Factors That Are Associated with Parental Expectations for the Employment Outcomes of Young Adults with Intellectual and Developmental Disabilities

By

Hyun Ju Kang

A dissertation submitted in partial fulfillment of

the requirements for the degree of

Doctor of Philosophy

(Special Education)

at the

UNIVERSITY OF WISCONSIN-MADISON

2015

Date of final oral examination: 07/30/2015

This dissertation is approved by the following members of the Final Oral Committee:

Cheryl Hanley-Maxwell, Professor, Rehabilitation Psychology & Special Education

Fong Chan, Professor, Rehabilitation Psychology & Special Education

William Hoyt, Professor, Counseling Psychology

Bonnie Doren, Associate Professor, Rehabilitation Psychology & Special Education

Timothy Tansey, Assistant Professor, Rehabilitation Psychology & Special Education

DEDICATION

This dissertation is dedicated to my family members who are the most important people in my life. My achievement would not have been possible without the continued love and support from my family members. My wonderful and loving parents, Jeom-Eui Lee (mother) and Seong-Ku Kang (father), believed my ability to succeed in my life. My parents also provided me support and encouraged me to keep on with my journey. My loving brother (Ilkwon Kang) and his wife (Jeongmin Kim) supported me to get through my PhD program. My loving sister (Hyunmi Kang) and her husband (Gwang-Woong Choi) also encouraged me to enjoy my life during the process of the PhD program. Finally, my beautiful nieces, Kyurin Kang and Seoyeong Choi, gave me joy and happiness during the PhD program. Special thanks to my brother and sister for taking care of parents.

My dream comes true!

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to my committee members: Dr. Cheryl Hanley-Maxwell, Dr. Fong Chan, Dr. William Hoyt, Dr. Bonnie Doren, and Dr. Timothy Tansey for your guidance and encouragement. I deeply respect your expertise, knowledge, and experience as well as appreciate your contribution to my study.

My doctoral advisor, Dr. Hanley-Maxwell, provided me the opportunity to expand my knowledge and experience. Dr. Hanley-Maxwell also inspired me to study youth with disabilities and their post-school outcomes. I am honored that she served as my advisor and chair of my committee. My academic mentor, Dr. Chan, helped me to develop my professionalism. His insights and patience allowed me to acquire research knowledge and skills and see the forest for the trees. I would like to delightfully thank Dr. Hoyt for his guidance and assistance in methodological issues and statistical analyses. His research methodology courses that I took helped me improve my statistical knowledge. I would also like to deeply thank Dr. Doren for her kind words and encouragement throughout my studies, and for reviewing my dissertation. Finally, I want to thank Dr. Tansey for his kindness and support. Dr. Tansey helped me improve my research knowledge and skills.

Your wisdom and support helped me develop my professionalism in special education!

TABLE OF CONTENTS

Dedication……. i

Acknowledgments……. ii

Table of contents……... iii

List of Tables……. vii

Abstract……. viii

CHAPTER I: NTRODUCTION…… 1

Statement of the Problem…….. 2

Significance of the Study…….. 5

Theoretical Framework……. 8

Statement of Purpose…… 9

CHAPTER II: LITERATURE REVIEW…… 12

Developmental Disabilities…….. 12

Developmental Disabilities Act…….. 13

Intellectual Disability and Autism Spectrum Disorder…… 16

Transition from High School to Work…….. 18

Transition-Related Legislation……. 19

Employment-Related Transition Goals and Activities…… 21

Employment of Youth with Intellectual and Developmental Disabilities…… 24

Parental Expectations for Youth's Employment…….. 26

Factors Affecting Parental Expectations…….. 29

Adolescent characteristics…… 30

Adolescent demographics…….. 30

Self-care skills…… 31

Social skills…… 32

Self-determination skills…… 33

Functional cognitive abilities…… 34

Job skills…… 34

Parent/family characteristics…….. 35

Socioeconomic status…… 36

Minority status……... 38

School characteristics……. 39

Work experience……. 39

Vocational education……. 40

Inclusion in general education…….. 41

Ecological System Theory…… 41

CHAPTER III: METHODOLOGY……. 46

Survey Research Design……... 47

Participants…… 48

Instrumentation……. 52

Demographic Variables……... 53

Adolescent variables…….. 53

Parent/family variables…….. 53

School program/service variables……... 54

Measurement Scales…….. 56

Social Skills Rating Scale for Parents…….. 57

The AIR Self-Determination Scale…….. 58

Family Survey: National Longitudinal Transition Study-2 (NLTS-2)…… 58

World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0)…… 59

Vineland Adaptive Behavior Scales, Second Edition (Vineland-II)……... 59

Procedures……. 60

Data Analysis…… 61

Sample Size…….. 64

Exploratory Regression Analysis……. 64

Hierarchical Regression Analysis……..... 65

CHAPTER IV: RESULT……... 67

Preliminary Data Screening and Analysis…… 67

Descriptive Statistics……. 68

Zero-Order Correlations…… 71

Exploratory Regression Analysis…….. 73

Hierarchical Regression Analysis……. 77

CHAPTER V: DISCUSSION…… 82

Major Study Findings……... 82

Exploratory Regression Analysis…… 82

SSI/SSDI benefits……... 84

Parental participation in the IEP meetings…….. 85

Hierarchical Regression Analysis…… 86

Mild disability……. 87

Medicaid/Medicare benefits…… 87

Functional cognitive abilities…….. 88

School activities…….. 89

General education classroom settings……. 89

Limitations…… 90

Implications for Practice……... 93

Functional Cognitive Abilities……. 94

School Activities…….. 95

General Education Classroom Settings…… 97

Implications for Future Research…….. 97

Conclusion……. 101

REFERENCE…….. 103

APPENDICES……. 136

Appendix A: Survey Questionnaire…….. 136

Appendix B: Cover Letter……. 145

Appendix C: Recruitment Flyer…… 146

Appendix D: Mail Invitation……. 147

Appendix E: Email Invitation to Web-based Survey…… 148

Appendix F: Research Participant Information and Consent Form for Mail…… 149

Appendix G: Research Participant Information and Consent Form for Web-based Survey… 151

LIST OF TABLES

Table 1 Parent/Family Characteristics……50

Table 2 Adolescent Characteristics…….51

Table 3 Definition of Variables used for Survey Scales……54

Table 4 School Program/Services……..69

Table 5 Parents' Employment Expectations……..70

Table 6 Summary of Intercorrelations, Means, and Standard Deviations for Variables...72

Table 7 Exploratory Regression Analysis on Parents' Employment Expectations……75

Table 8 Hierarchical Regression Analysis on Parents' Employment Expectations……..79

Abstract

Employment is a critical component for individuals with disabilities to build productive lives. Unfortunately, getting and maintaining a job is more difficult for young adults with intellectual and developmental disabilities (I/DD) than those with other disabilities. Limited cognitive ability and severe functional impairments make it difficult for young adults with I/DD to perform job tasks and maintain their jobs without additional supports in the workplace. Many parents of adolescents with I/DD rarely expect that their adolescent child will have a job. The purpose of this study was to identify factors that are associated with parental expectations about employment outcomes for young adults with I/DD, specifically youth with intellectual disability (ID) and Autism Spectrum Disorder (ASD) in middle and high school. Both mail and electronic (i.e., survey monkey) surveys were used to collect information about potential predictors (i.e., adolescent characteristics, parent/family characteristics, and school programs/services) of parental employment expectations. An exploratory regression analysis was conducted to explore the validity of sets of characteristics of adolescents, parents/families, and school program/service as predictors of parents' employment expectations. The results suggested that adolescent demographic covariates accounted for 28% of variance in parents' employment expectations. Of the predictor variables, the most significant variables included SSI/SSDI benefits, Medicaid/Medicare benefits, and mild disability. Functional life skills accounted for 32% of variance in parents' employment expectations. Of them, only functional cognitive abilities were found as a significant predictor of parents' employment expectations. However, parent/family variables did not account for a significant amount of variance in parents' employment expectations. Furthermore, school program/service variables accounted for 33% of variance in parents' employment expectations. Of them, the most significant variables consisted of parental

participation in the IEP meetings, school activities, and general education classroom settings. Findings from hierarchical regression analysis suggested that adolescent demographic covariates (i.e., Medicaid/Medicare benefits and mild disability), functional life skills (i.e., functional cognitive abilities), and school programs/services (i.e., school activities and general education classrooms) accounted for over 43% of variance in parents' employment expectations in this study. This study contributes to the literature by identifying the factors most associated with parental expectations for their adolescent child' future employment outcomes. Knowing which factors most influence parental expectations will help service providers identify and provide interventions and supports that meet the needs and hopes of parents.

CHAPTER I

INTRODUCTION

Like children and youth without disabilities, youth with disabilities are entitled to a free and appropriate education. In 2012-13 in the United States, over 6.4 million students with disabilities, including intellectual disability (ID) and developmental disabilities (DD) (i.e., multiple disabilities, autism spectrum disorder (ASD), traumatic brain injury, and developmental delay) received educational services under the Individuals with Disabilities Education Act (IDEA) (National Center for Education Statistics, 2015). Like students without disabilities, their education is a foundational component in achieving desired post-school outcomes, including employment (Fabian, Lent, & Willis, 1998; Glover & Marshall, 1993).

The transition from high school to adulthood is an important developmental process in an individual life course (Stewart, Law, Rosenbaum, & Willms, 2001). Unfortunately, students with disabilities have difficulty making the transition from high school to adulthood (Fabian et al., 1998). As a result, federal law requires that starting at age 16, students with disabilities must have an individualized education plan (IEP) that focuses on transition and includes goals in employment, postsecondary education or training, independent living, and community integration (Grigal, Neubert, & Moon, 2001; Papay & Bambara, 2011). The transition services articulated in these plans are designed to help students with disabilities and their support systems be prepared to achieve the students' desired post-school outcomes (Wehman et al., 2014). The services and outcomes identified for each student vary. The most commonly addressed outcomes for students with I/DD (intellectual/development disabilities) are employment, independent living, financial independence, community participation, and social life (Brollier, Shepherd, & Markley, 1994; Landmark, Ju, Zhang, 2010; Stewart et al., 2001, Wehman, 1996).

Despite the intended effect of transition planning, simply getting to graduation or receiving an education that adequately prepares students for post-school employment continues to be a problem. Over 30% of students with I/DD drop out of high school without the knowledge and skills needed to find and maintain a job (Fabian et al., 1998; Levinson & Palmer, 2005). Many students with I/DD do not have a career-related goal and career plan in their transition plan (Kochhar-Bryant, 2007; Levinson & Palmer, 2005). For example, students with severe ID often are taught skills within a functional life skill curriculum that does not include vocational education (Bouck, 2012; Kochhar-Bryant, 2007; McConnell et al., 2013). Due to the lack of vocational skills and services, many students with I/DD are less likely to be employed post-school than students with other disabilities (Fabian et al., 1998; Kraemer & Blacher, 2001; Landmark et al., 2010; Levinson & Palmer, 2005; Newman, Wagner, Cameto, Knokey, & Shaver, 2010).

Compared to students with other disabilities, only a small percentage of students with ID or ASD receive diplomas at the point of school leaving. For instance, about 34% of students with ID and 56% of students with ASD graduated from high school with a regular high school diploma during the 2007-2008 school year (U.S. Department of Education, 2010). Students with significant ID were least likely to graduate with a regular high school diploma (Wagner, Newman, Cameto, Levine, & Garza, 2006).

Statement of the Problem

Employment is a desired primary post-school outcome for students with disabilities (Levinson & Palmer, 2005). This outcome is desired because employment plays an important role in developing a sense of accomplishment and self-efficacy, promoting overall life satisfaction and quality of life, and providing physical and psychological well-being and

financial benefits to students with disabilities (Chan, Leahy, & Saunders, 2005; Dutta, Gervey, Chan, Chou, & Ditchman, 2008; Gold, Fabian, & Luecking, 2013; Hillier & Galizzi, 2014; Levinson & Palmer, 2005; Lindsay, 2011). However, getting and maintaining a job is more difficult for students and young adults with disabilities than those without disabilities (Fabian et al., 1998; Hillier & Galizzi, 2014; Kraemer & Blacher, 2001). This difficulty is revealed in employment rates for adults with and without disabilities. According to the National Organization on Disability (2010), 21% of individuals with disabilities are employed in part-time or full-time jobs, compared to 59% of their peers without disabilities after leaving high school.

When compared with students with other disabilities, students with ASD and ID have additional employment challenges (Allen, Burke, Howard, Wallace, & Bowen, 2012; Bouck, 2014; Wieren, Armstrong, & McMahon, 2012). Students with ASD have social and communication deficits as well as restricted activities and interests (Allen et al., 2012; Gargiulo, 2012; Heward, 2013; Smith, 2007; Wieren et al., 2012). These students also often exhibit behavior difficulties such as tantrums, aggression, self-injury, property destruction, or pica. Students with moderate to severe ID have significant limitations in both intellectual functioning and adaptive behaviors, which include social and communication skills, self-care skills, and independent living skills (Bouck, 2014; Gargiulo, 2012; Heward, 2013; Smith, 2007; Wieren et al., 2012). In turn, these behaviors affect job performance (Berkman & Meyer, 1998; Burt, Fuller, & Lewis, 1991; Hendricks, 2010; Smith, 1986; Smith, 1987).

Limited cognitive ability and severe functional impairments make it difficult for students with ASD and moderate to severe ID to perform job tasks and maintain their jobs without additional supports in the workplace (Allen et al., 2012; Hendricks, 2010; Hillier & Galizzi, 2014; Wieren et al., 2012). These difficulties result in students with ID and ASD being less

likely than their peers with other disabilities to achieve employment outcomes after leaving high school (Allen et al., 2012; Bouck, 2014; Newman et al., 2010). According to Grigal and colleagues (2011), 46% of students with ID were employed when leaving high school; this is significantly less than the 74% of students with other disabilities. In particular, 56.6% of students with moderate to severe ID do not have any paid jobs after leaving high school (Bouck, 2012). The statistics for youth with ASD are similar to those for youth with ID, with 45.2% obtaining employment post-high school. These rates of employment are different than those obtained by student with learning disabilities; 70.7% of youth with learning disabilities are employed after living high school (Sanford et al., 2011).

Many parents of children with ASD and ID rarely expect that their children will ever have a job (Wagner et al., 2003). Parents of young adults with ASD acknowledged that their children will stay at home and have unskilled jobs (Holwerda, Klink, Groothoff, & Brouwer, 2012; Wolf & Goldberg, 1986). Parents of young adults with severe ID also expect that their children will stay at home; they also expect their adult-child will be employed in segregated settings (Chambers, Hughes, & Carter, 2004; Grigal & Nuebert, 2004). Furthermore, parents of minority students with disabilities are less likely than parents of non-minority parents to think that their children will be employed (Doren, Gau, & Lindstrom, 2012).

Cooney (2002) conducted a qualitative research to examine transition experiences of young adults with severe disabilities, their parents, and professionals. He found that many parents acknowledged that their children would need specialized programs and supports to accomplish their goals. They also believed that their children would work in a sheltered workshop. Additionally, the parents felt powerless when advocating for their child's needs because they were treated as outsiders in transition meetings. This finding mirrors some of the

parental expectations found in earlier research. For example, Whitney-Thomas and Hanley-Maxwell (1996) found that the majority of their participants who were parents of students with disabilities were uncomfortable with the transition process, anticipating that their child would not have positive post-school outcomes. These resulted stood in stark contrast to what parents of students without disabilities said.

Geenen and colleagues (2003) used qualitative and quantitative research methods to examine barriers minority families faced when their adolescent child moves from high school to adulthood. Many parents indicated that professionals do not provide transition-related accommodations or supports to their child. Furthermore, they reported that their children were socially isolated from their peers. The parents also said that they experienced insensitivity and discrimination when interacting with professionals. They attributed the professionals' attitudes to their child's disability and family's culture. Similarly, Poon, Koh, and Magiati (2013) found that the majority of Chinese, Malaysian, and Indian parents who participated in their study expected that their children with ASD, ID, or multiple disabilities would have difficulties achieving community acceptance, being safe from harm, living independently, and achieving financial security. They also indicated that their child's level of functioning and severity of behavior problems reduced their expectations for their child's future adult outcomes.

Significance of the Study

Not surprisingly, parents perceive that their child's limited cognitive ability and functional impairments will prevent their child with I/DD from having work opportunities (Davies & Beamish, 2009; Hillier & Galizzi, 2014; Hurlbutt & Chalmers, 2004). Parents also anticipate that poor communication skills, social skills, and self-determination skills, and behavior problems will make it difficult for their child with a disability to maintain a job (Hillier

& Galizzi, 2014; Hurlbutt & Chalmers, 2004; Wehman et al., 2014). These parental concerns can negatively influence the parents' expectations regarding their child's future employment opportunities; in turn, this may play a role in the child's actual employment outcomes.

Many scholars have studied the factors that influence employment outcomes for students with disabilities (Brolin & Gysbersh, 1989; Carter et al., 2009; Carter et al., 2011; Fabian et al., 1998; Flexer, Daviso, Baer, Queen, & Meindl, 2011; Grigal et al., 2011; Heal & Rusch, 1995; Lindsay, 2011; Migliore, Timmons, Butterworth, & Lugas, 2012; Shier, Graham, & Jones, 2009). These include student, parent/family, and school characteristics. In regards to student characteristics, the strongest predictors of employment outcomes for students with disabilities are race/ethnicity and gender. Minority students with disabilities and female students with disabilities are less likely to be employed than White and male students with disabilities (Grigal, Hart, & Migliore, 2011; Lindsay, 2011). For example, 42% of African-American students with disabilities and 36% of Latino students with disabilities are employed compared to 63% of White students with disabilities (Cameto, Levine, Wagner, & Marder, 2003). More than half of male students with disabilities (64.3%) were employed; this is compared to 40.3% of female students with disabilities (Carter, Trainor, Ditchman, Swedeen, & Owens, 2009; D' Amico & Blackorby, 1992; Heal & Rusch, 1995; Lindsay, 2011).

Along with student characteristics, parent/family characteristics are important predictors of employment outcomes for students with disabilities. In particular, socioeconomic status (SES), household income, and parental education level have a powerful influence on post-school employment of students with disabilities (Diemer & Ali, 2009; Liu, 2002; Maher & Kroska, 2002). According to Chiang and colleagues (2013), students with ASD from low-income families are less likely to be employed than those from medium and high income-families. This

may be due, in part, to students with ASD from low-income families not receiving appropriate resources (e.g., transportation, vocational training, or job coach) and having fewer job opportunities than those from medium and high income-families (Chiang et al., 2013).

In addition to parent/family characteristics, work experience, vocational education, and participation in general education curriculum are significant predictors of employment outcomes for students with disabilities. Work experiences and vocational training during high school play an important role in promoting future career aspirations and career outcomes for students with disabilities (Carter et al., 2009; Carter et al., 2011). Vocational education also makes it possible for students with disabilities to make career decisions and increase full-time employment (Brolin & Gysbersh, 1989; Flexer et al., 2011). These factors may contribute to the correlations between vocational training, vocational education, and work experiences and post-school employment. In addition to these factors, participation in general education curriculum is associated with post-school employment outcomes for students with disabilities (Colley & Jamison, 1998; Hetherington et al., 2010; Landmark et al., 2010).

Many studies have reported that student characteristics, parent/family characteristics, and school characteristics have a strong influence on employment outcomes of young adults with disabilities (Brolin & Gysbersh, 1989; Carter et al., 2009; Carter et al., 2011; Flexer et al., 2011; Grigal et al., 2011; Lindsay, 2011; Shier et al., 2009). However, there is little attention toward investigating factors that are associated with parental expectations for their adolescent child's future employment outcomes. Parents are important mediators and decision makers for their child's future employment outcomes. Youth with disabilities who receive parents' support are more likely to find and maintain a job than those who do not receive parents' support (Flores & O'Brien, 2002; Turner & Lapan, 2002; Whiston & Keller, 2004; Young, 1994). Given this, it is

important to understanding what factors are associated with parental expectations. This study begins to address the need for this information.

Theoretical Framework

This study uses ecological system theory to understand parental expectations for their adolescent child's future employment outcomes. Ecological system theory developed by Bronfenbrenner (1979) emphasizes a system with multiple environments that surround an individual, indicating that there are reciprocal interactions between humans and the environment (Bronfenbrenner, 2005; Chibucos & Leite, 2005; Russell, 2003). According to Bronfenbrenner (1979), there are five systems: microsystem, mesosystem, exosystem, macrosystem, and chronosystem. Each of the systems can have a direct or indirect impact on the development of an individual (Bronfenbrenner, 2005; Chibucos & Leite, 2005; Russell, 2003; Wang, McGrath, Watts, 2010).

Components of each system are associated with parental expectations. According to Olsen, Roese, & Zanna (1996), "The concept of "expectancy" forms the basis for virtually all behaviour. Expectancies can be defined as beliefs about a future state of affairs. As such, expectancies represent the mechanism through which past experiences and knowledge are used to predict the future." (p. 211). Parental expectations can be shaped by and affect an individual beliefs, experiences, knowledge, and behavior (Tajfel & Fraser, 1978). Parental expectations play an important role in helping students with disabilities to establish their career decisions and plans (Carter et al., 2011; Schulenberg, Vondracek, Crouter, 1984; Test et al., 2009; Turner & Lapan, 2002). Parents shape the environment by sharing work roles, values, expectations, and aspirations with their child (Metheny & McWhirter, 2013; Vondracek, Lerner, & Schulenberg,

1986). Parents also play a central role in fostering their children's career aspiration and career exploration (Sawitri, Creed, & Zimmer-Gembeck, 2014).

Research has shown that there is a positive effect of parent support on career development of young adults (Turner & Lapan, 2002). Young adults who feel supported by their parents in pursuing careers engage in career exploration activities, value their future jobs, and have high career self-efficacy (Kracke & Noack, 2005; Lapan, Hinkelman, Adams, & Turner, 1999). For instance, Mexican-American high school girls who receive their fathers' support have educational plans and career expectations (McWhirter, Hackett, & Bandalos, 1998). Parental expectations are associated with their children's behaviors. In fact, the literature as it reveals that parental expectations are a significant predictor of their child's career aspirations, interests, and values as well as career behaviors (Fouad & Fitzpatrick, 2009; Morrow, Gore, & Campbell, 1996; Sawitri, Creed, & Zimmer-Gembeck, 2014). As a result, factors that are associated with parental expectations have the potential to influence their children outcomes.

According to Kraemer and Blacher (2001), parental expectations for their child's future educational attainment and independence are strongly influenced by the severity of their child's disability. In particular, a child's level of functioning and severity of behavior problems significantly influence parental expectations for their child's adult outcomes (Poon et al., 2013). While it is clear that student characteristics affect parental expectations, it is less clear how these expectations are influenced by parent/family characteristics and school program/services characteristics.

Statement of Purpose

The primary purpose of this study is to identify factors that are associated with parental expectations about employment outcomes for young adults with I/DD, specifically youth with

intellectual disability (ID) and Autism Spectrum Disorder (ASD) in middle and high school. This study particularly focuses on examining whether characteristics of young adults with ID or ASD, parents/families, and school programs/services are associated with parental expectations for their adolescent child's future employment outcomes. This study will contribute to the literature by identifying the factors most associated with parental expectations for their adolescent child' future employment outcomes. Knowing which factors most influence parental expectations will help service providers identify and provide interventions and supports that meet the needs and hopes of parents. This study addresses five research questions:

1. Do adolescent characteristics (e.g., adolescent demographics, self-care skills, social skills, self-determination skills, and employability skills) predict parental expectations for their child's future employment outcomes? For this research question, it is hypothesized that there is a significant relationship between adolescent characteristics and parental expectations.
2. Do parent/family characteristics (e.g., age, household income, education, employment status, and disability status) predict parental expectations for their child's future employment outcomes? For this research question, it is hypothesized that there is a significant relationship between parent/family characteristics and parental expectations.
3. Do school program/services (e.g., employment-related transition goals, work experience, vocational education, and inclusion in general education) predict parental expectations for their child's future employment outcomes? For this research question, it is hypothesized that there is a significant relationship between school program/services characteristics and parental expectations.

4. Do parent/family characteristics predict parental expectations for their child's future employment outcomes after controlling for adolescent characteristics? For this research question, it is hypothesized that there is a significant relationship between parent/family characteristics and parental expectations.
5. Do school program/services predict parental expectations for their child's future employment outcomes after controlling for both adolescent and parent/family characteristics? For this research question, it is hypothesized that there is a significant relationship between school program/services and parental expectations.

CHAPTER II

LITERATURE REVIEW

This chapter reviews the existing literature related to employment and factors affecting parental expectations for their adolescent child's future employment outcome. The purpose of this literature review is to provide an overall framework for establishing the importance, background, and context of this study. This chapter begins with an overview of developmental disabilities (DD), including the Developmental Disabilities Act and the IDEA categories of ID and ASD. The second section covers transition from high school to work by describing transition legislation and employment-related transition goals and activities. The third section provides information related to employment of youth with I/DD, parental expectations, and factors influencing parental expectations for youth's employment. The final section reviews social cognitive career theory as a theoretical framework about parental expectations for their adolescent child's future employment outcomes.

Developmental Disabilities

In the past, individuals with DD were viewed as possessed by evil spirits or as retribution for past sins (Harris, 2006; Odom, Horner, Snell, & Blacher, 2007). Since scientific knowledge about disabilities was expanded, the meaning of DD has been scientifically defined in the United States (Harris, 2006; Odom et al., 2007). The phrase "developmental disabilities" is widely recognized as an umbrella term that includes many types of disabilities that share common characteristics (Odom et al., 2007; Wehman, McLaughlin, & Wehman, 2005). ID, ASD, cerebral palsy, traumatic brain injury, and epilepsy are grouped as DD by the Administration on Developmental Disabilities (ADD) (Odom et al., 2007; Wehman et al, 2005).

Approximately 10 million children in the United States have been identified as having DD (Boyle et al., 2011). Individuals with DD have a significant life limitations in three or more life activities, including language, learning, mobility, and capacity for self-sufficiency. These limitations are present in infancy or childhood (Odom et al., 2007; Wehman et al., 2005). Developmental disabilities are caused by biological conditions; toxins; problems during pregnancy, at birth or after birth; and unknown factors (Crocker, 1989; Harvey & Kennedy, 2002; Kennedy & Horn, 2004; Smith, 2007). Chromosomal abnormalities or teratogens are also linked to development of such disabilities (Denckla, 2000; Harvey & Kennedy, 2002). The Developmental Disabilities Act officially defines DD, broadly. Understanding ID and ASD requires more information than the broad definition. As a result, this section begins with the Developmental Disabilities Act and its definitions, and ends with a more detailed discussion of ID and ASD.

Developmental Disabilities Act

Developmental Disability was first defined in federal law by P.L. 91-517, the Developmental Disabilities Services and Construction Act of 1970 (Kiernan & Schalock, 1995; Wehman et al., 2005). At this time, DD was defined as severe limitations in ability to function which appeared at birth or before the age of 18 years (Kiernan & Schalock, 1995), had a substantial impact on the life of the individual, and was expected to last indefinitely (The Minnesota Governor's Council on Developmental Disabilities, n.d.). The specific disabilities included in this early definition were mental retardation, epilepsy, cerebral palsy (Kiernan & Schalock, 1995), and other specific neurological conditions (The Minnesota Governor's Council on Developmental Disabilities, n.d.).

In 1975, the Developmental Disabilities Assistance and Bill of Rights Act (PL 94-103) retained the original definition but expanded the list of disabilities within the broader DD category, adding autism, dyslexia, and conditions that were similar to mental retardation (The Minnesota Governor's Council on Developmental Disabilities, n.d.). Three years later, the 1978 Rehabilitation, Comprehensive Services, and Developmental Disabilities Act (PL 95-602) changed the definition of DD by broadening it. Although the definition retained the criteria of severe and lifelong limitations, the amendments moved away from disability categories to cognitive or physical impairment. Severe impairment was further described as leading to substantial functional limitations in at least three areas of major life activities, including self-care, self-direction, language, learning, mobility, independent living, and economic self-sufficiency (Harvey & Kennedy, 2002). Furthermore, the 1978 amendments changed the upper age for onset from 18 to 22. The next definitional change occurred in the 1990 amendments, expanding the definition to include children from birth to age 5 whose delays or conditions were likely to result in developmental disabilities (The Minnesota Governor's Council on Developmental Disabilities, n.d.).

The most recent definitional change was done in 2010, by the American Association on Intellectual and Developmental Disabilities (AAIDD). AIDD definition retains the criteria of occurring before age 22 and lasting a lifetime, but changes cognitive or physical impairment to any severe and chronic disability that affects cognitive ability or physical function or a combination of both (AAIDD, 2010).

In addition to creating and refining the definition of DD, the laws articulated the rights of individuals with DD and progressively shaped the services these individuals were entitled to receive. Among the requirements, the 1975 amendments (PL 94-103) established the rights of

individuals with DD to receive appropriate services and treatment, including minimum standards for residential care. Furthermore, these amendments stated that services must be provided in the least restrictive environment. The act also required states receiving grants under this law to create protection and advocacy programs designed to ensure and support the rights of individuals with DD. These programs had to address areas such as special education, guardianship, abuse and neglect, transportation, housing, and employment discrimination. This Act also created the university affiliated programs to create research and service/demonstration programs to provide training and education to individuals with DD.

The Developmental Disabilities Act of 1984 changed specific focus areas of service established in the 1978 amendment (case management, child development, residential alternatives, and social development). These changes focused on creating services and support that would allow individuals with DD to live independently, become a productive person, and be integrated into the community (Wright & King, 1991). The amendments required that services be designed to help individuals with DD "to achieve their maximum potential through increased independence, productivity, and integration into the community" and defined each of the three terms used in this requirement (The Minnesota Governor's Council on Developmental Disabilities, n.d.). Of particular importance to this research, the amendment added definitions for employment-related activities and supported employment. Additionally, these amendments emphasized the importance of employment-related activities as one of the priority service areas for individuals with DD (Wright & King, 1991). In addition, special projects were required to expand and improve services for minority individuals with DD, such as Native Americans and Native Hawaiians (Wright & King, 1991).

In the 1987 amendments of the Developmental Disabilities Act, revisions mandated that the capabilities, competencies, preferences, and needs of individuals with DD be reflected in planning employment-related activities (Wright & King, 1991). Moreover, the roles of the family and members of the community were specifically identified as important factors in enhancing the lives of individuals with DD when support services are provided (Wright & King, 1991). The 1990 and 1994 amendments played an important role in expanding the purpose of the law to recognize that individuals with DD and their families are the primary decision-makers about services, supports, and other assistance they receive (The Minnesota Governor's Council on Developmental Disabilities, n.d.).

Intellectual Disability and Autism Spectrum Disorder

Over 6.5 million people in the United States have been identified as having an ID (Kraemer & Blacher, 2001; Partners Resource Network, n.d.). Of these, approximately 200,000 move from high school to adulthood each year (Wehman, 1996; Kraemer & Blacher, 2001). The majority of adults with ID have difficulty being employed without supports and living independently (Haring & Lovett, 1990; Kraemer & Blacher, 2001; Kregel & Wehman, 1989). Moreover, many adults with ID continue to live at home with their parents after leaving high school (Pilling, McGill, & Cooper, 2007). They have limited functioning in self-care, communication, and mobility (Neece, Kraemer, & Blacher, 2009; Pilling et al., 2007).

More specifically, ID is characterized by severe impairments in both intellectual functioning and adaptive behavior. Intellectual functioning refers to individual performance on certain types of cognitive tasks, including higher order thinking, learning, reasoning, and problem solving. Adaptive behavior refers to an ability to function in everyday life, dealing with

daily demands and requirements of the environment (Gargiulo, 2012; Heward, 2013; Smith, 2007). Furthermore, a diagnosis of ID must occur prior to the age of 18 (AAIDD, 2010).

Approximately 3.5 million individuals in the United States have been identified as having ASD (Buescher et al., 2014; Shattuck et al, 2012). ASD is a pervasive developmental disorder characterized by significant limitations in communication, social interaction, and repetitive patterns of behavior, interests, or activities (Diagnostic and Statistical Manual of Mental Disorders, 2013; Gargiulo, 2012; Heward, 2013; Smith, 2007). ASD includes autism, Asperger Syndrome, pervasive developmental disorder-not otherwise specified (PDD-NOS) (Hillier & Galizzi, 2014). ASD is usually identified in the early developmental period and is often accompanied by an ID (DSM-5, 2013; Gargiulo, 2012; Heward, 2013; Smith, 2007).

Many individuals with ASD have poor post-school employment and adjustment in adulthood outcomes (Eaves & Ho, 2008; Shattuck et al., 2012; Taylor & Seltzer, 2011). Poor adult outcomes reflect the challenges individuals with ASD have, often exhibiting maladaptive behaviors such as self-injury, aggression, and uncooperative behaviors (Lecavalier, 2006; Taylor & Seltzer, 2011). In addition, the majority of individuals with ASD continue to live at home because of experiencing difficulty dealing with new situation to manage their daily lives (Friedman, Erickson, & Parish, 2013).

Educational services for children and youth with ID and ASD are addressed by the Individuals with Disabilities Education Act (IDEA) of 1975 and its subsequent amendments. This act mandated the provision of a free and appropriate public education to children who are identified as having a disability and need special education and related services to benefit from their education (Migliore, Timmons, Butterworth, & Lugas, 2012; Palmer, Wehmeyer, Shogren, Williams-Diehm, & Soukup, 2012). The purpose of this legislation is to ensure educators prepare

students with disabilities for living independently, being employed, and participating in the community (Gaumer, Morningstar, & Clark, 2004; Grigal, Dwyre, & Davis, 2006; Odom et al., 2007; Palmer et al., 2012). About 7% of students with ID (n = 422,401) and ASD (n = 404,544) receive special education services under IDEA (U.S. Department of Education, 2013).

The majority of students with ID attend public secondary schools (Newman, Wagner, Cameto, & Knokey, 2009). About 94% of students with ID attend regular schools, while 4% of students with ID attend special schools (Newman et al., 2009). The other 2% of students with ID attend charter or alternative schools (Newman et al., 2009). Of them, 78% of students with ID take at least one vocational education course in a given semester (Newman et al., 2009). Similarly, many students with ASD attend public secondary schools (Wagner, Newman, Cameto, Levine, & Marder, 2007). About 84% of students with ASD attend regular schools, while 12% of students with ASD attend special schools (Wagner et al., 2007). The other 4% of students with ASD attend charter or alternative schools (Wagner et al., 2007). Of them, 77% of students with ASD take at least one vocational education course in a given semester (Wagner et al., 2007).

The services these students receive play an important role in helping prepare them for adulthood. This is particularly true of transition services which are intended to help students with disabilities move from school to adult life (Carter, Austin, & Trainor, 2011; Wehman & Revell, 1997).

Transition from School to Adult Life

Transition was once referred to as “a period of floundering that occurs for at least the first several years after leaving school as adolescents attempt to assume a variety of adult roles in their communities” (Halpern, 1991, p. 203). Wehman (2001) defines transition as “life changes, adjustments and cumulative experiences that occur in the lives of young adults as they move

from school environments to independent living and work environments" (p. 7). Transition services help students with disabilities move successfully from high school to adulthood (Bauer & Brown, 2001; Hughes & Carter, 2000; Luecking & Certo, 2003; Wehmeyer & Sands, 1998).

Over the years, advocates, families, and educators have paid attention to the content and the process of transition because of poor post-school outcomes of students with disabilities (Kohler & Field, 2003; Shogren & Plotner, 2012). These outcomes made it clear that transition programs and services needed to be created and changed to help students with disabilities achieve desired employment, independent living, postsecondary education, and community involvement outcomes (Hughes, 2001; Kohler & Field, 2003). The increased public recognition has contributed legislation that has helped shape transitional programs and services (Hughes, 2001; Kohler & Field, 2003). This section addresses transition-related legislation and focuses more specifically on employment-related transition goals and activities.

Transition-Related Legislation

In 1960, the work-study movement emerged from schools and vocational rehabilitation agencies to help students with mild disabilities prepare for their adult life after high school (Halpern, 1973; 1974; Kolstoe & Frey, 1965). The purpose of this movement was "to create an integrated academic, social, and vocational curriculum, accompanied by appropriate work experience that was designed to prepare students with mild disabilities for eventual community adjustment" (Halpern, 1991, p. 203). At this time, students who participated in the program received school credit, but their work experiences were unpaid (Halpern, 1973; 1974; Kolstoe & Frey, 1965).

In 1970, the career education movement emerged, aimed at developing skills for a meaningful work life (Halpern, 1991, 1994). Career education focused on economic, social, and

personal fulfillment (Brolin, 1973). During this time, the participants in career education programs or classes were students without disabilities (Halpern, 1991). However, the Career Education Implementation Incentive Act of 1977 began to change that, requiring that students with disabilities to be included as a target population for career education (Halpern, 1991). Consequently, students with disabilities gradually benefited from the services provided under the Act (Halpern, 1994).

In 1990, the Individuals with Disabilities Education Act (IDEA) amendments mandated that the Individualized Education Program (IEP) include a transition plan beginning at age 16 (Kohler & Field, 2003; Odom et al., 2007; Shogren & Plotner, 2012; Wehman et al., 2005). The amendments also required that all students with disabilities be provided with opportunities to take an active role in participating in the transition planning process and designing their future (Beirne-Smith, Ittenbach, & Patton, 2006; Hughes, 2001; Martin & Williams-Diehm, 2013; Wehmeyer, 2002; Wehmeyer, Bersani, & Gagne, 2000). In addition, the law mandated that transition plans reflect students' preferences, interests, and needs and include post-school outcome goals (Griffin, Taylor, Urbano, & Hodapp, 2013; Kohler & Field, 2003; Martin & Williams-Diehm, 2013; Milsom & Dietz, 2009; Odom et al., 2007; Shogren & Plotner, 2012).

In 1997, IDEA amendments emphasized that the transition plan should focus on post-school outcomes, including employment, postsecondary education, community participation, and independent living, to improve the quality of adult life of students with disabilities (Benz, Lindstrom, & Yovanoff, 2000; Hughes, 2001; Migliore et al., 2012; Odom et al., 2007; Powers et al., 2005; Wehman et al., 2005). The transition plan, as articulated in these amendments, must include a statement of the transition service needs, interagency responsibilities, and transition service components (e.g., advanced-placement courses or vocational education programs).

Furthermore, the age at which transition planning must start was lowered from 16 to 14 (Hughes, 2001; Kohler & Field, 2003; Martin & Williams-Diehm, 2013; Odom et al., 2007; Powers et al., 2005; Shogren & Plotner, 2012). Additionally, the amendments required that the transition plan must include employment and adult living objectives, community experiences, related services, daily living skills, and economic self-sufficiency (Hughes, 2001; Kohler & Field, 2003).

In 2004, reauthorization of IDEA included the requirement that the transition plan includes a statement of transition goals based on age-appropriate transition assessments (Smith, 2005). It also clarified that transition services should begin when students reach age 16, and should include a statement of interagency responsibilities (Weidenthal & Kochhar-Bryant, 2007). In addition, the law required that the transition plan is individualized and aimed at career development with other service systems (Sabbatino & Macrine, 2007). School districts are required to provide career and technical education to students with disabilities so that they are able to develop job skills (Emeagwali, 2005).

Employment-Related Transition Goals and Activities

The Individual Education Plan (IEP) can be one of the most important elements that meets the needs of students with disabilities. Students are rarely provided with opportunities to take a leadership role in IEP planning. The majority of students with disabilities (80%) in high school do not have an opportunity to lead their IEP meetings, and 67% do not even know what their IEP goals are. Furthermore, the majority of students with disabilities (96%) in junior high school do not learn how to lead their IEP meetings, and 61% do not receive any instruction about their IEP meetings (Agran & Hughes, 2008). As a result, although students with disabilities are supposed to have opportunities to participate in the transition planning process (Cameto et al., 2004; Martin & Williams-Diehm, 2013; Powers et al., 2005; Wehmeyer, 2002), it is not

surprising that many students with disabilities are not provided these opportunities (Hughes, 2001; Kohler & Field, 2003; Martin & Williams-Diehm, 2013; Rusch, Hughes, Agran, Martin, & Johnson, 2009; Zafft, Hart, & Zimbrich, 2004). Demographics seem to predict who is more likely to participative. Griffin and colleagues (2013) analyzed data from the National Longitudinal Transition Study-2 (NLTS-2), a nationally representative sample of students with ASD, to examine student involvement in transition planning. About 62.5% of students with ASD (n = 200) either did not participate in the meetings or engaged very little. Additionally, findings revealed that 80.5% of Caucasian students with ASD (n = 100) actively participated in the meetings compared with 8.5% of African American students with ASD (n = 10).

In addition to barriers to student participation in transition planning, the transition plan has often been considered inadequate, in spite of the requirements to include transition statements in the IEP by IDEA (Hughes, 2001; Kohler & Field, 2003; Shogren & Plotner, 2012). Less than 40% of students with ASD and ID have community/integrated employment-related goals in their transition plan (Powers et al., 2005; Shogren & Plotner, 2012). Instead of employment related goals, students with ASD and ID have goals related to functional independence and social relationships. Lack of attention to employment goals may contribute to poor employment outcomes after high school for students with disabilities (Strickland, Coles, & Southern, 2013).

Many students with disabilities cannot achieve successful post-school outcomes (Blackorby &Wagner, 1996; Sabbatino & Macrine, 2007). These students and their families experience distress, confusion, and uncertainty when moving from high school to adulthood (Hanley-Maxwell, Whitney-Thomas, & Pogoloff, 1995; Kennedy & Horn, 2004; Odom et al., 2007; Shogren & Plotner, 2012). The employment outcomes they experience often are

unemployment and job dissatisfaction (Newman et al., 2009; Pinkney, Murray, & Lind, 2012; Test et al., 2009). These poor employment outcomes have persisted over the years.

For example, in the 1980's, only 37% of school exiters with disabilities had full-time jobs, and 17% had part-time or seasonal jobs (Hasazi, Gordon, & Roe, 1985). More recent data reveal the same outcomes, with only 35% of school exiters with disabilities having full-time or part-time jobs (National Organization on Disability, 2004). In particular, young adults with ASD and ID are less likely to be employed, attend postsecondary education, participate in the community, and live independently than their peers with other disabilities (Billstedt, Gillberg, & Gillberg, 2005; Luftig & Muthert, 2005; National Organization on Disability, 2004; Shogren & Plotner, 2012).

Efforts to improve transition outcomes have occurred for more than three decades. For instance, the Office of Special Education and Rehabilitative Services (OSERS) has funded many research projects related to transition education and services (Field & Hoffman, 1996; Kohler & Field, 2003; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000). Additionally, local, state, and federal governments have invested financial resources into transition service development, professional development, and effective transition practice (Kohler & Field, 2003). These initiatives and efforts have improved transition services and made them more widely available (Kohler & Field, 2003), providing transition services focused on employment, postsecondary education, and independent living (Test et al., 2009). As a result, the transition plans for students with disabilities who have participated in the initiatives have included transition goals that focus on employment, postsecondary education, and independent living (Cameto, Levine, & Wagner, 2004; Test et al., 2009). Papay and Bambara (2013) analyzed data from the NLTS-2 to assess whether best practices predict post-school outcomes. Their results revealed that young adults

with ID who participated in their transition plan were employed and met their friends at least weekly after leaving high school. In addition, the young adults whose parents were involved in the transition planning had better postsecondary educational outcomes after high school than those who did not.

Employment of Youth with Intellectual and Developmental Disabilities

Employment is an important and valued component of adult life (Bullis & Yovanoff, 2006; Joshi, Bouck, & Maeda, 2012; Lemaire & Mallik, 2008; Rabren, Dunn, & Chambers, 2002; Steere, Rose, & Cavaiuolo, 2007). Employment allows students with disabilities to achieve a successful adult life in the United States (Bullis &Yovanoff, 2006; Fabian, 2007; Joshi et al., 2012). Many studies have revealed that integrated employment is positively associated with economic resources, job satisfaction, self-perception, social networks, and recreational activities (Blackorby & Wagner, 1996; Butterworth & Gilmore, 2000; Carter & Lunsford, 2005; Ju, Zhang, & Pacha, 2012; Stephens, Collins, & Dodder, 2005).

Employment helps adults with disabilities to have economic self-sufficiency, financial security, and opportunities for independent living and community involvement (Lindstrom, Doren, Miesch, 2011; Joshi et al., 2012; Rabren et al., 2002; Steere et al., 2007; Test, Aspel, & Everson, 2006). Employment also makes it possible for adults with disabilities to establish their adult identity and develop relationships and support networks (Goh & Bambara, 2013; Test et al., 2006). Furthermore, employment enables adults with disabilities to increase their self-esteem and self-fulfillment as well as quality of life as a productive member of society (Eggleton, Robertson, Ryan, & Kober, 1999; Joshi et al., 2012; Patton et al., 1996; Steere et al., 2007; Test et al., 2006).

However, adults with disabilities often have difficulties being employed and maintaining their independence in the community (Joshi et al., 2012; Luftig & Muthert, 2005; Rabren et al., 2002). Adults with disabilities have functional limitations in mobility, self-care, communication, social and job performance skills, and cognitive ability (Brooks-Gunn & Duncan, 1997; Cater & Wehby, 2003; Parish & Cloud, 2006). Youth and adults with disabilities also receive limited employment opportunities, inadequate transportation, and insufficient support (Lemaire & Mallik, 2008; Lindstrom et al., 2011). Moreover, they have limited access to employment training and vocational education classes (Benz & Halpern, 1993; Cater & Wehby, 2003; Frank & Sitlington, 1997), and they are less likely to have career decision-making skills, career outcome expectations, and vocational identities than their peers without disabilities (Ochs & Roessler, 2001; Pinkney et al., 2012).

Adults with disabilities are less likely to be employed than their peers without disabilities (Joshi et al., 2012; Newman et al., 2009). For example, only 40% of young adults with disabilities have a paid job during the first 2 years after leaving high school (Goldstein, Murray, & Edgar, 1998; Pinkney et al., 2012; Wagner et al., 2006). In addition, these young adults are less likely to earn wages and have employment-related benefits than their peers without disabilities (Goldstein et al., 1998; Pinkney et al., 2012; Wagner et al., 2006).

In particular, young adults with I/DD are less likely than students with other disabilities to have employment opportunities after high school (Carter et al., 2011; Johnson, McGrew, Bloomberg, Bruininks, & Lin, 1997; Test et al., 2009). This may be due, in part, to their substantial limitations in major life activities such as self-care, communication, and mobility (Neece, Kraemer, Blacher, 2009; Odom et al., 2007; Pilling et al., 2007). As a result, the majority of young adults with I/DD are employed in either facility-based work settings or community-

based non-work programs (Butterworth et al., 2011; Migliore et al., 2012; Taylor & Seltzer, 2011). When working in the community, adults with ID tend to be laid off from their jobs more frequently than adults with other disabilities (Baer, Daviso, Flexer, Queen, & Meindl, 2011; Newman et al., 2009).

Adults with ASD's employment patterns are similar to those of adults with I/DD. While they are more likely to be employed than those with I/DD, they are less likely to be employed than those with specific language impairments, learning disabilities, and ID (Allen et al., 2012; Hendricks, 2010; Hillier & Galizzi, 2014; Wieren et al., 2012). Employment outcomes for these individuals interact with their social and communication deficits as well as restricted activities and interests (Allen et al., 2012; Gargiulo, 2012; Heward, 2013; Smith, 2007; Wieren et al., 2012).

Outcomes for youth with disabilities are affected by many factors, including parental expectations. This section examines those expectations and the factors that influence parental expectations.

Parental Expectations for Youth's Employment

Parents play a critical and central role in facilitating adult life outcomes and accessing employment opportunities by helping their child's career and living plans as well as providing information about their child's preferences and abilities to professionals (Cooney, 2002; Morningstar, Turnbull & Turnbull, 1995; Odom et al., 2007). Parents of children with I/DD typically function as a primary caregiver who support their child's transition to adulthood (Fujiura, 1998; Fujiura & Braddock, 1992; Heller & Schindler, 2009; Henninger & Taylor, 2014; Turnbull & Turnbull, 2000). In this role, parents are important decision makers and advocates for increasing the quality of educational plans and services delivered to their children (Bianco,

Garrison-Wade, Tobin, & Lehmann, 2009). Parents also have a strong impact on their child's career aspirations and development, as well as academic achievement (Bianco et al., 2009; Lindstrom, Doren, Metheny, Johnson, & Zane, 2007; Penick & Jepsen, 1992; Whiston & Keller, 2004; Zhang, Haddad, Torres, & Chen, 2011).

Several studies have shown that expectations of parents of youth with disabilities have a powerful impact on their child's career development, employment options and outcomes, and postsecondary education participation (Blustein, Phillips, Jobin-Davis, Finkelberg, & Roarke, 1997; DiRago & Vaillant, 2007; Gallivan-Fenlon, 1994; Lindstrom et al., 2007; Newman, 2007; Symanski, 1994). For example, Doren, Gau, and Lindstrom (2012) analyzed data from the National Longitudinal Transition Study-2 (NLTS-2) to assess the relationships between parental expectations and post-school outcomes of youth with disabilities. They reported that higher parental expectations related to graduation, employment and postsecondary education led an increased likelihood of youth with disabilities achieving a standard diploma, being employed, attending or completing postsecondary education, and being engaged in both employment and postsecondary education after high school.

Newman (2005) also examined the expectations of parents of youth with disabilities about their adolescent child's future outcomes using NLTS-2 data. Youth with disabilities whose parents expect that their child will graduate from high school with a regular diploma actually graduate from high school with a regular diploma. In addition, youth with disabilities whose parents expect that their child will attend a postsecondary education or training actually enroll in postsecondary education or training. Furthermore, parental expectations for future driving, employment, and financial independence are positively associated with actual outcomes achieved by youth with disabilities.

However, many parents doubt that their adolescent child with a disability will attend a postsecondary education or training and have a competitive job (Blacher, Kraemer, & Howell, 2010; Neece, Kraemer, & Blacher, 2009). Furthermore, according to Chambers, Hughes, and Carter (2004), many parents of youth with significant disabilities believe that independent living and employment are very important elements of life after high school. However, they also expect that the future for their child with significant disability is staying at home and working in segregated employment settings. These parents cited concerns about employer willingness to offer a paid job to their child and their belief that their child would not receive adequate accommodations in the workplace.

Henninger and Taylor (2014) conducted a survey to examine family perspectives on adult outcomes of youth with I/DD. The majority of parents were aware of the importance of full-time employment as a successful post-school outcome. They believed that the most important component in transition for their child was helping their child find and secure a job. The parents also wanted their child to acquire the functional skills they need for their successful daily living.

Dixon and Reddacliff (2001) interviewed fifteen youth with ID and their parents about vocational competence. Youth with ID reported that their parents motivate them to value having a job and staying in the job. Interestingly, in many cases the youths' perceptions did not match parents' beliefs. In these cases, parents were worried about the possibility of exploitation and discrimination in the workplace. Furthermore, due to financial issues, these parents rarely encouraged their child to live independently or build social networks.

Not surprisingly, parents of minority adolescents with disabilities seldom expect that their children will be employed and/or attend postsecondary education after leaving high school (Doren et al., 2012; Povenmire-Kirk, Lindstrom, & Bullis, 2010). Minority students with

disabilities often have poor academic outcomes, high rates of dropping out of high school, and few postsecondary degrees (Fabian, 2007). In addition, minority students with disabilities face discrimination and oppression because of their minority status and disability status (Simon, 2001). Furthermore, some immigrant students cannot be involved in work-related activities because of their illegal immigration status (Povenmire-Kirk, Lindstrom, & Bullis, 2010).

Researchers who explored diverse parents' expectations, hopes, and concerns about their adolescent child's future found that in one small study, many of the Korean American parent participants did not expect their child to have a job or attend college after high school. These parents also did not believe that vocational training experiences would change the employment outcomes for their child (Kim, Lee, and Morningstar, 2007). The majority of Hispanic parents in Blue-Banning, Turnbull, and Pereira's study (2002) had similarly low employment expectations for their children, anticipating that their child would work in a segregated sheltered workshop. These parents also expected that their child with a DD to stay at home or live in a residential care facility. Ironically, in spite of the expectations, the parents hoped that their child would live in his or her own home independently and have a meaningful job. Additionally, the parents hoped that their child would have daily living skills such as communication, personal hygiene, eating, and dressing.

Factors Affecting Parental Expectations

As described above, many parents of youth with I/DD have low expectations for their child's future employment outcomes (Neece et al., 2009; Newman, 2005). Many factors may affect those expectations. Most of the parents had limited visions and hopes for their child's future, with parents in some studies citing the severity of their child's disability and low level of functional skills as the reasons for their limited expectations (Kim et al., 2007). More specially,

parents of youth with ID, ASD, multiple disabilities, and deaf-blindness indicate that they have low expectations for their child's post-school outcomes due to restricted mobility, limited communication, and other functional impairments (Blacher et al., 2010; Grigal & Neubert, 2004; Hanley-Maxwell et al., 1995; Neece et al., 2009; Newman, 2005). Furthermore, family income levels appear to be related to parental expectations, with parents of youth with disabilities from low-income households being less likely to have positive expectations for their child's education and employment outcomes than parents from high-income households (Newman, 2005).

Unfortunately, there is limited research that specifically addresses the link between student characteristics, parent/family characteristics, and school program characteristics and parental expectations. Instead, the literature examines the relationships between these factors and employment outcomes for youth with disabilities. As a result, this section provides an overview the research that examines the intersection between employment outcomes and adolescent, parent/family, and school program characteristics.

Adolescent characteristics. Youth with disabilities often have difficulties in obtaining employment and maintaining their jobs (Joshi et al., 2012; Luftig & Muthert, 2005; Rabren et al., 2002). These difficulties appear to be related to adolescent demographics (i.e., disability type and gender) and functional limitations in self-care skills, social skills, self-determination skills, and job skills (Brooks-Gunn & Duncan, 1997; Cater & Wehby, 2003; Doren & Benz, 1998; Lindsay, 2011; Fabian, 2007; Henninger & Taylor, 2014; Parish & Cloud, 2006). Each is described below.

Adolescent demographics. The presence of a disability has a strong impact on major life activities of youth with disabilities (Lamb, 2006; Shier et al., 2009). The type of disability can be seen as a barrier to youth with disabilities from finding and maintaining their jobs (Lindsay, 2011; Schuster et al., 2003; Shier et al., 2009) because disability status limits the amount of work

hours and the type of work (DeLeire, 2001). Many youth with I/DD need ongoing extensive supports and accommodations in the workplace to maintain their job (Cater & Wehby, 2003; Test et al., 2009). According to Schuster, Timmons, and Moloney (2003), young adults' disability has a negative impact on their ability to maintain jobs, continue their educations, build friendships, and participate in the community.

Along with the presence of a disability, female youth with disabilities face additional employment challenges because of gender stereotypical occupational training (Kaptein, Gignac, & Badley, 2009; Lindsay, 2011; Lindstrom, Harwick, Poppen, & Doren, 2012; Lusk & Cook, 2009). Female students with disabilities often receive a training related to home economics, office work, and health care while male students with disabilities receive a vocational preparation related to agriculture and industry (Lusk & Cook, 2009). Female students in a career and technical education are less likely than their male counterparts to achieve full-time employment (Daviso et al., 2010; Lusk & Cook, 2009). According to Rabren, Dunn, and Chambers (2002), only 25% of female youth with disabilities have a job after leaving high school. Of them, 19% of those females have a full-time job while 81% of males are employed on a full-time basis.

Self-care skills. Self-care skills are typically defined as "skills necessary for management of one's personal self-care and daily independent living, including the personal management skills needed to interact with others, daily living skills, financial management skills, and the self-management of health care/wellness needs" (Rowe et al., 2014, p. 9). Many young adults with severe disabilities have limited abilities to independently function in their daily environments (e.g., doing laundry or maintaining a clean) and workplaces (Cannella, O'Reilly, & Lancioni, 2005; Cannella-Malone, Fleming, Chung, Wheeler, Basbagill, & Singh, 2011; Carter et al., 2012;

Roessler & Gitchel, 2013). They find it difficult to acquire desired living arrangements, have employment opportunities, and maintain employment (Beatty, Blanco, Wilbanks, Paul, & Hames, 1995; Cannella-Malone et al., 2011; Carter et al., 2012; Heller, Bigge, & Allgood, 2005; Luft, 2012; Roessler & Gitchel, 2013).

Young adults with severe disabilities who function independently have reduced self-injurious behavior (Norgate, 1998) and increased occupational skills that help them enter the job market (Coyle & Cole, 2004; Hume & Odom, 2007; Keel, 1997; Schopler, Mesibov, & Hearsey, 1995). For instance, Foley and colleagues (2013) examined the relationship between functional skills and post-school employment for young adults with Down syndrome. They found that young adults with Down syndrome who function well in self-care and communication skills are more likely to have a job and attend technical education or training.

Social skills. Social skills are generally defined as "socially acceptable learned behaviors that enable a person to interact effectively with others and avoid socially unacceptable responses" (Gresham & Elliott, 1990, p. 1). Social skills are positively associated with job interview performance (Benz, Yovanoff, & Doren, 1997; Hall, Sheldon-Wildgen, & Sherman, 1980; Meyen & Deshler, 1978; Whang, Fawcett, & Mathews, 1984) and post-school employment outcomes (Cameto, 2005; Murray & Doren, 2013; Wagner, 2005). Students with disabilities who have good social skills often are confident of their vocational skills and hold higher expectations for their future career (Pinkney, Murray, & Lind, 2012). For example, students with ASD who have good social skills were more likely to find and maintain employment than those without good social skills (Lee & Carter, 2012). Additionally, people with disabilities who build relationships with their families and friends are more likely to have

full-time or part-time jobs than those who were socially isolated (Evert, Harvey, & Herrman, 2002).

Difficulties retaining jobs are associated with poor social skills for many young adults with ASD and ID (Huang & Cuvo, 1997; Schalock & Harper, 1978). Young adults with ASD and ID who have poor social skills or inappropriate behavior have difficulty getting along with their supervisors and coworkers (Huang & Cuvo, 1997; Marder, Wagner, & Sumi, 2003; Murray & Doren, 2013). Furthermore, these young adults find it difficult to understand what others feel or think, read facial expressions, body language, and social cues, and stay on topic in a conversation (Iovannone, Dunlap, Huber, & Kincaid, 2003; Wehman et al., 2014). Behaviors and skills deficits often lead to involuntary employment termination.

Self-determination skills. Self-determination skills are defined as "acting as the primary causal agent in one's life and making choices and decisions regarding one's quality of life free from undue external influence or interference" (Wehmeyer, 1999, p. 56). People with disabilities who have poor self-determination skills often have had limited opportunities to make choices and express their preferences (Stancliffe, 1997; Stancliffe & Abery, 1997; Stancliffe, Abery, & Smith, 2000; Stancliffe & Wehmeyer, 1995; Wehmeyer, Kelchner, & Richards, 1995; Wehmeyer & Metzler, 1995; Wehmeyer & Palmer, 2003). For many young adults with disabilities, lack of self-determination skills results in not completing high school and having difficulty succeeding in adult life (Eisenman, 2007; Frank & Sitlington, 2000; Wehmeyer & Kelchner, 1996; Wehmeyer & Metlzer, 1995).

Having self-determination skills is associated with employment, success in postsecondary education, independent living, and participation in the community (Anctil, Ishikawa, & Scott, 2008; Eisenman, 2007; Gerber, Ginsberg, & Reiff, 1992; Getzel & Thoma, 2008; McGuire &

McDonnell, 2008; Shogren, Palmer, Wehmeyer, Williams-Diehm, & Little, 2012; Wehmeyer & Palmer, 2003; Wehmeyer & Schwartz, 1997). Young adults with self-determination skills can express their preferences and needs, evaluate their progress toward meeting their goals, and resolve problems (Martin, Huber-Marshall, Maxson & Jerman, 1996). Consequently, these young adults with disabilities have more opportunity to achieve positive post-school outcomes than those who do not acquire self-determination skills (Wehmeyer & Schwartz, 1995). Self-determination skills affect job skills.

Functional cognitive abilities. Functional cognitive abilities are generally described as "four skills that often are used in daily activities: reading and understanding common signs, telling time on a clock with hands (i.e., an analog clock), counting change, and looking up telephone numbers and using the telephone." (Wagner, Newman, Cameto, Garza, & Levine, 2005, p. B-3). Youth with disabilities with high cognitive abilities were more likely to be engaged in employment and postsecondary education than those with low cognitive abilities after leaving high school (Heal & Rusch, 1995; Wagner et al., 2005). Individuals with cognitive abilities can perform certain types of cognitive tasks such as higher order thinking, learning, reasoning, and problem solving (Gargiulo, 2012; Heward, 2013; Murphy, 1989; Smith, 2007)..

Job skills. Job skills are defined as the ability to obtain and maintain a job, meet daily demands of the job, and adjust to work-life (Hanley-Maxwell, Bordieri, & Merz, 1996; Hogan, Chamorro-Premuzic, & Kaiser, 2013; Keim & Strauser, 2000). Job skills are comprised of identifying interests, searching for jobs, completing applications, and writing resumes (Boerner, 1994; Keim & Strauser, 2000; Tesolowski, 1979). Employers required that both individuals with and without disabilities demonstrate personal integrity/honesty in work, follow instructions, show respect for others, and be on time (Ju, Zhang, & Pacha, 2011). Poor job skills result in

many people with disabilities having difficulty searching for jobs, following supervision and work directions, and managing time (Elksnin &Elksnin, 2001; Keim & Strauser, 2000; Murray & Doren, 2013; Strauser, Waldrop, & Ketz, 1999), while having job skills leads to obtaining and maintaining employment (Rusch &Millar, 1998; Test & Mazzotti, 2011; Wackerw &Berg, 1983; Wehman & Hill, 1985). Individuals who have job skills have time management skills, teamwork skills, and basic problem-solving skills (Hamzah & Abdullah, 2009; Murray & Doren, 2013).

Parent/family characteristics. Socioeconomic status and minority status of the family are important factors that influence parental expectations for their adolescent child's future employment outcomes. Parent/family characteristics also play an important role in influencing career development (Brown, 2004; Whiston & Keller, 2004). Numerous studies have reported that socioeconomic status (SES), family structure (e.g., single parent status), parent occupation and educational attainment, and minority status are important factors that influence the vocational behavior of youth with disabilities (Chambers et al., 2004; Penick & Jepsen, 1992; Schultheiss, 2006; Schultheiss, Kress, Manzi, & Glasscock, 2001; Whiston & Keller, 2004). In particular, parents' financial resources and education have a strong impact on shaping employment experiences of youth with disabilities (Chambers et al., 2004). For example, more than half (62%) of young adults with disabilities from high- and moderate-income families have opportunities for competitive employment, compared to 42% from low-income families (Balcazar et al., 2012; Fujiura, Yamaki, & Czechowicz, 1998). In addition, minority youth with disabilities and those who live in poverty are less likely to have positive transition outcomes than those from White, middle-class backgrounds (Blackorby & Wagner, 1996; Heal & Rusch, 1995). These findings may be influenced by parental expectations for independence expectations for

their child; parents from low-income households report having lower expectations for their adolescent child's independence than those from wealthier households (Newman, 2005).

This section focuses on the research that examines the relationships between employment outcomes and SES and minority status. In this discussion, SES combines parents' education, family income, and parents' occupational status (Diemer & Ali, 2009; Fouad & Brown, 2000; Schulenberg, Vondracek, & Crouter, 1984; Thompson & Subich, 2006).

Socioeconomic status. SES has a powerful influence on facilitating or prohibiting educational and occupational opportunities (Liu, 2002; Maher & Kroska, 2002; Ali, McWhirter, & Chronister, 2005), as well as developing employment skills (Diemer & Ali, 2009; Fouad & Brown, 2000; Schulenberg et al, 1984; Thompson & Subich, 2006). SES also has a strong impact on the employment aspirations and expectations and the employment status of young adults (Blau & Duncan, 1967; Gansemer, 1977; Harvey & Kerin, 1978; MacKay & Miller, 1982; Marini & Greenberger, 1978; Otto, Haller, Meier, & Ohlendorf, 1974; Sewell, Haller, & Straus, 1957; Thompson & Subich, 2006; Werts, 1966). Families help their child develop his or her work skills, values, expectations, and aspirations (Vondracek, Lerner, & Schulenberg, 1986).

According to Diemer and Ali (2009), social class (i.e., SES level) is an important factor for occupational preparedness and labor market entry. Young adults from middle and upper social classes have more exposure to employment role models, develop more occupational knowledge, have more informal/kinship networks that facilitate employment, and have more economic resources than do students from lower social classes (Blustein et al., 2002; Ladany, Melincoff, Constantine, & Love, 1997; Parcel & Menaghan, 1994; Schulenberg et al., 1984). Furthermore, students from families that have economic resources, social power, and social

prestige are more likely to have confidence and certainty in their career decisions (Thompson & Subich, 2006).

On the other hand, students from low SES families are more likely to experience poor academic achievement and early school failure than those from middle and upper SES families (Walker, Greenwood, Hart, & Carta, 1994). As a result, these individuals often have fewer education-related marketable skills. These students also have poor self- advocacy skills needed to obtain employment support services and have limited access to social networks that can either provide employment opportunities or help them enter the workforce (Balcazar et al., 2012; McDonald, Keys, & Balcazar, 2007).

Blustein and colleagues (2002) evaluated the relationships between social class and individuals' career decisions during the school-to-work transition period. They found that social class played a significant role in influencing individuals' career decision-making. Similarly, Blau and Duncan's (1967) path analysis revealed the relationships between father's occupation and his child's education, with the father's relationship having a direct influence on his son's occupational attainment.

In addition to the SES, supplemental security income (SSI), as a cash benefit for people with disabilities who are from low-income families and have severe functional limitations, is a significant factor for career readiness (Davies et al., 2009; Loprest & Wittenburg, 2007; Parish & Cloud, 2006; Wehman, Chan, Ditchman, & Kang, 2014). Because SSI is a critical contribution to low income families resources (Rupp, Davies, Newcomb, Iams, Becker, Mulpuru, Ressler, Romig, & Miller, 2005), many families are afraid of losing SSI and other public assistance related to their child (Sheldon, 2002). Parents not only make their child stay at home but also prevent their child from participating in work experience during high school (Loprest &

Wittenburg, 2007). As a result, many of these young adults have poor employment outcomes and receive low wages (Davies et al., 2009; Hopf, 1991; Loprest & Wittenburg, 2007; Parish & Cloud, 2006).

Minority status. Minority youth with disabilities have poor post-school outcomes (Geenen, Powers, Vasquez, & Bersani, 2003; Schulenberg et al., 1984). Minority youth with disabilities (e.g., 42% of African American, 36% of Latino) are significantly less likely to have a competitive job than White youth with disabilities (63%) after leaving high school (Balcazar et al., 2012; Cameto, Levine, Wagner, & Marder 2003; Wagner et al., 2005). In particular, African-American students were less likely to achieve employment outcomes when compared to White students even though SES background, education, and career were controlled (Blau & Duncan, 1967; Duncan, Featherman, & Duncan, 1972; Hauser, & Featherman, 1974; Schulenberg et al., 1984). Additionally, Mexican-American students were less likely to have vocational and educational aspirations than White students (Hernandez, 1973; Schulenberg et al., 1984).

Minority students with disabilities and their families are not familiar with the IEP transition planning process (Balcazar et al., 2012; Cameto, 2005), the availability of formal supports (Balcazar et al., 2012; Loprest & Maag, 2001), and eligibility criteria for services (Balcazar et al., 2012; Green, Tigges, & Diaz, 1999). In addition, minority youth with disabilities have limited access to vocational training and workforce opportunities in their communities (Hasnain & Balcazar, 2009). Furthermore, there are cultural differences among minority students, their families, and teachers who are primarily Euro-American (Balcazar et al., 2012; Bynoe, 1998; Grant & Secada, 1990). Minority parents often have experiences with insensitivity and discrimination or ignorance associated with their child's disability and family's culture (Geenen et al., 2003)

Many studies have reported that there is employment discrimination because of race-based stereotypes (Bertrand & Mullainathan, 2004; Collins, David, Handler, Wall, & Andes, 2004; Din-Dzietham, Nembhard, & Collins, 2004; Mays, Coleman, & Jackson, 1996; Wilson, 1996). According to Bertrand and Mullainathan (2004), African Americans are less likely to receive call backs from employers than European Americans because of African Americans-sounding names on resumes. Many African-American youths have difficulty developing career-related beliefs and behaviors (Constantine, Wallace, & Kindaichi, 2005; Hughes & Bigler, 2007; Mickelson, 1990).

School characteristics. Work experience, vocational education, and inclusion in general education are important factors that influence parental expectations for their adolescent child's future employment outcomes (Carter et al., 2011; Chambers et al., 2004; Migliore et al., 2012; Test et al., 2009). Students with disabilities who had paid or unpaid work experience in high school had better employment outcomes (Colley & Jamison 1998; Wonacott, 2001). Furthermore, students with disabilities who were involved in general education had competitive jobs and felt prepared to maintain their jobs (Dupoux, 2008; Eisenmann, 2000; Sitlington et al., 1992).

Work experience. Work experience during high school helps increase the parents', educators', employers', and community members' expectations that youth with disabilities would be successfully employed in the future (Carter et al., 2009; McIntyre, Kraemer, Blacher, & Simmerman, 2004; Siperstein & Romano, 2006). Work experience helps youth with disabilities to establish their future career aspirations and outcomes during high school (Carter et al., 2009; Carter et al., 2011). Work experience during high school also allows youth with disabilities to foster their career awareness and skill, receive extra income, and improve their

post-school outcomes (Benz, Lindstrom, & Yovanoff, 2000; Benz, Yovanoff, & Doren, 1997; Brown, Shiraga, &Kessler, 2006; Carter et al., 2009; Staff & Schulenberg, 2010). Work experience usually occurs in many contexts such as school-sponsored internships, off-campus work experiences, afterschool and weekend jobs, or short-term and part-time summer jobs (Carter et al., 2011). According to Luecking and Fabian (2000), the majority of youth with disabilities who completed their internship were given the job positions within the original host company.

Vocational education. Students with disabilities who participate in a vocational education are more likely to obtain post-school employment outcomes than those who do not participate in the education (Carter et al., 2011; Frank, Sitlington, & Carson, 1991; Harvey, 1998; Fourqurean & LaCourt, 1990; Harvey, 1998; Hasazi, Gordon, & Roe, 1985; Shapiro & Lentz, 1991; Sitlington & Frank, 1990; Test et al., 2009). These students can also make a career decision, examine their vocational interests, and become aware of different types of jobs and job responsibilities (Brolin & Gysbersh, 1989). Vocational education provides vocational tests, work/job samples, situational assessment, and job tryouts to students with disabilities (Brolin & Gysbersh, 1989; Cawley, Kahn, & Tedesco, 1989; Chadsey-Rusch, Rusch, & O'Reilly, 1991). In particular, vocational instruction is focused on career choices of students with disabilities (Brolin & Gysbersh, 1989; Chadsey-Rusch et al., 1991). According to Flexer and colleagues (2011), students with disabilities who completed career and technical education had full-time jobs after leaving high school. Fabian (2007) also found that the majority of youth with disabilities who participated in career counseling and career assessment were significantly more likely to get a job than those who did not.

Inclusion in general education. The IDEA amendments of 1997 and later require that students with disabilities have access to the general education curriculum and participate in regular education classes with their peers without disabilities. The purpose of these requirements is to increase student performance and ensure access to a challenging curriculum (Casale-Giannola, 2012; Wehmeyer, Lattin, & Agran, 2001). Many studies have revealed that students with disabilities who are involved in general education have better post-school employment outcomes (Baer et al., 2003; Blackorby, Hancock, &Siegel, 1993; Halpern, Yovanoff, Doren, &Benz, 1995; Heal & Rusch, 1995; Leonard, D'Allura, & Horowitz, 1999; White & Weiner, 2004). In particular, students with disabilities who have strong academic skills have successful employment outcomes (McDonnall & Crudden, 2009). According to Test and colleagues (2009), the most common predictor for employment was inclusion in general education with work experience and vocational education.

Ecological System Theory

Ecological system theory was used as a theoretical framework in this study in order to understand parental expectations for their adolescent child's future employment outcomes. Ecological system theory was developed by Urie Bronfenbrenner (1979). This theory emphasizes a system with multiple environments that surround an individual, indicating that there are reciprocal interactions between humans and the environment (Bronfenbrenner, 2005; Chibucos & Leite, 2005; Russell, 2003). According to Bronfenbrenner (1979), there are five systems: microsystem, mesosystem, exosystem, macrosystem, and chronosystem. Each of the systems can have a direct or indirect impact on the development of an individual (Bronfenbrenner, 2005; Chibucos & Leite, 2005; Russell, 2003; Wang, McGrath, Watts, 2010).

First, microsystem refers to interpersonal interactions between an individual and his or her immediate settings (e.g., home or classroom) (Bronfenbrenner, 2005; Christenson & Sheridan, 2001; Russell, 2003; Wang et al., 2010). For instance, this may include that all the settings in which a child interacts and is influenced directly. If a child with a disability is born to parents that are unaware of the disability, the parents may feel distant from their child. The distance may limit the interactions between them; and the limited interactions may affect and shape their child's development in the future. These experiences can make parents to develop low expectations about their child's future life.

Second, mesosystem refers to interrelationships between major environments (e.g., home and school) in which the child is involved at a particular time (Bronfenbrenner, 2005; Christenson & Sheridan, 2001; Russell, 2003; Wang et al., 2010). For example, the mesosystem may include the family and school experiences that may affect the child's transition planning and future goal setting. Parents who participate in the IEP meetings expect that their child would have employment goals. On the other hand, IEP teams have goals regarding functional life skills. As a result, the parents feel excluded from the decisions that are being made. Relationship issues with IEP teams may result in low parental expectations.

Third, exosystem refers to one or more settings that indirectly influence the child's development (Bronfenbrenner, 2005; Christenson & Sheridan, 2001; Russell, 2003; Wang et al., 2010). For instance, this may be comprised of a setting in which there is a link between the contexts where in the child does not have any active role. If a father gets laid off from his work, he may not be able to pay rent or buy groceries. This situation may not only have a negative impact on his child's development, but also make him to have low expectation for his child's future life. On the other hand, if a father receives a promotion or a raise at work, this may have a

positive effect on his child's development because his parents will be better able to meet his needs. As a result, he has high expectation for his child's future life.

Fourth, macrosystem refers to settings that have an impact on an individual, but that the individual may not be a part of, and the macrosystem is influenced by cultural contexts such as legislation, socioeconomic status, or ethnicity that may have an impact on the individuals (Bronfenbrenner, 2005; Christenson & Sheridan, 2001; Russell, 2003; Wang et al., 2010). For example, parents' cultural contexts play a significant role in deciding their child's future life. Korean culture may influence what Korean parents decide for their child's future living arrangement. According to Kim-Rupnow (2001), Korean culture emphasizes interdependence among family members rather than independence. Many Korean parents expect that their child would stay at home after leaving high school. Finally, chronosystem refers to major life transitions, environmental events, or historical events that occur during child's development (Bronfenbrenner, 2005; Christenson & Sheridan, 2001; Russell, 2003; Wang et al., 2010). For instance, as a major life event, divorce may affect their child's behavior.

According to Olsen, Roese, & Zanna (1996), "The concept of "expectancy" forms the basis for virtually all behaviour. Expectancies can be defined as beliefs about a future state of affairs. As such, expectancies represent the mechanism through which past experiences and knowledge are used to predict the future." (p. 211). Parental expectations can be shaped by and affect an individual beliefs, experiences, knowledge, and behavior (Tajfel & Fraser, 1978). This study may suggest that parents can transmit their expectations through their behaviors, and high expectations result in positive employment outcomes for their adolescent child with a disability.

Parental expectations play an important role in helping students with disabilities to establish their career decisions and plans (Carter et al., 2011; Schulenberg, Vondracek, Crouter,

1984; Test et al., 2009; Turner & Lapan, 2002). Parents shape the environment by sharing work roles, values, expectations, and aspirations with their child (Metheny & McWhirter, 2013; Vondracek, Lerner, & Schulenberg, 1986). Parents play a central role in fostering their children's career aspiration and career exploration (Sawitri, Creed, & Zimmer-Gembeck, 2014).

According to Eccles (1994), parents are "expectancy socializers" who have a powerful influence on their children's perceptions of academic and employment outcomes. In addition, parents have a strong impact on their children's career-related decisions (Astin, 1984; Brown, 2004; Turner & Lapan, 2002; Whiston & Keller, 2004). Parents are the primary caregivers who help their adolescent child to reach employment goals by showing career-related behaviors and providing career-related learning experiences (Turner & Lapan, 2002; Young, 1994).

Research has shown that there is a positive effect of parent support on career development of young adults (Turner & Lapan, 2002). Young adults who feel supported by their parents in pursuing careers engage in career exploration activities, value their future jobs, and have high career self-efficacy (Kracke & Noack, 2005; Lapan, Hinkelman, Adams, & Turner, 1999). For instance, Mexican-American high school girls who receive their fathers' support have educational plans and career expectations (McWhirter, Hackett, & Bandalos, 1998).

According to Whiston and Keller (2004), parental aspirations and expectations, family relationships, and family support and advocacy play a powerful role in shaping career development of young adults. In particular, parental expectations are a significant predictor of their child's career aspirations, interests, and values as well as career behaviors (Fouad et al., 2008; Morrow, Gore, & Campbell, 1996; Sawitri et al., 2014). When adolescents decide their future career, they discuss with, ask advice from, and negotiate with their parents (Whiston & Keller, 2004). Young adults who feel supported by their parents tend to have high expectations

for their future (McWhirter et al., 1998), career aspirations (Flores & O'Brien, 2002), and career certainty (Constantine, Wallace, & Kindaichi, 2005).

Ecological system theory is an appropriate theoretical framework to explain the mechanisms of individual motivation and behavior influenced by parental expectations. Ecological system theory is used to depict relationships between the systems and parental expectations in this study. This study attempts to examine factors that are associated with parental expectations for their adolescent child's future employment outcomes. Human behavior is directly and indirectly influenced by microsystem, mesosystem, exosystem, macrosystem, and chronosystem. In addition, individual expectations and beliefs influence human behavior (Bandura, 1986; Bower, 1975; Neisser, 1976). Having positive experiences in career-related activities and aptitudes and expectations by others regarding specific careers makes it more likely that people will develop positive outcomes for their career pursuits (Lent et al., 1994). Adolescents are able to develop their career beliefs and skills through microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

CHAPTER III

METHODOLOGY

The primary purpose of this study is to identify factors that are associated with parental expectations about employment outcomes for young adults with I/DD, specifically youth with intellectual disability (ID) and Autism Spectrum Disorder (ASD) who are currently in middle and high school. This study particularly focuses on examining whether characteristics of young adults with ID or ASD, parents/families, and school programs/services are associated with parental expectations for their adolescent child's future employment outcomes. As a result, the study addresses five research questions:

1. Do adolescent characteristics (e.g., adolescent demographics, self-care skills, social skills, self-determination skills, and employability skills) predict parental expectations for their child's future employment outcomes? For this research question, it is hypothesized that there is a significant relationship between adolescent characteristics and parental expectations.
2. Do parent/family characteristics (e.g., age, household income, education, and disability status) predict parental expectations for their child's future employment outcomes? For this research question, it is hypothesized that there is a significant relationship between parent/family characteristics and parental expectations.
3. Do school program/services (e.g., employment-related transition goals, work experience, vocational education, and inclusion in general education) predict parental expectations for their child's future employment outcomes? For this research question, it is hypothesized that there is a significant relationship between school program/services characteristics and parental expectations.

4. Do parent/family characteristics predict parental expectations for their child's future employment outcomes after controlling for adolescent characteristics? For this research question, it is hypothesized that there is a significant relationship between parent/family characteristics and parental expectations.
5. Do school program/services predict parental expectations for their child's future employment outcomes after controlling for both adolescent and parent/family characteristics? For this research question, it is hypothesized that there is a significant relationship between school program/services and parental expectations.

As revealed in the purpose and research questions, this study is grounded in the epistemological approach of objectivism. Objectivism reflects the belief that "things exist as meaningful entities independently of consciousness and experience, that they have truth and meaning residing in them as objects (Crotty, 1998, p. 5)." This epistemological view of truth is reflected in researchers' positivist stance, nothing is meaningful until it has been verified (Crotty, 1998). The positivist position typically undergirds the survey research and statistical analyses in this study (Crotty, 1998). This chapter is organized to address the survey design, participants, instrumentation, procedures, and data analysis.

Survey Research Design

Survey research is a commonly used design in educational research. It is used to understand attitudes, opinions, behaviors, or characteristics of individuals, as well as educational problems and issues (Creswell, 2008; Groves et al., 2009). Surveys are inexpensive and flexible in obtaining data (Check & Schutt, 2012; Groves et al., 2009). When approached from a positivist perspective, survey research systematically and directly obtains information from a

sample of people and then generalizes the findings to a larger population (Check & Schutt, 2012; Creswell, 2008; Groves et al., 2009; Moser & Kalton, 1972; Taylor-Powell & Hermann, 2000).

There are two basic types of surveys: questionnaires and interviews (Creswell, 2008; Groves et al., 2009). A survey questionnaire is composed of questions and answer options (Groves et al., 2009). In keeping with the positivist approach, the questionnaire is administered uniformly to all participants. Although open ended questions may be included, the primary questions are standard, closed response items. Questionnaires are commonly administered as mail or electronic surveys (Check & Schutt, 2012; Creswell, 2008; Groves et al., 2009; Moser & Kalton, 1972). Interviews are often conducted in one-on-one in-person or telephone formats with a structured or semi-structured interview protocol (Check & Schutt, 2012; Creswell, 2008; Groves et al., 2009; Moser & Kalton, 1972).

In this study, both mail and electronic (i.e., survey monkey) surveys were used to systematically collect information about potential predictors (i.e., adolescent characteristics, parent/family characteristics, and school programs/services) of parental expectations for post-school employment of the adolescent with ID or ASD. Mail surveys and electronic surveys are efficient and effective modes of data collection. They reduce survey-related costs and survey error, as well as increase response rates (Check & Schutt, 2012; Groves et al., 2009; Moser & Kalton, 1972).

Participants

A total of 20 organizations for families of children with disabilities in a Midwestern state were contacted to request permission to access their membership in order to solicit study participants. Three organizations agreed to provide access. Both mail and electronic (i.e., survey monkey) surveys were distributed to parents who belonged to those organizations. For the

purpose of this study, *parent* was defined as a biological or custodial parent, primary caregiver, or legal guardian. All parents were selected based on three inclusion criteria: (a) being a parent residing in the Midwestern State; (b) being a parent of an adolescent with ID or ASD who is currently in middle or high school; and (c) being willing to participate in either mail surveys or electronic surveys.

One hundred forty-four parents of adolescents with ID or ASD participated in the study. Of them, 12 parents were excluded from the final analysis because their information did not meet the inclusion criteria. Thirty-three parents were also dropped from the final analysis because the survey information was not completed. A total of 99 parents of adolescents with ID or ASD were eligible for the study.

Participants ranged in age from 33 to 75 years (M = 48.84, SD = 6.76). As depicted in Table 1, the majority of participants were mothers (90.9%), who identified as White/Caucasian (91.9%). Minority parents in this sample were less represented than non-minority parents due, in part, to the large number of White/Caucasian families that reside in the state in which this study was conducted. The majority of the participants were married (81.8%); 83.8% of the participants were employed for wages (60.6%) or were homemakers (23.2%). Nearly 83% of the participants had a post-secondary education degree (2-year college, 25.3%; 4-year college, 35.4%; and graduate, 22.2%); an additional 11.1% had some college credit. The majority of the participants did not identify as having a disability (91.9%) or receive Supplemental Security Income (SSI) and/or Social Security Disability Insurance (SSDI) (94.9%). More than 70% of the participants had incomes over $50,000 (over $75,000, 54.5%; $50,000 to $74,999, 16.2%), despite the fact that 11.1% of the participants reporting incomes less than $25,000 (11.1%), only 9% reported

receiving food stamps. Finally, 97% of the participants had health insurance (i.e., Medicare, Medicaid, private, or other).

Table 1

Parent/Family Characteristics (*N* = 99)

Variable	***N* (%)**	***M* (*SD*)**
Age		48.84 (6.76)
Relationship		
Mother	90 (90.9%)	
Father	9 (9.1%)	
Ethnicity/Race		
White/Caucasian	91 (91.9%)	
Black/African American	1 (1%)	
Hispanic/Latino	4 (4%)	
American Indian/Alaska Native	3 (3%)	
Marital Status		
Single, never married	2 (2%)	
Separated	1 (1%)	
Divorced	14 (14.1%)	
Widowed	1 (1%)	
Married	81 (81.8%)	
Employment		
Employed for wages	60 (60.6%)	
Self-employed	5 (5.1%)	
Out of work and looking for work	2 (2%)	
A homemaker	23 (23.2%)	
A student	2 (2%)	
Retired	2 (2%)	
Unable to work	5 (5.1%)	
Education		
High school, no degree	1 (1%)	
High school graduate, diploma or the equivalent	5 (5.1%)	
Some college credit, no degree	11 (11.1%)	
2-year college degree	25 (25.3%)	
4-year college degree	35 (35.4%)	
Graduate degree	22 (22.2%)	
Disability Status		
Yes	8 (8.1%)	
No	91 (91.9%)	

Table 1 continued

Variable	*N* (%)	*M* (*SD*)
Social Security Beneficiaries		
Yes	5 (5.1%)	
No	94 (94.9%)	
Household Income		
Less than $25,000	11 (11.1%)	
$25,000 to $ 49,999	18 (18.2%)	
$50,000 to $74,999	16 (16.2%)	
Over $75,000	54 (54.5%)	
Food Stamps		
Yes	9 (9.1%)	
No	90 (90.9%)	
Health Insurance		
Yes	96 (97%)	
No	3 (3%)	

The adolescent children of the parent participants ranged in age from 11 to 22 years (*M* = 16.48, *SD* = 2.31). The majority of the adolescents were males (64.6%). More than 65% were identified as having ID, alone (41.4%) or in combination with ASD (24.2%). Nearly 87% had a mild (41.4%) or moderate disability (45.5%). While only 43.4% received SSI and/or SSDI, 69.7% received Medicaid/Medicare. Table 2 shows the specific demographic characteristics of adolescents.

Table 2

Adolescent Characteristics (*N* = 99)

Variable	*N* (%)	*M* (*SD*)
Age		16.48 (2.31)
Gender		
Male	64 (64.6%)	
Female	35 (35.4%)	
Primary Disability		
Autism spectrum disorders	34 (34.3%)	
Intellectual disabilities	41 (41.4%)	
Both ASD and ID	24 (24.2%)	

Table 2 continued

Variable	*N* (%)	*M* (*SD*)
Social Security Beneficiaries		
Yes	43 (43.4%)	
No	56 (56.6%)	
Medicaid/Medicare		
Yes	69 (69.7%)	
No	30 (30.3%)	
Level of Impairment		
Mild	41 (41.4%)	
Moderate	45 (45.5%)	
Severe	12 (12.1%)	
Profound	1 (1%)	

Note. Autism Spectrum Disorders = ASD; Intellectual Disabilities = ID

Instrumentation

A self-report survey was used to ask participants to identify their employment expectations for their child with ID or ASD. These expectations included working outside the home and work setting. The remainder of the survey was composed on demographic items and items selected from five survey scales: Social Skills Rating Scale for Parents, the AIR Self-Determination Scale, the Family Survey of the National Longitudinal Transition Study-2 (NLTS-2), the World Health Organization Disability Assessment Schedule 2.0, and the Vineland Adaptive Behavior Scales, Second Edition (Vineland-II). The scales and items within the scales, and many of the demographic variables were selected because they are highly likely to be associated with parental expectations. In previous research, many of the demographic items and the items of the scales were associated with parental employment expectations and/or employment outcomes for youth with disabilities. The demographic items and the survey scales are described below, identifying which subscales or content were selected for inclusion in this study's survey. See Appendix A for the final survey.

Demographic Variables

Demographic information was collected from participants regarding adolescent, parent/family, and school program/services variables. These variables yielded the descriptive data need to answer the research questions. They were also included in the analyses. Some of the variables have been associated with parental expectations for post-school employment or post-secondary employment outcomes for youth with disabilities (Brolin & Gysbersh, 1989; Carter et al., 2009; Carter et al., 2011; Flexer et al., 2011; Grigal et al., 2011; Lindsay, 2011; Pagan, 2009; Shier et al., 2009; Williams, 2006).

Adolescent variables. Participants were asked to provide demographic information about adolescents with ID or ASD: age, gender, disability type and degree, Medicaid/Medicare status, and SSI/SSDI status. Most of these variables have been associated with parental expectations for the future and/or employment outcomes: gender and SSI/SSDI status (e.g., Fabian, 2007; Doren & Benz, 1998; Lindsay, 2011; Wehman et al., 2014), disability type (e.g., Wagner et al., 2003) and degree of disability (e.g., Bouck, 2012; Kochhar-Bryant, 2007; McConnell et al., 2013). In addition, participants were asked to provide information about their adolescent child's functional life skills: self-care skills, communication skills, functional cognitive abilities, social skills, self-determination skills, job skills, and problem behaviors. Some of these variables have been related to parental expectations for their adolescent child's post-school outcomes (Anctil et al., 2008; Blacher et al., 2010; Cameto, 2005; Coyle & Cole, 2004; Grigal & Neubert, 2004; Hanley-Maxwell et al., 1995; Neece et al., 2009; Murray & Doren, 2013; Wagner et al., 2005).

Parent/family variables. Participants were also asked to provide information about themselves: age, gender, race/ethnicity, employment status, disability status, marital status, health insurance status, SSI/SSDI status, food support status, education, and family income.

These items were included for descriptive reasons. Additionally, in previous research, family income and parental education (Diemer & Ali, 2009; Liu, 2002; Maher & Kroska, 2002) have been associated with employment outcomes and parental expectations for youth with disabilities.

School program/service variables. In addition to adolescent and parent/family information, participants were asked to provide information about school program/services related variables: creation of the individualized education plan and parent and child participation in meetings, employment-related goals, vocational experiences, vocational-focused education programs/vocational training, inclusion in general education classroom, community service activities, and school activities. Previous research has demonstrated that work experiences and vocational training influence career outcomes for students with disabilities (Carter et al., 2009; Carter et al., 2011; Test et al., 2009). Additionally, inclusion in general education settings and curricula are associated with more positive post-school outcomes, including employment (Carter et al., 2009; Carter et al., 2011; Test et al., 2009). Table 3 provides definition of all the variables used by adolescent characteristics, parent/family characteristics, and school programs/services.

Table 3

Definition of Variables used for Survey Scales

Variable	Definition
Adolescent Characteristics	
Adolescent Demographics	
Gender	Male/Female
Disability type	Autism spectrum disorders(ASD); Intellectual disabilities (ID); Both ASD and ID
SSI/SSDI benefits	Federal programs provide assistance to people with disabilities.
Medicaid/Medicare benefits	Federal and state programs help some people with limited income and resources receive medical costs or benefits.

Table 3 continued

Variable	Definition
Degree of impairment	*Mild*: take longer to learn to talk, but can communicate well once he or she knows how; fully independent in self-care; have problems with reading and writing; be socially immature; or have an IQ range of 50 to 69 *Moderate*: be slow in understanding and using language; have only a limited ability to communicate; can learn basic reading, writing, counting skills; be a slow learner; be unable to live alone; or have an IQ range of 35 to 49 *Severe*: have noticeable motor impairment; have severe damage to and/or abnormal development of central nervous system; or have an IQ range of 20 to 34 *Profound*: be unable to understand or comply with requests or instructions; be immobile; must wear adult diapers; uses very basic nonverbal communication; cannot care for own needs; require constant help and supervision; or have an IQ of less than 20
Functional Life Skills	
Self-care skills	Skills necessary for management of one's personal self-care and daily independent living
Communication skills	Verbal and nonverbal communication
Functional cognitive abilities	Four skills that often are used in daily activities: reading and understanding common signs, telling time on a clock with hands
Social skills	Socially acceptable learned behaviors that enable a person to interact effectively with others and avoid socially unacceptable responses
Self-determination skills	Acting as the primary causal agent in one's life and making choices and decisions regarding one's quality of life free from undue external influence or interference
Job skills	The ability to obtain and maintain a job, meet daily demands of the job, and adjust to work-life
Problem behaviors	Behavior that is socially defined as a problem, as a source of concern, or as undesirable by the social and/or legal norms of conventional society and its institutions of authority
Parent/Family Characteristics	
Ethnicity/race	White/ Caucasian; Black or African American; Hispanic or Latino; Asian or Asian American; Hawaiian or Other Pacific Islander; American Indian or Alaska Native; Multiple ethnicities/races
Marital status	Single, never married; Separated; Divorced; Widowed; Married

Table 3 continued

Variable	Definition
Employment status	Employed for wages; Self-employed; Out of work and looking for work; A homemaker; A student; Retired; Unable to work
Higher education degree	High school, no degree; High school graduate, diploma or the equivalent (for example: GED); Some college credit, no degree; 2-year college degree (Associate degree); 4-year college degree (Bachelors' degree); Graduate degree (Advance degree)
Household income	The combined gross income of all the members of a household who are 15 years old and older.
Food stamps	A voucher issued by the government to those on low income, exchangeable for food
Health insurance	Insurance against the risk of incurring medical expenses among individuals
School Programs/Services	
Parental participation in the IEP meetings	Parental participation in the IEP meetings to design their child's special education program or services
IEP goals	An annual goal is a statement(s) of what a student with a disability can reasonably be expected to accomplish in a year's time or the duration of the IEP.
Vocational education/training	Provide accredited training in job related and technical skills
Work experience	A period of time that a young person spends working to get experience in a particular type of job
Community service activity	Services volunteered by individuals or an organization to benefit a community or its institutions
School activities	Educational activities not falling within the scope of the regular curriculum
Classroom settings	Receiving education mostly in general education classrooms; Some general education classrooms and some special education classrooms; Mostly in special education classrooms; Mostly community settings; Special school

Measurement Scales

Five measurement scales were identified as relevant to this research. These scales were used in previous transition-related research that includes parental responses. The scales selected for inclusion allowed parents to provide information about what they believe about their children's skills in areas associated with parental expectations for post-school employment or post-secondary employment outcomes. Items of the scales were comprised of self-care skills,

communication skills, functional cognitive abilities, social skills, self-determination skills, job skills, and problem behaviors. Self-care skills were measured by the *Family Survey: National Longitudinal Transition Study-2* (NLTS-2) and *Health Organization Disability Assessment Schedule 2.0*. Communication skills were measured by the *Health Organization Disability Assessment Schedule 2.0*. Functional cognitive abilities were measured by the *Family Survey: National Longitudinal Transition Study-2* (NLTS-2). Social skills were measured by the *Family Survey: National Longitudinal Transition Study-2* (NLTS-2). Self-determination skills were measured by the *Family Survey: National Longitudinal Transition Study-2* (NLTS-2) and *AIR Self-Determination Scale*. Job skills were measured by the *Health Organization Disability Assessment Schedule 2.0* and *Vineland adaptive behavior scales, second edition (Vineland-II).* Finally, problem behaviors were measured by the *Social Skills Rating Scale for Parents*. Mean scores of self-care skills, communication skills, functional cognitive abilities, social skills, self-determination skills, job skills, and problem behaviors were used to predict parental expectations for their adolescent child's future employment outcomes.

The draft of the survey was reviewed by a faculty member with expertise in transition and preparation for work, to ensure completeness and an advisor from the Survey Research Center, to identify potential structural issues. Additionally, the instrument was pretested to identify how long the survey takes and to ensure readability and understandability of survey items.

Social skills rating scale for parents. The *Social Skills Rating Scale for Parents* (SSRS-P) was developed by Gresham and Elliot (1990) to assess social skills dimensions of children. The SSRS-P is comprised of two measurement areas: social skills and problem behaviors. The social skills scale has five subscales: cooperation, assertion, responsibility, empathy, and self-

control. The problem behaviors scale is composed of 12 items across three subscales: externalizing problems, internalizing problems, and hyperactivity. The SSRS-P items are rated by parents on a 3-point scale ranging from 0 (never) to 3 (very often). For this study, the 12 *problem behaviors* items were selected for inclusion. A coefficient alpha was .84 for the problem behaviors scale. A coefficient of .84 was obtained in the current sample.

The AIR self-determination scale. The *AIR Self-Determination Scale* was developed by the American Institutes for Research (Wolman, Campeau, Dubois, Mithaug, & Stolarski, 1994) to measure an adolescent's level of self-determination. On the parent form, parents are asked to rate their child's skills on a 5-point scale ranging from 0 (never) to 5 (always) for each of 18 items, organized into 3 subscales: things my child does (6 items), what happens at home (6 items), and what happens at school (6 items). For this study, the items that comprise the subscale *things my child does* were selected for inclusion. These items explore the degree to which youth with disabilities set goals, meet their goals, monitor their progress, and advocate for their needs or desires. The AIR self-determination scale has an internal consistency correlation of .95. A coefficient of .89 was obtained in the current sample.

Family survey: National longitudinal transition study-2 (NLTS-2). *The Family Survey: National Longitudinal Transition Study-2* (NLTS-2) was developed by the U.S. Department of Education, Office of Special Education Programs to measure the experiences and achievements of young adults with disabilities (1985). The Family Survey (NLTS-2) has items that address functional life skills. There are a total of 39 items within 5 subscales: demographic information (8 items), youth's school experiences (15 items), youth's nonacademic experiences (7 items), youth's future (1 item), and family demographic information (8 items). Items are rated on a 4-point scale ranging from 0 (never) to 4 (always). For this study, *self-care skills*, *functional*

cognitive abilities, *social skills*, and *self-determination skills* items were selected for inclusion to measure parent evaluation of their adolescent's functional limitations in self-care skills, functional cognitive abilities, social skills, and self-determination skills. A coefficient alpha in the current sample was .81 for self-care skills, .85 for functional cognitive ability, .80 for social skills, and .89 for self-determination skills.

World health organization disability assessment schedule 2.0 (WHODAS 2.0). WHODAS 2.0 was developed and field-tested cross-culturally, and is found to be useful in both clinical settings and in the general population (Bindt et al., 2012; Von Korff et al., 2008). The WHODAS 2.0 assesses the impact of a health condition or disability in terms of functioning, which is based on the International Classification of Functioning, Disability and Health (WHO, 1998). There are a total of 36 items that cover six domains of common daily life activities: understanding and communicating (6 items), getting around (5 items), self-care (4 items), getting along with people (5 items), life activities (4 items), employment (4 items), and participation in society (8 items). The WHODAS 2.0 items are rated by parents on a 5-point scale ranging from 0 (none) to 5 (extreme or cannot do). For this study, items for *self-care*, *understanding and communicating*, and *employment* were selected for inclusion to determine parents' perceptions of limitations for their youth with disabilities. A coefficient alpha in the current sample was .81 for self-care skills, .80 for communication skills, and .85 for job skills.

Vineland adaptive behavior scales, second edition (Vineland-II). Vineland-II was developed by Sparrow, Balla, and Cicchetti (1984) to measure an individual's adaptive behavior and maladaptive behavior. Adaptive behavior is grouped into four domains: communication, daily living skills, socialization, and motor skills. Maladaptive behavior is grouped into two domains: internalizing and externalizing. The Vineland-II items are rated by parents on a 3-point

scale ranging from 0 (never) to 3 (usually). For this study, items for *job skills* under daily living skills domain were selected for inclusion to measure if youth with disabilities have job skills. A coefficient alpha in Vineland-II was .82 for daily living skills. A coefficient of .85 was obtained in the current sample.

Procedures

After the Institutional Review Board (IRB) at the University of Wisconsin-Madison approved this study, a total of 20 organizations (e.g., The Arc, multicultural centers, autism society, parent support groups for people with I/DD, etc.) in Wisconsin were identified. Once the organizations were identified, the directors of each organization were contacted to participate in the study. Once interested directors of the organizations contacted me via e-mail, I shared the purpose of the study, the procedures that are used, confidentiality and informed consent information, and the benefits and risks for the participants. Three organizations agreed to participate in this study. The directors of the organizations were asked to choose one of two survey modes: mail surveys or electronic surveys (i.e., survey monkey). One organization selected both mail surveys and electronic surveys. Both surveys and were sent to the organization. The organization distributed both mail and electronic surveys to parents. The other organizations selected electronic surveys only. An email invitation with a link to the web survey (i.e., survey monkey) was sent to the organizations. The organizations distributed it to parents. Parents who received either mail surveys or electronic surveys chose whether they participated in this study. Both surveys took approximately 15-20 minutes to complete.

Mail surveys consisted of a consent form, a survey questionnaire, and a self-addressed, stamped envelope to return the consent form and the survey questionnaire. The mail survey packets were sent to parents. The parents who received the packets were asked to return the

survey within 2 weeks. An email invitation with a link to the web survey (i.e., Survey Monkey) was sent to parents. The email invitation included a written description of the study with a statement that clicks a consent form at the bottom of the web-page. The consent form indicated that parents understand and agree to participate in the study. The consent form led the parents to the survey questions. To help maximize participation, two reminder emails were sent to the directors to distribute them to their parents. The first reminder was sent two weeks after the initial email. The final reminder was sent three weeks after the initial email.

As described above, reminders were used to try to increase response rates. Furthermore, a chance to win a $50 gift card was used as an incentive. At the end of the survey, parents who responded to the survey had the option to enter their name and contact information for drawing a $50 gift card. Their names and contact information were linked to a separate survey item that is not connected to their other survey data. Names and contact information were kept separate from the survey data and were not shared with anyone, to maintain confidentially. At the completion of data collection, five parents' names were drawn through lottery. These parents received the gift cards.

Data Analysis

All responses to survey questions were entered into the Statistical Package for the Social Sciences (SPSS) software. Data were analyzed using descriptive statistics, exploratory regression analyses, and hierarchical regression analyses to test research hypotheses. Descriptive statistics were computed for all independent and dependent variables to examine the shape of the distribution (normal distribution, skewness, kurtosis), the central tendency (mean, median, mode), and the dispersion (range, variance, standard deviation). Frequencies, percentages, means, and standard deviations were used to summarize demographic characteristics of

adolescents and parents/families. A correlation matrix with means and standard deviations of all independent and dependent variables were also computed. All data were screened for multicollinearity, outliers, and missing data. Coefficient alphas were calculated to estimate internal consistency of scores on each measure used.

Prior to beginning the regression analysis, some variables had to be coded, creating numerical variables to represent nominal and categorical variables (e.g., ethnic group, occupation, or marital status). This is done by assigning the values of either 0 or 1 (Cohen et al., 2003; Hoyt, Leierer, & Millington, 2006). More specifically, one group in dummy coding is indicated as a reference group which assigns a value of 0 (Cohen et al., 2003). The other group which is contrasted with the reference group is assigned as a value of 1(Cohen et al., 2003). For example, one dummy variable in this study was created for gender, with female coded as 1 and male coded as a reference group. Three dummy variables were created for race/ethnicity (e.g., White/Caucasian; Black/African American; Hispanic/Latino; and American Indian/Alaska Native). White/Caucasian was coded as a reference group. Black/African American was coded as 1, and others were coded as 0. Hispanic/Latino was coded as 1, and others were coded as 0. American Indian/Alaska Native was coded as 1, and others were coded as 0. Additionally, one dummy variable was created for SSI/SSDI recipients. SSI/SSDI recipients were coded as 1, and non SSI/SSDI recipients were coded as a reference group.

In addition to coding nominal and categorical data, when conducting the regression analysis the researcher must address multicollinearity. Multicollinearity occurs when one or more predictor variables are highly correlated with the other variables in the same regression model (Agresti & Finlay, 2009; Cohen et al., 2003; Groves et al., 2009). The multicollinearity results in standard errors of the coefficients and misleading results (Agresti & Finlay, 2009;

Cohen et al., 2003; Groves et al., 2009). One common way of detecting multicollinearity is a variance inflation factor (VIF) (Agresti & Finlay, 2009; Cohen et al., 2003; Groves et al., 2009). A VIF is computed in the regression equation to evaluate how much the variance of coefficients is inflated by multicollinearity (Agresti & Finlay, 2009; Cohen et al., 2003; Groves et al., 2009). A VIF of 10 indicates that multicollinearity has a problem (Agresti & Finlay, 2009; Cohen et al., 2003; Groves et al., 2009). In this study, multicollinearity was detected in the SPSS software by running a linear regression and focusing on collinearity statistics.

Missing data was also addressed. Missing data occur when respondents refuse or fail to respond to either partial or whole items (Baraldi & Enders, 2010; Cohen et al., 2003; Fielding, Fayers, & Ramsay, 2012; Groves et al., 2009). The missing data result in misleading conclusions from the data (Baraldi & Enders, 2010; Cohen et al., 2003; Fielding et al., 2012; Groves et al., 2009). There are two kinds of techniques for imputation in SPSS software: single and multiple imputation. Single imputation is an easy way to deal with missing data when a few cases are missing (less than 5%). Multiple imputation takes into account the uncertainty of missing values (Barnard & Rubin, 1999). The main difference between these two techniques is that multiple imputation produces several estimates for each missing value and takes probability error into account (Schafer & Olsen, 2010). According to Rubin (1996), there are three steps for multiple imputation: (1) generate a set of $m > 1$ plausible values for $Z^{mis} = (Y^{mis}, X^{mis})$; (2) analyze the *m* datasets using complete-case methods; and (3) combine the results from the *m* analyses. In this study, an item for *don't know* was treated as a missing value. The percent of missing values for the independent and dependent variables was calculated. About 2.42% of the values were missed. Single imputation in the SPSS software was used to deal with missing data because the

missing data was less than 5%. Each missing value was replaced with a value imputed by linear regression.

Sample Size

A priori power analysis was conducted to calculate sample size with G*Power 3.1.7 software tool (Faul, Erdfelder, Lang, & Buchner, 2007). G*Power 3.1.7 software is a free online resource for power analysis (Faul et al., 2007). A priori power analysis is designed to detect an effect of a specified sample size with the desired power before research is conducted (Cohen, 1988).

Exploratory Regression Analysis

An exploratory regression analysis (ERA) was used as the first analysis to examine the relationships between a set of predictor variables and an employment expectation variable. The ERA is an easy and convenient method to find predictor variables that contribute uniquely to explain outcome variables in linear regression analysis (Braun & Oswald, 2011). The ERA precedes the hierarchical regression analysis. For the ERA, each set of adolescent characteristics, parent/family characteristics, and school program/services were entered separately as predictors of parents' employment expectations. A set of adolescent characteristics consisted of two subsets with demographic information and functional life skills. A subset of the demographic information was comprised of age, gender, disability type and degree, Medicaid/Medicare status, and SSI/SSDI status. Another subset of the adolescent characteristics is adolescent functional life skills including self-care skills, communication skills, functional cognitive abilities, social skills, self-determination skills, job skills, and problem behaviors. A set of parent/family variables consisted of age, gender, race/ethnicity, employment status, disability status, marital status, health insurance status, SSI/SSDI status, education, food stamp status, and family income. A set

of school program/service variables included parent and child participation in the individualized education plan (i.e., IEP) meetings, IEP goals, employment-related goals, vocational-focused education programs/vocational training, vocational experiences, school training/support, school-sponsored work activities, community service activities, school activities, inclusion in general education classroom, and classroom settings.

Hierarchical Regression Analysis

A hierarchical regression analysis (HRA) was used as the final analysis to evaluate the relationships between predictor variables and an employment expectation variable. The HRA is a useful strategy for testing theoretically based hypotheses and evaluating the influence of predictors in a sequential way (Aron & Aron, 1999; Cohen, Cohen, West, & Aiken, 2003; Hoyt, Imel, & Chan, 2008). More specifically, the HRA is used to evaluate the contributions of a set of predictors above and beyond predictors entered at previous steps in the analysis and to examine incremental variance (Cohen et al., 2003; Hoyt et al., 2008). As a sequential process, the HRA determines the order of entry of predictors into the regression equation based on theory (Aron & Aron, 1999; Cohen et al., 2003; Hoyt et al., 2008). In addition, the HRA is designed to analyze the effect of predictor variables on an outcome variable after controlling for other variables (Aron & Aron, 1999; Cohen et al., 2003).

In this study, an order of entry of all predictor variables into the regression model was predetermined based on a theoretical reason. The theoretical reason for the order of entry in the HRA was based on ecological systems theory (Bronfenbrenner, 1986). The ecological systems theory states that human development is influenced by the different types of environmental systems. These systems include the micro system, the mesosystem, the exosystem, the macro system, and the chronosystem. The order of entry of all predictor variables into the regression

model was predetermined based on the systems. The predictor variables from adolescent characteristics, parent/family characteristics, and school program/services that were significant in the exploratory regression analyses were entered into the regression model. Four blocks were used to enter multiple variables into each block: (1) adolescent demographics; (2) adolescent functional life skills; (3) parent/family demographics; (4) school program/services. Significance tests for the regression coefficients for each predictor variable were assessed at each block and at the final model to assess unique relationships to the primary dependent variable. The change in R^2 (ΔR^2) was examined as a measure of each predictor set contribution.

CHAPTER IV

RESULTS

The purpose of the present study was to identify factors that are associated with parental expectations about employment outcomes for young adults with I/DD including ID and ASD in middle and high school. Exploratory regression analysis (ERA) was used to find predictor variables that contribute uniquely to explain parents' employment expectations. Each set of adolescent characteristics, parent/family characteristics, and school program/services were entered separately as predictors of parents' employment expectations. Based on the results of the ERA analysis, a follow-up hierarchical regression analysis (HRA) was conducted to determine the amount of variance in parents' employment expectations that could be accounted for by sets of predictors representing adolescent characteristics, parent/family characteristics, and school program/services. This chapter summarizes the results of the statistical analyses used to examine the five research questions and the follow-up analysis.

Preliminary Data Screening and Analysis

Data for all predictor and outcome variables were screened using the SPSS software for accuracy, multivariate outliers, and normality. Frequency tables were used to identify cases in which data had been entered in error. The presence of multicollinearity was evaluated by examining the variance inflation factors (VIF) and tolerance. None of the VIF values exceeded 10 for any variables in the analyses (range = 1.20 to 7.16), and none of the tolerance values were less than .10 (range .14 to .80), suggesting that standard errors for regression coefficients are not greatly inflated in these analyses. With the use of 11 predictors and $p < .01$ criterion for Mahalanobis distance, seven outliers were deleted from the hierarchical multiple regression analysis, resulting in a sample size of 99. Skewness and kurtosis statistics were used to assess

normality and linearity, and the assumptions of multivariate analyses were found to be met. A priori power analysis was conducted to calculate sample size with 11 predictor variables, an alpha level of 0.05, and power equal to .80. This was the power to detect an overall R^2 of .13 when all 11 predictors were included in the model. This was based on the formula: $f^2 = R^2/ (1 - R^2)$. Results of the priori power analysis indicated that a sample size of 123 was sufficient for a medium effect size. However, a sample size of 99 was collected for the current study. As a result, the analyses of the data for this study could result in one of two types of errors: a type I error of incorrectly rejecting the null hypothesis and a type II error of incorrectly accepting the null hypothesis.

Descriptive Statistics

In regard to the school program/service, 93.9% of parents and 73.7% of adolescents participated in the Individualized Education Plan (IEP) meetings. More than 77% of parents mentioned that their child's IEP goals were challenging and appropriate, and 67.7% indicated that their child had employment goals. In addition to these goals, 53.5% of parents said that their child participated in vocational-focused education programs or vocational training; 20.2% indicated that their child had an after school, weekend, or summer job that pays wages; and 57.6% reported that their child's school provided training or support related to jobs or job experiences to their child. Additionally, 34.3% of parents indicated that their child participated in a school-based-sponsored work activity, internship, or a school-based business. More than half (53.5%) of the parents said that their child participated in volunteer or community service activities; and 38.4% reported that their child participate in school activities such as sports teams, band or chorus, school clubs, or student government.

Parents reported varying instructional settings and access to general education curriculum for their adolescents. Less than half (48.5%) of parents indicated that their child was based in the general education curriculum. The location of instruction for these adolescents mirrors access to general education curriculum, with 46.5% of the parents reporting their children received some (26.3%) or all (20.2%) of their education in the general education classroom. Most of the remaining parents reported their children receiving their educations in segregated settings only, 38.4% in special education classrooms and 10.1% in special schools. A little more than 5% reported that their children were in the community for most of their instruction. A summary of the school program/service is presented in Table 4.

Table 4

School Program/Services

Variable	***N* (%)**
Parental Participation in the IEP Meetings	
Yes	93 (93.9%)
No	6 (6.1)
Student Participation in the IEP Meetings	
Yes	73 (73.7%)
No	26 (26.3%)
IEP Goals	
Yes	77 (77.8%)
No	22 (22.2%)
Employment Goals	
Yes	67 (67.7%)
No	32 (32.3%)
Vocational-Focused Education Programs/Training	
Yes	53 (53.5%)
No	46 (46.5%)
After School, Weekend, or Summer Job	
Yes	20 (20.2%)
No	79 (79.8%)
Training or Supports Provided Schools	
Yes	57 (57.6%)
No	42 (42.4%)

Table 4 continued

Variable	*N* (%)
School-Sponsored Work/Internship/School-Based Business	
Yes	34 (34.3%)
No	65 (65.7%)
Volunteer or Community Service Activities	
Yes	53 (53.5%)
No	46 (46.5%)
School Activities	
Yes	38 (38.4%)
No	61 (61.6%)
Classroom Settings	
General education classrooms	20 (20.2%)
Some general/special education classrooms	26 (26.3%)
Special education classrooms	38 (38.4%)
Community settings	5 (5.1%)
Special school	10 (10.1%)

The vast majority of the parents (84.9%) expected that their child would be employed in paid jobs in the community. Of these, 56.6% expected full or part time supported employment, where as 28.6% expected their adolescent to have full time (13.1%) or part time (15.2%) paid employment in the community, with no supports. The remaining 15.1% expected that their child would be employed in a segregated sheltered workshops (12.1%) or would not work outside the home (3%). A summary of the parents' employment expectations is presented in Table 5.

Table 5

Parents' Employment Expectations

Variable	*N* (%)
Employment Types	
Full time paid job in the community	13 (13.1%)
Part time paid job in the community	15 (15.2%)
Supported employment	56 (56.6%)
Segregated sheltered workshops	12 (12.1%)
No work outside the home	3 (3%)

Zero-Order Correlations

A summary of means, standard deviations, and intercorrelations among predictor and criterion variables is presented in Table 6. The intercorrelations among the variables were relatively high, although none exceeded .63. The majority of coefficients were significant at $p < .01$. Self-care skills, communication skills, functional cognitive abilities, social skills, self-determination skills, job skills, and general education classrooms were each positively correlated with parents' employment expectations ($r = .36$, $p < .01$; $r = .43$, $p < .01$; $r = .51$, $p < .01$; $r = .32$, $p < .01$; $r = .40$, $p < .01$; $r = .40$, $p < .01$; and $r = .21$, $p < .05$). However, Medicaid/Medicare benefits were negatively associated with parents' employment expectations ($r = -.33$, $p < .01$). Additionally, gender, SSI/SSDI benefits, problem behaviors, race/ethnicity, parent education, family income, work experience, and vocational education were not correlated with parents' employment expectations ($r = -.07$, $p > .05$; $r = -.09$, $p > .05$; $r = .00$, $p > .05$; $r = -.13$, $p > .05$; $r = .16$, $p > .05$; $r = .08$, $p > .05$; $r = -.14$, $p > .05$; and $r = -.05$, $p > .05$).

More specifically, SSI/SSDI benefits were positively correlated with Medicaid/Medicare benefits ($r = .53$, $p < .01$) and vocational education ($r = .33$, $p < .01$), while SSI/SSDI benefits were negatively correlated with functional cognitive abilities ($r = -.20$, $p < .05$) and family income ($r = -.29$, $p < .01$). Medicaid/Medicare benefits were positively associated with work experience ($r = .20$, $p < .05$) and vocational education ($r = .22$, $p < .05$), while Medicaid/Medicare benefits were negatively associated with communication skills ($r = -.21$, $p < .05$), functional cognitive abilities ($r = -.24$, $p < .05$), job skills ($r = -.26$, $p < .05$), and family income ($r = -.20$, $p < .05$).

Table 6

Summary of Intercorrelations, Means, and Standard Deviations for Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Gender	--																
2. SSI/SSDI	-.01	--															
3. Medicaid	-.02	.53**	--														
4. Self-Care	.10	.02	-.17	--													
5. CS	.17	-.18	-.21*	.33**	--												
6. FCA	-.03	-.20*	-.24*	.57**	.63**	--											
7. Social Skills	.12	-.09	-.04	.21*	.61**	.35**	--										
8. SDS	.18	.05	-.01	.53**	.41**	.50**	.59**	--									
9. Job Skills	.15	.05	-.26*	.45**	.35**	.50**	.38**	.56**	--								
10. PB	-.18	-.07	.04	.19	-.10	.10	-.51**	-.17	-.25*	--							
11. Race	-.17	.19	.13	-.27**	-.09	-.11	-.10	-.20	-.09	.00	--						
12. PA	-.02	-.18	-.16	-.01	.11	-.07	.12	.04	.09	-.25*	.06	--					
13. Income	.00	-.29**	-.20*	.07	.13	.18	.17	.02	-.01	-.14	.07	.26*	--				
14. WE	.13	.18	.20*	.11	.04	.02	.18	.13	.13	-.17	.06	.04	.14	--			
15. VE	.01	.33**	.22*	.11	-.04	-.02	.12	.09	.13	-.19	.17	.10	.07	.42**	--		
16. GEC	-.17	-.12	-.06	.05	.19	.25*	.03	.08	.03	.28**	-.01	-.08	-.07	-.19	-.15	--	
17. Parental Expectations	-.07	-.09	-.33**	.36**	.43**	.51**	.32**	.40**	.40**	.00	-.13	.16	.08	-.14	-.05	.21*	--
M	.35	.43	.70	2.43	2.64	2.67	2.36	2.42	2.58	1.69	.92	.35	3.14	.34	.54	.48	3.23
SD	.48	.50	.46	.66	.53	.59	.46	.63	.68	.40	.27	.48	1.08	.48	.50	.50	.93

Note. SSI/SSDI = supplemental security income/social security disability insurance; Medicaid = Medicaid/Medicare benefits; CS = communication skills; FCA = functional cognitive abilities; SDS = self-determination skills; PB = problem behaviors; PA = parent education; WE= work experience; VE = vocational education; GEC = general education classrooms. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Self-care skills were positively correlated with communication skills ($r = .33$, $p < .01$), functional cognitive abilities ($r = .57$, $p < .01$), social skills ($r = .21$, $p < .05$), self-determination skills ($r = .53$, $p < .01$), and job skills ($r = .45$, $p < .01$), while self-care skills were negatively correlated with race/ethnicity ($r = -.27$, $p < .01$). Communication skills were positively related to functional cognitive abilities ($r = .63$, $p < .01$), social skills ($r = .61$, $p < .01$), self-determination skills ($r = .41$, $p < .01$), and job skills ($r = .35$, $p < .01$). Functional cognitive abilities were positively associated with social skills ($r = .35$, $p < .01$), self-determination skills ($r = .50$, $p < .01$), job skills ($r = .50$, $p < .01$), and general education classrooms ($r = .25$, $p < .05$). Social skills were positively correlated with self-determination skills ($r = .59$, $p < .01$) and job skills ($r = .38$, $p < .01$), while social skills were negatively correlated with problem behaviors ($r = -.51$, $p < .01$). Self-determination skills were positively related to job skills ($r = .56$, $p < .01$). Job skills were negatively associated with problem behaviors ($r = -.25$, $p < .05$). Problem behaviors were positively correlated with general education classrooms ($r = .28$, $p < .01$), while problem behaviors were negatively correlated with parent education ($r = -.25$, $p < .05$). Parent education were positively related to family income ($r = .26$, $p < .05$). Finally, work experience were positively associated with vocational education ($r = .42$, $p < .01$).

Exploratory Regression Analysis

An exploratory regression analysis (ERA) was conducted to explore the validity of sets of characteristics of adolescents (i.e., adolescent demographics and functional life skills), parents/family, and school program/service as predictors of parents' employment expectations. Each set was entered separately in this study. The results of the analysis indicated whether the variables as a set predict parents' employment expectations (i.e., significance test for R^2) and

each variable in the set is uniquely predictive, controlling for the other characteristics of the same type (i.e., significance test for β). The results of the analysis are presented in Table 7.

The set of adolescent demographics (i.e., age, gender, disability type and degree, SSI/SSDI benefits, and Medicaid/Medicare benefits) was tested to predict parents' employment expectations, using linear regression analysis. This set of demographic covariates accounted for a significant amount of variance in parents' employment expectation scores, (28%), $R = .53$, $R^2 = .28$, $F\ (9, 89) = 3.78$, $p < .001$. Examining the standardized partial regression coefficients, age, gender, and disability type were not significant predictors of parental expectations. However, SSI/SSDI benefits, Medicaid/Medicare benefits, and mild disability were significant predictors of parental expectations, with $\beta = .23$, $t\ (89) = 2.00$, $p < .05$; $\beta = -.36$, $t\ (89) = -3.15$, $p < .01$; and $\beta = .31$, $t\ (89) = 2.98$, $p < .01$ respectively. The results indicate that adolescents who received SSI/SSDI benefits were associated with higher levels of parents' employment expectations compared to those who did not receive SSI/SSDI benefits. In addition, adolescents with mild disabilities were associated with higher levels of parents' employment expectation compared to those with moderate, severe, and profound disabilities. On the other hand, adolescents who received Medicaid/Medicare benefits were associated with lower levels of parents' employment expectations compared to those who did not receive Medicaid/Medicare benefits.

Table 7

Exploratory Regression Analysis on Parents' Employment Expectations

Variable	Parents' Employment Expectations			
	R^2	B	SE B	β
Adolescent Demographics	.28***			
SSI/SSDI benefits		.44	.22	.23*
Medicaid/Medicare benefits		-.73	.23	-.36**
Mild disability		.59	.20	.31**
Functional Life Skills	.32***			
Functional cognitive abilities		.44	.22	.28*
Parent/Family Characteristics	.11			
Age		.01	.02	.09
Gender		.29	.35	.09
Race/ethnicity		-.52	.36	-.15
Marital status		.10	.15	.10
Education		.18	.10	.22
Disability status		-.34	.40	-.10
SSI/SSDI benefits		-.50	.52	-.12
Family income		-.11	.13	-.13
Food stamp status		.12	.39	.04
Health insurance status		.47	.60	.09
School Program/Services	.33**			
IEP meetings		-2.09	.92	-.54*
School activities		.50	.21	.26**
General education classrooms		.80	.40	.35*

Note. F (9, 89) = 3.78, $p < .001$ for adolescent demographics; F (7, 91) = 6.05, $p < .001$ for functional life skills; F (10, 88) = 1.05, $p > .05$ for parent/family characteristics; F (17, 81) = 2.36, $p < .01$ for school program/services.

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

The set of functional life skills (i.e., self-care skills, communication skills, functional cognitive abilities, social skills, self-determination skills, job skills, and problem behaviors) was tested to predict parents' employment expectations. This set of functional life skills accounted for a significant amount of variance in parents' employment expectation scores, (32%), $R = .56$, $R^2 = .32$, $F\ (7, 91) = 6.05$, $p < .001$. Examining the standardized partial regression coefficients, self-care skills, communication skills, social skills, self-determination skills, job skills, and problem behaviors were not significant predictors of parental expectations. However, functional cognitive abilities with $\beta = .28$, $t\ (91) = 2.04$, $p < .05$ were significant predictors of parental expectations. The results indicate that higher levels of functional cognitive abilities predict higher levels of parents' employment expectations.

The set of parent/ family variables (i.e., age, gender, race/ethnicity, marital status, education, disability status, SSI/SSDI benefits, family income, food stamp status, and health insurance status) was tested to understand how the variables predict parents' employment expectations. This set of parent/family variables did not account for a significant amount of variance in parents' employment expectation scores, (11%), $R = .33$, $R^2 = .11$, $F\ (10, 88) = 1.05$, $p > .05$. Examining the standardized partial regression coefficients, none of the parent/family variables were significant predictors of parental expectations, with $\beta = .09$, $t\ (88) = .76$, $p > .05$; $\beta = .09$, $t\ (88) = .83$, $p > .05$; $\beta = -.15$, $t\ (88) = -1.45$, $p > .05$; $\beta = .10$, $t\ (88) = .64$, $p > .05$; $\beta = .22$, $t\ (88) = 1.87$, $p > .05$; $\beta = -.10$, $t\ (88) = -.84$, $p > .05$; $\beta = -.12$, $t\ (88) = -.98$, $p > .05$; $\beta = -.13$, $t\ (88) = -.87$, $p > .05$; $\beta = .04$, $t\ (88) = .32$, $p > .05$; and $\beta = .09$, $t\ (88) = .78$, $p > .05$ respectively.

The set of school program/service variables (i.e., parent and child participation in the individualized education plan (i.e., IEP) meetings, IEP goals, employment-related goals,

vocational-focused education programs/vocational training, vocational experiences, school training/support, school-sponsored work activities, community service activities, school activities, inclusion in general education classroom, and classroom settings) was tested to determine how these variables, as a set and individually, predicted parents' employment expectations. The set of school program/service variables accounted for a significant amount of variance in parents' employment expectation scores, (33%), $R = .58$, $R^2 = .33$, $F\ (17, 81) = 2.36$, $p < .01$. Examining the standardized partial regression coefficients, parental participation in the IEP meetings, school activities, and general education classroom settings were significant predictors of parental expectations, with $\beta = -.54$, $t\ (81) = -2.28$, $p < .05$; $\beta = .26$, $t\ (81) = 2.39$, $p < .01$; and $\beta = .35$, $t\ (81) = 2.02$, $p < .05$ respectively. The results indicate that parents who participated in the IEP meetings were associated with lower levels of parents' employment expectations compared to those who did not participate in the IEP meetings. However, adolescents who participated in school activities such as sports teams, band or chorus, school clubs, or student government were associated with higher levels of parents' employment expectations compared to those who did not participate in the school activities. Additionally, adolescents who mostly received their education in a general education classroom were associated with higher levels of parents' employment expectations compared to those who did not receive their education in a general education classroom.

Hierarchical Regression Analysis

Hierarchical regression analysis (HRA) was conducted to answer the primary research question with parents' employment expectations as the dependent variable, and three sets of characteristic variables that were significant predictors in the exploratory regression analysis were entered as predictors in sequential steps: (a) adolescent demographic covariates (i.e.,

SSI/SSDI benefits, Medicaid/Medicare benefits, and mild disability); (b) functional life skills variables (i.e., functional cognitive abilities); and (c) school program/service variables (i.e., parental participation in the IEP meetings, school activities, and general education classroom settings). Ecological systems theory was used to determine the sequential steps. The ecological systems theory states that human development is influenced by the different types of environmental systems (Bronfenbrenner, 1986). These systems consist of the micro system, the mesosystem, the exosystem, the macro system, and the chronosystem. The order of entry of all predictor variables into the regression model was predetermined based on the systems. HRA was used to examine the relative contributions of the three sets of characteristic variables as predictors of parents' employment expectations. The results of the analysis, including values of change in R^2 (ΔR^2) and standardized coefficients (β) for the predictor variables at each step and in the final model, are presented in Table 8.

In the first step of the regression analysis, adolescent demographic covariates (i.e., SSI/SSDI benefits, Medicaid/Medicare benefits, and mild disability) were entered. This set of demographic covariates accounted for a significant amount of variance in parents' employment expectation scores, (22%), $R = .47$, $R^2 = .22$, $F\ (3, 95) = 8.98$, $p < .001$. Examining the standardized partial regression coefficients, SSI/SSDI benefits with $\beta = .14$, $t\ (95) = 1.27$, $p > .05$ did not significantly contribute to the change in variance in parents' employment expectation scores. However, Medicaid/Medicare benefits and mild disability significantly contributed to the change in variance in parents' employment expectation scores, with $\beta = -.32$, $t\ (95) = -2.96$, $p < .01$ and $\beta = .33$, $t\ (95) = 3.49$, $p < .01$ respectively. The results indicate that adolescents who received Medicaid/Medicare benefits were associated with lower levels of parents' employment expectations compared to those who did not receive Medicaid/Medicare benefits. On the other

hand, adolescents with mild disabilities were associated with higher levels of parents' employment expectations compared to those with moderate, severe, and profound disabilities.

Table 8

Hierarchical Regression Analysis on Parents' Employment Expectations

Variable	Parents' Employment Expectations	
	ΔR^2	β
Step 1	.00	
SSI/SSDI benefits		.14
Medicaid/Medicare benefits		-.32**
Mild disability		.33**
Step 2	.13***	
Functional cognitive abilities		.41***
Step 3	.38**	
Parental participation in the IEP meetings		-.09
School activities		.23**
General education classrooms		.25**
Total R^2	.51***	
n	99	

Note. $R^2 = .22$, F (3, 95) = 8.98, $p < .001$ at Step 1; $\Delta R^2 = .32$, ΔF (1, 94) = 17.96, $p < .001$ at Step 2; $\Delta R^2 = .38$, ΔF (3, 91) = 4.21, $p < .01$ at Step 3.
$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Functional life skills variables (i.e., functional cognitive abilities) were entered in the second step of the regression analysis. Functional cognitive abilities accounted for a significant amount of additional variance in parents' employment expectation scores beyond that explained by the adolescent demographic covariates entered in the first step, (35%), $R = .59$, $R^2 = .35$, $\Delta R^2 = .13$, ΔF (1, 94) = 17.96, $p < .001$, suggesting that functional cognitive abilities were significantly related to parents' employment expectations even after controlling for the effect of the adolescent demographic covariates. In this step, the standardized beta for Medicaid/Medicare benefits was reduced from -.32 to -.29. Despite the changes in standardized beta values, Medicaid/Medicare benefits remained a significant contributor to the variance in parents'

employment expectations. Mild disability was no longer significant contributor to the variance in parents' employment expectations. Examining the standardized partial regression coefficients within this step, functional cognitive abilities with $\beta = .41$, $t\ (94) = 4.24$, $p < .001$ significantly contributed to the change in variance in parents' employment expectation scores, indicating that higher levels of functional cognitive abilities predicted higher levels of parents' employment expectations in this sample of young adults with intellectual disabilities or autism spectrum disorders.

School program/service variables (i.e., parental participation in the IEP meetings, school activities, and general education classrooms) were entered in the third step of the regression analysis. This set of variables accounted for a significant amount of additional variance in parents' employment expectation scores beyond that explained by the adolescent demographic covariates and functional cognitive abilities entered in previous steps, (43%), $R = .65$, $R^2 = .43$, $\Delta R^2 = .38$, $\Delta F\ (3, 91) = 4.21$, $p < .01$, suggesting that school program/service variables were significantly related to parents' employment expectations even after controlling for the effect of the adolescent demographic covariates and functional cognitive abilities. In this step, the standardized beta for SSI/SSDI benefits was increased from .17 to .26. The standardized beta for Medicaid/Medicare benefits was also increased from -.29 to -.30. On the other hand, the standardized beta for functional cognitive abilities was reduced from .41 to .35. Despite the changes in standardized beta values, SSI/SSDI benefits, Medicaid/Medicare benefits, and functional cognitive abilities remained significant contributors to the variance in parents' employment expectations. Mild disability was no longer significant contributor to the variance in parents' employment expectations. Examining the standardized partial regression coefficients within this step, parental participation in the IEP meetings with $\beta = -.09$, $t\ (91) = -1.04$, $p > .05$

did not significantly contribute to the change in variance in parents' employment expectation scores. However, school activities with $\beta = .23$, $t\ (91) = 2.76$, $p < .01$ and general education classrooms with $\beta = .25$, $t\ (91) = 2.74$, $p < .01$ significantly contributed to the change in variance in parents' employment expectation scores. The results indicate that school activities and general education classrooms were positively associated with parents' employment expectations, suggesting that higher levels of participation in school activities and general education classrooms predicted higher levels of parents' employment expectations in this sample of young adults with ID or ASD.

CHAPTER V

DISCUSSION

The purpose of this study is to identify factors that are associated with parental expectations about employment outcomes for young adults with I/DD, specifically youth with intellectual disability (ID) and Autism Spectrum Disorder (ASD) in middle and high school. This study particularly focuses on examining whether characteristics of adolescents with ID or ASD, parents/families, and school programs/services are associated with parental expectations for their adolescent child's future employment outcomes. This chapter is organized to address the major findings, limitations, and implications for practice and future research.

Major Study Findings

Exploratory Regression Analysis

The exploratory regression analysis revealed that SSI/SSDI benefits, Medicaid/Medicare benefits, mild disability, functional cognitive abilities, parental participation in the IEP meetings, school activities, and general education classrooms were significant predictors of parental expectations for their adolescent child's future employment outcomes in this current study. These findings were anticipated as significant predictors of parental expectations because the findings were consistent with previous studies that examined parental expectations or employment outcomes for young adults with disabilities.

However, there were surprising findings in the current that were different from the literature. First, self-care skills, social skills, self-determination skills, and job skills were expected to be significant predictors of parental expectations for their adolescent child's future employment outcomes. These skills are associated with positive employment outcomes (Cameto, 2005; Cannella et al., 2005; Carter et al., 2012; Eisenman, 2007; Test & Mazzotti, 2011). Studies

revealed that functional life skills, including self-care skills, social skills, self-determination skills, and job skills are associated with parental expectations for their child's post-school outcomes (Blacher et al., 2010; Grigal & Neubert, 2004; Hanley-Maxwell et al., 1995; Kim et al., 2007; Lindsay, 2011; Neece et al., 2009; Newman, 2005; Schuster et al., 2003). Second, socioeconomic status, parental education and occupation, and minority status were anticipated to be significant predictors of parental expectations for their adolescent child's future employment outcomes. Research indicates that parents can help their children develop their job skills and influence their children's employment outcomes (Blau & Duncan, 1967; Chambers et al., 2004; Diemer & Ali, 2009). Studies reported that parents' financial resources and education, as well as minority status are associated with employment aspirations, expectations, and status of young adults with disabilities (Blau & Duncan, 1967; Chambers et al., 2004; Diemer & Ali, 2009; Duncan et al., 1972; Penick & Jepsen, 1992; Schultheiss, 2006; Schultheiss et al., 2001; Whiston & Keller, 2004). Finally, work experience and vocational education were expected to be significant predictors of parental expectations for their adolescent child's future employment outcomes. This is because paid or unpaid work experience and vocational education in high school are related to improved employment outcomes for youth with disabilities (Colley & Jamison 1998; Wonacott, 2001). Furthermore, research revealed that work experience and vocational education/training were associated with parental expectations for their adolescent child's future employment outcomes (Carter et al., 2011; Chambers et al., 2004; Migliore et al., 2012; Test et al., 2009).

The most surprising findings from this study were SSI/SSDI benefits and parental participation in the IEP meetings. These findings were not consistent with other studies that determined employment outcomes of young adults with disabilities. Each is described below.

SSI/SSDI benefits. SSI/SSDI benefits were found to be significantly associated with parents' employment expectations. This current study suggests that parents of adolescents with ID or ASD who receive SSI/SSDI benefits have higher expectations that their adolescent child will get a job after high school compared to parents of adolescents who do not receive SSI/SSDI benefits. This finding was surprising because in other research receiving SSI/SSDI benefits have been associated with lower levels of parental expectations for their adolescent child or young adult's future employment outcomes. Furthermore, the finding is not consistent with studies that examined employment outcomes for adults with disabilities. For instance, lower rates of employment of individuals with intellectual and developmental disabilities are associate with receipt of SSI/SSDI benefits as compared with those who did not receive SSI/SSDI benefits (Davies et al., 2009; Loprest & Wittenburg, 2007; Rizzolo, Hemp, Braddock & Pomeranz-Essley, 2004; Wehman & Revell, 2005; Wehman, Revell, & Kregel, 1998). Furthermore, other research indicates that even when capable of working, individuals with disabilities who receive SSI/SSDI benefits did not get a job due to concern that it would restrict their earnings or terminate their benefits (Kregel, 2012). According to Loprest and Wittenburg (2007), many parents limit their children's participation in work experiences during high school. This may be because SSI/SSDI benefits are an essential financial resource for the family (Rupp et al., 2005). Additionally, studies have found that families keep their adult children at home and limit their employment to insure continued receipt of the benefits (Loprest & Wittenburg, 2007). As a result, family financial need may contribute to poor employment outcomes for young adults with severe disabilities (Carter et al., 2012; Davies et al., 2009; Hopf, 1991; Loprest & Wittenburg, 2007; Parish & Cloud, 2006; Sheldon, 2002; Wehman et al., 2014).

The difference between the results of the current study and previous research may lie in the demographic backgrounds of the participants. The majority of participants were young, married, White/Caucasian, and well-educated mothers. The majority were employed for wages and earned over $75,000. As a result, they may have been less dependent on their children's SSI/SSDI to maintain family financial stability. Furthermore, nearly 85% of the parents expected their adolescents to work in the community after leaving high school. The demographic backgrounds of parents who participated in other studies were different. According to Newman (2005), parents of youth from low-income households have lower expectations for their children's educational attainment and independence than those from high-income households. Additionally, White/Caucasian parents have higher expectations for their children's independent living than African-American or Hispanic parents. Moreover, Doren and her colleagues (2012) found that parents of adolescents from low-income households have lower expectations for their children's high school graduation, employment, and postsecondary education than those from high-income households. Therefore, the demographic differences in the present study may have produced different results than the other studies. However, the different results of this study could also be due to the fact that the study was underpowered.

Parental participation in the IEP meetings. Parental participation in the IEP meetings was found to be significantly associated with parents' employment expectations in the exploratory regression analysis. This result suggests that parents who participate in their child's IEP meetings have lower expectations that their adolescent child will get a job after leaving high school compared to those who do not participate in the IEP meetings. This result was surprising because in previous research parental participation in the IEP meetings was associated with higher levels of parental expectations for their adolescent child's future employment outcomes.

For example, Walker and colleagues (2005) found that parents who actively participated in the transition process helped their children move from high school to adulthood successfully. In addition, parents who were involved in the IEP meetings built positive relationships with IEP teams and helped their children get a job after high school (Saliembier & Furney, 1997; Test et al., 2009).

The current study differs from these previous studies in several ways that may explain the difference in the results. First, nearly all of the parents who participated in this study (93 of the 99 parents) participated in the IEP meetings. Second, the study was under-powered. Either of these two factors or the combination of the factors could have influenced the outcomes of this study.

Hierarchical Regression Analysis

Significant predictor variables of adolescent characteristics, parent/family characteristics, and school program/services from the exploratory regression analysis were used for the hierarchical regression analysis. The hierarchical regression analysis revealed that mild disability, Medicaid/Medicare benefits, functional cognitive abilities, school activities, and general education classroom settings were significant predictors of parental expectations for their adolescent child's future employment outcomes after controlling for the effect of the adolescent demographic covariates and functional cognitive abilities. These findings were not surprising because in other research mild disability, functional cognitive abilities, school activities, and general education classroom settings were associated with higher levels of parental expectations for their adolescent child's post-school outcomes, while receipt of Medicaid/Medicare benefits have been associated with lower levels of parental expectations. The findings are consistent with

other studies that examined parental expectations or studies that investigated employment outcomes of young adults with disabilities. Each is described below.

Mild disability. Mild disability was found to be significantly associated with parents' employment expectations in this study. The current study suggests that parents of adolescents with mild ID or ASD have higher expectations that their adolescent child will get a job after leaving high school than parents of adolescents with moderate to severe ID or ASD. The result is consistent with previous research. For example, Heal and Rusch (1995) found that youth with mild disabilities were more likely to be employed than those with severe disabilities. Furthermore, the majority of youth with mild intellectual disabilities have a higher rate of employment (Joshi, Bouck, & Maeda, 2012) than those of youth with severe intellectual disabilities after leaving high school (Bouck, 2012; Carter et al., 2012). According to Grigal and Nuebert (2004), parents of young adults with high-incidence disabilities expect that their children will be more likely to attend postsecondary education and have a full-time or part-time job than parents of young adults with low-incidence disabilities. Additionally, parents of youth with learning disabilities (91.6%), other health impairment (87.1%) and speech/language impairment (86.8%) have higher expectations that their child will get a paid job than parents of youth with autism spectrum disorders (44.7%) (Newman, 2005).

Medicaid/Medicare benefits. Medicaid/Medicare benefits were found to be significantly associated with parents' employment expectations in this study. The current study suggests that parents of adolescents with ID or ASD who receive Medicaid/Medicare benefits have lower expectations that their adolescent child will obtain a job after leaving high school compared to parents of adolescents who do not receive Medicaid/Medicare benefits. This result is consistent with related studies. For example, Migliore and his colleagues (2012) found that youth with

autism who received medical benefits (e.g., Medicaid/Medicare) were employed at lower rates than youth with autism who did not receive medical benefits. Another study reported that Medicaid/Medicare eligibility may not only limit employment and earnings, but may also reduce the motivation to find a job (Yelowitz, 1995). This might be because individuals with disabilities who receive SSI/SSDI benefits automatically qualify for Medicaid/Medicare eligibility in almost all states ((Davies & O'Brien, 1996; Davies et al., 2009; Parish & Cloud, 2006). To be considered for Medicaid/Medicare eligibility, individuals with disabilities must meet specific income requirements (Clark & Hulbert, 1998; Davies et al., 2009; Parish & Cloud, 2006; Yelowitz, 1995). They must also have significant levels of impairments (Davies & O'Brien, 1996).

Functional cognitive abilities. Functional cognitive abilities were found to be significantly associated with parents' employment expectations in this study. This result suggests that parents of adolescents with ID or ASD who have higher levels of functional cognitive abilities have higher expectations that their adolescent child will get a job after leaving high school compared to parents of adolescents with ID or ASD who have lower levels of functional cognitive abilities. The result is consistent with other similar studies. For instance, Heal and Rusch (1995) found that youth with disabilities with high cognitive abilities were more likely to be employed than those with low cognitive abilities. Additionally, Wagner and her colleagues (2005) found that youth with higher levels of functional cognitive skills had higher levels of employment or postsecondary education after leaving high school. This may be because individuals with cognitive abilities can perform certain types of cognitive tasks, including higher order thinking, learning, reasoning, and problem solving (Gargiulo, 2012; Heward, 2013; Murphy, 1989; Smith, 2007).

School activities. School activities were found to be significantly associated with parents' employment expectations in this study. This current study suggests that parents of adolescents with ID or ASD who participate in school activities, such as sports teams, band or chorus, school clubs, or student government, have higher expectations that their adolescent child will get a job after high school compared to parents of adolescents with ID or ASD whose children do not participate in school activities. The result is consistent previous research. For instance, Otto (1982) found that participation in sports was positively associated with educational attainment, occupational status, and income. Other studies also found that students who participated in extracurricular school activities had better academic outcomes, university enrollment, and occupational aspirations than students who did not participate (Camp, 1990; Cooper et al., 1999; Marsh & Kleitman, 2002; Melnick, Sabo, & Vanfossen, 1992). This may be because school activity experiences provide an essential platform for academic and nonacademic accomplishments, psychological development, and friendship interaction (Marsh & Kleitman, 2002; Wagner et al., 2005). School activity experiences also reduce high school dropout rates (Mahoney & Cairns, 1997; Wagner, Cadwallader, & Marder, 2003).

General education classroom settings. General education classroom settings were found to be significantly associated with parents' employment expectations in this study. This result suggests that parents of adolescents with ID or ASD who mostly receive their education in a general education classroom have higher expectations that their adolescent child will get a job after leaving high school compared to those of adolescents with ID or ASD who do not receive their education in a general education classroom. The result is consistent with studies that examined post-school outcomes. For example, many studies have reported that students with severe disabilities who receive their education in a general education classroom have better post-

school employment outcomes (Baer et al., 2003; Blackorby et al., 1993; Carter & Hughes, 2006; Fisher & Meyer, 2002; Halpern et al., 1995; Heal & Rusch, 1995; Leonard et al., 1999; White & Weiner, 2004). According to Test and his colleagues (2009), the most common predictor of employment was inclusion in general education.

Having access to the general education curriculum means that students' "educational programs are based on high expectations that acknowledge each student's potential and ultimate contribution to society" and that "students with disabilities be provided with the supports necessary to allow them to benefit from instruction" (Nolet & McLaughlin 2000, p. 2, 9). Receiving education in a general education classroom allows students with severe disabilities to develop better communication and social skills (Carter & Hughes, 2006; Fisher & Meyer, 2002; Harrower & Dunlap, 2001) and to make more progress in language and mathematics than their peers with disabilities in special education (Peetsma, Vergeer, Roeleveld, & Karsten, 2001). These beneficial outcomes in a general education classroom can be associated with higher levels of parental expectations for their child's future employment outcomes.

Limitations

Several limitations should be considered when interpreting the results of the current study. First, the generalizability of the findings is limited by the fact that the sample was a non-random sample obtained through three non-profit organizations for parents of adolescents with ID or ASD. This sample was predominately comprised of young, married, White/Caucasian, and well-educated mothers. The majority of the participants were from upper-middle class families in a Midwestern state. Parents of adolescents with ID or ASD who have diverse racial and/or ethnic backgrounds and low-income parents are underrepresented in this study. Furthermore, parents who seek support services and resources through non-profit organizations may be different from

parents who are less aware of or uninterested in these support services and resources. Consequently, sampling bias can arise because some parents are not given a chance to be selected.

Second, data for this study were collected through self-reported surveys, which may yield results vulnerable to bias or error. Self-reported surveys depend on participants accurately responding to the survey questions. For example, a potential error may occur when parents of adolescents with ID or ASD answer “yes” to parental expectation questions even though their true answer is “no”. This may be because they want to avoid the potential embarrassment of someone learning of their expectations for the employment outcomes of their adolescent child. Socially desirable answers may be obtained on the survey questions. Another potential source of error may be understanding the survey questions and format. In this study, thirty-three parents were excluded from the final analysis because the survey information was not completed. Some parents may not know how to answer the survey questions because of insufficient navigational cues and instructions, as well as misunderstanding concepts and terms of the survey questions. As a result, even if parents know the answers to the questions, their answers may not be accurate. Parents may differently interpret the meaning of words or phrases in the survey questions. The other potential source of error may be to mismatch between a construct and its related measurement. It is difficult to reflect the true state of the construct being measured because the construct is abstract (Groves et al., 2009). Survey questions may not adequately capture and measure all the aspects of the constructs.

Third, this study is underpowered and may be unable to detect specific independent contributions of variables because sample size was not sufficient for the primary regression analyses. Insufficient sample size may limit the chance of finding a significant difference. For

example, if there is a larger sample size in this study, parent/family variables (e.g., age, gender, race/ethnicity, marital status, education, disability status, SSI/SSDI benefits, family income, food stamp status, and health insurance status) may be found to be significantly associated with parents' employment expectations in the exploratory regression analysis. Furthermore, the results that parental participation in the IEP meetings were associated with lower post-school employment expectations might be different when a sufficient sample size is used. Additionally, the power to detect R^2 (variance explained by predictors as a set) was reported in this study. However, most of the analyses were significance tests for regression coefficients (unique effect of a single predictor on the dependent variable). The power for the test of a regression coefficient tended to be lower than the power to detect R^2 in this dataset.

Fourth, limited variability on some variables, adolescent characteristics, parent/family characteristics, and school programs/services may have influenced the results. For example, there was not much variability on parental participation in the IEP meeting variable in this sample because almost parents reported participating in their child's IEP meetings. Furthermore, this study used bivariate variables such as "SSI/SSDI recipients," and "non SSI/SSDI recipients." Moreover, statistical suppression occurred in this study. For instance, Medicaid/Medicare benefits were a negative predictor of parents' employment expectations, while SSI/SSDI benefits were a positive predictor of parents' employment expectations after controlling for other demographic variables. This was a case of statistical suppression in this study.

Finally, this survey research design uses a descriptive correlational design that is called a cross-sectional study. The descriptive correlational design cannot determine if one variable causes another. Relationships between independent and dependent variables cannot be considered as causality because this study did not manipulate any of the variables. Consequently,

whenever a descriptive correlational design is used, it can be inaccurate in determining whether or not one variable influences the other or vice versa. For example, Wagner et al. (2005) found that youth with higher levels of functional cognitive skills had higher levels of employment after leaving high school. Their finding cannot imply, however, that higher levels of functional cognitive skills cause higher levels of employment outcomes.

Implications for Practice

Findings from this study provide important implications for helping improve parental expectations for employment outcomes of youth with I/DD. Parental expectations are one of the most significant predictors of post-school employment outcomes of youth with disabilities (Doren et al., 2012; Newman, 2005). This current study found that parental expectations were significantly associated with mild disability, SSI/SSDI benefits, Medicaid/Medicare benefits, functional cognitive abilities, parental participation in the IEP meetings, school activities, and general education classrooms in exploratory regression analysis. Most important, parents associated mild disability, functional cognitive abilities, school activities, and general education classroom settings with higher expectations for the employment outcomes of youth with I/DD after controlling for both adolescent characteristics and parent/family characteristics. These key factors are emphasized in this study in order to build partnerships between parents and educators that encourage and foster parental expectations, as well as develop and provide transition programs and services that improve employment outcomes of youth with I/DD. Functional cognitive abilities, and participation in school activities and general education classroom settings can be directly modified and improved by educators and other service providers. Therefore, educators and school personnel should partner with parents to promote parental expectations through activities and opportunities for students. Furthermore, educators, parents, and other

service professionals should ensure that school programs provide youth with I/DD with transition opportunities that promote the development of functional cognitive abilities. Each of these three factors is described in detail below.

Functional Cognitive Abilities

Functional cognitive abilities were positively associated with parental expectations for their adolescent child's future employment outcomes. Educators and school personnel should provide information and consultation to parents about available supports, accommodations, and services to help their adolescent child with I/DD develop his or her functional cognitive abilities. For example, educators and school personnel can provide examples or activities (e.g., problem-solving activities) that develop functional cognitive abilities.

Educators should also continue to build the functional cognitive abilities of youth with I/DD. In particular, emphases should be placed on developing the skills needed to perform certain types of cognitive tasks such as higher order thinking, learning, reasoning, and problem solving (Gargiulo, 2012; Heward, 2013; Murphy, 1989; Smith, 2007). Obtaining these skills will result in greater independence for youth with disabilities and may, in turn, enhance parental expectations for employment. Furthermore, they influence the post-school outcomes for youth with disabilities. A number of studies have revealed that youth with disabilities with higher levels of cognitive abilities are more likely to be employed than those with lower levels of cognitive abilities after leaving high school (Heal & Rusch, 1995; Murphy, 1989; Schmidt et al., 1986; Smith, 2007; Wagner et al., 2005).

To provide youth with I/DD the opportunity to improve the development of their functional cognitive abilities, educators and other service professionals should be familiar with effective teaching strategies. One strategy, community-based instruction, provides opportunities

to learn and practice skills in the community settings in which they live (Alberto, Cihak, & Gama, 2004). Teaching functional cognitive skills for or in community settings would naturally include building problem solving skills through responding to natural variations in the community or searching for jobs through a variety of sources. Community-based instruction can also be used to build or enhance reading and writing skills through a variety of activities such as completing applications and writing resumes. Youth with I/DD may initially learn and practice these skills in the classroom but they also should be provided with opportunities to apply those skills in community settings. A second way in which educators and other service professionals can improve functional cognitive abilities is to build partnerships with parents so that they help their adolescent child learn and practice critical skills (e.g., higher order thinking skills or problem solving skills, practicing/applying reading and math skills) at home and in community settings.

School Activities

School activities (e.g., sports teams, band or chorus, school clubs, or student government) were positively associated with parental expectations about their adolescent child's future employment outcomes in this study. Educators and school personnel should help parents learn about the available activities and the importance of their children's participation in these activities in developing and refining a variety of skills. They may also partner with parents to develop home activities such as gardening, cooking, doing laundry, attending a concert or play, or going to science museums or libraries so as to extend and practice the skills students are learning at school. Utilizing school and home/community activities to further develop or enhance academic and nonacademic skills, psychological development, and social skills (Marsh & Kleitman, 2002; Wagner et al., 2005) may affect how parents see their children. Improved skills

may heighten parental post-school expectations. Additionally, it is possible that parents who see their children in a variety of settings, engaging in age-typical activities may be more likely to expect typical post-school outcomes such as employment.

To encourage youth with I/DD engage in school activities, schools should reach out to parents to ensure they know about these opportunities. For examples, educators and school personnel could use school newsletters that advertise such activities, including sports teams, band or chorus, school clubs, or student government to parents. Educators and school personnel could also use their school website as a source of information about these activities, describing the activities and the opportunities for participation in the activities. Enhancing parental awareness and knowledge may result in parents encouraging their children to participate in school activities.

A second way in which educators and school personnel can help improve parental expectations is to build partnerships with community agencies and non-profit organizations in order to ensure parents receive information and resources regarding community-sponsored activities and social networks for parents. The information and resources can make it possible for parents to participate in community-sponsored activities, leisure, and recreational activities with their adolescent child with I/DD together or ensure that parents can identify activities in which they want their children to participate. Community-sponsored activities can be a major vehicle for youth with I/DD to participate in additional leisure and recreational activities. These opportunities are especially important if access to school activities is limited or parents and/or students are not interested in the opportunities provided through the schools. Benefits derived from participation in such activities (e.g., improving the adolescent's social skills or communication skills), and providing the venue to meet and talk with other parents about

resources and services may also influence parental expectations for their adolescent child's future employment outcomes.

General Education Classroom Settings

General education classroom settings were positively associated with parental expectations about their adolescent child's future employment outcomes in this study. Participation in general education settings is associated with improved social, communication, (Carter & Hughes, 2006; Fisher & Meyer, 2002; Harrower & Dunlap, 2001), and academic skills in a general education classroom, such a language and mathematics (Peetsma et al., 2001). Improving communication, social, and academic skills in a general education classroom may have a positive influence on higher parental expectations for their children's adult lives. Parents need to have opportunities to learn about what their adolescent is doing in the classroom and other general education settings. Hearing about their child's accomplishment may raise parents' expectations. It might be important to ensure parents see what their child can do at school to help them understand the capabilities and performance of their child. A number of studies have shown that inclusion in a general education classroom is associated with better post-school employment outcomes for students with severe disabilities (Baer et al., 2003; Blackorby et al., 1993; Carter & Hughes, 2006; Fisher & Meyer, 2002; Halpern et al., 1995; Heal & Rusch, 1995; Leonard et al., 1999; White & Weiner, 2004).

Implications for Future Research

Although parental expectations were significantly correlated with mild disability, SSI/SSDI benefits, Medicaid/Medicare benefits, functional cognitive abilities, parental participation in the IEP meetings, school activities, and general education classroom settings, additional research is needed to address several limitations emerged from this study. First, the

sample of this current study was comprised predominately of young, married, White/Caucasian, and well-educated mothers. The majority of the participants were from upper-middle class families in one Midwestern state. Parents from racial and ethnic minority backgrounds and low-income families were underrepresented in this study. Future research is needed to recruit these underrepresented parents in order to understand their expectations for the employment outcomes of young adults with I/DD.

Additionally, this present study was not able to detect specific independent contributions of variables because of insufficient sample size. Sample size is related to power to detect effects of a given size. In this study, insufficient sample size may have limited the chance of finding parent/family variables (e.g., age, gender, race/ethnicity, marital status, education, disability status, SSI/SSDI benefits, family income, food stamp status, and health insurance status) as a predictor of parents' employment expectations. Future research is needed to obtain a large, diverse sample because the large sample size increases the chance of finding a significant difference. Future research is also needed to investigate the relationships between parental expectations and parent/family variables. In addition, a less homogeneous sample might provide a broader range of responses to better assess the relationships between parental expectations and student/family/school variables. A replication study across states is needed to determine factors that are associated with parents' employment expectations.

Second, parents of adolescents with I/DD in middle and high school participated in this current study. Parents of middle school age children may hold different employment expectations than those held by parents of high school age children. Students in high school have more opportunities to participate in vocational activities than those in middle school. Vocational activities during high school help youth with disabilities develop their job skills (Benz et al.,

2000; Benz et al., 1997; Brown et al., 2006; Carter et al., 2009; Staff & Schulenberg, 2010). These activities may influence parental expectations. Furthermore, students' skills can be changed from middle school to the end of high school, influencing parental perspectives of possible post-school outcomes. Future research is needed to examine how parental employment expectations may vary when students are in middle school versus high school.

Third, findings of this study suggest that parents who participate in their child's IEP meetings had lower expectations that their adolescent child will get a job after leaving high school compared to those who did not participate in the IEP meetings. This current study differs from previous studies. Previous studies have revealed that parental participation in the IEP meetings is positively associated with parental expectations about their child's future employment outcomes (Saliembier & Furney, 1997; Test et al., 2009; Walker et al., 2005). Future research is needed to further investigate whether or not participation in IEP meetings is associated with high parental expectations for post-school employment. Specifically, it is impossible to know if parents in this study had similar IEP experiences as parents in the other research. As a result, future research is needed to explore how IEP meetings or parental participation in this meetings is associated with parental post-school expectations.

Furthermore, future research is needed to look at how family supports, expectations of family networks, and expectations of educators are related to parental expectations for the employment outcomes of young adults with I/DD. Parents who participate in support groups (e.g., The Arc and The Autism Society) may have higher expectations that their adolescent child would be employed after high school than those who do not participate in such groups. Additionally, parents who receive specific employment related expectations from teachers and

other service providers could have higher expectations that their adolescent child would have a job after leaving high school.

Fourth, findings of this current study indicates that parents of adolescents with ID or ASD who participate in school activities such as sports teams, band or chorus, school clubs, or student government have higher expectations that their adolescent child would get a job after high school. Unfortunately, according to Wagner et al (2003), youth with hearing impairments, other health impairments, and speech language impairments are more likely to participate in extracurricular activities than those of multiple disabilities, intellectual disabilities and autism spectrum disorders. Future research is needed to evaluate how participation in school activities is associated with parents' employment expectations. In addition to school activities, parents of adolescents with ID or ASD who mostly receive their education in a general education classroom have higher expectations that their adolescent child will get a job after leaving high school. However, it is difficult to know what aspects or elements of the inclusion in general education are associated with parents' employment expectations. Future research is needed to examine what aspects or elements (e.g., a curriculum content or child's improved social skills) are related to parents' employment expectations. Additionally, if adolescents with moderate to severe ASD and ID are taught a functional curriculum that is based on low expectations for post-school outcomes (e.g., only self-care or simple leisure skills), parents may expect that their children will not be employed in the future. Future research is needed to explore whether a curricular content is correlated with parents' employment expectations.

Finally, the causality of the relationships between independent and dependent variables cannot be verified because a descriptive correlational study is used in this study. Although mild disability, SSI/SSDI benefits, Medicaid/Medicare benefits, functional cognitive abilities, parental

participation in the IEP meetings, school activities, and classroom settings (i.e., general education classroom) were significantly correlated with parental expectations, it is unclear whether these factors influence parental expectations for the employment outcomes of youth with I/DD. Future research is needed to test actual causal relationships between the factors and parental expectations.

Conclusion

Parents of youth with I/DD are typically viewed as a primary caregiver who supports their child's transition to adulthood (Fujiura, 1998; Fujiura & Braddock, 1992; Heller & Schindler, 2009; Henninger & Taylor, 2014; Turnbull & Turnbull, 2000). Parents are important decision makers and mediators to help increase the quality of services their children receive and educational plans created for their children (Bianco, Garrison-Wade, Tobin, & Lehmann, 2009). Parents also have a strong impact on their child's career aspirations and development. Parental expectations are one of the strong predictors of the career development, employment options and outcomes, and postsecondary education of youth with disabilities (Blustein, Phillips, Jobin-Davis, Finkelberg, & Roarke, 1997; DiRago & Vaillant, 2007; Gallivan-Fenlon, 1994; Lindstrom et al., 2007; Newman, 2007; Symanski, 1994). The purpose of this study was to identify factors that are associated with parental expectations about employment outcomes for young adults with I/DD, specifically youth with intellectual disability and autism spectrum disorder in middle and high school.

The present study found that mild disability, functional cognitive abilities, school activities, and general education classroom settings were associated with higher levels of parental expectations for their adolescent child's future employment outcomes. Of them, functional cognitive abilities, school activities, and general education classroom settings should

be considered as key factors in promoting parental expectations for employment outcomes of young adults with I/DD because these factors can be directly modified and improved by educators and other service providers.

This study contributes to the literature by identifying the factors most associated with parental expectations for their adolescent child's future employment outcomes because there is little research to investigate the impact of parental expectations on the employment outcomes of youth with I/DD. Additional research is needed to examine how SSI/SSDI benefits were associated with higher levels of parental expectations, and how parental participation in the IEP meetings were associated with lower levels of parental expectations. Furthermore, knowing which factors most influence parental expectations will help service providers identify and provide evidence-based interventions and support that meet the needs and hopes of parents. Unfortunately, this study cannot answer the question related to causality. It is unknown how factors affect parental expectations for their adolescent child's future employment outcomes. Therefore, causality between factors and parental expectations should be investigated as a future research.

This study is novel in that it is the first to identify factors that are associated with the parental expectations for the employment outcomes of young adults with I/DD. As researchers, following this line of research may help us better understand the expectations, hopes, experiences, and challenges of parents of children with I/DD. This in turn may improve the collaboration between educators and parents as they seek to prepare adolescents for their adult lives, improving the outcomes.

References

Agran, M., & Hughes, C. (2008). Asking student input: Students' opinions regarding their individualized education program involvement. *Career Development for Exceptional Individuals, 31*, 69-76.

Agresti, A., & Finlay, B. (2009). *Statistical methods for the social sciences*, 4rd Edition. Upper Saddle River, NJ: Pearson.

Alberto, P. A., Cihak, D. F., & Gama, R. I. (2004). Use of static picture prompts versus video modeling during simulation instruction. Research in Developmental Disabilities, 26, 327-339. doi:10.1016/j.ridd.2004.11.002

Ali, S. R. (2005). Self-efficacy and vocational outcome expectations for adolescents of lower socioeconomic status: A pilot study. *Journal of Career Assessment, 13*, 40–58. doi:10.1177/1069072704270273

Allen, K., Burke, R., Howard, M., Wallace, D., & Bowen, S. (2012) Use of audio cuing to expand employment opportunities for adolescents with autism spectrum disorders and intellectual disabilities. *Journal of Autism and Developmental Disorders, 42*, 2410–2419.

Alwell, M., & Cobb, B. (2009). Social and communicative interventions and transition outcomes for youth with disabilities: A systematic review. *Career Development and Transition for Exceptional Individuals, 32(2)*, 94-107. doi:10.1177/0885728809336657

American Association on Intellectual & Developmental Disabilities. (2010). *Intellectual Disability: Definition, Classification, and Systems of Supports*, 11th Edition. Washington, DC: American Association on Intellectual & Developmental Disabilities.

American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013.

Aron, A., & Aron, E. N. (1999). *Statistics for psychology*. Upper Saddle River, NJ: Prentice Hall.

Baer, R. M., Daviso, A. W., Flexer, R. W., Queen, R. M., & Meindl, R. S. (2011). Students with intellectual disabilities: Predictors of transition outcomes. *Career Development for Exceptional Individuals, 34*, 83–94. doi:10.1177/0885728811399090

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freemam

Baraldi, A. N., & Enders, C. K. (2010). An introduction to modern missing data analyses. *Journal of School Psychology, 48,* 5-37. doi: 10.1016/j.jsp.2009.10.001

Bauer, A. M., & Brown, G. M. (2001). *Adolescents and inclusion: Transforming secondary schools*. Baltimore, MD: Paul H. Brookes.

Beirne-Smith, M., Ittenbach, R. F., & Patton, J. R. (2006). *Mental retardation*, 7th Edition. Upper Saddle River, NJ: Merrill/Prentice Hall.

Benz, M. R., & Halpern, A. S. (1993). Vocational and transition services needed and received by students with disabilities during their last year of high school. *Career Development for Exceptional Individuals, 16*, 197-211.

Benz, M. R., Lindstrom, L., & Yovanoff, P. (2000). Improving graduation and employment outcomes of students with disabilities: Predictive factors and student perspectives. *Exceptional Children, 66*, 509-529.

Berkman, K. A., & Meyer, L. H. (1998). Alternative strategies and multiple outcomes in the remediation of severe self-injury: Going “all out” nonaversively. *Journal of the Association for Persons with Severe Handicaps, 13*, 76–86.

Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha

and Jamal? A field experiment on labor market discrimination. *Economic Review, 94,* 991-1013. doi:http://www.nber.org/papers/w9873

Betz, N. E., Klein, K., & Taylor, K. M. (1996). Evaluation of a short form of the career decision making self-efficacy scale. *Journal of Career Assessment, 4,* 47-57.

Bianco, M., Garrison-Wade, D. F., Tobin, R., & Lehman, J. P. (2009). Parents' perceptions of postschool years for young adults with developmental disabilities. *Intellectual and Developmental Disabilities, 47,* 186-196.

Billstedt, E., Gillberg, I. C., & Gillberg, C. (2005). Autism after adolescence: Population-based 13- to 22-year follow-up study of 120 individuals with autism diagnosed in childhood. *Journal of Autism and Developmental Disorders, 35,* 351–360.

Blacher, J., Neece, C., & Paczkowski, E. (2005). Families and intellectual disability. *Current Opinion in Psychiatry, 18(5),* 507-513.

Blackmon, S. M., & Thomas, A. J. (2014). Linking contextual affordances: Examining racial-ethnic socialization and parental career support among African American college students. *Journal of Career Development, 41(4),* 301-320.

Blackorby, J., & Wagner, M. (1996). Longitudinal postschool outcomes of youth with disabilities: Findings from the national longitudinal study. *Exceptional Children, 62,* 399-413.

Blue-Banning, M., Turnbull, A., & Pereira, L. (2002). Hispanic youth/ young adults with disabilities: Parents' visions for the future. *Research & Practices for Persons with Severe Disabilities, 27(3),* 204-219.

Bouck E. C. (2012). Secondary students with moderate/severe intellectual disability:

considerations of curriculum and post-school outcomes from the National Longitudinal Transition Study-2. *Journal of Intellectual Disability Research, 56,* 1175–1186. doi: 0.1111/j.1365-2788.2011.01517.x

Bouck E. C. (2014). The postschool outcomes of students with mild intellectual disability: Does it get better with time? *Journal of Intellectual Disability Research, 58,* 534–548.

Boyle, C. A., Boulet, S., Schieve, L. A., Cohen, R. A., Blumberg, S. J., Yeargin-Allsopp, M., Visser, S., & Kogan, M. D. (2011). Trends in the prevalence of developmental disabilities in US children, 1997-2008. *Journal of the American Academy of Pediatrics, 127*, 1034-1042. doi: 10.1542/peds.2010-2989

Brolin, D. E. (1973). Vocational education: Special education's responsibility. *Education and Training of the Mentally Retarded, 8,* 12-17.

Brolin, D. E., & Gysbersh, N. C. (1989). Career education for students with disabilities. *Journal of Counseling & Development, 68(2),* 155-159.

Brollier, C., Shepherd, J., & Markley, K. F. (1994). Transition from school to community living. *American Journal Occupation Therapy, 48*, 346-353.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (2005). *Making human beings human: Bioecologicial perspectives on human development*. Thousand Oaks, CA: Sage Publications.

Brooks-Gunn, J., & Duncan, G. J. (1997). The effects of poverty on children. *The Future of Children, 7,* 55-71.

Brown, M. T. (2004). The career development influence of family of origin: Considerations of Race/ethnic group membership and class. *The Counseling Psychologist, 32,* 587-595.

Brown, L., & Leigh, J. (1986b). *The adaptive behavior inventor*. Austin, TX: Pro-Ed.

Bullis, M., & Yovanoff, P. (2006). Idle hands: Community employment experiences of formerly incarcerated youth. *Journal of Emotional and Behavioral Disorders, 14*, 71-85.

Burt, D. B., Fuller, S. P., & Lewis, K. R. (1991). Competitive employment of adults with autism. *Journal of Autism and Developmental Disorders, 21*, 237–242.

Butterworth, J., & Gilmore, D. (2000). Are we there yet? Trends in employment opportunities and supports. *TASH Newsletter, 26*, 5-7.

Cameto, R., Levine, P., & Wagner, M. (2004) *Transition planning for students with disabilities*. Menlo Park, CA. SRI International. Available at http://www.nlts2.org/reports/2004_11/nlts2_report_2004_11_execsum.pdf

Cameto, R., Levine, P., Wagner, M., & Marder, C. (2003). *The emerging independence of youth with disabilities*. Menlo Park, CA: SRI International. Available at www.nlts2.org/pdfs/achievements_ch6.pdf

Camp, W. (1990). Participation in student activities and achievement: A covariance structural analysis. *Journal of Educational Research, 83*, 272-278.

Carter, E. W., Austin, D., & Trainor, A. A. (2011). Factors associated with the early work experiences of adolescents with severe disabilities. *Intellectual and Developmental Disabilities, 49(4),* 233-247. doi:10.1352/1934-9556-49.4.233

Carter, E. W., Austin, D., & Trainor, A. A. (2012). Predictors of postschool employment outcomes for young adults with severe disabilities. *Journal of Disability Policy Studies, 23*, 50-63.

Carter, E. W., & Hughes, C. (2006). Including high school students with severe disabilities in

general education classes: Perspectives of general and special educators, paraprofessionals, and administrators. *Research and Practice for Persons with Severe Disabilities, 31*, 174-185.

Carter, E. W., & Lunsford, L. B. (2005). Meaningful work: Preparing transition-age youth with emotional and behavioral disorders for employment. *Preventing School Failure, 49*, 63-69.

Carter, E. W., Trainor, A. A., Ditchman, N., Swedeen, B., & Owens, L. (2009). Evaluation of a multicomponent intervention package to increase summer work experiences for transition-age youth with severe disabilities. *Research & Practice for Persons with Severe Disabilities, 34(2)*, 1-12.

Carter, E. W., Trainor, A. A., Cakiroglu, O., Cole, O., Swedeen, B., Ditchman, N., & Owens, L. (2009). Exploring school-business partnerships to expand career development and early work experiences for youth with disabilities. *Career Development for Exceptional Individuals, 32*, 145–159. doi: 10.1177/0885728809344590

Carter, E. W., & Wehby, J. H. (2003). Job performance of transition age youth with emotional and behavioral disorders. *Exceptional Children*, 69, 449-465.

Chambers, C. R., Hughes, C., & Carter, E. W. (2004). Parent and sibling perspectives on the transition to adulthood. *Education and Training in Developmental Disabilities, 39*, 79–94.

Chan, F., Leahy, M., & Saunders, J. (2005). *Case management for rehabilitation health professionals (Volume 1): Foundational aspects*. Osage Beach, MO: Aspen Professional Services.

Chibucos, T. R., & Leite, R. W. (2005). *Readings in family theory*. Thousand Oaks, CA: Sage

Publications.

Christle, C. A., & Yell, M. L. (2010). Individualized education programs: Legal requirements and research findings. *Exceptionality, 18*, 109-123.

Check, J., & Schutt, R. K. (2012). *Research method in education*. Thousand Oaks, CA: Sage.

Chiang, H., Cheung, Y. K., Li, H., & Tsai, L. Y. (2013). Factors associated with participation in employment for high school leavers with autism. *Journal of Autism and Developmental Disorders, 43*, 1832–1842. doi: 10.1007/s10803-012-1734-2

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*, 3rd Edition. Mahwah, NJ: Erlbaum.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.

Colley, D. A., & Jamison, D. (1998). Post school results for youth with disabilities: Key indicators and policy implications. *Career Development for Exceptional Individuals, 21*, 145-160.

Collins, J. W., David, R. M., Handler, A., Wall, S., & Andes, S. (2004). Very low birth weight in African American infants: The role of maternal exposure to interpersonal racial discrimination. *American Journal of Public Health, 94*, 2131-2138. doi:10.2105/AJPH.94.12.2132

Constantine, M. G., Wallace, B. C., & Kindaichi, M. M. (2005). Examining contextual factors in the career decision status of African American adolescents. *Journal of Career Assessment, 13*, 307-319. doi:10.1177/1069072705274960

Cooney, B. F. (2002). Exploring perspectives on transition of youth with disabilities: Voices of young adults, parents, and professionals. *Mental Retardation, 40(6)*, 425-435

Cooper, H., Valentine, J. C., Nye, B., & Lindsay, J. J. (1999). Relationships between five after-school activities and academic achievement. *Journal of Educational Psychology, 91*, 369-378.

Creswell, J. H. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson.

Crocker, A. C. (1989). The causes of mental retardation, *Pediatric Annals, 18*, 623-635.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. London: Thousand Oaks.

D'Amico, R., & Blackorby, J. (1992). Trends in employment among out-of school youth with disabilities. In M. Wagner, R. D'Amico, C. Marder, L. Newman, & J. Blackorby (Eds.), *What happens next? Trends in postschool outcomes of youth with disabilities. The second comprehensive report from the National Longitudinal Transition Study of Special Education Students*. Menlo Park, CA: SRI International.

Davies, M., & Beamish, W. (2009). Transitions from school for young adults with an intellectual disability: Parents perspectives on "life as an adjustment". *Journal of Intellectual and Developmental Disability, 34(3)*, 248-257.

Davies, P., Rupp, K., & Wittenburg, D. (2009). A life-cycle perspective on the transition to adulthood among children receiving supplemental security income payments. *Journal of Vocational Rehabilitation, 30(3)*, 133-151.

DeLeire, T. (2000). The wage and employment effects of the Americans with Disabilities Act. *Journal of Human Resources, 35(4)*, 693-715.

Denckla, M. B. (2000). Specific behavioral/cognitive phenotypes of genetic disorders. *Mental Retardation Developmental Disabilities Research Reviews, 6*, 81-83.

Deslandes, R., & Bertrand, R. (2005). Motivation of parent involvement in secondary-level schooling. *The Journal of Educational Research, 98(3),* 164-175.

Developmental Disabilities Assistance and Bill of Rights Act of 1975. P.L. 94-103. http://mn.gov/mnddc/dd_act/documents/FEDREG/90-DDA-LEGLISLATIVEHISTORY.pdf

Developmental Disabilities Assistance and Bill of Rights Act of 2000. P.L.106-402. http://www.acf.hhs.gov/programs/add/DDACT2.htm

Diemer, M. A., & Ali, S. R. (2009). Integrating social class into vocational psychology: Theory and practice implications. *Journal of Career Assessment, 17(3),* 247-265. doi: 10.1177/1069072708330462

Din-Dzietham, R., Nembhard, W. N., & Collins, R. (2004). Perceived stress following race based discrimination at work is associated with hypertension in African-Americans. *Social Science & Medicine, 58,* 449-461.

Dixon, R. M., & Reddacliff, C. A. (2001). Family contribution to the vocational lives of vocationally competent young adults with intellectual disabilities. *International Journal of Disability, Development and Education, 48,* 193-206. doi: 10.1080/10349120120053667

Doren, B., & Benz, M. (1998). Employment inequality revisited: Predictors of better employment outcomes for young women with disabilities in transition. *The Journal of Special Education, 31*, 400-405.

Doren, B., Gau, J., & Lindstrom, L. (2012). The relationship between parent expectations and post-school outcomes of adolescents with disabilities. *Exceptional Children. 79(1),* 7–23.

Dutta, A., Gervey, R., Chan, F., Chou, C. C, & Ditchman, N. (2008). Vocational rehabilitation

services and employment outcomes of people with disabilities: A United States study. *Journal of Occupation Rehabilitation, 18,* 326-334.

Eaves L. C., & Ho, H. H. (2008). Young adult outcome of autism spectrum disorders. *Journal of Autism Developmental Disorders, 38(4),* 739-747.

Eggleton, I., Robertson, S., Ryan, J., & Kober, R. (1999). The impact of employment on the quality of life of people with an intellectual disability. *Journal of Vocational Rehabilitation,13,* 95-107.

Emeagwali, N. S. (2005). New IDEA heralds changes for instruction of students with disabilities. *Techniques: Connecting Education & Careers, 80,* 16-17.

Fabian, E. S. (2007). Urban youth with disabilities: Factors affecting transition employment. *Rehabilitation Counseling Bulletin, 50,* 130-138.

Fabian, E. S., Lent, R. W., & Willis, S. P. (1998). Predicting work transition outcomes for students with disabilities: Implications for counselors. *Journal of Counseling & Development, 76,* 311-316.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39(2),* 175-191.

Ferry, T. R., Fouad, N. A., & Smith, P. L. (2000). The role of family context in a social cognitive model for career-related choice behavior: A math and science perspective. *Journal of Vocational Behavior, 57(3),* 348-364. doi:10.1006/jvbe.1999.1743

Fielding, S., Fayers, P., & Ramsay, C. R. (2012). Analysing randomised controlled trials with missing data: Choice of approach affects conclusions. *Contemporary Clinical Trials, 33(3),* 461-469. doi: 10.1016/j.cct.2011.12.002

Field, S., & Hoffman, A. (1996). *Steps to self-determination: A curriculum to help adolescents learn to achieve their goals*. Austin, TX: PRO-ED.

Fish, W. W. (2006). Perceptions of parents of students with autism towards the IEP meeting: A case study of one family support group chapter. *Education, 127,* 56-68.

Fisher, M., & Meyer, L.H. (2002). Development and social competence after two years for students in inclusive and self-contained educational programs. *Research and Practice for Persons with Severe Disabilities, 27,* 165-174

Flexer, R. W., Daviso III, A. W., Baer, R. M., Queen, R. M., & Meindl, R. S. (2011). An epidemiological model of transition and postschool outcomes. *Career Development for Exceptional Individuals, 34(2),* 83-94. doi: 10.1177/0885728810387922

Flores, L. Y., & O'Brien, K. M. (2002). The career development of Mexican American adolescent women: A test of social cognitive career theory. *Journal of Counseling Psychology, 49,* 14-27. doi:10.1037//0022-0167.49.1.14

Fouad, N. A., & Fitzpatrick, M. E. (2009). Social class and work-related decisions: Measurement, theory, and social mobility. *Journal of Career Assessment, 17(3),* 266–270. doi:10.1177/1069072708330677

Frank, A. R., & Sitlington, P. L. (1997). Young adults with behavioral disorders-before and after IDEA. *Behavioral Disorders, 23,* 40-56.

Fujiura, G. T. (1998). Demography of family households. *American journal of mental retardation, 103,* 225-235.

Fujiura, G. T., & Braddock, D. (1992). *Fiscal and demographic trends in mental retardation services: The emergence of the family*. In L. Rowitz (Ed.), Mental retardation in the year 2000 (pp. 316-338). New York, NY: Springer-Verlag.

Gargiulo, R. M. (2012). *Special education in contemporary society: An introduction to exceptionality*, 4th Edition. Los Angeles, CA: Sage Publications.

Gati, I., Ryzhik, T., & Vertsberger, D. (2013). Preparing young veterans for civilian life: The effects of a workshop on career decision-making difficulties and self-efficacy. *Journal of Vocational Behavior, 83(3),* 373-385. doi:10.1016/j.jvb.2013.06.001

Gaumer, A. S., Morningstar, M. E., & Clark, G. M. (2004). Status of community-based transition programs: A national database. *Career Development for Exceptional Individuals, 27,* 131-149.

Geenen, S., Powers, L., Vasquez, A. L., & Bersani, H. (2003). Understanding and promoting the transition of minority adolescents. *Career Development for Exceptional Individuals, 26,* 27-46.

Glover, R. W., & Marshall, R. (1993). Improving the school-to-work transition of American adolescents. *Teachers College Record, 94,* 589-609.

Goh, A. E., & Bambara, L. M. (2013). Video self-modeling: A job skills intervention with individuals with intellectual disabilities in employment settings. *Education and Training in Autism and Developmental Disabilities, 48,* 103-119.

Gold, P. B., Fabian, E. S., & Luecking, R. G. (2013). Job acquisition by urban youth with disabilities transitioning from school to work. *Rehabilitation Counseling Bulletin, 57,* 31-45.

Goldstein, D., Murray, C., & Edgar, E. (1998). Employment earnings and hours of high school graduates with learning disabilities through the first decade after graduation. *Learning Disabilities Research & Practice, 13,* 53-64.

Gresham, F. M., & Elliott, S. N. (1990). *The social skills rating system*. Circle Pines, MN:

American Guidance Service.

Griffin, M. M., Taylor, J. L., Urbano, R. C., & Hodapp, R. M. (2013). Involvement in transition planning meetings among high school students with autism spectrum disorders. *Journal of Special Education, 47(4),* 256-264.

Grigal, M., Dwyre, A., & Davis, H. (2006). Transition services for students aged 18–21 with intellectual disabilities in college and community settings: Models and implications of success. *Information Brief, 5(5),* 1-5.

Grigal, M., Hart, D., & Migliore, A. (2011). Comparing the transition planning, postsecondary education, and employment outcomes of students with intellectual and other disabilities. *Career Development and Transition for Exceptional Individuals, 34,* 4–17. doi:10.1177/0885728811399091

Grigal, M., Neubert, D. A., & Moon, M. S. (2001). Public school programs for students with significant disabilities in post-secondary settings. *Education and Training in Mental Retardation and Developmental Disabilities, 36(3),* 244-254.

Grigal, M., & Neubert, D. A. (2004). Parents' in-school values and post-school expectations for transition-aged youth with disabilities. *Career Development for Exceptional Individuals, 27,* 65-85.

Groves, R. M., Fowler, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey methodology,* 2nd Edition. Hoboken, NJ: John Wiley & Sons, Inc.

Gushue, G. V. (2006). The relationship of ethnic identity, career decision-making self-efficacy and outcome expectations among Latino/a high school students. *Journal of Vocational Behavior, 68,* 85-95. doi:10.1016/j.jvb.2005.03.002

Halpern, A. S. (1973). General unemployment and vocational opportunities for EMR individuals.

American Journal of Mental Deficiency, 80, 81-89.

Halpern, A. S. (1974). *Work-study programs for the mentally retarded: An overview*. In P. Browning (Ed.), Mental retardation: Rehabilitation and counseling. Springfield, IL: Charles C Thomas.

Halpern, A. S. (1991). Transition: Old wine in new bottles. *Exceptional Children, 58(3),* 202-211.

Halpern, A. S. (1994). The transition of youth with disabilities to adult life: A position statement of the division on career development and transition, the council for exceptional children. *Career Development for Exceptional Individuals, 17,* 115-124.

Hanley-Maxwell, C., Whitney-Thomas, J., & Pogoloff, S. M. (1995). The second shock: A qualitative study of parents' perspectives and needs during their child's transition from school to adult life. *The Association for Persons with Severe Handicaps, 20,* 3-15.

Haring, K., & Lovett, D. (1990). A study of the social and vocational adjustment of young adults with mental retardation. *Education and Training in Mental Retardation, 25,* 52-61.

Harris, J. C. (2006). *Intellectual disability: Understanding its development, causes, classification, evaluation, and treatment*. New York, NY: Oxford University Press.

Harrower, J. K., & Dunlap, G. (2001). Including children with autism in general education classrooms: A review of effective strategies. *Behavior Modification, 25,* 762-784.

Harvey, M. T., & Kennedy, C. H. (2002). Polysomnographic phenotypes in developmental disabilities. *International Journal of Developmental Neuroscience, 20(3-5),* 443-448. doi: 10.1016/S0736-5748(02)00008-4

Hasazi, S. B., Gordon, L. R., & Roe, C. A. (1985). Factors associated with the employment status of handicapped youth exiting high school from 1979 to 1983. *Exceptional*

Children, 51, 455-469.

Heal, L. W., & Rusch, F. R. (1995). Predicting employment for students who leave special education high school programs. *Exceptional Children, 61*, 472-487.

Heller, T., & Schindler, A. (2009). Family support interventions for families of adults with intellectual and developmental disabilities. *International Review of Research in Mental Retardation, 37*, 299-332.

Hendricks, D. (2010). Employment and adults with autism spectrum disorders: Challenges and strategies for success. *Journal of Vocational Rehabilitation, 32*, 125–134. doi: 10.3233/JVR-2010-0502

Henninger, N. A., & Taylor, J. L. (2014). Family perspectives on a successful transition to adulthood for individuals with disabilities. *Intellectual and Developmental Disabilities, 52(2)*, 98-111. doi: 10.1352/1934-9556-52.2.98

Hetherington, S. A., Durant-Jones, L., Johnson, K., Nolan, K., Smith, E., & Taylor-Brown, S. (2010). The lived experiences of adolescents with disabilities and their parents in transition planning. *Focus on Autism and Other Developmental Disabilities, 25(3)*, 163-172. doi:10.1177/1088357610373760.

Heward, W. L. (2013). *Exceptional children: An introduction to special education*, 10th Edition. Boston, MA: Pearson.

Hillier, A., & Galizzi, M. (2014). Employment outcomes for young adults with autism spectrum Disorders. *Review of Disability Studies: An International Journal, 10*, 69-81.

Hoyt, W. T., Imel, Z. E., & Chan, F. (2008). *Multiple regression and correlation techniques: Recent controversies and best practices*. Rehabilitation Psychology, 53(3), 321-339. doi: 10.1037/a0013021

Hoyt, W. T., Leierer, S., & Millington, M. J. (2006). Analysis and interpretation of findings using multiple regression techniques. *Rehabilitation Counseling Bulletin, 49(4),* 223–233. doi: 10.1177/00343552060490040401

Hughes, C. (2001). Transition to adulthood: Supporting young adults to access social, employment, and civic pursuits. *Mental Retardation and Developmental Disabilities Research Reviews, 7,* 84-90.

Hughes, J. M., & Bigler, R. S. (2007). *The impact of race on children's occupational aspirations*. In S. M. Quintana & C. McKown (Eds.), The handbook of race, racism, and the developing child (pp. 397-423). Hoboken, NJ: John Wiley.

Hughes, C., & Carter, E. W. (2000). *The transition handbook: Strategies that high school teachers use that work.* Baltimore, MD: Paul H. Brookes.

Hurlbutt, K., & Chalmers, L. (2004). Employment and adults with Asperger syndrome. *Focus on Autism and Other Developmental Disabilities, 19(4),* 215-222.

Iovannone, R., Dunlap, G., Huber, H., & Kincaid, D. (2003). Effective educational practices for students with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 18(3),* 150-165.

Johnson, D. R., McGrew, K. S., Bloomberg, L., Bruininks, R. H., & Lin, H. C. (1997). Results of a national follow-up study of young adults with severe disabilities. *Journal of Vocational Rehabilitation, 8,* 119-133.

Joshi, G. S., Bouck, E. C., & Maeda, Y. (2012). Exploring employment preparation and

postschool outcomes for students with mild intellectual disability. *Career Development and Transition for Exceptional Individuals, 35(2),* 97-107. doi: 10.1177/0885728811433822

Ju, S., Zhang, D., & Pacha, J. (2012). Employability skills valued by employers as important for entry-level employees with and without disabilities. *Career Development for Exceptional Individuals, 35,* 29-38. doi: 10.1177/0885728811419167

Kennedy, C. H., & Horn, E. M. (2004). *Including students with severe disabilities*. Boston, MA: Pearson/Allyn and Bacon.

Kiernan, W. E., & Schalock, R. L. (1995). *Developmental disabilities*. In A. E. Dell Orto & R. P. Marinelli (Eds.), Encyclopedia of disability and rehabilitation (pp. 249-257). New York, NY: Simon & Schuster Macmillan.

Kim, K., Lee, Y., & Morningstar, M. E. (2007). An unheard voice: Korean American parents' expectations, hopes, and experiences concerning their adolescent child's future. *Research & Practice for Persons with Severe Disabilities, 32,* 253-264.

Kolstoe, O., & Frey, R. (1965). *A high school work-study program for mentally sub-normal students*. Carbondale, IL: Southern Illinois University Press.

Kochhar-Bryant, C. A. (2007). The summary of performance as transition "passport" to employment and independent living. *Assessment for Effective Intervention, 32,* 160-170. doi: 10.1177/15345084070320030401

Kohler, P. D., & Field, S. (2003). Transition-focused education: Foundation for the future. *The Journal of Special Education, 37(3),* 174-183. doi: 10.1177/00224669030370030701

Kraemer, B. R., & Blacher, J. (2001). Transition for young adults with severe mental retardation:

school preparation, parent expectations, and family involvement. *Mental Retardation, 39*(6), 423-435.

Kregel, J., & Wehman, P. (1989). Supported employment: Promises deferred for persons with severe disabilities. *Journal of the Association for Persons with Severe Handicaps, 14,* 293-303.

Landmark, L. J., Ju, S., & Zhang, D. (2010). Substantiated best practices in transition: fifteen plus years later. *Career Development for Exceptional Individuals, 33(3),* 165-176.

Larson, S. L. et al. (2000). *Prevalence of mental retardation and/or developmental disabilities: analysis of the 1994/1995 NHIS-D*. MR/DD data brief. Minneapolis, MN: Institute on Community Integration, University of Minnesota.

Lecavalier, L. (2006). Behavioral and emotional problems in young people with pervasive developmental disorders: Relative prevalence, effects of subject characteristics, and empirical classification. *Journal of Autism and Developmental Disorders, 36,* 1101-1114.

Lee, G. & Carter, E. (2012) Preparing transition-age students with higher functioning autism spectrum disorders for meaningful work. *Psychology in the Schools, 49(10),* 988-1000.

Lemaire, G. S., & Mallik, K. (2008). Barriers to supported employment for persons with developmental disabilities. *Archives of Psychiatric Nursing, 22,* 147-155.

Levinson, E. D., & Palmer, E. J. (2005). Preparing students with disabilities for school-to-work transition and post-school. Retrieved from http://www.nasponline.org/ resources/principals/Transition%20Planning%20WEB.pdf

Lindstrom, L., Doren, B., Metheny, J., Johnson, P., & Zane, C. (2007). Transition to employment: Role of the family in career development. *Exceptional Children, 73(3),* 348-366.

Lindstrom, L., Doren, B., & Miesch, J. (2011). Waging a living: Career development and long-term employment outcomes for young adults with disabilities. *Exceptional Children, 77(4),* 423-434.

Lindstrom, L., Harwick, R., Poppen, M., & Doren, B. (2012). Gender gaps: Career development for young women with disabilities. *Career Development for Exceptional Individuals, 35*, 108-117. doi:10.1177/0885788112437737

Liu, W. M. (2002). The social class-related experiences of men: Integrating theory and practice. *Professional Psychology: Research and Practice, 33*, 355-360.

Lindsay, S. (2011). Discrimination and other barriers to employment for teens and young adults with disabilities. *Disability and Rehabilitation, 33,* 1340–1350. doi: 10.3109/09638288.2010.531372

Lotter, V. (1978). *Follow-up studies*. In M. Rutter, & E. Schopler, E. (Eds.), Autism: A reappraisal of concepts and treatment (pp. 475-495). New York: Plenum Press.

Lovitt, T. C., & Cushing, S. (1999). Parents of youth with disabilities: Their perceptions of school programs. *Remedial and Special Education, 20(3),* 134-142.

Luecking, R., & Certo, N. (2003). Integrating service systems at the point of transition for youth with significant support needs: A model that works. *American Rehabilitation, 27,* 2-9.

Luftig, R. L., & Muthert, D. (2005). Patterns of employment and independent living of adult graduates with learning disabilities and mental retardation of an inclusionary high school vocational program. *Research in Developmental Disabilities, 26,* 317-325.

Lusk, S. L., & Cook, D. (2009). Enhancing career exploration, decision making, and problem solving of adolescent girls with disabilities. *Journal of Vocational Rehabilitation, 31(3),* 145-153.

Maher, E. J. & Kroska, A. (2002). Social status determinants of control in individuals' accounts of their mental illness. *Social Science & Medicine, 55(6),* 949-961.

March, H. W., & Kleitman, S. (2002). Extracurricular school activities: The good, the bad, and the nonlinear, *Harvard Educational Review, 72*, 464-514.

Martin, J. E., Dycke, J. L. V., Greene, B. A., Gardner, J. E., Christensen, W. R., Woods, L. L., & Lovett, D. L. (2006). Direct observation of teacher-directed IEP meetings: Establishing the need for student IEP meeting instruction. *Council for Exceptional Children, 72*, 187-200.

Martin, J., Huber-Marshall, L., Maxson, L., & Jerman, P. (1996). *Self-directed IEP*. Longmont, CO: Sopris West.

Martin, J. E., & Williams-Diehm, K. (2013). Student engagement and leadership of the transition planning process. *Career Development and Transition for Exceptional Individuals, 36,* 43-50. doi: 10.1177/2165143413476545

Mays, V. M., Coleman, L. M., & Jackson, J. S. (1996). Perceived race-based discrimination, employment status, and job stress in a national sample of Black women: Implications for health outcomes. *Journal of Occupational Psychology, 1,* 319-329. doi:10.1037/1076-8998.1.3.319

McConnell, A. E., Martin, J. E., Juan, C. Y., Hennessey, M. N., Terry, R. A., El-Kazimi, N. A., Pannells, T., & Willis, D. M. (2013). Developing the transition assessment and goal generator (TAGG): Building student behavior constructs as the first step in developing a new transition assessment. *Career Development and Transition for Exceptional Individuals, 36,* 174-187.

McIver, J. P., & Carmines, E. G. (1981). *Unidimensional scaling*. Thousand Oaks, CA: Sage.

McWhirter, E. H., Rasheed, S., & Crothers, M. (2000). The effects of high school career education on social cognitive career variables. *Journal of Counseling Psychology, 47,* 330-341.

Melnick, M. J., Sabo, D. F., & Vanfossen, B. (1992). Educational effects of interscholastic athletic participation of African-American and Hispanic youth. *Adolescence, 27,* 295-308.

Metheny, J., & McWhirter, E. H. (2013). Contributions of social status and family support to college students' career decision-making self-efficacy and outcome expectations. *Journal of Career Assessment, 21(3),* 378-394.

Mickelson, R. A. (1990). The attitude-achievement paradox among Black adolescents. *Sociology of Education, 63,* 44-61.

Migliore, A., Timmons, J., Butterworth, J. & Lugas, J. (2012). Predictors of employment and post-secondary education of youth with autism. *Rehabilitation Counseling Bulletin, 55,* 176-184.

Milsom, A., & Dietz, L. (2009). Defining college readiness for students with learning disabilities: A Delphi study. *Professional School Counseling, 12,* 315-323.

Morningstar, M. E., Turnbull, A. P., & Turnbull, H. R. (1995). What do students with disabilities tell us about the importance of family involvement in the transition from school to adult life? *Exceptional Children, 62,* 249-260.

Morrow, S. L., Gore, P. A., & Campbell, B. W. (1996). The application of a sociocognitive framework to the career development of lesbian women and gay men. *Journal of Vocational Behavior, 48(2),* 136-148. doi: 10.1006/jvbe.1996.0014

Moser, C. A., & Kalton, G. (1972). Survey methods in social investigation, 2nd Edition. New

York, NY: Ashgate publishing company.

Muller, E., Schuler, A., Burton, B. A., & Yates, G. B. (2003). Meeting the vocational support needs of individuals with Asperger syndrome and other autism spectrum disabilities. *Journal of Vocational Rehabilitation, 18,* 163-175.

Murphy, K. R. (1989). Is the relationship between cognitive ability and job performance stable over time? *Human Performance, 2(3),* 183-200.

National Organization on Disability. (2004). *National Organization on Disability/Harris Survey of Americans with Disabilities*. Washington, DC: Author.

National Organization on Disability (2010). *National Organization on Disability/ Harris Survey of Americans with disabilities*: Washington, DC: Author

National Center for Education Statistics (2015). *Children and Youth with Disabilities*. Retrieved from http://nces.ed.gov/programs/coe/indicator_cgg.asp

Neece, C. L., Kraemer, B. R., & Blacher, J. (2009). Transition satisfaction and family well being among parents of young adults with severe intellectual disability. *Intellectual and Developmental Disabilities, 47*, 31-43. doi:10.1352/2009.47:31-43

Newman, L. (2005). *Family involvement in the educational development of youth with disabilities*. *A special topic report of findings from the national longitudinal transition study-2 (NLTS2)*. Menlo Park, CA: SRI International.

Newman, L., Wagner, M., Cameto, R., & Knokey, A-M. (2009). *The post-high school outcomes of youth with disabilities up to 4 years after high school. A report of findings from the national longitudinal transition study-2 (NLTS2)* (NCSER 2009-3017). Menlo Park, CA: SRI International.

Newman, L., Wagner, M., Cameto, R., Knokey, A. M., & Shaver, D. (2010). *Comparisons*

across time of the outcomes of youth with disabilities up to 4 years after high school. A report of findings from the national longitudinal transition study (NLTS) and the national longitudinal transition study-2 (NLTS2) (NCSER 2010-3008). Menlo Park, CA: SRI International.

Nolet, V., & McLaughlin, M. (2000). *Accessing the general curriculum: Including students with disabilities in standards-based reform*. Thousand Oaks, CA: Corwin Press.

Ochs, L. A., & Roessler, R. T. (2004). Predictors of career exploration intentions: A social cognitive career theory perspective. *Rehabilitation Counseling Bulletin, 47(4),* 224-233. doi:10.1177/00343552040470040401

Odom, S. L., Horner, R. H., Snell, M. E., & Blacher, J. (2007). *Handbook of developmental disabilities*. New York, NY: The Guilford Press.

Olson, J. M., Roese, N. J., & Zanna, M. P. (1996). *Expectancies*. In E.T. Higgins & A.W. Kruglanski (Eds.), Social psychology: Handbook of basic principles. New York, NY: Guilford Press

O'Reilly, M. F., Lancioni, G. E., Sigafoos, J., O'Donoghue, D., Lacey, C., & Edrisinha, C. (2004). Teaching social skills to adults with intellectual disabilities: a comparison of external control and problem-solving interventions. *Research in Developmental Disabilities, 25(5),* 399-412. doi:10.1016/j.ridd.2003.07.003

Otto, L. B. (1982). *Extracurricular activities*. In H. J. Walberg (Ed.). Improving educational standards and productivity (pp. 217-233). Berkeley, CA: McCutchan.

Palmer, S. B., Wehmeyer, M. L., Shogren, K. A., Williams-Diehm, K. L., & Soukup, J. H.

(2012). An evaluation of the beyond high school model on the self- determination of students with intellectual disability. *Career Development and Transition for Exceptional Individuals, 35(2),* 76-84. doi:10.1177/0885728811432165

Papay, C. K., & Bambara, L. M. (2011). Postsecondary education for transition-age students with intellectual and other developmental disabilities: A national survey. *Education and Training in Autism, 46,* 78-93.

Papay, C. K., & Bambara, L. M. (2011). Best practices in transition to adult life for youth with intellectual disabilities. *Career Development and Transition for Exceptional Individuals,* 1-13. doi: 10.1177/2165143413486693

Parish, S. L., & Cloud, J. M. (2006). Financial wellbeing of young children with disabilities. *Social Work, 51,* 223-232.

Partners Resource Network (n.d.). *Intellectual Disability*. Retrieved from http://www.partnerstx.org/intellectual-disability

Patton, J. R., Smith, T. E. C., Clark, G. M., Polloway, E. A., Edgar, E., & Lee, S. (1996). Individuals with mild mental retardation: Postsecondary outcomes and implications for educational policy. *Education and Training in Mental Retardation and Developmental Disabilities, 31,* 75-85.

Peetsma, T., Vergeer, M., Roeleveld, J. & Karsten, S. (2001) 'Inclusion in education: comparing pupils' development in special and regular education. *Educational Review, 53 (2),* 125-135.

Penick, N., & Jepsen, D. (1992). Family functioning and adolescent career development. *Career Development Quarterly, 49,* 208-222.

Pilling, N., McGill, P., & Cooper, V. (2007) Characteristics and experiences of children and

young people with severe intellectual disabilities and challenging behaviour attending 52-week residential special schools. *Journal of Intellectual Disability Research, 51*, 184-196.

Penick, N., & Jepsen, D. (1992). Family functioning and adolescent career development. *Career Development Quarterly, 49*, 208-222.

Pinkney, C. J., Murray, C. J. & Lind, J. R. (2012). Individual skill predictors of the school-and career-related adjustment of adolescents with disabilities. *Career Development and Transition for Exceptional Individuals, 35*, 39-49.

Plevyak, L. H. (2003). Parent involvement in education: Who decides? *Education Digest, 69(2)*, 32-38.

Poon, K. K., Koh, L., & Magiati, L. (2013). Parental perspectives on the importance and likelihood of adult outcomes for children with autism spectrum disorders, intellectual disabilities or multiple disabilities. *Research in Autism Spectrum Disorders, 7*, 382-390. doi: 10.1016/j.rasd.2012.10.006

Powers, K. M., Gil-Kashiwabara, E., Greenen, S.J., Powers, L. E., Balandran, J., & Palmer, C. (2005). Mandates and effective transition planning practices reflected in IEPs. *Career Development for Exceptional Individuals, 28*, 47-59.

Rabren, K., Dunn, C., & Chambers, D. (2002). Predictors of post-high school employment among young adults with disabilities. *Career Development for Exceptional Individuals, 25*, 25-40.

Randolph, D., & Andresen, E. M. (2004). Disability, gender & unemployment relationships in the United States from the behavioral risk factor surveillance system. *Disability & Society, 19(4)*, 403-414.

Rusch, F. R., Hughes, C., Agran, M., Martin, J. E., & Johnson, J. R. (2009). Toward self-directed

learning, post-high school placement, and coordinated support: Constructing new bridges to adult life. *Career Development for Exceptional Individuals, 32,* 53–59.

Russell, F. (2003). The expectations of parents of disabled children. *British Journal of Special Education, 30 (3),* 144-149.

Sabbatino, E. D., & Macrine, S. L. (2007). Start on success: A model transition program for high school students with disabilities. *Preventing School Failure: Alternative Education for Children and Youth, 52,* 33–39. doi:10.3200/ PSFL.52.1.33-40

Salembier, G., & Furney, K. S. (1997). Facilitating participation: Parents' perceptions of their involvement in the IEP/transition planning process. *Career Development for Exceptional Individuals, 20,* 29-42. doi: 10.1177/088572889702000103

Sanford, C., Newman, L., Wagner, M., Cameto, R., Knokey, A. M., & Shaver, D. (2011). *The post-high school outcomes of young adults with disabilities up to 6 years after high school. Key findings from the national longitudinal transition study-2 (NLTS2)* (NCSER 2011-3004). Menlo Park, CA: SRI International. Available at www.nlts2.org/reports/

Sawitri, D. R., Creed, P. A., & Zimmer-Gembeck, M. J. (2014). Parental influences and adolescent career behaviours in a collectivist cultural setting. *International Journal for Educational and Vocational Guidance, 14,* 161-180. doi: 10.1007/s10775-013-9247-x

Schmidt, F., Hunter, J., & Outerbridge, A. (1986). Impact of job experience and ability on job knowledge, work sample performance, and supervisory ratings of job performance. *Journal of Applied Psychology, 71,* 432-439.

Schulenberg, J. E., Vondracek, F. W., & Crouter, A. (1984). The influence of the family on vocational development. *Journal of Marriage and the Family, 46,* 129-143.

Schultheiss, D. E. P. (2006). The interface of work and family life. *Professional Psychology:*

Research and Practice, 37, 334-341.

Schultheiss, D. E. P., Kress, H., Manzi, A., & Glasscock, J. (2001). Relational influences in career development: A qualitative inquiry. *The Counseling Psychologist, 29*, 214-239.

Schuster, J., Timmons, J., & Moloney, M. (2003). Barriers to successful transition for young adults who receive SSI and their families. *Career Development for Exceptional Individuals, 26,* 47-66. doi:10.1177/088572880302600104

Shattuck, P. T., Narendorf, S. C., Cooper, B., Sterzing, P. R., Wagner, M., & Taylor, J. L. (2012). Postsecondary education and employment among youth with an autism spectrum disorder. *Journal of the American Academy Pediatrics, 129(6),* 1042-1049. doi:10.1542/peds.2011-2864

Shewhart, W. A., & Wilks, S. S. (1997). *Survey measurement and process quality*. New York, NY: John Wiley & Sons, Inc.

Shier, M., Graham, J. R. & Jones, M. E. (2009): Barriers to employment as experienced by disabled people: a qualitative analysis in Calgary and Regina, Canada. *Disability & Society, 24*, 63-75.

Shogren, K. A., & Plotner, A. J. (2012). Transition planning for students with intellectual disability, autism, or other disabilities: Data from the national longitudinal transition study-2. *Intellectual and Developmental Disabilities, 50,* 16-30. doi: 10.1352/1934-9556-50.1.16

Smith, M. (1986). Managing the aggressive and self-injurious behaviors of adults disabled by autism in the community. *Journal of the Association for Persons with Severe Handicaps, 10*, 228–232.

Smith, M. (1987).Treatment of pica in an adult disabled by autism by differential reinforcement

of incompatible behavior. *Journal of Behavior Therapy and Experimental Psychiatry, 18*, 285–288.

Smith, P. (2007). Have we made any progress? Including students with intellectual disabilities in regular education classrooms. *Intellectual and Developmental disabilities, 45,* 297-309.

Smith, T. E. C. (2005) IEDA 2004: Another round in the reauthorization process. *Remedial & Special Education, 26 (6),* 314-319.

Spector, P. (1992). *Summated rating scale construction*. Thousand Oaks, CA: Sage.

Steere, D., Rose, E., & Cavaiuolo, D. (2007). *Growing up: Transition to adult life for students with disabilities*. Boston, MA: Pearson Allyn & Bacon.

Stephens, D. L., Collins, M. D., & Dodder, R. A. (2005). A longitudinal study of employment and skill acquisition among individuals with developmental disabilities. *Research in Developmental Disabilities, 26*, 469-486.

Stewart, D., Law, M. C., Rosenbaum, P., & Willms, D. G. (2001). A qualitative study of the transition to adulthood for youth with physical disabilities. *Physical and Occupational Therapy in Pediatrics, 21(4),* 3-21.

Strickland, D., Coles, C., & Southern, L. (2013). JobTIPS: A transition to employment program for individuals with Autism Spectrum Disorders. *Journal of Autism and Developmental Disorders, 43(10),* 2472-2483. doi: 10.1007/s10803-013-1800-4.

Tajfel, H., & Fraser, C. (1978) *Introducing Social Psychology*. Harmondsworth, UK: Penguin Books.

Taylor, J. L., & Seltzer, M. M. (2011). Employment and post-secondary educational activities for young adults with autism spectrum disorders during the transition to adulthood. *Journal of Autism and Developmental Disorders, 41*, 566-574.

Test, D. W., Aspel, N. P., & Everson, J. M. (2006). *Transition methods for youth with disabilities*. Upper Saddle River, NJ: Pearson/Merrill/Prentice Hall.

Test, D. W., Mazzotti, V. L., Mustian, A. L., Fowler, C. H., Kortering, L., & Kohler, P. (2009). Evidence-based transition predictors for improving post school outcomes for students with disabilities. *Career Development for Exceptional Individuals, 32,* 180-181.

The Minnesota Governor's Council on Developmental Disabilities (n.d.). *The ADA Legacy Project*. Retrieved from http://mn.gov/mnddc/

Turnbull, H. R., & Turnbull, A. P. (2000). *Free appropriate public education,* 6th Edition. Denver, CO: Love Publishing Co.

Turner, S., & Lapan, R. T. (2002). Career self-efficacy and perceptions of parent support in adolescent career development. *The Career Development Quarterly, 51*, 44-55.

U.S. Department of Education. (2010). *Thirty-five years of progress in educating children with disabilities through IDEA*. Retrieved from http://www2.ed.gov/about/offices/list/osers/idea35/history/idea-35-history.pdf

U.S. Department of Education. (2010). *Children and youth with disabilities*. Retrieved from http://nces.ed.gov/programs/coe/pdf/coe_cgg.pdf

Vondracek, F. W., Lerner, R. M., & Schulenberg, J. E. (1986). *Career development: A life-span developmental approach*. Hillsdale, NJ: Erlbaum Associates.

Wagner, M., Marder, C., Levine, P., Cameto, R., Cadwallader, T. W., Blackorby, J., Cardoso, D., & Newman, L. (2003). *The individual and household characteristics of youth with disabilities. A report from the national longitudinal transition study-2 (NLTS2)*. Menlo Park, CA: SRI International.

Wagner, M., Newman, L., Cameto, R., Garza, N., & Levine, P. (2005). *After high school: A first*

look at the postschool experiences of youth with disabilities. A report from the national longitudinal transition study-2 (NLTS2). Menlo Park, CA: SRI International.

Wagner, M., Newman, L., Cameto, R., & Levine, P. (2006). *The academic achievement and functional performance of youth with disabilities. A report from the national longitudinal transition study-2 (NLTS2). (NCSER 2006-3000).* Menlo Park, CA: SRI International.

Wagner, M., Newman, L., Cameto, R., Levine, P, and Garza, N. (2006). *An overview of findings from Wave 2 of the National Longitudinal Transition Study-2 (NLTS2).* Menlo Park, CA: SRI International.

Wagner, M., Newman, L., Cameto, R., Levine, P., Marder, C. (2007). *Perceptions and expectations of youth with disabilities*. *A special topic report of findings from the national longitudinal transition study-2 (NLTS2)* (NCSER 2007-3006). Menlo Park, CA: SRI International.

Walker, J. M. T., Wilkins, A. S., Dallaire, J. R., Sandler, H. M., & Hoover-Dempsey, K. V. (2005). Parental involvement: Model revision through scale development. *The Elementary School Journal*, 106, 85-106.

Wallace, C. J., Liberman, R. P., Tauber, R., & Wallace, J. (2000). The independent living skills survey: A comprehensive measure of the community functioning of severely and persistently mentally III individuals. *Schizophrenia Bulletin, 26(3),* 631-658.

Wang, G., McGrath, B. B., Watts, C. (2010). Health care transitions among youth with disabilities or special health care needs: an ecological approach. *Journal of Pediatric Nursing, 25(6),* 505-550.

Wehman, P. (1996). *Life beyond the classroom: Transition strategies for young people with disabilities*. Menlo Park, CA: SRI International.

Wehman, P. (2001). *Life beyond the classroom. Transition strategies for young people with Disabilities*. 2nd ed. Baltimore, MD: Paul H. Brookes.

Wehman, P., Chan, F., Ditchman, N., & Kang, H. (2014). Effect of supported employment on vocational rehabilitation outcomes of transition-age youth with intellectual and developmental disabilities: A case control study. *Intellectual and Developmental Disabilities, 52 (4),* 296-310.

Wehman, P., McLaughlin, P. J., & Wehman, T. (2005). *Intellectual and developmental disabilities: Toward full community inclusion*, 3rd Edition. Austin, TX: PRO-ED, Inc.

Wehman, P., & Revell, W. G. (1997). Transition into supported employment for young adults with severe disabilities: Current practices and future directions. *Journal of Vocational Rehabilitation, 8*, 65-74.

Wehman, P., Schall, C., Carr, S., Targett, P., West, M., & Cifu, G. (2014). Transition from school to adulthood for youth with autism spectrum disorder: What we know and what we need to know. *Journal of Disability Policy Studies*, 25, 30-40. doi: 10.1177/1044207313518071

Wehmeyer, M. L. (2002). Teaching students with mental retardation: Providing access to the general curriculum. Baltimore, MD: Paul H. Brookes.

Wehmeyer, M. L., Bersani, H., & Gagne, R. (2000). Riding the third wave: Self-determination and self-advocacy in the 21st century. *Focus on Autism and Other Developmental Disabilities, 15(2),* 106-115.

Wehmeyer, M. L., Palmer, S. B., Agran, M., Mithaug, D. E., & Martin, J. E. (2000). Promoting causal agency: Self-determined learning model of instruction. *Exceptional Children, 66*, 439-453.

Wehmeyer, M. L., & Sands, D. J. (Eds.). (1998). *Making it happen*. Baltimore, MD: Paul H. Brookes.

Weidenthal, C., & Kochhar-Bryant, C. (2007). An investigation of transition practices for middle school youth. *Career Development for Exceptional Individuals, 30(3),* 147-157.

Wehmeyer, M. L., & Schwartz, M. (1995). Self-determination and positive adult outcomes: A follow–up study of youth with mental retardation and learning disabilities. *Exceptional Children, 63,* 245-255.

Whiston, S. C., & Kellet, B. K. (2004). The influences of the family of origin on career development: A review and analysis. *The Counseling Psychologist, 32,* 493-568

White, N., & Hastings, R. P. (2004). Social and professional support for parents of adolescents with severe intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities, 17,* 181-190.

Whitney-Thomas, J., & Hanley-Maxwell, C. (1996) Packing the parachute: A survey of parents' experiences as their children prepare to leave high school. *Exceptional Children, 63,* 75-87.

Wieren, T. A. V., Armstrong, A. J., & McMahon, B. T. (2012). Autism spectrum disorders and intellectual disabilities: A comparison of ADA Title I workplace discrimination allegations. *Journal of Vocational Rehabilitation, 36,* 159–169. doi: 10.3233/JVR-2012-0591

Wilson, W. J. (1996). *When work disappears: The world of the new urban poor*. New York, NY: Random House.

Wright, B., & King, M. P. (1991). *Americans with developmental disabilities: Policy*

directions for the states. Paper presented at the National Conference of State Legislatures, Denver, CO.

Wolman, J., Campeau, P., Dubois, P., Mithaug, D., & Stolarski, V. (1994). *AIR self-determination scale and user guide*. Palo Alto, CA: American Institutes for Research.

Zaft, C., Hart, D., & Zimbrich, K. (2004). College career connection: A study of youth with intellectual disabilities and the impact of postsecondary education. *Education and Training in Developmental Disabilities, 1*, 45-54.

Zhang, Y., Haddad, E., Torres, T., & Chen, C. H. (2011). The reciprocal relationships among parents' expectations, adolescents' expectations, and adolescents' achievement: A two-way longitudinal analysis of the NELS data. *Journal of Youth and Adolescence, 40(4),* 479-489.

Appendix A

Survey Questionnaire: Parent Employment Expectation Survey

The following brief survey is intended to explore your expectations for the employment outcomes of your adolescent child with an intellectual disability and autism spectrum disorder. Your responses to this survey will help service providers identify and provide interventions and supports needed to positively shape parental expectations for your child's future employment.

Section 1: About Your Child

Instructions: **Please indicate your response to each of the following items by checking the corresponding box**.

1. How old is your child with a disability _____?
2. What is your child's gender?
   - ☐ Male
   - ☐ Female
3. What type of disability does your child have?
   - ☐ Autism Spectrum Disorders
   - ☐ Intellectual disabilities
   - ☐ Both autism spectrum disorders and intellectual disabilities
4. Does your child receive Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI)?
   - ☐ Yes
   - ☐ No
5. Does your child receive Medicaid or Medicare?
   - ☐ Yes
   - ☐ No
6. How would you describe your child's level of impairment?
   - ☐ Mild
   - ☐ Moderate
   - ☐ Severe
   - ☐ Profound

Mild: take longer to learn to talk, but can communicate well once he or she knows how; fully independent in self-care; have problems with reading and writing; be socially immature; or have an IQ range of 50 to 69

Moderate: be slow in understanding and using language; have only a limited ability to communicate; can learn basic reading, writing, counting skills; be a slow learner; be unable to live alone; or have an IQ range of 35 to 49

Severe: have noticeable motor impairment; have severe damage to and/or abnormal development of central nervous system; or have an IQ range of 20 to 34

Profound: be unable to understand or comply with requests or instructions; be immobile; must wear adult diapers; uses very basic nonverbal communication; cannot care for own needs; require constant help and supervision; or have an IQ of less than 20

Section 2: School Program Services

Instructions: **Please indicate your response to each of the following items by checking the corresponding box**.

1. Do you or someone in the family attend Individualized Education Plan (IEP) meetings to design your child's special education program or services?
   - ☐ Yes
   - ☐ No

2. Do you or your family representative participate meaningfully in Individualized Education Plan (IEP) meetings?
   - ☐ Yes
   - ☐ No

3. Does your child attend Individualized Education Plan (IEP) meetings to design his/her special education program or services?
   - ☐ Yes
   - ☐ No

4. Does your child participate meaningfully in Individualized Education Plan (IEP) meetings?
   - ☐ Yes
   - ☐ No

5. Are your child's IEP goals challenging and appropriate?
   - ☐ Yes
   - ☐ No

6. Does your child have employment goals?
   - ☐ Yes
   - ☐ No

7. Does your child participate in vocational-focused education programs or vocational training?
   - ☐ Yes
   - ☐ No

8. Does your child have an after school, weekend, or summer job that pays wages?
   - ☐ Yes
   - ☐ No

9. Does your school provide training or support to your child in jobs or job experiences?
   - ☐ Yes
   - ☐ No

10. Does your child participate in a school-sponsored work activity, internship, or a school-based business?
    - ☐ Yes
    - ☐ No

11. Does your child participate in volunteer or community service activities?
    - ☐ Yes
    - ☐ No

12. Does your child participate in school activities such as sports teams, band or chorus, school clubs, or student government?
    - ☐ Yes
    - ☐ No

13. Is your child's education based in the general education curriculum?
    - ☐ Yes
    - ☐ No

14. Where does your child receive his or her education? (select one)
    - ☐ All or mostly in general education classrooms
    - ☐ Some general education classrooms and some special education classrooms
    - ☐ Mostly in special education classrooms
    - ☐ Mostly community settings
    - ☐ Special school
    - ☐ Other (Please describe): _____

Section 3: Employment Outcome Expectations

Instructions: This question is about ***your*** **employment outcome expectations** of your adolescent child with an intellectual disability or autism spectrum disorder. P**lease select your employment outcome expectations**.

1. What type of employment will your child have? (select one)
    - ☐ Employed in a full time paid job in the community, with no supports
    - ☐ Employed in a part time paid job in the community, with no supports
    - ☐ Employed in a supported and supervised full or part time paid community job (supported employment)
    - ☐ Employed in a setting designed for individuals with disabilities who are unable to work in a paid community employment jobs (segregated sheltered workshops)
    - ☐ My child will not work outside the home

Section 4: Child's Functional Life Skills

Instructions: Functional life skills are defined as "**skills that contribute to the successful, independent functioning of an individual in adulthood**." **For each of the items listed, please rate how often your child independently performs the skill now**.

Self-Care Skills **My child**	**Never**	**Sometimes**	**Usually**	**Always**	**Don't Know**
Fixes his/her own breakfast or lunch	1	2	3	4	5
Gets dressed	1	2	3	4	5
Does laundry	1	2	3	4	5
Straightens up his/her own room or living area	1	2	3	4	5
Buys a few things at the store he/she needs	1	2	3	4	5
Washes his/her whole body	1	2	3	4	5
Communication Skills **My child**	**Never**	**Sometimes**	**Usually**	**Always**	**Don't Know**
Understands joking and teasing	1	2	3	4	5
Verbally or nonverbally communicates her/his needs	1	2	3	4	5
Generally understands what people say	1	2	3	4	5
Starts and maintains a conversation	1	2	3	4	5
Understands conversation rules (e.g., not interrupting)	1	2	3	4	5
Functional Cognitive Abilities **My child**	**Never**	**Sometimes**	**Usually**	**Always**	**Don't Know**
Reads and understands common signs, like "Stop," "Men," "Women," or "Danger"	1	2	3	4	5
Reads and understands simple text (e.g., single words, menu items, peoples names)	1	2	3	4	5
Concentrates on doing something for ten minutes	1	2	3	4	5
Remembers to do important things	1	2	3	4	5
Analyzes and finds solutions to problems in day-to-day life	1	2	3	4	5

Functional Cognitive Abilities (cont.) **My child**	**Never**	**Sometimes**	**Usually**	**Always**	**Don't Know**
Learns a new task, for example, learning how to get to a new place	1	2	3	4	5
Tells time	1	2	3	4	5
Counts change	1	2	3	4	5
Looks up telephone numbers and uses the phone	1	2	3	4	5
Social Skills **My child**	**Never**	**Sometimes**	**Usually**	**Always**	**Don't Know**
Appropriately interacts with people he or she does not know	1	2	3	4	5
Makes friends easily	1	2	3	4	5
Maintains a friendship	1	2	3	4	5
Gets along with people who are close to him or her	1	2	3	4	5
Starts conversations rather than waiting for others to talk first	1	2	3	4	5
Controls his/her temper when arguing with peers	1	2	3	4	5
Joins group activities without being told					
Speaks in an appropriate tone and volume at home	1	2	3	4	5
Receives criticism well	1	2	3	4	5
Avoids situations that are likely to result in trouble	1	2	3	4	5
Ends disagreements with you calmly	1	2	3	4	5
Self-Determination Skills **My child**	**Never**	**Almost Never**	**Sometimes**	**Almost Always**	**Always**
Knows what he/she needs, likes, and is good at	1	2	3	4	5
Uses knowledge of his or her abilities to set goals to satisfy wants or needs	1	2	3	4	5
Independently makes plans to meet goals and decides what to do independently	1	2	3	4	5
Begins work on plans to meet his or her goals as soon as possible after setting goal(s)	1	2	3	4	5

Self-Determination Skills (cont.) **My child**	**Never**	**Almost Never**	**Sometimes**	**Almost Always**	**Always**
Checks his or her own progress when completing his or her plan, or asks others what they think of his or her progress	1	2	3	4	5
Tries another way to meet goals if her/his plan doesn't work	1	2	3	4	5
Seems self-confident in social situations, such as parties or group outings	1	2	3	4	5
Keeps working at something until it is finished, even if it takes a long time	1	2	3	4	5
Advocates for her/his needs or desires	1	2	3	4	5
Job Skills **My child**	**Never**	**Sometimes**	**Usually**	**Always**	**Don't Know**
Obeys time limits for breaks (for example, lunch or coffee breaks, etc.)	1	2	3	4	5
Attempts to improve job performance after receiving constructive criticism from supervisor	1	2	3	4	5
Focuses on completing his or her most important work	1	2	3	4	5
Gets all the work done that is needed	1	2	3	4	5
Gets the work done as quickly as needed	1	2	3	4	5
Problem Behaviors **My child**	**Never**	**Sometimes**	**Very Often**		
Likes to belong	1	2	3		
Is easily embarrassed	1	2	3		
Fights with others	1	2	3		
Argues with others	1	2	3		
Threatens or bullies others	1	2	3		
Talks back to adults when corrected	1	2	3		
Has temper tantrums	1	2	3		

Problem Behaviors (cont.) My child	Never	Sometimes	Very Often
Appears lonely	1	2	3
Gets angry easily	1	2	3
Shows anxiety about being with a group of peers	1	2	3
Acts sad or depressed	1	2	3
Has low self-esteem	1	2	3

Section 6: About You

Instructions: **Please indicate your response to each of the following items by checking the corresponding box**.

1. What is your age _____?
2. What is your relationship to your child with a disability?
   - ☐ Mother
   - ☐ Father
3. What is your ethnicity/race?
   - ☐ White/ Caucasian
   - ☐ Black or African American
   - ☐ Hispanic or Latino
   - ☐ Asian or Asian American
   - ☐ Hawaiian or Other Pacific Islander
   - ☐ American Indian or Alaska Native
   - ☐ Multiple ethnicities/races
4. What is your marital status?
   - ☐ Single, never married
   - ☐ Separated
   - ☐ Divorced
   - ☐ Widowed
   - ☐ Married

(Continued)

5. Are you currently?
   - ☐ Employed for wages
   - ☐ Self-employed
   - ☐ Out of work and looking for work
   - ☐ A homemaker
   - ☐ A student
   - ☐ Retired
   - ☐ Unable to work

6. What is the highest degree or level of school you have completed?
   - ☐ High school, no degree
   - ☐ High school graduate, diploma or the equivalent (for example: GED)
   - ☐ Some college credit, no degree
   - ☐ 2-year college degree (Associate degree)
   - ☐ 4-year college degree (Bachelors' degree)
   - ☐ Graduate degree (Advance degree)
   - ☐ Other (please describe): _____

7. Do you have a disability?
   - ☐ Yes
   - ☐ No

8. Do you receive Social Security Income (SSI) or Social Security Disability Insurance (SSDI) for you and for your spouse?
   - ☐ Yes
   - ☐ No

9. What is your household income?
   - ☐ Less than $25,000
   - ☐ $25,000 to $ 49,999
   - ☐ $50,000 to $74,999
   - ☐ Over $75,000

10. Do you receive food stamps or other income supports?
   - ☐ Yes
   - ☐ No

11. Do you have any kind of health insurance (medicare or medicaid, private, other)?
   - ☐ Yes
   - ☐ No

Appendix B: Cover Letter

Dear Parents,

You are invited to participate in a research study designed to understand parents' expectations for the employment outcomes for young adults with intellectual disabilities and autism spectrum disorders. You are being asked to participate because we hope to understand your expectations and concerns.

We invite you to participate in either mail survey or online survey. Based on your choice, either mail survey or online survey will be sent to the parents. The survey takes approximately 15 minutes. **The information you share will help us better understand parents' expectations for their young adults' employment outcomes. We intend to use what we learn in this study to create supports, services, or interventions that will meet the needs and hopes of parents.**

You might benefit from the survey because, in similar studies, parents reported that the survey made them more aware of their expectations for their child's future employment outcomes. This awareness might help you be more informed and better able to participate in IEP planning meetings when post-school services and outcomes are addressed.

- **If you are still interested and prefer to participate by mail, please sign the included consent form and fill out the survey questionnaire form, and return them to Hyun-Ju Kang in the self-addressed, stamped envelope provided to you.**
- **If you are still interested and prefer to participate by completing the survey online, you will find the consent form and survey questionnaire at the following web address**: .

Feel free to ask questions about the research at any time. Please contact Hyun-Ju Kang at hkang25@wisc.edu or 608-263-5824 (office).

Sincerely,

Cheryl Hanley-Maxwell, PhD	Hyun Ju Kang
Professor and Associate Dean	Ph.D. Candidate
Department of Rehabilitation Psychology and Special Education	Department of Rehabilitation Psychology and Special Education
University of Wisconsin-Madison	University of Wisconsin-Madison

Appendix C: Recruitment Flyer

Parents' Expectations for the Employment Outcomes of Young Adults with Intellectual/Developmental Disabilities

Are you a parent living in Wisconsin state?

Are you a parent of an adolescent with intellectual disability or autism spectrum disorder?

Is your adolescent currently in high school?

Are you willing to participate in either mail survey or online survey?

If you answered yes to all the above questions, you are invited to participate in a research study about parents' expectations for your child's future employment outcomes.

The Purpose of the Study

The purpose of the study is to **identify the factors most associated with parental expectations for their adolescent child's future employment outcomes**. We intend to use what we learn in this study to create supports, services, or interventions that will meet the needs and hopes of parents.

What does participation mean?

You will be asked to complete an on-line or paper survey that should take approximately 15 minutes.

If you are interested or have questions, please contact

- **Hyun-Ju Kang**
- **hkang25@wisc.edu or 608-263-5824 (office).**

Rehabilitation Psychology and Special Education
School of Education
University of Wisconsin-Madison 1000 Bascom Mall Madison, Wisconsin 53706-1496
608/263-5860 Fax: 608/262-8108 E-mail: rpseinfo@education.wisc.edu http://www.education.edu/rpse/

Appendix D: Mail Invitation

Dear Parents,

You are invited to participate in a research study designed to understand parents' expectations for the employment outcomes for young adults with intellectual disabilities and autism spectrum disorders. You are being asked to participate because we hope to understand your expectations and concerns.

The survey takes approximately 15 minutes. **The information you share will help us better understand parents' expectations for their young adults' employment outcomes. We intend to use what we learn in this study to create supports, services, or interventions that will meet the needs and hopes of parents.**

A chance to win **a $50 gift card** will be used as an incentive. At the end of the survey, you will have the option to enter your name and contact information for drawing a $50 gift card. At the completion of data collection, only five parents' names will be drawn through lottery. These parents will receive the gift cards.

You might benefit from the survey because, in similar studies, parents reported that the survey made them more aware of their expectations for their child's future employment outcomes. This awareness might help you be more informed and better able to participate in IEP planning meetings when post-school services and outcomes are addressed.

- **If you are still interested in participating in the mail survey, please sign the included consent form and fill out the survey questionnaire form, and return them to Hyun-Ju Kang in the self-addressed, stamped envelope provided to you**.

Feel free to ask questions about the research at any time. Please contact Hyun-Ju Kang at hkang25@wisc.edu or 608-263-5824 (office).

Sincerely,

Cheryl Hanley-Maxwell, PhD

Professor and Associate Dean

Department of Rehabilitation Psychology and Special Education

University of Wisconsin-Madison

Hyun Ju Kang

Ph.D. Candidate

Department of Rehabilitation Psychology and Special Education

University of Wisconsin-Madison

Appendix E: Email Invitation to Web-based Survey

Dear Parents,

You are invited to participate in a research study designed to **understand parents' expectations for the employment outcomes for young adults with intellectual disabilities and autism spectrum disorders**. You are being asked to participate because you are a parent of an adolescent with intellectual disability or autism spectrum disorder who is currently in high school.

The survey takes approximately 15 minutes. **The information you share will help us better understand parents' expectations for their young adults' employment outcomes. We intend to use what we learn in this study to create supports, services, or interventions that will meet the needs and hopes of parents.**

A chance to win **a $50 gift card** will be used as an incentive. At the end of the survey, you will have the option to enter your name and contact information for drawing a $50 gift card. At the completion of data collection, only five parents' names will be drawn through lottery. These parents will receive the gift cards.

You might benefit from the survey because, in similar studies, parents reported that the survey made them more aware of their expectations for their child's future employment outcomes. This awareness might help you be more informed and better able to participate in IEP planning meetings when post-school services and outcomes are addressed.

- **If you are still interested in participating in the online survey, you will find the consent form, survey questionnaire, and lottery for a $50 gift card at the following web address**: https://www.surveymonkey.com/s/parentexpectation

Feel free to ask questions about the research at any time. Please contact Hyun-Ju Kang at hkang25@wisc.edu or 608-263-5824 (office).

Sincerely,

Cheryl Hanley-Maxwell, PhD
Professor and Associate Dean
Department of Rehabilitation Psychology and Special Education
University of Wisconsin-Madison

Hyun Ju Kang
Ph.D. Candidate
Department of Rehabilitation Psychology and Special Education
University of Wisconsin-Madison

Appendix F: Research Participant Information and Consent Form for Mail

Research Participant Information and Consent Form

Title of the Study: Parents' Expectations for the Employment Outcomes of Young Adults with Intellectual and Developmental Disabilities

Principal Investigator: Cheryl Hanley-Maxwell (phone: 608-262-9850) (email: cheryl@education.wisc.edu)

Student Researcher: Hyun-Ju Kang (office: 608-263-5824) (email: hkang25@wisc.edu)

DESCRIPTION OF THE RESEARCH

You are invited to participate in a research study designed to understand parents' expectations for the employment outcomes of young adults with intellectual disabilities and autism spectrum disorders.

You have been asked to participate because you are a parent of an adolescent with intellectual disability or autism spectrum disorder.

The purpose of this study is to identify factors that influence parents' expectations about employment outcomes for young adults with I/DD (includes intellectual disability, ID, and Autism Spectrum Disorder, ASD) in high school. This study particularly focuses on examining whether characteristics of young adults with I/DD, families, and school programs/services are associated with parents' expectations for their adolescent child's future employment outcomes.

This study will include about 123 parents of adolescents with intellectual disabilities or autism spectrum disorders. Parents selected must be (a) parents residing in Wisconsin state; (b) parents of adolescents with intellectual disabilities or autism spectrum disorders, currently in high school; and (c) willing to participate in either mail survey or online survey.

WHAT WILL MY PARTICIPATION INVOLVE?

You will receive a survey packet. The packet consists of a survey questionnaire and a self-addressed, stamped envelope to return the consent form and the survey questionnaire. You will be asked to complete surveys, which should only take about 15 minutes of your time. You will be asked to return the survey within 2 weeks.

ARE THERE ANY RISKS TO ME?

Your participation in survey might cause your stress. To reduce your stress, you will be reminded at the beginning of the surveys that you can decline to answer any questions or withdraw from the study at any time. A second risk might be that the private information you provide in the survey might be seen/read/heard by others outside of the research team. The researchers will work to protect your identity by never connecting your name with any written papers. Additionally, all information will be kept on an encrypted, password-protected flash-drive.

ARE THERE ANY BENEFITS TO ME?

There are no direct benefits. However, in similar studies, parents reported that the surveys made them more aware of their expectations for their child's future employment outcomes. This awareness may help you better participate in IEP planning meetings when post-school services and outcomes are addressed.

WILL I BE COMPENSATED FOR MY PARTICIPATION?

A chance to win a $50 gift card will be used as an incentive. At the end of the survey, you will have the option to enter your name and contact information for drawing a $50 gift card. At the completion of data collection, only five parents' names will be drawn through lottery. These parents will receive the gift cards.

HOW WILL MY CONFIDENTIALITY BE PROTECTED?

This study is confidential. Neither your name nor any other identifiable information will be recorded. For drawing a $50 gift card, your name and contact information will be linked to a separate survey and will not be connected to the information they provide for the study. Your name and contact information will not be provided to anyone and will be maintained confidentially. While there will probably be publications of the results of this study, your name will not be used. Only group characteristics will be published.

WHOM SHOULD I CONTACT IF I HAVE QUESTIONS?

You may ask any questions about the research at any time. If you have questions about the research after you leave today you should contact the Principal Investigator Cheryl Hanley-Maxwell at 608-262-9850 or cheryl@education.wisc.edu. You may also call the student researcher, Hyun-Ju Kang at 608-263-5824 or hkang25@wisc.edu.

If you are not satisfied with response of research team, have more questions, or want to talk with someone about your rights as a research participant, you should contact the Education Research and Social & Behavioral Science IRB Office at 608-263-2320.

Your participation is completely voluntary. If you decide not to participate or to withdraw from the study it will have no effect on any services or treatment you are currently receiving.

Your signature indicates that you have read this consent form, had an opportunity to ask any questions about your participation in this research and voluntarily consent to participate. You will receive a copy of this form for your records.

Name of Participant (please print):_____

_____ _____

Signature Date

Rehabilitation Psychology and Special Education
School of Education
University of Wisconsin-Madison 1000 Bascom Mall Madison, Wisconsin 53706-1496
608/263-5860 Fax: 608/262-8108 E-mail: rpseinfo@education.wisc.edu http://www.education.edu/rpse/

Appendix G: Research Participant Information and Consent Form for Web-based Survey

Research Participant Information and Consent Form

Title of the Study: Parents' Expectations for the Employment Outcomes of Young Adults with Intellectual and Developmental Disabilities

Principal Investigator: Cheryl Hanley-Maxwell (phone: 608-262-9850) (email: cheryl@education.wisc.edu)

Student Researcher: Hyun-Ju Kang (office: 608-263-5824) (email: hkang25@wisc.edu)

DESCRIPTION OF THE RESEARCH

You are invited to participate in a research study designed to understand parents' expectations for the employment outcomes of young adults with intellectual disabilities and autism spectrum disorders.

You have been asked to participate because you are a parent of an adolescent with intellectual disability or autism spectrum disorder.

The purpose of this study is to identify factors that influence parents' expectations about employment outcomes for young adults with I/DD (includes intellectual disability, ID, and Autism Spectrum Disorder, ASD) in high school. This study particularly focuses on examining whether characteristics of young adults with I/DD, families, and school programs/services are associated with parents' expectations for their adolescent child's future employment outcomes.

This study will include about 123 parents of adolescents with intellectual disabilities or autism spectrum disorders. Parents selected must be (a) parents residing in Wisconsin state; (b) parents of adolescents with intellectual disabilities or autism spectrum disorders, currently in high school; and (c) willing to participate in either mail survey or online survey.

WHAT WILL MY PARTICIPATION INVOLVE?

You will receive an email invitation with a link to the web survey (i.e., Survey Monkey). The email invitation includes a written description of the study with a statement that click a consent form at the bottom of the web-page. The consent form indicates that you understand and agree to participate in the study. The consent form leads you to the survey questions. You will be asked to complete surveys, which should only take about 15 minutes of your time. Two reminder emails will be sent in addition to the initial email. The first reminder will be sent two weeks after the initial email. The final reminder will be sent three weeks after the initial email.

ARE THERE ANY RISKS TO ME?

Your participation in survey might cause your stress. To reduce your stress, you will be reminded at the beginning of the surveys that you can decline to answer any questions or withdraw from the study at any time. A second risk might be that the private information you provide in the survey might be seen/read/heard by others outside of the research team. The researchers will work to protect your identity by never connecting your name with any written papers. Additionally, all information will be kept on an encrypted, password-protected flash-drive.

ARE THERE ANY BENEFITS TO ME?

There are no direct benefits. However, in similar studies, parents reported that the surveys made them more aware of their expectations for their child's future employment outcomes. This awareness may help you better participate in IEP planning meetings when post-school services and outcomes are addressed.

WILL I BE COMPENSATED FOR MY PARTICIPATION?

A chance to win a $50 gift card will be used as an incentive. At the end of the survey, you will have the option to enter your name and contact information for drawing a $50 gift card. At the completion of data collection, only five parents' names will be drawn through lottery. These parents will receive the gift cards.

HOW WILL MY CONFIDENTIALITY BE PROTECTED?

This study is confidential. Neither your name nor any other identifiable information will be recorded. For drawing a $50 gift card, your name and contact information will be linked to a separate survey and will not be connected to the information they provide for the study. Your name and contact information will not be provided to anyone and will be maintained confidentially. While there will probably be publications of the results of this study, your name will not be used. Only group characteristics will be published.

WHOM SHOULD I CONTACT IF I HAVE QUESTIONS?

You may ask any questions about the research at any time. If you have questions about the research after you leave today you should contact the Principal Investigator Cheryl Hanley-Maxwell at 608-262-9850 or cheryl@education.wisc.edu. You may also call the student researcher, Hyun-Ju Kang at 608-263-5824 or hkang25@wisc.edu.

If you are not satisfied with response of research team, have more questions, or want to talk with someone about your rights as a research participant, you should contact the Education Research and Social & Behavioral Science IRB Office at 608-263-2320.

Your participation is completely voluntary. If you decide not to participate or to withdraw from the study it will have no effect on any services or treatment you are currently receiving.

By selecting the "I agree to participate" link at the bottom of this page, you are indicating that you have read this consent form, had an opportunity to ask any questions about your participation in this research and voluntarily consent to participate. Please print a copy of this page if you would like a copy for your records.