constructive free time (Hanley-Maxwell et al., 1995). These parental views are

important to a successful transition experience since parents remain as advocates,

teachers, and case managers, and a family support system for the young adult with ID

(Gillan & Coughlan, 2010) long after the youth has graduated.

Despite its importance, parental involvement in transition has not been well

researched, as several overviews of transition literature suggest (Cobb & Alwell, 2009;

Kohler, 1993; Leena Jo Landmark et al., 2010; D. W. Test, Fowler, et al., 2009; D. W.

Test, Mazzotti, et al., 2009). The five articles that have reviewed the transition literature

found only eight studies that met standards of "evidence" regarding the effects of

parental involvement in transition planning. The benefits of parental involvement were

detailed in Chapter I, but briefly, parental involvement in transition indicates that family

involvement was related to employment (Fourqurean et al., 1991); associated with better

wages and more hours worked per week; and predicted employment, living, and

financial status; as well as employment history, months employed, and total earnings

(Schalock et al., 1992; Schalock et al., 1986). In addition parental involvement in

transition is associated with a settled and clear career choice (L. E. Lindstrom & Benz,

2002) and community adjustment (Sample, 1998). Other studies indicated that parent

training about transition increased their transition knowledge (Boone, 1992), parent

support during the transition process was vital to successful competitive employment

placement (Heal et al., 1990), and students viewed parent support during transition as a

key (Hudson et al., 1988). This research base is heavily invested into employment issues

although parents repot they are more concerned with residential and social issues. In

addition, little scientific research exists related to how to effectively involve parents.

The few studies that have examined the relationship between parental

involvement and achievement of students in special education have found a positive

relationship whether parents are involved at home or at school. For example, two

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studies that analyzed parental involvement at home found that parental assistance in school work and monitoring of activities was associated with grades and time spent on homework (Deslandes et al., 1999), and parental expectations and conversations about school were positively associated with achievement (Zhang, Hsu, Kwok, Benz, & Bowman-Perrott, 2011). Parental participation in school based activities has also been associated with academic achievement, as well as lower rates of retention, fewer years in special education (Miedel & Reynolds, 1999), and early reading skills (Calderon, 2000).

In conclusion, research indicates many benefits of parental involvement. Parents influence was reported to extend to employment, academics, and family support. However, the studies samples were often either limited or included few individuals with ID. Therefore, a review of the NLTS-2 would be beneficial to extending the understanding of parental involvement in transition.

NLTS-2 report on family involvement. Due to its large sample size and longitudinal format, two valuable sources of information about parental involvement in transition are the NLTS-2 reports on family involvement in transition by Newman (2005) and the transition planning report by Renee Cameto, Levine, and Wagner (2004). Newman (2005)reported on both at home and at school activities for the general and special education populations and in some cases statistics are reported for disability categories such as ID. In addition, the Newman report also examines the effect of family support on participation, and the Cameto report adds important information on whether parents receive information about post high school services and vocational rehabilitation (VR) participation in transition planning.

Regarding at home activities, Newman (2005) found that over 70% of parents of children with disabilities help with homework at least once a week compared to the rate of 55% reported by parents of children in general education. Approximately 21% of parents with children in special education reported they helped with homework five or more times a week, whereas over 28% of parents of adolescents with ID reported this level of homework involvement. Almost 82% of parents in the NLTS-2 study said they discussed school with their children regularly compared to 79% of parents of youth with ID. A measure of family support at home indicated that about 70% of students received either high or very high parental support, while only 2% reported low levels of support. Overall, parents that have children with disabilities appear to be more involved at home than parents who have children in general education and parents of students with ID are involved at about the same levels as other parents who have children with disabilities. It should be noted that the analysis cannot tell whether increased parental involvement is due to a student's greater difficulty with homework or whether parents are more involved by choice.

Newman (2005) also reported on parental involvement activities at school in two categories: activities available to all families and IEP participation. The first category, activities that are available to all families, consisted of four activities: general school meetings, parent-teacher conferences, school or class events, and volunteering. Newman found that parents of adolescents in special education were more involved in all categories except volunteering. Over 77% of parents of students in special education attended general school meeting compared to 70% of parents with children in general

education. Parents of children with ID attended general meetings at a rate of 72%.

Regarding parent-teacher conferences, almost 73% of parents with children with

disabilities said they attended these meetings, compared to almost 56% of general

education parents. Approximately 74% of parents of students with ID reported they had

attended a parent-teacher conference. Parents with children in special education

attended school or class events more often, 62.5% to 59%, whereas 59% of parents of

children with ID said they had attended school or class events. The category with the

least parental participation was volunteering. Parents of general education students

volunteered more often according to Newman, 26% to almost 24%, while 21% of

parents of students with ID reported volunteering. Again, parents of children with ID

participate in school activities at about the same rates as other parents who have children

with disabilities.

The second category of parental involvement examined how parents are involved

in the transition process. Almost 90% of parents reported they had attended at least one

IEP meeting in the current or prior year, whereas parents of children with ID attended

IEP meetings about 86% of the time, which represented the lowest rate of any disability

category. One out of five parents reported that they had been primarily responsible for

developing IEP goals, while almost half of parents said that goals were developed

primarily by the school. Although schools seem to be largely in control of creating

educational plans, about 66% of parents reported that they felt their level of involvement

was appropriate, however, the remaining parents said they wanted to be more involved.

In addition, almost 90% of parents agreed that their child's IEP goals were challenging

and appropriate. Interestingly, Newman found a relationship between participation in the IEP meeting and feelings about IEP goals. More than 75% of parents who said the their child IEP goals were not challenging and appropriate also said they wanted to be more involved in the IEP process. Again, the question remains whether at school involvement is a choice or perhaps parents of students with disabilities must be more involved in school due to issues related to their child's disability. This question is especially pertinent because parents of children in general education volunteer at a higher rate.

Finally, Newman (2005) found that family support, defined as social support and support of training and information, was positively related to parental involvement. For instance, when a family has lived in a community for an extended period of time, they are more likely to help with homework and participate in school-based activities compared to families who have lived in a community a year or less. Also, families belonging to a support group for families of children with disabilities were more likely to help with homework and participate in school-based activities compared to families who were not part of a support group. Furthermore, parents who participated in OSEP-supported or other trainings were more likely to participate in school-based activities and IEP meeting than parents without training.

Cameto and her colleagues (2004) found that about 75% of students with disabilities have a transition plan by age 14 and by ages 17 to 18 over 96% have a plan. Of interest is that at age 14 less that 3% of students with disabilities have a VR counselor attend their meetings and by ages 17-18 only about 1 in 4 students have a VR counselor

in attendance although 43% of students with disabilities reported needing vocational education, training, or support. Cameto also found that schools reported that they contacted VR for 38% of students. Other organizations schools contacted for transitioning students were colleges or vocational schools (24%), sheltered workshops (7%), supported employment programs (14%), vocational training programs (26%, job placement agencies (24%), employers (20%), and the military (15%). Agency attendance at transition meetings is one way schools can help educate parents and school staff about available resources in the community and what is needed to access these resources. Although a disparity exists between VR attendance at transition meetings and reported VR needs, 77% of parents of 17-18 year olds report that the school has provided them information about post school services.

Overall, NLTS-2 reports by Newman (2005) and Renee Cameto et al. (2004) seem to indicate that parents of children in transition are involved at similar levels as parents of children in general education. The preceding section detailed the benefits of parental involvement, which indicated parental involvement is related to positive transition outcomes. Therefore, transition outcomes for people with ID should be positive if parental involvement is related to outcome, but outcomes of individuals with disabilities have not been positive.

For example, in one study, most participants were not employed six months after graduation (Gallivan-Fenlon, 1994), while in another, all participants were employed, but of those who were employed, not all were half-time and not all were paid (Hanley-Maxwell et al., 1995). In addition, a majority of parents reported their child was either

not receiving services or waiting for another job opportunity to be developed, and of those who were receiving services, most were placed in a sheltered workshop (Gallivan-Fenlon, 1994). Clearly, transition could be more effective. Improving outcomes might be accomplished with greater involvement of post school agencies in the transition planning process and providing parents with better opportunities to understand the agency system and the skills needed to access available agency services.

Parental challenges and barriers in transition. Aside from the research-based literature and the NLTS-2, other research into parental involvement in transition for parents of children with ID has been largely qualitative (Ankeny, Wilkins, & Spain, 2009; Cooney, 2002; deFur et al., 2001; Dixon & Reddacliff, 2001; Gallivan-Fenlon, 1994; Hanley-Maxwell et al., 1995; Heslop & Abbott, 2007) or descriptive (Ankeny & Lehmann, 2011; Kim & Turnbull, 2004; Stineman, Morningstar, & Bishop, 1993). However, there is a growing base of quantitative literature that examines parental roles in transition (Blacher, Kraemer, & Howell, 2010; Neece et al., 2009; Rowe & Test, 2010).

This section reviews what parents say about their transition experiences and what barriers families face. Barriers are divided as transition process barriers, professional and agency barriers, and parental barriers. These barriers may partially explain why parental involvement may not translate into better post school outcomes.

Transition process barriers. Parents reported that transition was a stressful time for their family. They said the transition process contributed to feelings of powerlessness because of unfamiliarity with transition terminology (Cooney, 2002;

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deFur et al., 2001) and process (Steere, Rose, & Cavaiuolo, 2007), perceived barriers to

desired goals, and uncertain outcomes (Cooney, 2002). Some parents said that the

process seemed to focus on their child's weaknesses (deFur et al., 2001; Gillan &

Coughlan, 2010) and that teacher expectations were either too low or unattainable

(Steere et al., 2007). Moreover, parents were discouraged that the transition process

often started late their child's high school career (Gallivan-Fenlon, 1994; Hetherington

et al., 2010); and stated that there was not enough time to plan properly, and plans

seemed to be more focused on the near term as opposed to the long-term (Steere et al.,

2007).

Other problems parents described were that all participants in the transition

process were unaware of agencies and services available in their community, (Gallivan-

Fenlon, 1994), and communication between parents and school was often inconsistent

and weak (Ankeny et al., 2009). Parents also thought that waiting lists, lack of social

networks, parent versus child needs, and the difficulty of the child moving on (Hanley-

Maxwell et al., 1995) were barriers to transition. In addition, parents commented that

they were disappointed that community living options were rarely discussed (Gallivan-

Fenlon, 1994), and expressed that teacher and administrator attitudes made families feel

"isolated, mistrustful, and not part of the transition team" (deFur et al., 2001, p. 26).

Professional staff and agencies as barriers. Transition professionals have

stressed a need for increased parental involvement in and knowledge about transition

(Collet-Klingenberg, 1998). Conversely, parents reported transition issues related to

professional staff and provider systems. Parents felt that they were not active

participants in the decision making process (Collet-Klingenberg, 1998; Gallivan-Fenlon, 1994; Gillan & Coughlan, 2010; Halpern & Benz, 1987; Hetherington et al., 2010; Zhang & Stecker, 2001), and their views were undervalued due to the process being based on the assumption that professions knew what was best (Steere et al., 2007). Although parents said they focused on their child's strengths and talked about a future with fulfillment and security (Cooney, 2002) when determining post school placements, professionals concentrated on programming needs, available resources and viable options (Cooney, 2002; Gallivan-Fenlon, 1994).

Another concern parents voiced was about the appropriateness and availability of adult services (Chambers et al., 2004; Cooney, 2002; Gillan & Coughlan, 2010; Hanley-Maxwell et al., 1995; Kraemer & Blacher, 2001; Whitney-Thomas & Hanley-Maxwell, 1996). Parents said agencies became involved late in the transition process (Hetherington et al., 2010), and when they became involved parents felt that there appeared to be little coordination between school and adult systems, interactions with adult services providers were challenging, and staff did not listen to them (Gillan & Coughlan, 2010). Parents also reported that when they had experiences with post high school systems, they were concerned that they did not feel the same level of support they had felt from the school (Hanley-Maxwell et al., 1995). One explanation for this feeling may be that parents report that turnover of service staff was a constant issue (Bianco et al., 2009). Finally, parents stated that transition was inhibited by negative employer attitudes, lack of opportunities to develop social networks, and the possibility

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of a loss of disability benefits when the young adult became employed (Gillan &
Coughlan, 2010).

   Parents as barriers. Although parents report that they try to balance concerns
related to self-determination and protection (Saaltink, Mackinnon, Owen, & Tardif-
Williams, 2012), families of youth with ID can themselves sometimes be barriers. For
example, 3 out of 4 parents of students with severe ID indicated that their child would
remain living at home after high school and into the foreseeable future (Kraemer &
Blacher, 2001). Similarly, Gillan and Coughlan (2010) reported that parents were
reluctant to provide opportunities for independence and remained concerned about their
child's vulnerability and cognitive limitations. Other research indicated that parents
have workplace safety and discrimination concerns (Dixon & Reddacliff, 2001), a
general fear about the future (Steere et al., 2007), pessimism about their child's future in
a work environment (Kraemer & Blacher, 2001), and resistance to proposed outcomes
(Rusch et al., 1992). Parental attitudes and concerns may cause parents to reject post
high school opportunities.

   The level of knowledge possessed by parents was also a possible barrier.
Families report that they are unfamiliar with post high school options (Chambers et al.,
2004).   They said that they were unfamiliar with agency supports and unsure about
their role in acquiring services (Benz, Johnson, Mikkelsen, & Lindstrom, 1995; Collet-
Klingenberg, 1998; Cooney, 2002; Gillan & Coughlan, 2010; Martinez, 2012; Steere et
al., 2007). This lack of familiarity with post school systems had several consequences:
First, parents did not understand the differences in the way disability is defined from

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school to post high school; second, lack of knowledge led to unreasonable expectations of agencies; and third parents felt overwhelmed by the number of professionals they had to meet to complete a post school assessment for their child (Benz et al., 1995). In addition, parental ideals about vocational outcomes did not match their realistic assessments, so although 3 of 4 parents of a child with severe ID in one study reported that ideally they prefer independent work placements for their child, only about 1 in 4 said that independent placement was realistic (Kraemer & Blacher, 2001). It seems reasonable that the gap between ideal versus realistic placement would shrink if parents were more aware of available supports. Finally, parents also stated that at times their vision of the future differed from their child's vision (Steere et al., 2007). For example, some studies indicate that parental views of post-high school goals were more restrictive than their child's (Cobb & Alwell, 2009; Gallivan-Fenlon, 1994). Again, perhaps parents would hold less restrictive views of they were aware of available supports. Though not well studied, Rowe and Test (2010) found that parental training about transition increased parental knowledge about postsecondary service providers.

The transition from school to adult life can be a stressful experience for any parent, however parents with children in special education seem to indicate that lack of knowledge about transition and post high school supports, as well as lack of support from professional staff increased their stress and required them to advocate for their child's needs (Hetherington et al., 2010). In addition, parents can also be a barrier to successful transition. Transition outcomes for individuals with ID remain a problem. For instance, a recent study found the majority of individuals with I/DD in the study had

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a vocational outcome of workshop, followed by at home/not working; in most cases these categories far exceeded the category of community employment (Blacher et al., 2010). Some ways to improve transition outcomes might be through greater agency participation in the transition process, improved parental training about the transition process, and understanding and implementing practices that parents say make the transition experience positive for their families.

Positive factors that helped parents. Despite the many challenges and barriers parents reported, they also mentioned many positive transition experiences. Understanding which factors are associated with positive transition planning experiences is essential because parental reports of satisfaction with transition planning are related to overall transition satisfaction and well-being of the family unit (Neece et al., 2009). Studies indicated that parents identified transition specialists (Gallivan-Fenlon, 1994) and special education teachers (Hanley-Maxwell et al., 1995) as invaluable to the process and said educational professionals can make a difference in helping families (Whitney-Thomas & Hanley-Maxwell, 1996). They felt that communication that was honest, direct, and knowledgeable made a difference in a child's life (deFur et al., 2001). Families also indicated that they appreciated professionals who collaborated with them by listening and being open-minded; helping them connect to resources such as adult service providers, training resources, or other families with children who were transitioning; believing in their goals and the potential of their child; and striving to include their child in as many activities in school as possible (deFur et al., 2001). In

addition, some parents said that vocational experiences were appropriate and there was

regular communication with teachers and adult services staff (Gillan & Coughlan, 2010).

Ways to increase parental involvement. Some things that parents have said

would help them be involved in the transition process are materials that explain the

assessment process; having a single, trusted person to go to in the schools; and support

groups for students and parents (Benz et al., 1995). Parents also said that

communication, commitment, equality, skills, trust, and respect were important in

family-school collaboration (Blue-Banning, Summers, Frankland, Nelson, & Beegle,

2004). The aforementioned qualities are another way of saying that parents prefer a

more personalized relationship in transition planning (deFur et al., 2001; M. L.

Wehmeyer, Morningstar, & Husted, 1999) that is based "on the hopes, dreams and

strengths of their child; they want the process to consider them as the experts in the

knowledge of their child; and they want to first talk about what could be rather than to

hear or feel that policy and procedures are paramount" (deFur et al., 2001, p. 32).

Parental education about transition is a recurrent theme throughout the transition

literature (Ankeny & Lehmann, 2011). For example, deFur et al. (2001) point out that

when a family has a high understanding of the system, the power relationship is more

balanced with professionals than if a family has a low level of system understanding.

Parents should receive information regarding post school options early in the transition

process and have the opportunity to explore post school options (Chambers et al., 2004)

in order to be connected to multiple adult services agencies (Aspel, Bettis, Quinn, Test,

& Wood, 1999) before graduation. Educators should assist parents in understanding

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what resources are available in their communities and to seek out support systems such as other families with similar experiences (Bianco et al., 2009).

deFur (2003, 2012) developed a family partnership model for transition based on 10 strategies that overcome barriers mentioned by parents and incorporate the things parents say are important to them such as (a) transition should be student- and family-centered; (b) transition outcomes should be a shared vision; (c) the process should be culturally responsive; (d) communication should be proactive; (e) participants should be caring and committed; (f) all parties should be given a voice and the process should involve various ways to meet goals; (g) the process should use creative problem solving in planning transition services; (h) the process should foster helpful connections for the student and family; (i) follow through is necessary on decisions made in the planning process; and (j) the process should allow for reflection and celebration.

Kim and Turnbull (2004) have recommend person-family interdependent planning which recognizes that individuals with ID often continue to rely on their families into adulthood. Interdependent planning states that (a) the person with ID is influenced by the family system; (b) the young adult with ID and their family must make decisions that concern both of their lives; (c) no person is fully competent in all of life's domains; (d) plans for the future should consider both the individual with ID and their families; and (e) policies and programs that provide social, emotional, and financial supports for young adults with ID and their families should be implemented.

Since parents are such an important part of the transition process, eliminating barriers to their participation and understanding how to make their involvement in the

process productive should be a goal of all schools. Parents say they need more information to participate meaningfully in transition planning and prefer personal to professional relationships. Research indicates that parents of children with ID are involved at high levels both at home and in schools, so involvement itself does not appear to be the cause of poor outcomes. This research suggests that the quality of the involvement is the key to improved outcomes. If parents understand what supports are available and what is required to access them, outcomes should be improved when compared to parents who do not understand what is available or how to access services.

Summary

Parents of students with ID have a long history of advocacy for their children. Parental advocacy has led to the right of their children to be educated alongside their peers and the right for parents to be involved in the educational process. These rights are codified at both the federal and state levels, and schools are required to inform parents of children receiving special education services of those rights, one of which is parental involvement in the educational process.

The predominant transition model includes five components in the transition process, one of which is family involvement. Importantly, aspects of family involvement pervade the other four components. The Taxonomy for Transition Planning (Kohler, 1996) divides parental involvement into three clusters: family participation and roles, family empowerment, and family training. It is interesting to note that most of the research into family involvement falls into the family participation and roles cluster. Family empowerment and family training are not well studied.

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Research into parental involvement in transition indicates that parental involvement has many positive effects. Despite high levels of parental involvement at home and school, outcomes for individuals with disabilities generally and with ID specifically remain disappointing when compared to individuals without disabilities. Transition literature is replete with reports from parents saying they do not understand the transition process or post school systems; yet family empowerment and family training are not well studied.

Therefore, this study examines the relationship between the role of family knowledge in the transition process with agency usage and transition outcomes. Although much has been written regarding the importance of parental knowledge in the transition process, no research has examined either the relationship between family transition knowledge and usage of agency systems such as DARS and DADS or the relationship between family transition knowledge and transition outcomes.

CHAPTER III

METHODOLOGY

The purposes of this study are to examine the transition experiences of parents with children labeled as ID who have graduated from Texas high schools to determine if a relationship exists between parental knowledge about transition and agencies developed in the transition process and agency usage and transition outcomes, whether a functional relationship exists between agency usage and transition outcomes, and how the transition process is related to parental opinions of the process. To investigate these relationships, parents took a survey that required them to rate their level of agreement with statements about their and their child's transition experiences in three areas: transition practices, outcomes, and post-high school usage of DARS or DADS. This study was designed to answer the following research questions:

1) Within a transition framework, what is the relationship between family knowledge of transition and agency usage after graduation?

2) Within a transition framework, what is the relationship between family knowledge of transition and transition outcomes?

3) What is the relationship between agency usage and transition outcomes?

4) What is the relationship between the transition process and parent's opinion of the transition process?

To examine these research questions, data were analyzed using a two-step process. First a principal components analysis (PCA) was performed on the three

sections of the survey that focused on transition experiences, agency usage, and transition outcomes to determine how items on each of the three sections formed clusters. After creating the clusters indicated by the PCA, linear regression was performed to determine the relationships in the research questions.

Survey

Parents shared their experiences by filling out a 4-part survey developed to assess transition experiences. The first part of the survey required subjects to share parent demographic information, such as gender, income level, level of education, and child demographic information such as gender, age, and disability. The next part of the survey examined their child's and parent's secondary transition experiences. Parents were asked to rate their level of agreement with a series of statements about the transition process that were organized around Kohler's Taxonomy for Transition Programming (Kohler, 1993). The taxonomy organizes transition practices around five areas. For example, research indicated that inclusion in general education was associated with improved outcomes for individuals with disabilities, so the survey asked parents to rate their level of agreement with such statements as, "My child was included in general education classes during the transition planning process."

The third section of the survey inquired about outcomes of the transition process. Parents were asked to respond to statements about whether the transition process helped them to understand what they needed to know about DARS/DADS when their child graduated and statements about whether the transition plan helped their child achieve post school goals. Also included in the outcomes section were a series of questions that

asked about employment, educational, vocational, and independent living outcomes. For each outcome area, parents were asked about both the current outcome and the outcome since graduation. Parents were asked both whether their child was currently employed and also whether their child had ever been employed since graduating from high school, for example.

The final part of the survey explored parent's experiences with either DARS/DADS. Statements in this section of the survey focused on the parent's experiences with agencies and agency services. The initial question of this section asked parents to select which agency, DARS or DADS, they had used most often and directed them to respond to the remaining statements about that particular agency only.

Population and Sampling

Target Population

The target population for this study was parents of individuals with ID who were involved in the transition process, who could recall their transition experiences, and whose children had graduated from a public high school in Texas. The qualification section of the survey asked the parent to agree/disagree with the statement, "I am the parent/guardian of a child with an intellectual disability." This wording allowed parents of children who were labeled with other developmental disabilities such as autism, to participate in the survey if they believed their child had an intellectual disability.

Study Population

This study utilized a descriptive cross-sectional survey design that included 60 subjects. The parents who participated all responded that they recalled their child's

transition experiences, had a child that had ID and their child had graduated from a Texas High School.

Sample Recruitment

This study uses non-probability purposive quota sampling to represent the proportion of responders with respect to their child's gender and their ethnicity and income. The sample was recruited via non-probability sampling methods initially using an e-mail listserv of parents of individuals with disabilities and through "snowball recruiting" (i.e., asking respondents to ask other parents of individuals with ID to contact the researcher). Initial recruitment was low, so in order to gain more respondents, the researcher gained cooperation from several disability organizations who agreed to send an announcement about the survey to their members. Organizations who agreed to assist included The Texas Council on Developmental Disabilities, The Arc of Texas, The State Independent Living Council, Texas Parent 2 Parent, The Center on Disability and Development at Texas A&M, The Texas Center for Disability Studies, Texas Family to Family, Partners Resource Network, The Coalition of Texans with Disabilities, ADAPT, Community Now!, the Partners Resource Network, and DADS. DARS referred the request to one of their service providers who agree to help publicize the survey. Most of the organizations who announced the survey agreed to send the announcement to their e-mail list and publish it in their publications that were sent to their members. The announcement included a section that said that those who wanted to take the survey over the phone or by paper could contact the principal investigator and take the survey by

phone or have a paper copy of the survey mailed. A copy of the announcement that was

e-mailed to organizations is in Appendix A.

Sample. One hundred-eight people accessed the survey online and one person

took the survey in a face to face format. Of these 109 people who accessed the survey,

31 (28.4%) were not qualified to take the survey because they answered "No" to at least

one of the three qualification questions. Of the remaining 78, four subjects (3.7%) were

eliminated due to answering all questions with either 1 or 4. Of the 74 subjects that

remained, 14 (12.8%) were eliminated because of incomplete responses. Due to the

nature of the sampling method, a response rate was unattainable.

Design

A survey was created to collect data for analysis in the study. Since surveys

measure data at the individual level (Weisburg, Krosnick, & Bowen, 1996), and the

research questions were about parental experiences, a survey was an appropriate data

collection method.

A multiple regression/correlation (MRC) design was used to analyze the data in

order to answer the research questions and determine the accuracy of the hypotheses.

Since each research question tests a hypothesis about the relationship between the each

DV and the IVs, an MRC design is appropriate for the study's purpose. MRC can be

used whenever the dependent variable (DV) is quantitative and is to be studied as a

function of its relationship to a set of independent variables (IVs) (Cohen, Cohen, West,

& Aiken, 2003). MRC also has other advantages such as providing both statistical

significance testing and effect size (ES) measures as well as the advantage of handling

several IVs and partitioning each variable's unique or partial relationships (Cohen et al., 2003). All data for this study were analyzed using IBM SPSS for Windows, Version 21.0 (IBM Corp, 2012).

Variables

Likert-type items were used to collect the survey data used to investigate the research questions and included three categories of items, statements about the transition process, statements about agency usage, and statements about transition outcomes. The statements about the transition process and agency usage were all statements that assessed agreement on a six-point scale. The points of the scale were either labeled Strongly Disagree, Disagree, Not Sure, Agree, Strongly Agree, and Prefer not to respond-N/A or Never/Almost Never, Seldom, Sometimes, Often Always/Almost always, and Prefer not to respond-N/A. "Prefer not to respond-N/A" was included to ensure that respondents did not skip items they did not feel comfortable answering or did not skip items that did not apply to their experience. Since the category "Prefer not to respond-N/A" equaled 6 on the scale, it artificially added variance to the scale. As a result, I made the decision to combine "Prefer not to respond-N/A" with "Not sure," which was the third point on the scale. Since "Not Sure" was in the center of the scale it represented a neutral position. In addition, because few respondents chose "Prefer not to respond-N/A" the mean for these items remained about the same.

In addition to statements about transition, agency usage, and outcomes, the demographic section of the survey also asked subjects rank item question, frequency questions, and open-ended questions. These items were not used for statistical analysis

but were included to better understand parents' transition experiences through descriptive statistics.

Demographic variables. Demographic variables were collected for both parent and child with ID. Parental variables included relationship to the person with ID, education level, income, and home language. Child variables were gender, age, ethnicity, disability label(s), and level/severity of intellectual disability. These variables were used for descriptive purposes only.

Independent variables. The IVs were related to family transition experiences organized around the categories of the Taxonomy for Transition Programming (Kohler, 1996) and the section of the survey containing these items was labeled "Transition Process." This section required parents to rate their level of agreement about statements in the five Taxonomy categories of Student-Focused Planning, Student Development, Interagency Collaboration, Program Structure, and Family Involvement. Each item was selected based on research that indicated that a particular practice was either associated with positive transition outcomes in employment, post-secondary education, or independent living or based on research indicating a practice was considered a best practice. The components extracted from the PCA are discussed below.

Dependent variables. The DVs were named Agency Usage (DARS/DADS), Transition Utility, and Transition Outcomes. Many survey items in Agency Usage were similar to items used in consumer surveys by DARS and DADS, such as "It was easy to get the benefits or services my child needed after graduation." Some items were created to understand how parents felt about their agency experiences. For example, one item

asked parents to rate their level of agreement with, "My child is receiving all of the services he/she needs." The discussion of the components extracted by the PCA follows.

Items regarding Transition Utility asked parents about their experiences with and services from DARS or DADS. Two examples are "It was easy to get the benefits or services my child needed after graduation" and "The DARS or DADS benefits or services my child has received have helped her/him to achieve her/his goals."

Survey items in Transition Outcomes asked parents two questions about transition outcomes in education, vocational training, employment, and independent living. One question asked if the child was currently employed and the other question asked if the child had been employed at any time since graduation, for example.

Principal Components Analysis of Survey Items

PCA is used as a way to reduce the number of interrelated variables by creating major components (Jolliffe, 2002). The new components constitute a smaller set of data that minimizes loss of information (IBM Corp, 2012). The resulting components are uncorrelated and ordered so that the initial components remain with the maximum variation for later analysis (Jolliffe, 2002).

Survey PCA. All items in each of the three survey sections, Transition Process, Agency Usage, and Transition Outcomes were analyzed using PCA because items were assumed to be interrelated as they were selected from an existing transition framework and since an analysis of data indicated that data largely met the assumptions underlying PCA (see Appendix B). Since many factors across the three sections of the survey were above the .32 correlation level (see Appendix B) recommended by Tabachnick and

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Fiddell (2007) and since Tabachnick and Fiddell (2007) recommend oblique rotation under these circumstances, Promax was used for rotation. The purpose of rotation is to make the factor loadings clearer to allow for better interpretation of data.

Transition Process PCA. A PCA with Promax rotation determined that the survey questions related to the IV of Transition Process had seven components and not the five that were expected given that items were developed based on the five factor model developed by Kohler (1996). Three components, Student Focused Planning, Program Structures, and Student Development, were maintained from Kohler's model because most items that composed the three components were from the respective taxonomy category. Although two of the three items from Kohler's Family Roles and Responsibilities factor loaded together, other items that loaded on this factor represented contributions to general family knowledge of the transition process, so the fourth factor was labeled Family Knowledge. The fifth factor contained items that indicated the student's knowledge of post high school options and was named Student Knowledge. The sixth component of the PCA contained items related to the inclusion of the student and family in school and was labeled Student and Family Inclusion. The final component included items that related to post school employment and was labeled Employment Issues. Details of each of the seven transition factors are detailed in Table 3.1

Agency usage PCA. The PCA indicated that the items related to the DV, Agency Usage, formed two components that were labeled Agency Experiences and Agency Services. The Agency Experiences was composed of items that asked parents to

rate their level of agreement with statements about DARS/DADS such as, "DARS or DADS staff members were able to answer my questions." The Agency Services component asked parents to rate their level of agreement with statements like, "The DARS or DADS benefits or services my child has received have helped her/him to achieve her/his goals" (see Table 3.2).

Transition Outcomes PCA. The second DV, Transition Outcomes, was composed of two types of items. The first type of item asked parents about outcomes in the areas of employment, education, vocational training, and independent living in a Yes/No format. These items constituted Transition Outcomes and are the type of outcomes typically reported in the transition literature. The second type of statement asked parents to rate their level of agreement with statements about the usefulness of the transition planning process such as, "The employment goals in my child's transition plan helped him/her to become employed after graduation." These items are not outcomes as are typically reported in the transition literature. They were included in the survey to ascertain whether parents felt the transition process was helpful in using agencies, attaining agency services, and attaining transition outcomes. The components of these two item types are discussed below.

The PCA determined that "Transition Outcomes" items contained five components. Three components were related to transition outcomes in the areas of employment, education, vocational training, and independent living and the remaining two components were related to the statements about parental opinions about agency usage and the transition process. The items related to transition outcomes contained two

questions about each outcome area. For instance, the first question asked if the child was currently employed, and the second question if the child had ever been employed since graduation. PCA indicated that items related to the questions concerning education and vocational training loaded on a single factor, which was named Education and Training.

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Table 3.1
Principal Components Analysis for Transition Process (Communalities in parenthesis)

Survey items	Student focused planning	Program structures	Student development	Family knowledge	Student knowledge	Student and family inclusion	Employment issues
			Factor names				
Opportunities to develop interests (.712)	**.501**	.018	.139	.307	-.040	-.014	.285
Developed plan (.852)	**.927**	-.096	.036	-.050	.087	.090	-.078
Active participant in meetings (.844)	**.899**	-.051	.040	-.111	.095	.183	-.114
General education expectations (.638)	**.440**	.301	-.149	.393	-.158	-.160	.212
School welcoming (.830)	-.188	**.884**	-.014	.018	.114	.081	.058
Family respect (.788)	-.159	**.921**	.030	-.258	.213	-.066	.141
Child included (.690)	.408	**.689**	-.016	-.158	-.050	-.019	-.194
Special education expectations (.545)	.008	**.482**	.042	.428	-.216	-.003	-.004
Staff knowledgeable about child (.699)	.353	**.605**	-.002	.140	-.133	-.017	.067
Self Determination goals (.787)	.271	-.136	**.765**	-.018	.087	-.058	.130
Plan coordinated (.669)	.099	-.056	**.630**	.383	.097	-.123	-.025
Education goals (.575)	.309	.055	**.568**	-.102	.167	-.145	-.088
Independent living (.759)	-.032	.070	**.557**	-.107	-.076	.526	.116
Social skills (.844)	-.332	.150	**.816**	-.022	-.026	.238	.145
Training on transition (.739)	.001	-.323	.067	**.555**	.091	.444	.110
Training on agencies (.672)	-.159	.085	-.141	**.714**	.272	-.064	.117
School staff agency knowledge (.763)	-.216	.194	.119	**.723**	.292	-.128	-.204
Agency agreements explained (.720)	.109	-.222	.051	**.908**	-.113	.017	-.095
Aware of employment options (.812)	.064	.135	.079	.000	**.772**	-.045	.158
Aware of educational options (.776)	.430	.048	.164	-.016	**.620**	.018	-.206
Aware of independent living options (.747)	-.004	-.033	.068	.148	**.728**	.085	.092
Vocational classes (.745)	.243	.090	-.473	.052	.217	**.598**	.201
Parent involved in planning (.562)	.134	-.006	.081	-.075	-.021	**.765**	-.226
School-wide inclusion (.720)	-.040	.361	.183	.240	-.088	**.449**	-.449
Child's goals and interests in plan (.601)	.061	-.029	.399	-.094	-.038	-.117	**.704**
Employment goals (.637)	.192	.110	.299	-.089	.001	.295	**.394**
Paid work experience (.641)	-.159	.059	-.033	-.002	.117	-.106	**.832**
Eigenvalues	9.018	2.416	2.254	1.899	1.471	1.248	1.060
% of total variance	33.40%	8.95%	8.35%	7.03%	5.45%	4.62%	3.93%
# of test measures	4	5	5	4	3	3	3

Notes. Factor loadings for each component are in boldface.

The two items that related to employment outcomes and the two items that related to independent living outcomes loaded as separate factors. Typically, factors should contain a minimum of three items to facilitate interpretation (Raubenheimer,

2004), however, a two item component is acceptable when factor the two items are

highly correlated to each other and not correlated to other factors (Tabachnick & Fidell,

1983). The correlation matrix for the two items independent living items produced a .79

correlation and other relationships were less than .29. The correlation between the two

employment items was .53 and the remaining items were correlated to the two

employment items below .29. Clearly, independent living items met the standard to

form a two item component. It was less clear whether the two employment items

formed a two item factor since the correlation was not of the level recommended,

however, because employment is the most reported transition outcome it was included as

a component (see Table 3.3).

Table 3.2
Principal Components Analysis for Agency Usage (Communalities in parenthesis)

Survey items	Factor names	
	Agency Experiences	Agency Services
Waited reasonable time (.419)	**.457**	.263
Staff able to answer questions (.760)	**.846**	.050
Services explained clearly (.612)	**.740**	.079
Treated with respect (.748)	**.929**	-.146
Chance to needed services (.504)	**.811**	-.299
Staff were knowledgeable about other services (.701)	**.774**	.115
Complaint process explained (.412)	**.546**	.161
I believe my complaints would be treated fairly (.674)	**.546**	.161
Easy to get the services (.519)	.060	**.689**
Services helped to achieve goals (.681)	.156	**.735**
Enough programs to meet needs (.810)	-.012	**.906**
Child receiving needed services (.774)	-.294	**.990**
Overall satisfaction (.838)	.159	**.826**
Eigenvalues	6.458	1.995
% of variance explained	49.68%	15.35%
# of test measures	8	5

Notes. Factor loadings for each component are in boldface.

The remaining two components were related to parental perceptions of the transition process, Transition Utility (see Table 3.4). The first component was related to how parents perceived the transition process prepared the family for future DARS/DADS usage and was labeled Process Utility. The second component was composed of items that focused on parent's opinions of whether the employment, education, vocational training, and independent living goals in the transition plan were related to transition outcomes in the associated areas and was titled Goals Utility.

Table 3.3
Principal Components Analysis for Transition Outcomes (Communalities in parenthesis)

Survey items	Factor Names		
	Education and training	Independent living	Employment
Current educational training (.640)	.750	-.059	.220
Ever educational training(.685)	.748	-.075	.293
Current vocational training (.707)	.808	.155	-.251
Ever vocational training(.584)	.754	-.036	-.217
Currently living outside home (.900)	-.012	.936	.105
Ever lived outside home (.884)	.005	.942	-.032
Current employed (.692)	.000	.195	.794
Ever employed (.746)	-.033	-.097	.868
Eigenvalues	2.424	1.906	1.508
% of variance explained	30.29%	23.83%	18.85%
# of test items	4	2	2

Notes. Factor loadings for each component are in boldface.

Variable Relationships

The four research questions were inferentially investigated using five models. The first model used the seven-factor Transition Process as the IVs and the DVs were the two factors that made up Agency Usage. In model two, the seven-factor Transition Process factors were the IVs and the DVs were the three-factor Transition Outcomes. In the third model, the two factors that made up Agency Usage were the IVs and the DVs

were the Transition Outcome components related to Education and Training,

Employment and Independent Living, and Outcomes Combined. The fourth model used

Transition Utility, composed of Goals Utility and Process Utility, as the IV, and the DVs

consisted of the two factors that comprised Agency Usage, Agency Experiences and

Agency Services. The final model again used Transition Utility as the IV and the DVs

consisted of Transition Outcomes.

Table 3.4
Principal Components Analysis for Transition Utility (Communalities in parenthesis)

Survey items	Factor Names	
	Process Utility	Goals Utility
Understood agencies (.428)	**.654**	.320
Training useful (.770)	**.857**	.215
Plan useful (.615)	**.781**	.414
Easy transition (.596)	**.765**	.433
Employment goals helpful (.762)	.442	**.871**
Education goals helpful (.794)	.540	**.876**
Vocational goals helpful (.596)	.504	**.727**
Independent living goals helpful (.657)	.101	**.765**
Eigenvalues	3.787	1.404
% of variance explained	47.34%	17.56%
# of test items	4	4

Notes. Factor loadings for each component are in boldface.

Instrument

Survey Development

Initial steps. The first steps in the process were to select the target audience,

determine the purpose, goals, research questions and hypothesis. The initial target

audience was individuals with ID, however, since initial research indicated that a

majority of studies focused on parent reports, the decision was made to focus on parents

of individuals with ID. After determining that parents were the target audience and

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reviewing the research into parental involvement in the transition process, the purpose of the investigation was determined to be an examination of transition experiences of parents to determine the relationship between parental transition knowledge and agency usage and transition outcomes. The goal was to see what effect parental knowledge of transition, functioning within a transition framework had on agency usage and transition outcomes. With this goal in mind, four research questions were developed:

1) What is the relationship between family knowledge of transition and agency usage after graduation?

2) What is the relationship between family knowledge of transition and transition outcomes?

3) What is the relationship between agency usage and transition outcomes?

4) What is the relationship between the transition process and parent's opinion of the transition process?

The general hypotheses were that parents who reported that the transition process helped them understand what they need to know about DARS or DADS (knowledge) would report better experiences and greater satisfaction with services from DARS or DADS (research question 1) and better transition outcomes for their children (research question 2) than parents who reported that the transition process left them with lower levels of knowledge about DARS or DADS. In addition I hypothesized that agency usage would be positively related to transition outcomes (research question 3) and that knowledgeable parents would view the transition process as useful (research question 4).

Item selection. Next, items for the survey were developed based on transition literature. Kohler's Taxonomy for Transition Programming was selected as the framework for questions because of its rigorous research base and wide use in transition research.

The IVs were the practices associated with each of the categories of Kohler's Taxonomy and this section of the survey was labeled Transition Process. Not all transition practices reviewed were deemed relevant to students with ID, so item inclusion was based on relevance to students with ID and either the research base indicating a transition practice was positively associated with a transition outcome or the literature related to best practices in transition.

Because transition literature indicated that parents of children with ID are highly involved in the transition process but transition outcomes are well below the level of outcomes achieved by both individuals with other disabilities and youth without identified disabilities, it was assumed that parental involvement in transition meetings was neither the cause of poor outcomes nor the solution to improving outcomes. Instead, since research indicated that parents said they did not understand the transition process, the focus of parental involvement in this study was parental training and knowledge of the transition process, which is a component of Kohler's taxonomy (Kohler, 1996) that has not been well studied.

In addition, since the Taxonomy for Transition Programming (Kohler, 1996) includes components of parental involvement throughout each factor, I speculated that items not related to parental training might load together with parent training to form a

knowledge component. For example, an item was developed for interagency

collaboration that stated parents were told about interagency agreements. Since required

collaboration of state agencies may have been covered in parent training, I thought this

item and others could load with the items about parent training to form a family

knowledge component. Initially, statements were developed on a four-point scale with

response choices ranging from strongly disagree to strongly agree but the final survey

used a six-point survey that included "Not Sure" and "Prefer not to respond-N/A."

DVs in the survey focused on two areas: agency usage and transition outcomes.

Items in the agency usage section were based on items commonly found in satisfaction

surveys used by DARS and DADS. Some items in the transition outcomes section were

based on transition outcomes commonly reported in transition literature. Other items in

this section were related to parent opinions about the perceived value of the transition

process in helping their child meet post high school goals. Questions about transition

outcomes were framed as Yes/No and statements about the perceived value of the

transition process were framed as a four-point scale ranging from "Strongly Disagree" to

"Strongly Agree." After consulting with a statistics expert, the scale, "Not sure" and

"Prefer not to respond- N/A" were added to all scales to ensure accuracy of responses.

By adding these categories, respondents are not "forced" to make a choice that does not

reflect their experience, but can either state that they are not sure or opt out of answering

the question.

Survey Format. An initial attempt was made to format the survey using

Microsoft Word, which caused considerable formatting difficulties whenever an item

was added, deleted, or changed. As a result, SurveyMonkey was selected to format the survey. Advantages to using SurveyMonkey included clear layout, appropriate font size and ease of data collection. In addition, formatting changes were easier with the selected program.

Validity. The next step in developing the survey was to establish validity. After obtaining Institutional Review Board approval the principal investigator took several steps before the final survey was completed. First, the researcher conducted a literature review and only included items in the survey that the transition literature had determined were either best practices or associated with positive transition outcomes to establish construct validity. Next, the researcher convened a focus group with five parents. Then, a pilot study was conducted with 15 parents. Finally, the survey was sent to a group of five transition professionals: two Ph.Ds. with transition backgrounds, 2 doctoral students studying transition, and a parent who works at a University Center of Excellence in Developmental Disabilities and has a child who has graduated and received transition services. Changes to the survey instrument were made at each step of the process to reflect the feedback of the groups. This process established both face and content validity of the survey. Each step of the process is described in greater detail below.

Literature review. The first step in the literature review was to establish search terms, then use library databases to find articles. Eric (EBSCO), PsycINFO (ProQuest), and ProQuest Dissertations & Theses Full Text. Articles were reviewed to determine which were valid for inclusion in the current study. In addition, reference sections from relevant articles were reviewed to find additional sources. Finally, an electronic search

of the general catalog of the university library was conducted. This search included books, research articles, monographs, reports, conference proceedings, government documents, dissertations, and theses.

Focus group. The researcher began by sharing information about transition to determine familiarity with transition terms and to determine what parents thought was important in the transition process. Parents were then presented with the initial set of statements selected for the survey. Parents had time to read over the statements to determine if questions made sense to them, whether wording was confusing or clear, and whether vocabulary was appropriate. The primary investigator answered any questions, and based on this feedback, a second version was developed. The second version had fewer items, although some items were added. In addition, the wording of several questions was changed in accordance with feedback from the focus group. The focus group was familiar with much of the transition terminology in the survey as well as generally knowledgeable about DARS and DADS. Some parents were not aware of the agency they had not used.

Pilot testing. Next, the researcher conducted a pilot study across several weeks on a group of 15 parents who had a child with ID, some of whom were in school but had a transition plan and some of whom had graduated. The purposes of the pilot study were to determine whether parents understood the survey, to determine the average time to complete the survey, and to collect comments about how to make the survey more user-friendly. The process began with a short lecture about the Taxonomy for Transition Programming and a question and answer session. Next, parents took a paper and pencil

version of the survey. Feedback from the group indicated that although the test was

lengthy, they were interested in the topic and they believed that parents would not be

concerned with the length. The first parent finished the survey at approximately 40

minutes and the last finished at 75 minutes. In addition, the group felt that questions

were easily understood, but pointed out how some items that were related used slightly

different wording. As a result, wording to some items was changes to gain consistency

in the survey. Parents also recommended changes to the format to indicate how

statements were grouped.

Peer review. The final step of the survey development was to send the survey to

several transition professionals to examine the survey. The professionals included three

Ph.D. level transition professionals, one of whom distributed the survey to two doctoral

students studying transition issues; a director of an independent living center with a

transition background; and a parent with a child with ID who worked at a University

Center for Excellence in Developmental Disabilities and who had been through the

transition process with his daughter who had an ID. Based on this feedback, minor

changes to wording were incorporated into the survey.

Reliability. It was assumed that parents would respond accurately and therefore

a measure of reliability was not necessary in test development. Interrater reliability,

represented by Chronbach's alpha, is reported for each component of the survey and for

items within each component (see Appendix B). Components of the scales displayed

Chronbach's alphas between .649 and .919. Generally, > .9 is Excellent, > .8 is Good, >

.7 is Acceptable, > .6 is Questionable, > .5 is Poor, and < .5 is Unacceptable. Two

components were below .6, so a regression analysis was run without the two components however results were similar to the seven-factor solution. Given the similarity in R^2 between the two models, and because research supports the inclusion of these variables, the variable were retained for the final analysis.

Survey Description. The survey had four major components. The first part of the survey consisted of the Texas A&M Human Subjects Protection Information Sheet and Consent forms. The second part of the survey consisted of the qualification survey, which had the following statements to which the subjects were to respond Yes or No: I am the parent/guardian of a child with an intellectual disability (In 2010, mental retardation was changed to intellectual disability in the Individuals with Disabilities Education Act); My child has graduated from a Texas high school; and I can recall my child's secondary transition experiences. If a parent answered no to any of the three questions, the survey program sent the subject to a page thanking them for their participation. The third part of the survey contained information about completing the survey, DARS and DADS, the sections of the survey, an explanation of the scale, and a statement about confidentiality. This section also contained information that reminded participants of the previous names of agencies prior to the current DARS/DADS labels. The fourth part of the survey was the body of the survey.

The body of the survey was divided into four sections. The first section was demographic information about the parent and child. The second section examined the parents' transition experiences. The third section was about transition outcomes, and the last asked about parental experiences with DARS or DADS.

Data Collection Procedures

The survey was available online, paper and pencil, and telephonically. With one exception, all surveys were taken online. One person contacted the principle investigator to take the survey over the phone, but the survey was administered face to face instead. No requests were received to have a survey mailed.

Online surveys were administered using SurveyMonkey, which provided several advantages. SurveyMonkey, located at http://www.surveymonkey.com, allows for various types of questions (e.g., open ended, Likert-type, rating, etc.), was easy to access with a provided link, used skip logic (people who did not qualify were taken to the Survey Completed page), and encouraged subjects to complete the survey by not allowing them to skip questions. In addition, if a person did not completer the survey in their first attempt, the survey could be accessed at the point where they terminated the previous session.

Survey Response Description

The survey took between 45 minutes to one hour and a half to complete. Sixty individuals who qualified to take the survey answered all questions. One hundred-eight people accessed the survey online and one person took the survey in a face to face format. Of these 109 people who took the survey, 31 (28.4%) were not qualified to take the survey because they answered "No" to at least one of the three qualification questions. Of the remaining 78, four subjects (3.7%) were eliminated due to answering all questions with either 1 or 4. Of the 74 subjects that remained, 14 (12.8%) were

eliminated because of incomplete responses. Due to the nature of the sampling method, a response rate was unattainable.

Analysis

PCA, descriptive, and MRC analyses were conducted using IBM SPSS for Windows, Version 21.0 (IBM Corp, 2012). Following the elimination of incomplete and suspicious data, some items were reverse coded to ensure that all scales were in the same direction. Next, items were analyzed to ensure that they met the assumptions underlying PCA and MRC. Analysis indicated that items met assumptions, so PCA was conducted. Components were constructed and descriptive statistics were run on Transition Outcomes and Transition Utility. Then regression analyses were run to answer each research question.

Summary

This study examines the relationships between Parental Knowledge, defined as receiving training about transition and post school services, within a transition framework and both Agency Usage and Transition Outcomes. The number of parents surveyed this study was 60. Organizations that work with parents of children with ID or serve individuals with disabilities helped to recruit parents.

The analysis of data began with a PCA to determine the components present in each section of the transition survey then moved to a multiple regression to investigate the relationships between the IVs and the DVs. Data analysis includes descriptive statistics of the sample, descriptive analysis of transition outcomes, the PCA, and the regression analyses of DVs on the IVs. The PCA determined that Transition Process

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was composed of seven components, while Agency Usage had two components and Transition Outcomes had five components. The four items that assessed education and vocational training loaded together, but the two items that asked about independent living outcomes and the two items that asked about employment outcomes both loaded as separate components. Since components should include at least three items, independent living and employment were combined. In addition, a component was created that combined all outcomes for the purposes of analysis.

Two components of Transition Outcomes, Process Utility and Goals Utility, were also used as IVs called Transition Utility to determine its relationship with both Agency Usage and Transition Outcomes in employment, education, vocational training, and independent living. The outcomes of the descriptive and regression analyses are presented in the next chapter.

The survey instrument was developed after an extensive literature review to determine which transition practices were considered best practices or positively associated with transition outcomes. Next the selected items were formatted and presented to a focus group, a pilot study was completed, and the instrument was reviewed by transition experts. This process established content and face validity.

Reliability was not assessed in the development of the instrument as it was unnecessary since one may assume that answers parents give reflect their lived reality. Chronbach's alpha was used to assess the inter-item reliability of each section of the test. Alpha levels ranged from > .5 to > .8. Although items that comprised the two components that fell near the .5 range are considered "poor" and should be considered

for elimination, the items remain in the survey analysis because of the strong theoretical

grounding for each component.

CHAPTER IV

RESULTS

The main purposes of this study were to investigate the relationship between Family Knowledge developed within a transition framework and Agency Usage and between Family Knowledge developed within a transition framework and Transition Outcomes. Other research questions focused on the relationship between Agency Usage and Transition Outcomes and the relationship between Transition Process and Transition Utility. The PCA for items that composed the Transition Process showed seven components that were labeled, Student Focused Planning, Program Structures, Student Development, Family Knowledge, Student Knowledge, Student and Family Inclusion, and Employment Issues. Student Focused Planning, Program Structures, and Student Development mirror the components from Kohler's Taxonomy, and Family Knowledge is comparable to Parental involvement from the Taxonomy. However, the items that comprised Student Knowledge, Student and Family Inclusion, and Employment Issues did not load as expected but were combined to into factors since grouping them under the chosen names made intuitive sense, factor loading scores for the items supported their being grouped, and the eigenvalues for the components indicated they helped explain variance. These seven components served as the IVs for research questions about Agency Usage, Transition Outcomes, and Transition Utility.

Agency Usage, composed of Agency Experiences and Agency Services, was used as both a DV and an IV. First each component of Agency Usage components was

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used as a DV to examine the relationship between Family Knowledge within the Transition Process and Agency Usage, the first research question. The third research question focused on the relationship between Agency Usage and Transition Outcomes, therefore the components of Agency Usage were IVs.

The PCA indicated Transition Outcomes consisted of three components: Education and Training, Independent Living and Employment, which were used as DVs to examine the relationship between Transition Process and Transition Outcomes. A set of questions within the Transition Outcomes section of the survey focused on parental opinions of the transition process. These items were named Transition Utility. However, since these set of questions are not typically used in transition outcomes research, a separate PCA was run for the items that made up Transition Utility. The analysis indicated that the questions formed two components that were labeled, Goals Utility and Process Utility. These components were used as DVs to examine the relationship of Transition Process with Transition Utility.

To explore these relationships, parents of children with ID took a survey designed to answer four research questions:

1) Within a transition framework, what is the relationship between family knowledge of transition and agency usage after graduation?

2) Within a transition framework, what is the relationship between family knowledge of transition and transition outcomes?

3) What is the relationship between agency usage and transition outcomes?

4) What is the relationship between parent's opinion of the transition process and

agency usage and outcomes?

Chapter IV discusses the study's sample and describes the transition outcomes.

The remainder of this chapter includes the regression analysis of the four research

questions, and a summary of the findings.

Sample

The sample included 60 of 109 (55%) individuals who accessed the survey. Of

the original sample of 109, 38 (34.9%) did not answer the qualification questions in the

affirmative and therefore, were not eligible to take the survey. Of the remaining 71

individuals who accessed the survey, 11 (10.1%) individuals did not complete the survey

and were not used for analysis, which means that 60 individuals were qualified to take

the survey and produces completed survey with no suspicious response patterns.

The parents who responded to the survey were predominantly mothers of

children who graduated from high school after 2004 and reported English as the home

language ($\geq$ 80%). About two thirds of the respondents had at least a bachelor degree,

earned over $50,000, were parents of males, and were White/Caucasian. Parents

reported the highest levels of disabilities in the categories of ID and Autism (AU).

Fewer parents reported disabilities such as Other Health Impairment (OHI) and Multiple

Disabilities (MD) and even fewer parents reported their child has an Auditory

Impairment (AI), Visual Impairment (VI), or Deaf-Blindness (DB, see Table 4.1).

Compared to an annual Texas Education Agency report (TEA, 2011) , the

sample for this study mostly diverges from the typical parent of a child with a disability

in Texas (see Table 4.2). One way in which the samples were similar was student

gender (TEA 64.1% v. 63.3). However, this sample overrepresented Whites (TEA 37.5

v. 65), was better educated (28% college graduate v. 61.6%), and probably

overrepresented higher incomes (TEA, not economically disadvantaged, 36% v. Income

+50,000, 68.3%).

Transition Outcomes

Parents reported transition outcomes in the areas of employment, education,

vocational training and independent living and I explored these outcomes using

frequency counts and percentages. Most parents reported that their child was currently

unemployed and living at home. Parents reported identical levels of being currently in a

vocational training program and ever being in a vocational training program (23%). The

differences between currently living outside the family home and ever living outside the

family home were minimal (15% v. 13%). The highest positive outcome was reported

for ever having been enrolled in an educational program (48%). Outcomes for all

Transition Outcomes ranged from 13% to 48% (see Table 4.3).

Table 4.1
Participant Demographics (N=60)

Variable	Total	Percentage
Relationship		
Mother	48	80%
Father	4	6.7%
Other family member	3	5%
Legal guardian	3	5%
Other	2	3.3%
Level of education		
High school degree or equivalent	6	10%
Some college	14	23.3%
Associate degree	3	5%
Bachelor degree	20	33.3%
Graduate degree	17	28.3%
Income		
$0-$24,999	4	6.7%
$25,000-$49,999	14	23.3%
$50,000+	41	68.3%
Did not answer	1	1.7%
Home language		
English	57	95%
Spanish	2	3.3%
Both English and Spanish	1	1.7%
Gender of child		
Male	38	63.3%
Female	22	36.7%
Race		
White/Caucasian	39	65%
Hispanic	14	23.3%
Black or African American	6	10%
Asian/ Pacific Islander	1	1.7%
Year Graduated		
1991-2000	4	6.6%
2001-2004	2	3.3%
2004+	51	85%
Did not answer	3	5%
Disability*		
Intellectual disability	33	55%
Autism	31	51.7%
Other health impairment	13	21.7%
Multiple disability	9	15%
Auditory impairment	4	6.7%
Visual impairment	3	5%
Deaf-blindness	2	3/3%

Note. Disability does not sum to 100% as some parents reported their child had more than one disability.

Regression Results

The sample size for this survey falls on the lowest end of sample sizes that are acceptable for PCA and MRC. An analysis of the PCA was conducted to determine whether the data met the assumptions that underlie MRC. The analysis determined that the factors extracted for the analysis met the assumptions.

Table 4.2
Study versus Statewide Demographics

Variable	Study	Statewide
Ethnicity		
Black or African American	10%	17.7%
Hispanic	23.3%	40%
White	63.3%	40.8%
Asian/Pacific Islander	1.7%	-
Other	-	1.5%
Gender of child		
Male	63.3%	66.8%
Female	36.7%	33.2%
Level of education		
Some high school	-	16%
GED	-	5.6%
High school graduate	-	21.8%
High school degree or equivalent	-	10%
Some College	23.3%	-
Associate degree	5%	-
Bachelor degree	33.3%	-
Graduate degree	28.3%	-
College graduate	-	28%
Income		
Economically disadvantaged	-	63.3%
$0-$24,999	6.7%	-
$25,000-$49,000	23.3%	-
$50,000+	68.3%	-

Note. Statewide statistics taken from "Statewide Survey of Parents of Students Receiving Special Education Services' by Texas Education Agency, 2011.

Regression of Agency Usage on Transition Process

I conducted a MRC to examine the relationship between Transition Process and Agency Usage after graduation (see Figure 4.1), which represented the first research

question. The items that formed the IVs in transition process were drawn from Kohler's

Taxonomy of Transition Programming (Kohler, 1996) and based on research that

indicated that the practices in the survey items were either associated with positive

transition outcomes or were considered best transition practices by transition experts. A

PCA did not reproduce Kohler's five factor transition model. Instead, the PCA indicated

that Transition Process items formed seven components. The first component of Agency

Table 4.3
Frequencies of Transition Outcomes

	Transition Outcomes							
	Employment		Education		Vocational training		Independent living	
	Current employment	Ever employed	Current education	Ever education	Current vocational	Ever vocational	Current living	Ever living
Yes	16	23	22	29	14	14	8	9
No	42	35	36	29	44	43	51	50
Not sure	2	2	2	2	2	3	1	1
% Positive outcome	26.7%	38.3%	36.6%	48.3%	23.3%	23.3%	13.3%	15%
% Negative outcome	70%	58.3%	60%	48.3%	73.3%	71.7%	85%	83.3%

Usage was Agency Experiences, which consisted of items that asked parents to rate their

level of agreement with statements associated with their personal interactions with

agency personnel as parents attempted to access services. The second component,

Agency Services, asked parents to rate their level of agreement with statements

associated with services accessed. The hypothesis for this research question was that at

least the Transition Process component of Family Knowledge would be significantly

related to Agency Usage. In other words, if parents report that the transition process

taught them about transition and agencies, they would also report better experiences with

and ease in receiving services from DARS or DADS.

Figure 4.1
Regression Model of Agency Usage Regressed on Transition Process
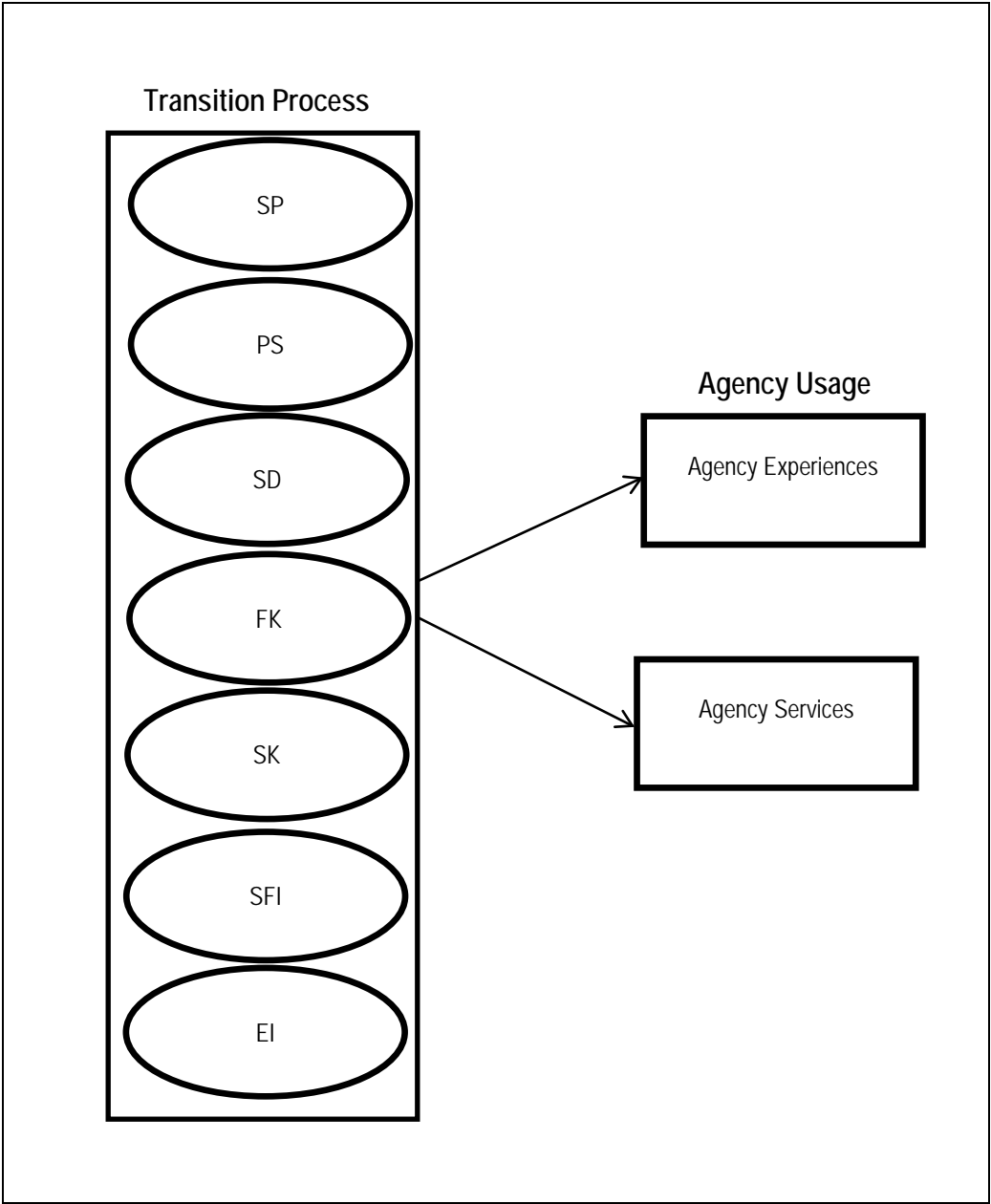
An ANOVA analysis indicated that neither the model that regressed Agency Experiences on Transition Process ($R^2_{adj.}$ = -.068, F (7, 52) = .47, p = .85) nor the model that regressed Agency Services on Transition Process ($R^2_{adj.}$ = .033, F (7, 52) = 1.29, p = .28) were significantly different from the null hypothesis, which states that Transition Process does not influence Agency Usage. Thus, it appears that the process of transition is neither related to parental experience with agencies nor whether they receive services from agencies, for this sample. Furthermore, the analysis did not support the hypotheses that Family Knowledge was positively related to Agency Usage (see Table 4.4).

Table 4.4
Regression Summary for Agency Usage on Transition Process (N=60)

	Agency Usage							
	Agency experiences				Agency services			
Variable	B	SE B	β	95% CI[a]	B	SE B	β	95% CI
SFP[b]	.063	.296	.038	[-.530, .657]	.032	.208	.026	[-.386, .450]
PS	.066	.246	.046	[-.428, .560]	.032	.173	.030	[-.316, .379]
SD	-.124	.257	-.089	[-.639, .390]	.021	.181	.020	[-.342, .383]
FK	.052	.328	.027	[-.606, .710]	.267	.231	.187	[-.196, .731]
SK	.566	.412	.250	[-.260, 1.392]	.557	.290	.332	[-.025, 1.139]
SFI	-.542	.486	-.202	[-1.517, .433]	-.413	.342	-.208	[-1.099, .274]
EI	-.254	.412	-.101	[-1.080, .573]	-.536	.290	-.287	[-1.117, .046]
$R^2_{adj.}$		-.068				.033		
F		.467				1.288		

Notes. [a] CI = confidence interval. [b] SFP = Student Focused Planning, PS = Program Structures, SD = Student Development, FK = Family Knowledge, SK = Student Knowledge, SFI = Student Family Inclusion, EI = Employment Issues.

Regression of Transition Outcomes on Transition Process

The second research question tested the relationship of Family Knowledge in Transition Process to the three component DVs in Transition Outcomes (see Figure 4.2). The hypothesis was that at least the Transition Process component of Family Knowledge would be significantly related to each Transition Outcome component. The ANOVA

analyses showed that for this sample Transition Process is not related to the outcomes of Education and Vocational Training ($R^2_{adj.}$ = .026, $F (7, 52)$ = 1.22, p = .31), Independent Living ($R^2_{adj.}$ = -.092, $F (7, 52)$ = .29, p = .96), or Employment ($R^2_{adj.}$ = .057, $F (7, 52)$ = 1.15, p = .18). These analyses suggest that for parents in this sample, the transition process was not related to these outcome measures (see Table 4.5).

Table 4.5
Regression Summary for Transition Outcomes on Transition Process (N=60)

	Transition Outcomes											
	Education and training				Independent living				Employment			
Variable	B	SE B	β	95% CI[a]	B	SE B	β	95% CI	B	SE B	β	95% CI
SFP[b]	.135	.107	.212	[-.080, .350]	.029	.054	.096	[-.080, .138]	.078	.061	.212	[-.044, .201]
PS	.074	.089	.137	[-.105, .253]	-.013	.045	-.050	[-.103, .078]	.041	.051	.129	[-.061, .142]
SD	-.009	.093	-.017	[-.195, .178]	-.051	.047	-.200	[-.145, .044]	.030	.053	.098	[-.076, .136]
FK	.207	.119	.284	[-.031, .446]	-.002	.060	-.004	[-.122, .119]	-.064	.068	-.152	[-.200, .071]
SK	-.010	.149	-.012	[-.309, .290]	.065	.075	.159	[-.086, .217]	.017	.085	.033	[-.154, .187]
SFI	-.239	.176	-.235	[-.592, .115]	-.025	.089	-.051	[-.203, .154]	-.170	.100	-.289	[-.371, .031]
EI	-.237	.149	-.248	[-.537, .062]	-.014	.075	-.030	[-.165, .138]	.107	.085		[-.063, .277]
$R^2_{adj.}$	.026				-.092				.057			
F	1.223				.292				1.513			

Notes. [a] CI = confidence interval. [b] SFP = Student Focused Planning, PS = Program Structures, SD = Student Development, FK = Family Knowledge, SK = Student Knowledge, SFI = Student Family Inclusion, EI = Employment Issues.

Agency Usage on Transition Outcomes

The third research question investigated the relationship between Agency Usage and Transition Outcomes (see Figure 4.3). Transition Outcomes consists of three components, Education and Training, Independent Living, and Employment. The hypothesis was that the three Transition Outcomes would be positively related to Agency Usage.   The ANOVA analyses indicated that for this sample, Transition Outcomes were not significantly different from the null hypothesis that states that there

is no relationship between Agency Experiences or Agency Services (i.e., Agency Usage) and Transition Outcomes. The first model that investigated the relationship between Agency Usage and Education and Training outcomes was not significantly different from the null hypothesis ($R^2_{adj.}$ = .056, F (2, 57) = 2.74, p = .073). Likewise, Agency Usage was neither related Independent Living ($R^2_{adj.}$ = -.033, F (2, 57) = .060, p = .942) nor Employment ($R^2_{adj.}$ = -.026 .F (2, 57) = .241, p = .320, see Table 4.6).

Table 4.6
Regression Summary for Transition Outcomes on Agency Usage (N=60)

Transition outcomes		Variables			
		AE[b]	AS[c]	$R^2_{adj.}$	F
Education and training	B	-.076	.182	.056	2.742
	SE B	.057	.078		
	β	-.201	.354*		
	95% CI[a]	[-.191, .039]	[.026, .337]		
Independent living	B	--.010	-.008	-.033	.060
	SE B	.029	.039		
	β	-.055	.031		
	95% CI	[-.067, .048]	[-.070, .085]		
Employment	B	.004	-.030	-.026	.241
	SE B	.035	.047		
	β	.017	-.100		
	95% CI	[-.066, .073]	[-.123, .064]		

Notes. [a] CI = confidence interval. [b] AE = Agency Experiences, [c]AS = Agency Services

Transition Utility on Transition Process

The final research question examined the relationship between Transition Process and Transition Utility (see Figure 4.4). Transition Utility was composed two components. One component, labeled Goals Utility, asked parents whether the goals related to a specific transition outcome helped their child to achieve said outcome. The

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second component asked parents whether the transition process was useful in helping parents understand how to use the agency system after graduation. This component was labeled Process Utility. The hypotheses were that parental knowledge would relate to positive utility outcomes with both components. The ANOVA model that tested the null hypothesis that there is no relationship between the predictors in Transition Process and the DV of Goals Utility indicated that the null hypothesis should be rejected ($F (7, 52) =$ 7.975, $p < .001$). The R^2 effect size of .518 indicates that approximately 52% of the variance is explained by the transition model.   According to Cohen (1988) this effect size is large. Although use of the benchmarks set by Cohen should be avoided when a body of research has developed a body of research that has reported effect sizes, when no such body of research exists, then use of the benchmarks is warranted (Vacha-Haase & Thompson, 2004). The adjusted R^2 of the model, .453, is a .063 change from the R^2.

The R^2 effect size uses every predictor to explain variation, whereas the adjusted R^2 penalizes independent variables that do not belong in the model. Analysis of the transition components indicates that Student Knowledge was the only predictor that met statistical significance ($p < .01$). The unstandardized regression (B) weight of .428 for Student Knowledge indicates that one unit change in the predictor produces .428 units change in the DV, holding other predictors constant. The 95% confidence interval around the B weight indicates that if infinitely many samples were drawn from the population under investigation, the B weight in the population will fall between the boundaries of .116 and .740 95% of the time and will fall outside these boundaries 5% of the time (see Table 4.7). The transition process component of Student Knowledge

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contained items related to whether the student was informed of post-school options. Therefore, informing students of post-school options predicts whether parents find that transition goals were useful in helping their children achieve post-school goals. This outcome did not support the hypothesis that parental knowledge would predict Goals Utility.

The ANOVA model that tested the null hypothesis that there is no relationship between the predictors in Transition Process and the DV of Process Utility indicated that the null hypothesis should be rejected ($F (7, 52) = 7.98$, $p < .001$). The R^2 effect size of .347 indicates that approximately 35% of the variance is explained by the transition model. This is a large effect size according to Cohen (1988). The adjusted R^2 of the model, .259, is a .08 change from the R^2. The R^2 effect size uses every predictor to explain variation, whereas the adjusted R^2 penalizes independent variables that do not belong in the model. Analysis of the transition components indicates that Family Knowledge was the only predictor that met statistical significance ($p < .001$). The unstandardized regression (B) weight of .504 indicates that one unit change in the predictor produces .504 units change in the DV, holding other predictors constant. The 95% confidence interval around the B weight indicates that if infinitely many samples were drawn from the population under investigation, the B weight in the population will fall between the boundaries of .221 and .787 95% of the time and will fall outside these boundaries 5% of the time (see Table 4.7).

Figure 4.2
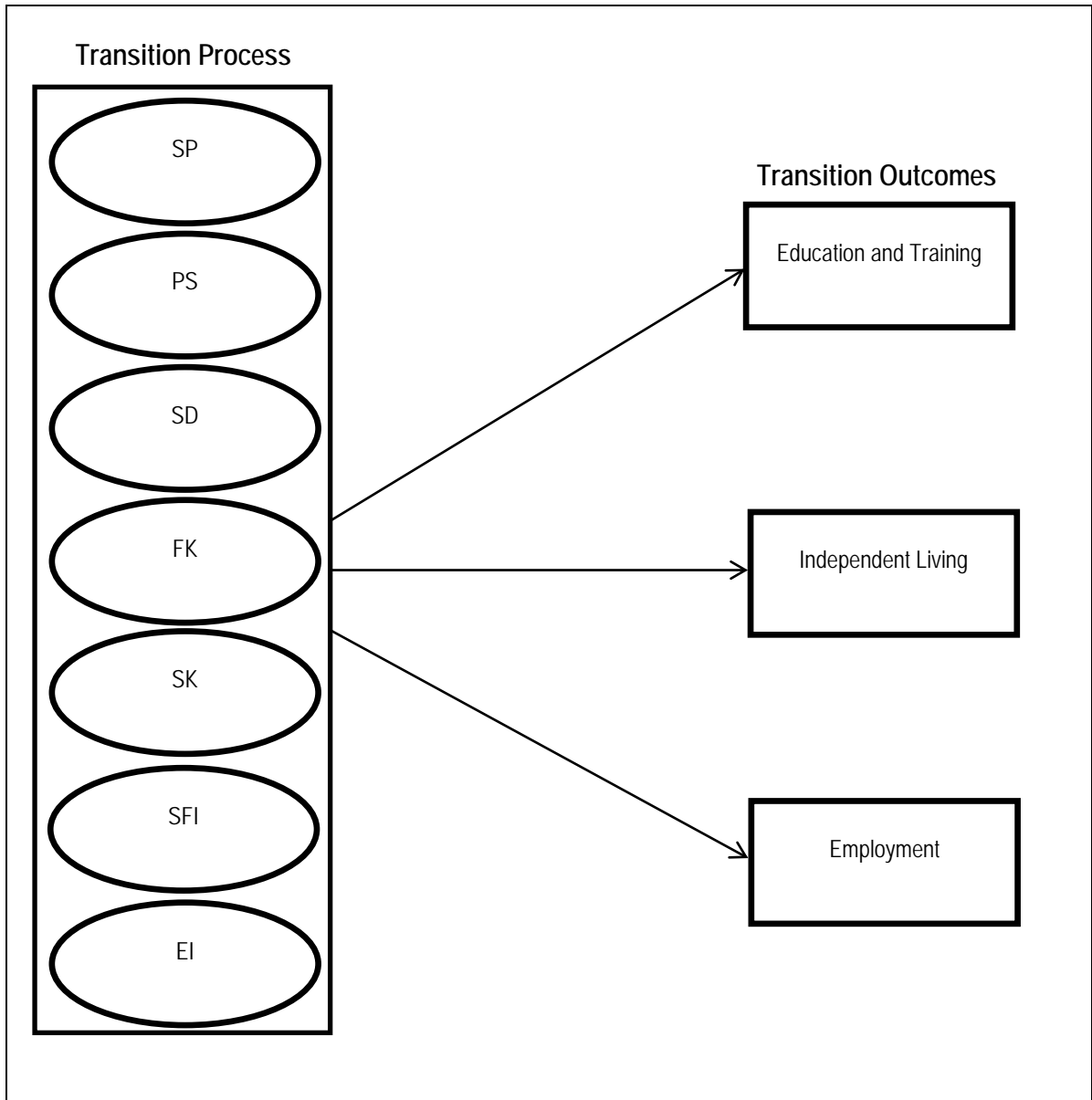*Regression Model of Transition Outcomes Regressed on Transition Process*

Transition Process

- SP
- PS
- SD
- FK
- SK
- SFI
- EI

Transition Outcomes

- Education and Training
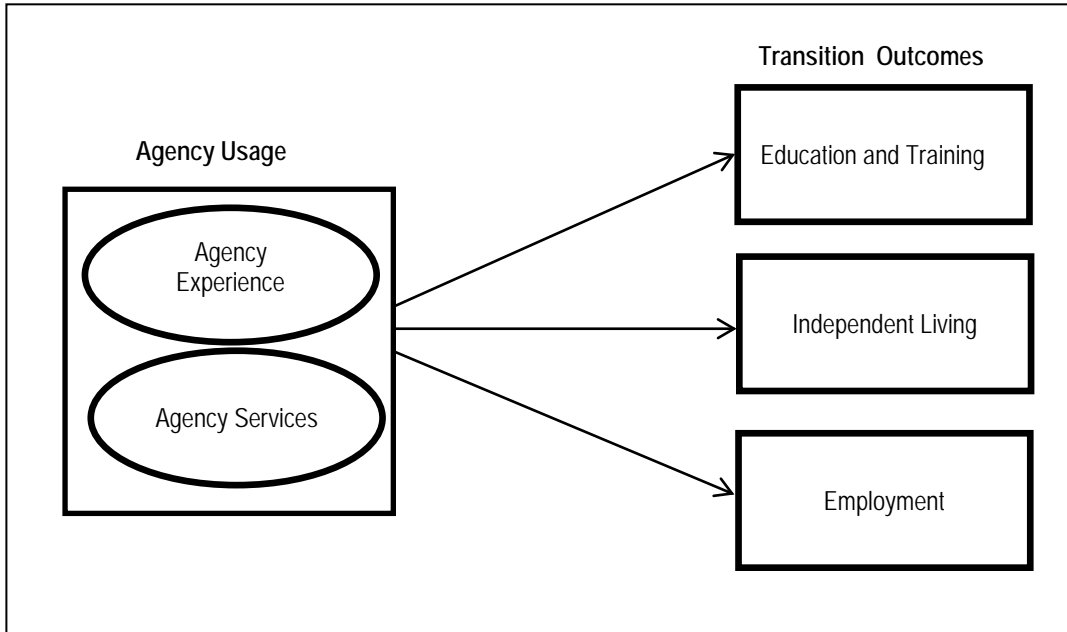- Independent Living
- Employment

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Figure 4.3
Regression Model for Transition Outcomes Regressed on Agency Usage
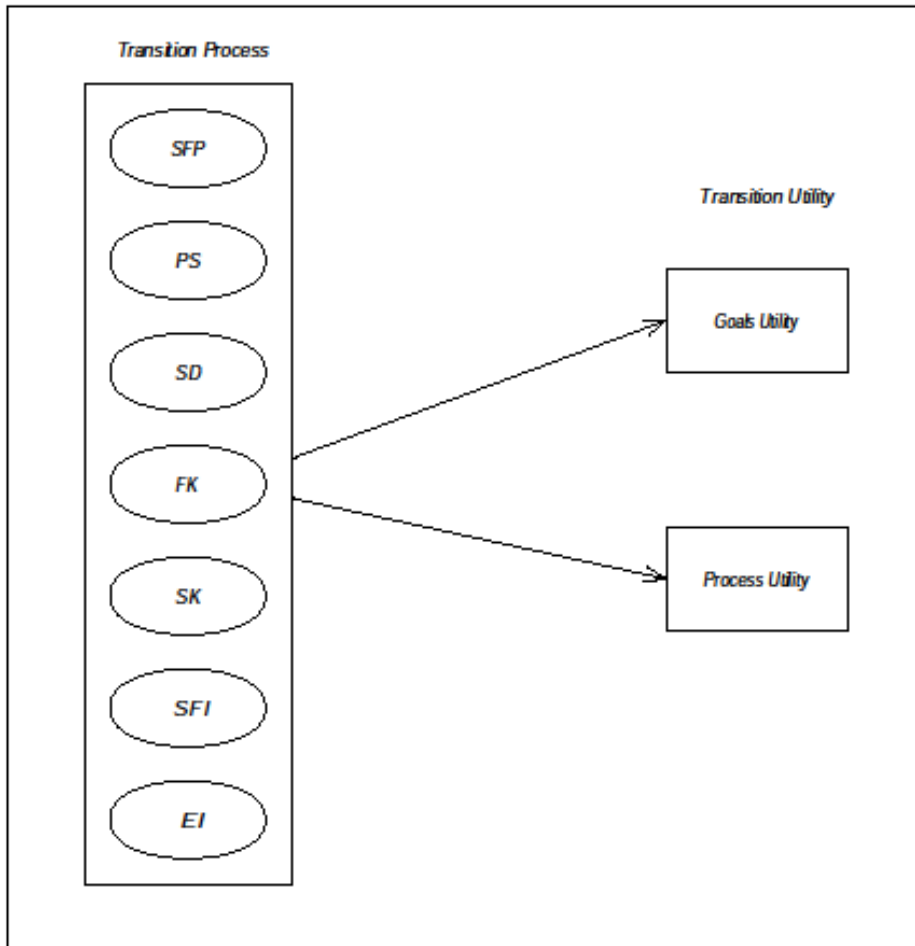
Figure 4.4 represents the regression model showing the components of the IV and DV.

Table 4.7
Regression Summary for Transition Utility on Transition Process (N=60)

	Transition Utility							
	Goals utility				Process utility			
Variable	B	SE B	β	95% CI[a]	B	SE B	β	95% CI
SFP[b]	.164	.112	.185	[-.060, .388]	.138	.127	.159	[-.118, .393]
PS	.019	.093	.026	[-.167, .206]	-.070	.106	-.095	[-.283, .142]
SD	.058	.097	.079	[-.136, .253]	-.015	.110	-.021	[-.237, .207]
FK	.193	.124	.190	[-.055, .442]	.504	.141	.506***	[.221, .787]
SK	.428	.155	.358**	[.116, .740]	.271	.177	.232	[-.085, .627]
SFI	.076	.184	.054	[-.293, .444]	-.097	.209	-.070	[-.517, .323]
EI	.057	.155	.043	[-.255, .369]	-.254	.177	-.195	[-.609, .102]
$R^2_{adj.}$		.453				.259		
F		7.975***				3.942**		

Note. [a] CI = confidence interval. [b] SFP = Student Focused Planning, PS = Program Structures, SD = Student Development, FK = Family Knowledge, SK = Student Knowledge, SFI = Student Family Inclusion, EI = Employment Issues.
*p < .05. **p < .01. ***p < .001.

The transition process component of Family Knowledge contained items related to whether the school provided parents with knowledge about the transition process and agency usage. Thus, results imply that parents being informed about the transition process and agency usage is related to parents reporting that the transition process was useful in helping them understand how to use agencies to meet their child's needs. This outcome supported the hypothesis that Family Knowledge would predict Process Utility.

Summary

This chapter presented the descriptive statistics of the sample and transition outcomes in addition to the regression analyses of the four research questions. The sample for this study was predominantly mothers, whose home language was English and whose child had graduated after 2004 ($\geq$ 80%). In addition, a majority of the sample reported that they were White/Caucasian parents of a male child who had a university

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degree and earned more than \$50,000 (> 60%). Parents also reported that ID (53%) and AU (51%) were the most common disabilities.

Descriptive statistics revealed that transition outcomes across employment, education, vocational training, and independent living were poor. Parent responses indicated that current successful outcomes ranged from approximately 13% (independent living) to 36% (education) while ever achieving a positive outcome since graduation showed slight improvement, ranging from 15% (independent living) to 48% (education).

Regression analyses showed that for this sample, Transition Process affected neither Agency Usage nor Transition Outcomes in the areas of Education and Training, Independent Living, or Employment. Likewise, Agency Usage did not share a statistically significant relationship with Transition Outcomes according to the ANOVA analysis.

The regression of Goals Utility on Transition Process indicated that the Process component of Student Knowledge ($R^2_{adj.}$ = .45) was related to Goals Utility. This means that an increasing rate of parents reporting that their child was made aware how to access post high school options is associated with an increasing level of parents saying that transition goals were helpful in their child meeting post school outcomes. Although the model was significantly different from the null hypothesis, Family Knowledge did not predict Goals Utility as assumed by the hypothesis.

Transition Process was correlated to Process Utility, whether parents found the transition process useful. The regression of Transition Utility on Transition Process

found that the only component that was statistically significant was Family Knowledge $(R^2_{adj.} = .26)$. This supported the hypothesis that family knowledge was a predictor of Process Utility and implies that as parents reported that they were provided opportunities to learn about transition and DARS and DADS, they also report higher levels of understanding about DARS or DADS services, feeling prepared to use DARS or DADS, and seeing the transition process as helpful.

The next chapter will examine each research question and discuss outcomes of the analyses and compare them to the body of transition research. Threats to the validity of the study and limitations to the study will follow. The chapter will close with a discussion of the implications of the study as well as recommendations for future research and actions.

CHAPTER V

SUMMARY AND DISCUSSION

The initial part of this chapter summarizes the results of the study and compares the findings to previous studies. The second part interprets the results of the regression analyses. The third part of this chapter discusses threats to validity and limitations to the study. The final section of the chapter discusses the implications of the findings for both secondary transition and DARS/DADS and concludes with recommendations for future research.

Summary and Discussion

Summary of Descriptive Demographic Results

The descriptive statistics of the study sample, parent reported transition outcomes, and the regression analyses of the research questions are summarized in this section. Descriptive analysis of the sample indicated that the sample was composed of predominantly mothers, whose home language was English and whose child had graduated after 2004 ($\geq 80\%$). Other respondents included fathers (6.7%), other family members (5%), and legal guardians (5%). Only 3.3% of the sample reported that Spanish was the home language and one person reported that both English and Spanish were spoken at home. Approximately 3% of the sample reported their child graduated between 2001 and 2004, and almost 7% of the sample reported their child had graduated between 1991 and 2000.

A majority of the sample reported that they were White/Caucasian parents of a male child who had a university degree and earned more than $50,000 (> 60%). Incomes of $25,000 - $49,999 were 23.3% of the sample and 6.7% reported an income below $24,999. Five percent of the sample reported having earned an Associate degree, 23% reported having some college, and 10% reported having a high school degree or equivalent. Over 36% of respondents were parents of a female child. The sample was also composed of about 23% Hispanics, 10% Black or African American, and 1.7% Asian/Pacific Islander. Parents also reported that ID (53%) and AU (51%) were the most common disabilities, followed by OHI (21.7%), MD (15%), AI (15%), VI (5%), and DB (3.3%).

Summary of Descriptive Transition Outcomes Results

Transition outcomes across the outcome areas of Employment, Education, Vocational Training, and Independent Living were poor. Parent responses indicated that current successful outcomes ranged from approximately 13% (Independent Living) to 37% (Education). Current Vocational Training was reported by over 23% of the sample and almost 27% of the sample said their child is currently employed. The range for ever achieving a positive outcome since graduation was similar but slightly better. On the low side, 15% of parents reported their child had lived outside the family home, and the highest of any outcomes was that parents said that 48% been in an educational program since high school. Vocational Training since graduation remained the same (23%) and approximately 38% of parents reported that their child had been employed at some time since high school.

Summary of Regression Analyses

The ANOVA analyses of both Agency Usage on Transition Process and Transition Outcomes on Transition Process indicated that the regression coefficients did not have predictive power. Put another way, the ANOVAs indicated that the regression coefficients were not significantly different from zero. As a result, no further analysis of components was required. Likewise, the model investigating Agency Usage on Transition outcomes was not statistically significant, according to the ANOVA table, so analysis of components was unnecessary.

The ANOVA for Goals Utility on Transition Process indicated that at least one regression weight deviated from the null hypothesis. The regression model of Goals Utility on Transition Process indicated a positive relationship ($R^2_{adj.} = .45$). The only statistically significant component was Student Knowledge ($p < .01$). The ANOVA testing Process Utility on Transition Process revealed that at least one regression weight was not equal to zero. For the test of this relationship, the only statistically significant component was Family Knowledge ($R^2_{adj.} = .26$, $p < .001$).

Discussion

The discussion section will begin by examining the descriptive analysis of the sample and transition outcomes. The outcomes components Education, Vocational Training, Independent Living, and Employment will be compared to previous studies to determine whether the outcomes from this sample are similar to outcomes reported in previous studies. Next, the results of the regression analyses of each research question and how these analyses relate to previous transition literature are explained

Sample

Compared to an annual TEA report (TEA, 2011) , the sample for this study mostly diverges from the typical Texan parent of a child with a disability. One way in which the samples were similar was student gender (TEA 64.1% v. 63.3). However, this sample overrepresented Whites (TEA 37.5 v. 65), was better educated (28% college graduate v. 61.6%), and probably overrepresented higher incomes (TEA, not economically disadvantaged, 36% v. Income +50,000, 68.3%).

Transition Outcomes

Descriptive analysis of employment determined that this sample of parents said that about 23% of their children were currently employed and 38% reported that their child had been employed at some time since high school. Other studies have reported the employment rates at 35% percent for individuals with disabilities, which was a rate for either full (24%) or part time (11%) work (National Organization on Disability, 2004), at 23% for individuals with disabilities that had been out of school up to two years (Wagner, Newman, Cameto, & Levine, 2005), or at 27.5% for people who reported having a severe disability versus a non-severe disability or no disability (Brault, 2012). Carter et al. (2012) found that 26% of sample of students with severe disabilities drawn from the NLTS-2 data were employed up to two years after graduation. Newman et al. (2011) found that almost 39% individuals with ID who had graduated up to eight years prior to the interview were currently employed and 76% had been employed at some time since graduation.

With the exception of the Newman et al. (2011) report, the employment rates cited are similar to the employment rates for this study. However it is important to note that most studies reported employment numbers for people with disabilities and not only for people with ID. Since individuals with ID have among the poorest outcomes even when compared to others with disabilities (Newman et al., 2011), and since the employment rates found in this study are similar to reported rates for individuals with disabilities generally, it seems that the employment rates indicate that individuals with ID are becoming employed at higher rates. Conversely, the employment rates reported by Newman, particularly the 76% rate are well above rates reported in other studies. Perhaps this is because students in Newman's sample had been out of school for at least eight years. This may imply that as youth with ID are out of school longer they will report both higher rates of being currently employed and having been employed at some time since graduation. Although this sample had a majority of respondents who said that their child graduated after 2004, half of the parents reported their children had graduated between 2010 and 2012. Therefore, the employment rates for this study show that individuals with ID in Texas are employed at similar rates to other individuals with disabilities.

Parents in this study said that 36% of their children with ID were currently enrolled in some type of postsecondary education, while 48% been in an educational program since high school. One NLTS-2 study by Wagner, Newman, Cameto, and Levine (2005) indicated parents said that 13% of their children with ID who had been out of high school two years had engaged in any PSE in the two years since they had

graduated. Another NLTS-2 study by Newman et al. (2011) found that 29% of parents said that their child with ID had some form of PSE in their eight years of graduation. These two NLTS-2 reports imply that people with ID access PSE at higher rates as they gain experience. Still, when compared with the percentages of parents in this survey who reported their child had accessed PSE, it seems that this sample accessed PSE at higher rates than those previously reported.

It is possible that the difference could be an artifact of the way items were presented or phrased. Possibly, parents who took this survey counted education as activities other than 2-year or community colleges and 4-year colleges, while respondents to the NLTS-2 surveys constrained their answers to 2-year or community colleges and 4-year colleges since this is what the question specified. This survey did not specify the type of PSE in the item, so it is possible that parents said that their child had accessed PSE if they received on the job training or if they had craft classes at an independent living center. It may also be that there are more opportunities in Texas for youth with ID to access postsecondary education or that Texas parents are more aware of the opportunities available. Whatever the case may be, parents in Texas reported having accessed post-secondary education at higher rates than previously reported.

Parents in this survey said that over 23% of their children were currently in a vocational program and reported a similar percentage when asked if their child had ever been in a vocational program since graduation. Wagner, Newman, Cameto, and Levine (2005) reported that 10.5% of parent said that their child had been enrolled in a vocational, technical or business school, while parents in the Newman et al. (2011) study

said that 16% had accessed a vocational, business, or technical school. Similar to postsecondary educational outcomes, vocational outcomes appear higher in Texas. Again, this difference in accessing vocational education may be related to the differences in wording. The NLTS-2 studies considered vocational, technical or business school, while this study only asked about vocational training. Another explanation of the differences could be attributed to the participants of the current study. It could be that parents who answered the survey were more active than the average parent in seeking vocational opportunities for their children.

Independent living outcomes for this study indicated that 13% of children currently live independently and 15% had live independently at some time since high school graduation according to their parents. This is consistent with literature that showed parents expect that children will live with them after high school(Chambers et al., 2004). This also supports the report from (Wagner, Newman, Cameto, & Levine, 2005) that stated that parents report 14.5% of their children with ID live outside the family home, which was a 10% increase from the 1987 cohort and the report from Newman et al. (2011) that found that 36% of parents reported their child lived independently. This study's rate of independent living is most similar toWagner, Newman, Cameto, and Levine (2005). This is likely due to the similarity of the samples. The Wagner sample had been out of school up to two years, while half of the sample for this study had been out of school for up to three years. Newman's sample included parents who reported that their child had been out of school for eight years, and perhaps students in this sample will approach the levels in Newman's report over time.

These outcomes add to the transition literature by reporting the outcomes of parents whose children had graduated from a high school in Texas. The results show that employment and independent living outcomes are similar to other published reports, but PSE and vocational education rates were higher than those reported in much of the transition literature. Although it is possible that these rates of are higher due to greater opportunities in these areas, it is equally possible that the parents in this small sample were more diligent than most of the parents in the larger samples of the other studies. Another possibility is that the higher outcomes could be an artifact of how items were worded. For example, this survey asked whether the child was enrolled in any type of educational training, while other surveys contained questions asking about 2- or 4-year colleges. Therefore, it is possible that parents in this survey might have responded that their child was enrolled in educational training because they attend a center that provides social skills training; while research that asks about 2- or 4-year colleges would not have considered such activities as "educational training."

Overall, this study agrees with the large body of research that reveal consistently poor transition results for individuals with ID (Blackorby & Wagner, 1996; Grigal et al., 2011; Hasazi et al., 1985; McDonnell et al., 1986; Mithaug et al., 1985; National Organization on Disability, 2004; Neel et al., 1988; Newman et al., 2011; Wagner, Newman, Cameto, Garza, & Levine, 2005). Although some results of outcomes from this study are higher than results of outcomes typically found in the transition literature, the gap between those with disabilities and the general population remains.

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This study supports the fact that a persistent gap remains between people identified with disabilities, specifically ID, and the general population. These results suggest that the systems of support for individuals with disabilities need improvement.

The next section of this chapter interprets outcomes of the regression analyses. Since one important goal of transition plans is outcomes, logically a student with disabilities should be connected to a system of support, such as DARS or DADS, upon graduation to assist them in accomplishing their goals. Therefore, the first analysis examines the relationship between the transition process and DARS and DADS usage. The next analysis explores the relationship between the transition process and transition outcomes since it is possible that outcomes can be achieved without the support of the agencies. There were two categories of outcomes. The first type of outcomes was transition outcomes typically reported in transition literature: employment, postsecondary education, vocational training, and independent living. The second type of outcome was parent opinion about the utility of the transition process. The third research question focuses on the relationship between agency usage and transition outcomes. It is reasonable to expect that agency services should have some effect on outcomes given that one aim of DARS and DADS is to connect individuals to services that help them to achieve their transition goals. The final analysis used parental opinion of the utility of the transition process to predict both agency usage and transition outcomes.

Regression Analyses

      Research question one. The first research question examined the relationship between family knowledge of transition and agency usage after graduation and hypothesized that the Transition Process component of Family Knowledge would be related to Agency Usage. Family Knowledge (range = 4 – 20, M = 9.15, SD = 3.84) is composed of four items (scale range is 1 = Strongly Disagree to 5 = Strongly Agree).

1. My child's school provided training opportunities to learn about the secondary transition process at any time during the transition process. (M = 2.43, SD = 1.25)

2. My child's school provided training opportunities to my family about DARS or DADS services at any time during the transition process (M = 2.23, SD= 1.28).

3. School staff members were able to answer my questions about DARS or DADS during the transition process (M = 2.32, SD = 1.14).

4. Interagency agreements were explained to me during my child's transition planning (M = 2.17, SD = 1.264).

      Agency Usage was composed of two components, Agency Experiences and Agency Services. Agency Experiences consisted of items that asked parents to rate their level of agreement with statements associated with their personal interactions with agencies as they attempted to access services. Agency Services asked parents to rate their level of agreement with statements associated with services accessed.

      The two regression analyses of each component of Agency Usage tested the relationships with Transition Process to determine whether Family Knowledge was a statistically significant predictor. ANOVA analyses of the two regression models

indicated that neither the model that regressed Agency Experiences on Transition Process ($R^2_{adj.}$ = -.068, F (7, 52) = .467, p = .85) nor the model that regressed Agency Services on Transition Process ($R^2_{adj.}$ = .033, F (7, 52) = 1.29, p = .27) were significantly different from the null hypothesis, which states that the regression weights of Transition Process are equal to zero. Therefore, the results indicate that the Transition Process component of Family Knowledge is not associated with Agency Usage, for this sample.

Although Family Knowledge was not a significant predictor, descriptive statistics are of interest. The mean of each of the four items that make up Family Knowledge is below the midpoint of the scale. This means that on the average, respondents disagreed with the statements that compose Family Knowledge. Another way to explain the descriptive results of Family Knowledge is that on the average, parents in this survey indicated that schools did help them to understand transition or agency usage.

About 23% of the sample either agreed or strongly agreed that the school provided training opportunities about transition, 22% either agreed or strongly agreed they were provided training on agencies, 18% either agreed or strongly agreed that school staff could answer questions about DARS or DADS, and 20% either agreed or strongly agreed that interagency agreements were explained to them. For each item in the Family Knowledge component, at least 60% of respondents either disagreed or strongly disagreed. Therefore, it appears that according to parents in this sample fewer than 1 in 4 parents was well informed about either transition or DARS or DADS after their child graduated.

The descriptive results of Family Knowledge reinforce previous literature in which parents report they are not knowledgeable about the transition process or options for services (Benz et al., 1995; Chambers et al., 2004; Collet-Klingenberg, 1998; Cooney, 2002; Gillan & Coughlan, 2010; Kingsnorth et al., 2011; Martinez, 2012; Steere et al., 2007). One way to inform parents about transition and what they might face after their children graduate is to have agency representatives at the annual transition meeting. Unfortunately, Renee Cameto et al. (2004) reported that by ages 17-18 only about 25% of students with disabilities have a VR counselor in attendance at their transition meeting despite 43% of students with disabilities reporting a need in vocational education, training, or support. Because families are unfamiliar with transition and agencies, they may not understand the differences in the way disability is defined from school to post high school, they may have unreasonable expectations of agencies, and they may become overwhelmed by the agency system (Benz et al., 1995). Another consequence of lack of knowledge of transition and post-school systems is that parents may not have realistic expectation about what their child can accomplish (Kraemer & Blacher, 2001). For instance, some studies indicate that parental views of post-high school goals were more restrictive than their child's (Cobb & Alwell, 2009; Gallivan-Fenlon, 1994). Perhaps parents would hold less restrictive views if they were aware of available supports and what is required to access them.

Research question two. The second research question tested the relationship between family knowledge of transition and transition outcomes. The hypothesis was that the Transition Process component of Family Knowledge would be related to the

three DV components of Transition Outcomes, Education and Training, Independent Living, and Employment. None of the models that tested the three DVs was statistically significant (Education and Vocational Training ($R^2_{adj.}$ = .026, F (7, 52) = 1.223, p = .31); Independent Living ($R^2_{adj.}$ = -.092, F (7, 52) = .292, p = .58); and Employment ($R^2_{adj.}$ = .057, F (7, 52) = 1.513, p = .4)). This means that for this sample, none of the Transition Process components, including Family Knowledge, predicted any of the Transition Outcomes, which means none of the hypotheses were supported.

Previous transition literature shows that various transition practices are associated with improved transition outcomes. The following transition activities have been found to have a positive association with transition outcomes: inclusion in general education (Baer, Daviso, Flexer, McMahan Queen, & Meindl, 2011; Leena Jo Landmark et al., 2010; Newman, Wagner, Cameto, & Knokey, 2009; D. W. Test, Mazzotti, et al., 2009), interagency collaboration (Leena Jo Landmark et al., 2010; Repetto, Webb, Garvan, & Washington, 2002; D. W. Test, Mazzotti, et al., 2009), occupational courses (Baer et al., 2003; Leena Jo Landmark et al., 2010; Newman et al., 2011; Repetto et al., 2002; D. W. Test, Mazzotti, et al., 2009), work experience (Benz, Lindstrom, & Yovanoff, 2000; Carter et al., 2012; Fourqurean et al., 1991; Joshi, Bouck, & Maeda, 2012; Leena Jo Landmark et al., 2010; Repetto et al., 2002; Shandra & Hogan, 2008; D. W. Test, Mazzotti, et al., 2009), parental involvement (Carter et al., 2012; Fourqurean et al., 1991; Joyce, 1997; Leena Jo Landmark et al., 2010; A. M. Pleet, 2000; Repetto et al., 2002; Sample, 1998; Schalock et al., 1992; D. W. Test, Mazzotti, et al., 2009), self-determination (Leena Jo Landmark et al., 2010; D. W. Test, Mazzotti, et al., 2009; M.

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Wehmeyer & Schwartz, 1997; M. L. Wehmeyer & Palmer, 2003), independent living skills (Carter et al., 2012; Repetto et al., 2002; D. W. Test, Mazzotti, et al., 2009), social skills (Carter et al., 2012; Leena Jo Landmark et al., 2010; D. W. Test, Mazzotti, et al., 2009), student involvement in IEP meetings (Joyce, 1997), and student support (D. W. Test, Mazzotti, et al., 2009). Most of the above practices fall into the categories of Student-Focused Planning and Student Development, and the practices were included in the items selected for the survey.

The research of individual practices that are related to improved transition outcomes transition outcomes is difficult to compare to the outcomes of this study since the practices in this study were combined into components. However, some studies have examined transition using the five factor taxonomy model (Kohler, 1996). D. W. Test, Fowler, et al. (2009) examined evidence based-practices and found that Student Development had the strongest evidence base with 25 evidence based practices such as teaching life skills, self-determination skills, social skills, and employment skills. Student-Focused Planning included seven studies, one of which was a literature review that included 17 studies. Each study focused on involving students in IEP meetings. Program structures listed providing community-based instruction and providing student support. Family Involvement detailed one practice of teaching parents about transition, and no evidence based practices were found in Interagency Collaboration. Cobb and Alwell (2009) found that Student-Focused Planning and Student Development were related to improved transition outcomes. These studies combined with the studies that related individual transition practices to outcomes can be taken to suggest that at least

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Student-Focused Planning and Student Development should have been related to transition outcomes.

On the other hand, Cobb and Alwell (2009) also state that there are insufficient studies to assess the effectiveness of Parental Involvement, Program Structures, and Interagency Collaboration. Therefore, since Parental Involvement, Program Structures, and Interagency Collaboration have not been proven affect transition outcomes (Cobb & Alwell, 2009), perhaps it should not be surprising that these components were unrelated to Transition Outcomes. Other studies that studies that offer support for the failure of the aforementioned components to predict Transition Outcomes are Repetto et al. (2002), which found that interagency councils, programs, services and supports were not related to employment outcomes; A. M. Pleet (2000), which found no relationship between transition components and post school outcomes; and Baer, Daviso, Flexer, et al. (2011), which found that career and work study programs are not predictors of post school employment.

Research question three. The third research question that asked: What is the relationship between agency usage and transition outcomes? The hypothesis was that both components of Agency Usage would be related to Transition Outcomes. The ANOVAs of the regression models indicated that neither Agency Services nor Agency Services are related to the transition outcomes of Employment, Education, Vocational Training, and Independent Living have been described as poor and in need of improvement.

Agency usage consisted of the components of Agency Experiences and Agency Services. Agency Experiences was composed of the following eight items (scale range is 1 = Strongly Disagree to 5 = Strongly Agree):

1. My child waited a reasonable length of time to receive benefits or services from DARS or DADS after graduation ($M = 2.70$, $SD = 1.31$).

2. DARS or DADS staff members were able to answer my questions ($M = 2.83$, $SD = 1.29$).

3. DARS or DADS benefit or service choices available to my child were clearly explained by agency personnel ($M = 2.73$, $SD = 1.26$).

4. DARS or DADS staff members treated me with respect ($M = 3.37$, $SD = 1.28$).

5. I had a chance to say what benefits or services I wanted my child to receive from DARS or DADS ($M = 3.45$, $SD = 1.17$).

6. DARS and DADS staff members were knowledgeable about other DARS or DADS programs for which my child might have qualified ($M = 2.57$, $SD = 1.16$).

7. DARS or DADS staff members helped me to understand the process for making a complaint about benefits or services ($M = 2.93$, $SD = 1.21$).

8. If I complained about DARS or DADS services, I believe my complaint would be addressed fairly ($M = 2.92$, $SD = 1.08$).

Regarding the items included in Agency Experiences parents agreed that they were treated with respect (60%) and they had a chance to say what type of services they wanted for their children (62%). Other rates of agreement were lower. For instance, 43% of parents said that they waited a reasonable amount of time to receive services,

42% said staff were able to answer questions, half said choices were clearly explained, and 48% said staff members were knowledgeable about other programs. It should be noted that for many of these items about 20% of the sample responded with not sure. This is probably a result of half of the sample being out of school three or fewer years, so the parents who responded "Not Sure" may not have had enough experience to make another judgment. Although positive results might have been higher if these parents had more experience, the data seem to imply that they probably would have been more negative. This descriptive analysis suggests that although parents are treated well and appear to feel that they can share knowledge about their child in the agency process, services are delayed and staff members do not serve as a source of information.

Items included in Agency Services included the following items:

1. It was easy to get the benefits or services my child needed after graduation ($M = 2.35$, $SD = 1.36$).

2. The DARS or DADS benefits or services my child has received have helped her/him to achieve her/his goals ($M = 2.78$, $SD = 1.30$).

3. DARS and DADS have sufficient programs to meet my child's needs ($M = 2.08$, $SD = 1.21$).

4. My child is receiving all of the services he/she needs ($M = 2.37$, $SD = 1.33$).

5. Overall, I am satisfied with the DARS or DADS benefits or services my child receives ($M = 2.40$, $SD = 1.33$).

The descriptive statistics of Agency Services indicate that on the average, parents disagree with all of the above statements. Over half of the respondents disagreed that it

was easy to get agency services after graduation, there were enough programs to meet their child's needs, their child is receiving all the services needed, and they were satisfied. The items that received the most positive responses were that the services help to achieve goals (33%) and overall satisfaction (25%). Clearly, most parents feel that their child has unmet need and that agencies need more programs with easier access.

These outcomes cannot be directly compared to past studies since the DVs were unique to this study, however, individual items from the components can be compared. The comparisons that follow are from the Annual Report of the Rehabilitation Council of Texas (2012). In all cases, the respondents of the Rehabilitation Annual Report were more satisfied than the parents in this study. For example being in this study reported that they were treated with respect (92% v. 60%), contributed to the saying what services they needed (84% v. 62%), and were satisfied overall with the services they received (87.3 v. 25%).

The Texas Health and Human Services System (2010) customer service report is similar in reporting higher satisfaction than was found in this survey. The Health and Human Services (HHS) report examined outcomes for all programs, focusing on children with special health care needs. The following agencies and programs participated in the survey: DADS Medically Dependent Children's Program (MDCP), DARS Early Childhood Intervention (ECI), the Department of Family and Protective Services (DFPS) Substitute Care Services (SCS), Department of State Health Services (DSHS) Children with Special Healthcare needs (CSHCN) program, and the Health and Human Services Commission (HHSC) Personal Care Services (PCS). Agreement with

overall satisfaction with services ranged from 88% (SCS) to 96% (PCS, MDCP) versus 25% for the current parent survey. Satisfaction with length of wait to receive services ranged from 52% (MDCP) to 95% (ECI) versus 32% for this survey. People using state services reported that it was not difficult receiving service ranging from 64% (MDCP) to 89% (ECI) versus 22% for this survey.

There are wide differences between state program satisfaction and parental satisfaction for the current study. One reason for the difference may be that the state surveyed individuals up to 18 (parent interview) and between 18 and 21 (youth, if possible). Also, the state surveyed those already receiving services. The sample in this study examined the parental experiences of those who had already graduated. A majority of the students had been out of school between one to three years so were probably between 22 – 25-years-old. In addition, only 25% of the sample had received services before graduation, whereas the state sample is comprised of individuals already receiving services. Thirty-eight percent of the participants in this study responded that their child was currently receiving services from DARS or DADS (n = 55). It is reasonable to think that being the recipient of services makes past negative experiences seem less negative compared to someone who is in the process of seeking services.

Research Question 4

The final research question explored the relationship between Transition Process and Transition Utility, which is composed of two components, Goals Utility and Process Utility. The regressions of Goals Utility on Transition Process and Process Utility on Transition Process both produced statistically significant models. Goals Utility contained

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items that focused on parents' opinions of whether the employment, education, vocational training, and independent living goals in the transition plan were related to transition outcomes in the associated areas. Process Utility was related parental perceptions of how the transition process prepared the family for future DARS/DADS usage.

Transition Process was related to Goals Utility (F = 7.957 , p < .001), which explained 45.3% of the variance and the single statistically significant predictor was Student Knowledge (p < .01).

The regression analysis shows that as parents report their children are informed of post-school resources parents will report that the transition goals were helpful in helping their child achieve transition goals. Although this did not support the hypothesis that Family Knowledge would produce a statistically significant relationship, the relationship is based on student knowledge of how to access post school options.

Student knowledge was composed of the following items:

1. My child was made aware of how to access employment options available after graduation during the transition process (*M* = 2.17, *SD* = 1.32).

2. My child was made aware of how to access post high school educational options during the transition process (*M* = 2.37, *SD* = 1.27).

3. My child was made aware of how to access independent living options available after graduation during the transition process (*M* = 2.02, *SD* = 1.15).

These items were rated with the highest level of disagreement of any items in Transition Process. For each item, 60% or more of the sample chose a level of disagreement and

72% of parents reported that their child was not made aware of independent living options. Interestingly, although transition often focuses on employment, the highest level of agreement was the item about education (25%).

Goals Utility was composed of the following items:

1. The employment goals in my child's transition plan helped him/her to become employed after graduation ($M = 1.88$, $SD = 1.24$).

2. The post-secondary education goals in my child's transition plan helped her/him to enter an educational program after graduation ($M = 1.93$, $SD = 1.26$).

3. The vocational goals in my child's transition plan helped her/him to enter a vocational training program after graduation ($M = 1.73$, $SD = 1.03$).

4. The independent living goals in my child's transition plan helped him/her to access the community for recreation/leisure purposes after graduation ($M = 2.02$, $SD = 1.26$).

Items in this component were the lowest rated in the survey. Parents disagreed with these statements from 70% (independent living) to 80% (vocational training). The items rated highest rated were education and independent living goals, both at 17%.

Parental responses to the Student Knowledge component indicate school staff is not making students with ID or their parents aware of student's post-school options. This implies that school staff must be well informed about post high school services and the important function they play in a graduate's future. Unfortunately, past research has shown that educators often do not understand post school services (D. Anderson et al., 2003) or have unfounded beliefs of how to access services and what adult service

providers can do for families, which is exacerbated by the lack of systems to facilitate collaboration with agencies (Agran, Cain, & Cavin, 2002; Benz et al., 1995; Li, 2004)

The second part of the analysis of Transition Process on Process Utility indicated that the model was statistically significant (F $(7, 52)$ = 3.942, p < .01), explained 25.9% of the variance, and Family Knowledge was a statistically significant component (p < .001). Process Utility was composed of statements related to whether the transition process helped parents to use DARS or DADS. Family knowledge was composed of items that rated agreement on whether the school provided training on DARS or DADS and whether the school staff could answer questions about these agencies, for example (see above for a detailed description about this component). The regression analysis implies that if schools can improve the knowledge families about transition, parents will view the transition process as contributing to their knowledge about DARS and DADS.

Process Utility is composed of the following survey items:

1. I understood what I needed to know about DARS or DADS services when my child graduated from high school (M = 2.60, SD = 1.43).

2. The DARS or DADS training provided by my child's school during the transition process helped me to understand how to use these agencies to meet my child's needs upon graduation (M = 2.08, SD = 1.18).

3. Overall, my child's transition plan was useful in helping me to access services from DARS or DADS after graduation (M = 1.97, SD = 1.19).

4. My child was able to transition to post high school services from DARS or DADS with few problems (M = 2.10, SD = 1.25).

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Overall, the range of disagreement with the above statements was from 50%, for understanding agencies upon graduation, to 76% for the plan being helpful in accessing services. The highest level of agreement was related to the understanding of agencies upon the child's graduation (37%).

The NLTS-2 examined parental perception of usefulness of the transition process (Renee Cameto et al., 2004). According to NLTS-2 data over 40% of parents of students with ID reported that the transition planning process was useful. The minority of parents in the current survey agreed the process helped them to understand what services are offered by DARS or DADS (37%), how to access agency services (13%), or to make the transition to agency services easier (11%). In addition, a minority of parents said that employment goals were useful in helping the child become employed (10%), educational goals were helpful in accessing educational opportunities (17%), vocational goals were helpful in accessing vocational training (7%), independent living goals were helpful in their child's access to the community (17%). So, although, the percentage reported by NLTS-2 leaves room for improvement, parents in this sample were noticeable less satisfied.

One reason for the differences between previous studies and the results from this study may be the small sample. Perhaps a larger, more representative sample would have revealed levels similar to those in the NLTS-2 study. Another reason for the differences in outcomes is the general nature of the NLTS-2 query. If parents had at least one thing about transition they thought was useful, they could answer in the affirmative. In the current survey, several specific questions were asked.

Summary of results. Results of the regression analyses indicate that knowledge of the transition process is associated with parent's opinions about the transition process. Family Knowledge, one component of Transition Process was associated with parent reports of Process Utility. This means that higher levels of knowledge of the transition process and agencies are associated with later high levels of parents reporting that the transition process was helpful in accessing services. Also, the Transition Process component of Student Knowledge was associated with Goals Utility. The relationship indicates that higher levels of parents reporting that their child was informed how to access post school options is associated with high levels of parents reporting that transition goals focused on outcome areas (employment, education, etc.) were helpful in meeting outcome goals after graduation. No relationship was found between Transition Process and Transition Outcomes, between Transition Process and Agency Usage, or between Agency Usage and Transition Outcomes.

Threats to Validity

Threats to the validity of this study are both internal and external. One internal threat is maturation. Although, most of the sample was parents of children who had graduated up to three years ago, the transition process started when the child was between 14 to 16 years old and given that most students with ID graduate at 21years of age, the transition process started as many as 10 years earlier. As a result, one must be aware that the transition memories may be inaccurate. Selection bias is another threat to internal validity. Subjects were not randomly chosen for inclusion, which may indicate that those who participated also represent those who advocate for their child more or had

negative experiences or are in some way not representative of the universe of parents of children with ID that had graduated from a Texas high school. The final internal threat is regression toward the mean. Since selection bias cannot be eliminated, there is no way of knowing whether this group had extreme scores. Therefore, if the group represents an extreme sample of the population, any replication is likely to regress toward the mean and replication may fail.

An external validity threat is aptitude-treatment interaction. Aptitude-treatment interaction means that a specific sample was selected and results may not generalize. Since this sample represents individuals who volunteered to take the survey, these results may not generalize to the population of non-volunteers. Another external threat may be reactivity, which occurs when respondents alter their behavior in reaction to being observed. Since many respondents learned of the survey through disability organizations, responses may have been affected by a desire to assist the organizations purpose.

Limitations

The results of this study should be interpreted with caution due to the following limitations.

1. The sample for this study was small given the statistical tests performed. Both PCA and MRC are large group analyses and the sample for this study is near the bottom of recommended ranges. Therefore, results from this sample may not generalize to the population under consideration.

2. The sample was limited to parents of individuals with ID whose children graduated from a Texas high school, which means that results cannot be generalized to individuals from other parts of the country or with other disabilities.

3. Since respondents were not followed longitudinally and since the survey relied on self-report, it is possible that respondents did not accurately report their experiences

Implications

Transition is a process that requires collaboration between families, schools, and adult service providers. This study uncovered some of the relationships that underlie this complex process. For instance, this study found that Family Knowledge in the transition process is associated with parent reports of Process Utility. This means that higher levels of knowledge of the transition process and agencies are associated with later high levels of parents reporting that the transition process was helpful in accessing services, which means that parental training about transition affects whether parents understand how to access services. This implies that trainings offered by schools are valuable.

The study also found that the Transition Process component of Student Knowledge was associated with Goals Utility. The relationship indicates that higher levels of parents reporting that their child was informed how to access post school options is associated with high levels of parents reporting that transition goals focused on outcome areas (employment, education, etc.) were helpful in meeting goals after

graduation. This finding implies that school staff members must either become aware of post school options or aware of sources of information in order to refer parents.

The study failed to establish a connection between the components of transition and agency usage, between the components of transition and transition outcomes, and between agency usage and outcomes. These findings mean that for this sample, even a high level of knowledge about transition and agencies was not enough to have a positive agency experience or a successful transition outcome. This may imply that sufficient opportunities do not exist in order for individuals with ID to have successful transition outcomes. The results may also imply that opportunities exist, but employers, for example, do not believe people with disabilities can be successful.

Recommendations for Future Research

Texas schools need improved methods to inform parents about and train them in transition processes and post high school agency usage. A recent TEA report (Texas Education Agency, 2011) found that 61% of parents said that schools were providing them with information about parent organizations, community agencies or trainings about their child's needs, 78% of parents reported that the school encourages them to participate, and 85% of parents stated that they participate in ARD meetings. However, only 43% of parents overall and 58% of parents of children in high school said they were provided information about agencies, and only 45% of parents said that special education services helped the family get needed services outside of school.

School principals, in the same report (Texas Education Agency, 2011) revealed that 45% of schools did not provide training workshops on parent involvement, and

when these workshops were held, they were typically offered once a semester or once a month. Principals also reported that less than half of schools offered annual meetings to inform parents about special education programs and services. In addition, meetings were usually held in the evening (93%), according to school principals.

Although most parents in the TEA study said they are invited to participate, almost half of schools do not offer training to parents to help them understand their roles and responsibilities during ARD meetings or how to become involved in their child's education. Furthermore, a majority of parents said that they did not receive information about agencies. Thus, when parents report that transition meetings are often a passive experience for them (Collet-Klingenberg, 1998; Gallivan-Fenlon, 1994; Gillan & Coughlan, 2010; Halpern & Benz, 1987; Hetherington et al., 2010; Zhang & Stecker, 2001), that educational jargon is confusing (deFur et al., 2001), and that they are not knowledgeable about the transition process or options for post school services (Chambers et al., 2004; Collet-Klingenberg, 1998; Kingsnorth et al., 2011; Martinez, 2012), it is reasonable to assume that many parents are in need of training about the transition process and the supports that are available when their child graduates.   Parents in the current study echoed many of the same concerns.

Special education parent training is in the age of compliance and needs to move into the modern era of accountability. Schools should be required to track the results of their parent training efforts and report them to TEA. TEA should set goals to improve the rate of parent participation in special education training and fix standards regarding what parents need to know to help their children transition successfully. In order to

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ensure comparable results throughout the state, TEA should work with publishers to make available a curriculum that presents the standards for parent training in transition.

In addition, schools should make training content available through varied methods. Books and videos regarding special education topics should be made available to parents. Schools can use technology to make trainings available by webcast; training sessions can be recorded and placed on the school's website to be available on demand, and parents can access assessments when they feel prepared. Finally, parents should be sent to trainings with their child's teacher, which will be beneficial to both parties since they can learn to better appreciate the challenges each face.

Another systemic challenge faced by parents involved in the transition process is the lack of participation by adult service providers. Since vocational rehabilitation counselors are the most frequent participants when outside agencies are involved in transition planning (Renee Cameto et al., 2004), the following discussion will center mostly on VR professionals. Parents have commented that agencies become involved late in the transition process (Hetherington et al., 2010), which agreed with NLTS-2 data. For example, Renee Cameto et al. (2004) found that by age 14 less that 3% of students with disabilities have a VR counselor attend their meetings, but by ages 17-18 about 1 in 4 students have a VR counselor in attendance even though 43% of students with disabilities reported needing vocational education, training, or support. This is discouraging both because VR attendance is low and because if VR attendance at ITP meetings occurs by age 14 versus beginning at age 16, employment is more likely, wages are higher, and service cost to VR is lower (Cimera, Burgess, & Wiley, 2013)

Another issue parents report is that when agencies become involved, there appears to be little coordination between school and adult systems (Gillan & Coughlan, 2010) and research indicates that lack of coordination often leads to poor service outcomes (Baer, Daviso, Queen, & Flexer, 2011). Parents have also remarked that interactions with adult services providers are challenging, staff did not listen to them (Gillan & Coughlan, 2010), and when they have experiences with post high school systems, they are concerned that they do not feel the same level of support they had felt from the school (Hanley-Maxwell et al., 1995). In order to change parental perceptions of service providers, it is vital that adult service providers become involved early in the process in order to develop a relationship with families, however research suggests that VR counselors are not involved because they are not often invited to transition meetings (Agran et al., 2002; R. Cameto & Levine, 2005). Given the above research, it was expected and confirmed by the results from the parent survey that adult service providers are not meeting the needs of many families.

The most immediate way to solve the participation issue is to pass legislation that mandates the participation of VR or adult service organizations. Parents should be able to decide whether VR participation is or is not required. For example, the parents of a student with LD may decide that may decide that they understand how to access post-secondary educational and employment opportunities and therefore a VR counselor is not needed at the ITP meeting. Conversely, most parents of children with ID will probably require VR assistance at their meetings. The sample for this study was highly educated, mostly white, and most respondents had access to financial resources but still

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struggled with understanding how to access post-school services for their children. In

order to improve outcomes, adult service providers should become involved as soon as

the transition process begins, which in Texas, is when the child turns 14.

Short of a legislative mandate that requires participation, educators need to be

more active in gaining an understanding of the systems of support that are available to

families after high school. Studies have documented that educators often do not

understand post school services (D. Anderson et al., 2003). Furthermore educators have

unfounded beliefs of how to access services and what adult service providers can do for

families, which is exacerbated by the lack of systems to facilitate collaboration with

agencies (Agran et al., 2002; Benz et al., 1995; Li, 2004). Models exist that help

educators involve adult service providers. One such model is the Transition Service

Integration Model (TSIM), in which 88 % of graduates with significant support needs

transitioned to post school systems without an interruption in services (Nicholas J. Certo

et al., 2003). TSIM begins before the student's final year, is person-centered, employs

customized job development by using job carving, provides workplace support from

both school and VR, and requires that a plan is developed by parents, educators, and VR

counselors that authorizes the continuation of services following graduation (N. J. Certo

& Luecking, 2006; Nicholas J. Certo et al., 2003). Many models are available, but when

selecting a model, schools should ensure the model works toward a transition without a

break in services. To make models like TSIM more appealing to educators advocates

should support those who call for policies that authorize schools to contract services with

adult service providers and who are working to make post school services an entitlement

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for individuals with disabilities (Brown, Shiraga, & Kessler, 2006; Nicholas J. Certo et al., 2008; Nicholas J. Certo et al., 2003)

Using a model like TSIM will be useful to special education teachers since they report that they feel unprepared for transition upon earning their degrees (D. Anderson et al., 2003; Benitez, Morningstar, & Frey, 2009), and since transition to post school services is an area of weakness for many of them (Agran et al., 2002; D. Anderson et al., 2003). A transition model that engages adult service providers relieves the teacher of the burden of being a VR expert when the VR counselor is absent. In addition, having an adult service provider at all ITP meetings may encourage teachers to further their training. Educational leaders should support teachers by ensuring that special educators have sufficient opportunities to develop transition knowledge, especially knowledge of adult services, after they become educators.

Lastly, more research on the effects of parent training in transition is needed. Few studies exist, and these studies demonstrate that training can increase parent's level of transition understanding (Boone, 1992; Rowe & Test, 2010). The next step is to determine how increased understanding is related to agency usage and outcomes. Although this study took tentative steps in investing this question, results did not establish a relationship. However, the present study had a small sample and less than desirable sampling methods. Therefore, the final recommendation is that further studies are needed that establish the effect of parental training about transition on agency usage and outcomes. In order to establish a causal connection, an experiment that uses randomized experimental group designs will be required (Odom et al., 2005) and a

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longitudinal study should be employed to discern changes across time and to establish the direction and size of the change (Menard, 2002).

Summary

The main purpose of this study was to investigate the relationship between parent's knowledge about the transition process developed within a transition framework and both agency usage and transition outcomes. Another purpose of the study was to explore how agency usage affects transition outcomes. Thirdly, this study examined the relationship between parental knowledge of the transition process and parental opinions about the usefulness of the transition process. This study surveyed parents of youth with ID who had graduated from a Texas high school to answer the research questions. A multiple regression/correlation (MRC) design was used to analyze the data in order to answer the research questions and determine the accuracy of the hypotheses. Results of the regression analyses indicate that knowledge of the transition process is associated with parent's opinions about the transition process. Family Knowledge, one component of Transition Process was associated with parent reports of Process Utility. This means that higher levels of knowledge of the transition process and agencies are associated with later high levels of parents reporting that the transition process was helpful in accessing services. Also, the Transition Process component of Student Knowledge was associated with Goals Utility. The relationship indicates that higher levels of parents reporting that their child was informed how to access post school options is associated with high levels of parents reporting that transition goals focused on outcome areas (employment, education, etc.) were helpful in meeting outcome goals after graduation. No relationship

was found between Transition Process and Transition Outcomes, between Transition

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