ABSTRACT

Direct support workers face a myriad of challenges on the job which are intensified by the complexities of supporting aging clients. Previous research indicates that high demand and low control contributes to occupational strain and voluntary staff turnover. The purpose of this study was to explore multiple hypotheses related to staff retention; most importantly, that completion of a competency-based credentialing program is a significant predictor of worker retention in community-based intellectual and developmental disability services. Theoretically, the study used a job demand/control/support framework to explain staff turnover and posited that the completion of competency-based training courses will increase a worker’s self-efficacy and affect her desire to remain on the job.

This study used an exploratory cross-sectional online survey design. Ninety-seven workers were conveniently sampled from organizations in Ohio which offer a state-level professional credential based on a competency-based curriculum. Data were collected on credential completion and age of persons supported, as well as explanatory variables identified in the literature as antecedents to retention including worker age, tenure, job demand, perceived control, perceived organizational support, general self-efficacy, organizational commitment, and
job satisfaction. The response variable in this study was turnover intent. The data were analyzed using descriptive, bivariate, and multiple regression methods.

The results showed that job satisfaction was the most critical predictor of retention. Credentialed staff demonstrated higher tenure but lower self-efficacy than other groups. Interestingly, staff working toward the credential had the highest self-efficacy which was attributed to the presence of a skills mentor. Staff who primarily support aging adults showed lower empowerment/control than their peers. Descriptive data suggest that they are also at higher risk of attrition. A path model illustrating the significant relationships between the variables associated with retention was developed and recommendations for social work and organizational practices in the disability sector were discussed. Further implications for policy and future research were shared.

INDEX WORDS: Developmental Disability, Intellectual Disability, Social Work, Aging, Direct Care Staff, Direct Support Professional, DSP, Professional Development, Competency-based Training, Community-based Supports, Job Demand/Control/Support, Self-efficacy, Turnover, Retention
CREDENTIALING AS A PREDICTOR OF STAFF RETENTION IN SUPPORTS FOR AGING ADULTS WITH DEVELOPMENTAL DISABILITIES

by

CAROL B. LAWS

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M.S.W., Rutgers University, 2007

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by

CAROL B. LAWS

Major Professor:  Stacey Kolomer
Committee:  Brian Bride
Edwin Risler
Zolinda Stoneman

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
August 2012
DEDICATION

All labor that uplifts humanity has dignity and importance and should be undertaken with painstaking excellence.

-Martin Luther King, Jr.
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CHAPTER 1
INTRODUCTION

In spite of national policies such as the Americans with Disabilities Act (1990), and federal judicial rulings such as the Olmstead decision (1999) which grant United States citizens with intellectual and developmental disabilities (ID/DD) the right to live outside of the confinement of state institutions, the potential for people with disabilities to live supported lives within their communities is being threatened. Direct Support Professionals (DSPs) who provide non-medical care by assisting people with disabilities with activities of daily life such as hygiene, food preparation, transportation, and housekeeping, are becoming increasingly more difficult for support organizations to recruit and retain (Engberg, Castle, Hunter, Steighner & Maggio, 2009; Office of the Assistant Secretary for Planning and Evaluation, 2006). Underpaid and overburdened, DSPs are leaving the long-term care sector to work in the fast food and retail markets which offer similar wages without the difficulties associated with working with people with disabilities (Hewitt & Larson, 2007).

DSPs face a myriad of challenges on the job and those demands are intensified by the complexities of supporting people with disabilities who are also aging. The majority of DSPs work in home and community settings, and the challenges faced by DSPs in fulfilling their roles has been greatly increased by the decentralization of community support services (Seavey, 2004). DSPs are called on to provide medication supports, implement behavioral plans, teach new self-care skills, design and implement augmentative communication systems, support friendships and self-determination, and provide a wide range of other sophisticated supports that
require substantial skills, judgment, and personal accountability (Seavey, 2004) while wages remain low at a state pre-tax entry average of $9.37/hour for private providers (ANCOR, 2009). Additionally, community-based residential staff are increasingly confronted with challenges created by the age-related health problems of residents (Donaldson, 2002; Lloyd, Kalsey, & Gatherer, 2008). Continence care, mobility decline, diabetes, arthritis, skin break down, heart conditions, fractures, cancer, and behavior changes are some of the more common age related changes among residents with which staff are faced (Webber, Bowers, & McKenzie-Green, 2010). Residents with dementia present more demands on staff time with respect to hygiene maintenance and behavior management when compared to other residents not affected by dementia (Janicki, Dalton, McCallion, Baxley & Zendell, 2005). To be effective, DSPs must possess and be able to implement a wide variety of complex skills without on-site supervision (Hewitt, 1998; Taylor, Bradley & Warren, 1996). Employees point to their lack of competence in these skills as negatively impacting job satisfaction and causing turnover (Hewitt, Larson & Lakin, 2000; Larson, Lakin & Bruinicks, 1998), raising concerns that provider organizations are ill-prepared to address the increased needs of an older population with lifelong disabilities (McCallion & Nickle, 2008, National Task Group on Intellectual Disabilities and Dementia Practice, 2012).

The need for competent support staff for people who are aging with disability is growing (National Task Group on Intellectual Disabilities and Dementia Practice, 2012). In the last 30 years, the trend toward deinstitutionalization and improved medical care has contributed to the longevity of individuals aging with a developmental disability (Doka & Lavin, 2003). As people with developmental disabilities presently have approximately the same life expectancy as the non-disabled population, people with developmental disabilities are outliving their parent
caregivers in large numbers for the first time in history (Parish & Lutwick, 2005). Currently, more than half a million adults with ID/DD are 60 and older (Doka & Lavin, 2003; Heller, 2004). By 2030, that number is projected to triple (Heller, 2004). Moreover, in this population, the likelihood for additional co-morbidities and functional limitations often accelerate the aging process (Krahn, Putnam, Drum, & Powers, 2006; McCarron, Gill, McCallion, & Begley, 2005; Mosqueda, 2004). Studies have also pointed to the increased incidence of dementia and behavioral concerns in those aging with ID/DD (Davidson et al., 2003). The occurrence of Alzheimer’s disease among persons with intellectual and related developmental disabilities appears to be about the same as in the general population (or about 6% of persons age 60 and older); however, the rate of Alzheimer’s disease among adults with Down syndrome is much higher - about 25% for adults age 40 and older and about 65% for adults age 60 and older (Alvarez, 2008). The last large population study investigating the prevalence of dementia in adults with ID/DD, conducted in 2000 by Janicki and Dalton, found that at least 9,000 older adults with ID/DD were affected by Alzheimer’s and other dementias; although this number was likely a low estimate as dementia is underdiagnosed and underreported within this population (Strydom et al., 2009). The prevalence of dementia in people with ID/DD is expected to triple within the next 20 years (Janicki et al., 2005). In fact, in a 2012 report, the National Task Group on Intellectual Disability and Dementia Practice projected that there might be at least 54,000 adults with an intellectual disability and cognitive decline in the United States, representing a modestly sized population, but one with high dependencies, high impact on caregivers, and a high draw on resources. Davidson, Heller, Janicki, and Hyer (2004) suggest the need for research and effective training models to support this emerging and complex population. The increased
longevity of people with disabilities coupled with more complex needs for both physical and psychosocial care point to the pressing demand for a large number of stable, well-trained DSPs.

This study will contribute to a growing body of research on career and staff empowerment training to attract and retain qualified workers in the aging sector (Dill, Morgan & Konrad, 2010; Findley, Biklen, Krause-Barrett, & Richardson, 2000; Morgan & Konrad, 2008; Rehnquist, 2002; Stone & Wiener, 2001) and a small body in the ID/DD sector (Coogle, Parham, Jablonski & Rachel, 2007 a & b). The negative effects of staff turnover on the quality of life of service recipients is clear (The Lewin Group, 2008; Stone & Weiner, 2001). A recent study by Castle, Engberg, and Men (2007) showed a significant relationship between moderate to high turnover of direct care workers in nursing homes and poorer outcomes on quality of care measures, including use of physical restraints, catheter use, contractures, pressure ulcers, and psychoactive drug use suggesting it is likely that when direct care workers stay in their positions for a longer period of time, they are able to better learn the needs of residents and provide a higher level of care. Staffing was repeatedly identified as a barrier to keeping people with ID/DD ‘at home’ in community group homes as they aged and developed health conditions (Webber, Bowers, & McKenzie-Green, 2010). In particular, supervisors expressed a fear that ‘something might happen’ for which they were unprepared even though the resident had no increase in basic daily needs or requirements for technically skilled care (Webber, Bowers, & McKenzie-Green, 2010). These findings support McCallion and McCarron’s (2004) contention that as a person with ID/DD ages, the transfer of the person to more restrictive settings, such as nursing homes, may be considered rather than the service continuing to support him or her with aging in place if staffing is insufficient.
Statement of the Problem

In 2006, the U.S. Department of Health and Human Services (DHHS), at the request of Congress, reported on the impending crisis of community-based care for citizens with intellectual and developmental disabilities (ID/DD) in America (Office of the Assistant Secretary for Planning and Evaluation, 2006). It found that in the 15 years between 2005 and 2020 the number of direct support professionals (DSPs) needed to provide long-term supports for individuals with ID/DD would increase by about 323,000 or about 37% because of population growth, the increased life expectancy among persons with ID/DD, the aging of family caregivers, and the expansion of home and community-based services. Additionally, the 2006 U.S. Department of Labor occupational projections for the direct support workforce estimated that by 2016 an additional one million jobs would need to be created to meet the demand for services with 88% of that growth anticipated to be in home and community-based services for the elderly and people with disabilities (Dohm & Shniper, 2007). According to the Paraprofessional Health Institute (PHI) (2010a), in 2008 there were approximately 800,000 personal and home care aides (which includes DSPs as well as direct care workers who support the elderly and physically disabled), and by 2018 there will be a 46% increase in demand, making it the fourth fastest growing occupation in America. This demand for DSPs is outpacing the supply of available workers as women ages 25 to 54, the main labor pool from which these workers are drawn, is only projected to increase by less than 1 percent (PHI, 2008). Compounding the issue of limited supply is the problem of staff attrition in the ID/DD sector. This problem is significant as staff turnover rates range from 41% per year to over 71% per year in community settings, compared to a range of 14% to 34% in institutional settings (Hewitt & Lakin, 2001). In a meta-analysis of twenty-six state and local studies on DSP turnover from 1998 to 2003, Seavey (2004) found that
the average rate of turnover for residential/in-home staff was 53.6% and the average for turnover in vocational/day settings was 46%. There is significant research on an impending crisis in the community-based long-term support sector if DSP attrition rates remain high (ANCOR, 2009; Hewitt & Larson, 2007; Office of the Assistant Secretary for Planning and Evaluation, 2006; PHI, 2008). It is estimated that a shortfall of approximately 900,000 DSPs is likely by 2020 (Office of the Assistant Secretary for Planning and Evaluation, 2006).

The prominence of this issue is evident in the recent national calls for the creation of a Federal office to address long-term care workforce issues (White House Conference on Aging, 2005) and the establishment of the National Commission for Quality Long-Term Care to identify factors influencing the ability to improve quality of care nationally and make recommendations about efforts that should lead to sustainable quality improvement. In an initial report to the National Commission for Quality Long-Term Care, Capitman and colleagues (2005) recommend building long-term care workforce improvements into the efforts that are launched. The DHHS (2006) report further observed that meeting the future demand for DSPs will be extremely difficult to achieve through enhanced recruitment, and that it will be critically important to improve the retention of existing DSPs in order to meet the increased need for supports.

**Significance of the Study**

As concerns over this looming crisis grow, researchers and providers are working to identify strategies to better recruit and retain DSPs. National reports show that relevant advanced professional training is associated with increased DSP job satisfaction and lower attrition rates (Engberg, et al., 2009; The Lewin Group, 2008; Wright, 2009). To this end, the Community Support Skill Standards (CSSS, Taylor, Bradley, & Warren, 1996) and the Community Residential Core Competencies (CRCC, Hewitt, 1998) have been identified and
nationally validated as indicative of high quality community-based supports for people with ID/DD across the adult lifespan (Larson et al., 2007). Fifteen of these competencies have been endorsed by the National Alliance of Direct Support Professionals (NADSP) and provide the basis for a number of nationally accredited training programs as well as a voluntary national DSP credentialing program.

Certificate/credentialing programs which offer competency-based advanced professional development have been recommended as a means by which to improve DSP retention (Hewitt & Larson, 2007; National Direct Service Workforce Resource Center, 2008; Stuart, Hoge, Morris, Adams & Daniels, 2009). However, there is a marked lack of research that provides insight into the relationship between the implementation of credentialing programs in the ID/DD sector and DSP job satisfaction, perceived empowerment, stress, organizational support, organizational commitment, and turnover intent – the variables demonstrated in the literature to correlate with retention. Additionally, there is a lack of research examining if these variables differ when DSPs primarily support aging adults with ID/DD.

This study seeks to add to the evidence that workforce development projects that professionally develop direct care workers show potential to lower turnover rates of the direct support workforce (Coogle et al., 2007 a & b; Dill, Morgan & Konrad, 2010). In National Goals and Research for People with Intellectual and Developmental Disabilities, Lakin, Gardner, Larson, and Wheeler (2005) highlight the identification and description of the effects of systematic efforts to improve working conditions, compensation, recruitment, training, and other interventions on the stability and performance of DSPs as a research recommendation. This study responds to that recommendation by exploring the correlation between credentialing and DSP retention and by seeking to provide evidence for states and community-based support providers
to invest in competency-based, professional development for the advancement of their staffs’
skills, workplace retention, and improvements to the quality of care provided to aging adults with
ID/DD.

**Importance of the Study to Social Work**

As social work has historically identified the most vulnerable and oppressed groups as
clients, aging persons who are also developmentally disabled are a particularly vulnerable group in need of the profession’s attention. For over two decades, researchers have been concerned about the strain the developmental disabilities service network will face as elderly parents become unable to continue providing care and large numbers of aging persons with developmental disabilities move to community supports (Gibson, Rabkin & Munson, 1992). At the macro practice level, national health and social policies that are inclusive of people with intellectual disabilities and provide for special supports and assistance into old age are much needed -as are education and training initiatives in diagnostic procedures, presentation of interventions, and provision of supports (World Health Organization, 2000).

Additionally, as DSPs are among America’s working poor, interventions that improve the quality of their lives are important to social work as well. The overwhelming number (89%) of DSPs are women ages 25-55 (Smith & Baughman, 2007). In 2005, the median hourly wage for all DSPs was $9.56, about one-third less than the median wage for all U.S. workers (Dawson, 2007). DSPs are more likely to live in poverty and to rely on food stamps than other workers (Government Accounting Office, 2001). In fact, recent data show that 36% of DSPs live below the federal poverty line for a family of three (ANCOR, 2009) and 42.7% of DSPs rely on public benefits (PHI, 2008). Women in direct support jobs are more than twice as likely to be poor than working women in general (Smith & Baughman, 2007). In 2007, the average annual income for
DSPs was $21,798 versus the national average of $41,248 (PHI, 2008). Nearly 30 percent of DSPs lack health coverage of any kind (Regan, 2008). They are much less likely than U.S. female workers to have employer-based health insurance, or any insurance at all (Smith & Baughman, 2007). DSPs have limited access to sick leave and retirement benefits (Smith & Baughman, 2007). Minorities account for approximately half of the workforce with new immigrants, often with limited English-speaking abilities, playing an increasingly important role in filling the gaps of this waning workforce (Stone & Wiener, 2001). By examining the role of competency-based professional development on the variables associated with retention, this study will illuminate how credentialing programs affect DSPs as well as their employers.

**Purpose of the Study**

The purpose of this study is to empirically investigate if there is a significant difference between DSPs who support aging adults with ID/DD and those who do not when the variables affecting turnover are compared. In addition, this study will explore if there is a difference in retention, as measured by turnover intent, between DSPs who complete a credentialing program and those who do not obtain the credential. The desired output of the study is to produce a regression model that reliably predicts DSP retention from the variables being explored.

**Research Questions**

This study is guided by the following questions:

1. Does participating in a competency-based professional development initiative predict DSP retention?
2. When the variables associated with job retention/attrition are compared, are DSPs who obtain a competency-based credential different from those who do not?
3. When the variables associated with job retention/attrition are compared, are DSPs who primarily support aging adults with ID/DD different from those who support younger adults?

4. What is the relationship between the variables associated with job retention/attrition?

**Definition of Terms**

A number of variables are examined in this study and are defined below:

**Direct Support Professionals.** Direct Support Professionals (DSPs) are defined according to the NADSP’s definition wherein they are employed and paid an hourly wage by support organizations to provide non-medical support including hygiene, housekeeping, and other activities of daily living (ADLs) to people with ID/DD where at least 50% of their time is spent in direct support activities.

**Community-based Supports.** Community-based support describes the environment where services are provided to people with ID/DD. Community supports are federally and state funded by the Home and Community Based Services (HCBS) Waiver through Medicaid. HCBS programs are based on the recognition that individuals at risk of being placed in long-term care institutions can receive support services in their homes and communities, and preserve their independence and ties to family and friends at a comparable or lower cost in public funds. HCBS waiver programs give states the flexibility to develop and implement creative alternatives to placing eligible individuals in hospitals, nursing facilities, or intermediate care facilities. Services funded by this mechanism are provided outside of institutional or congregate care facilities (also called Intermediate Care Facilities for the Mentally Retarded or ICFs/MR) to people who reside in their own homes, with their families, or in small groups in houses and apartments. Community–based supports are also provided in vocational and day programs that
are located outside of a facility or restricted setting. The quality of, and access to, HCBS services are dependent upon the direct support workforce (Kaiser, 2007).

**Aging Adults with ID/DD.** Intellectual disabilities (ID) and developmental disabilities (DD) are different but related concepts. They have certain shared features that cause them to overlap in the individuals they describe and in their popular use. Intellectual disability is defined by current demonstration of: (a) significantly sub-average intellectual performance (as evidenced by an I.Q. of about 70 or lower), (b) substantial limitations in age appropriate performance in at least two major life areas related to independent living; and (c) manifested while still in the developmental period (Office of the Assistant Secretary for Planning and Evaluation, 2006). People are considered having a developmental disability in accordance with the definition in the Developmental Disabilities Act section 102(8) wherein the disability is a severe, chronic disability of an individual 5 years of age or older that:

1. Is attributable to a mental or physical impairment or combination of mental and physical impairments;

2. Is manifested before the individual attains age 22;

3. Is likely to continue indefinitely;

4. Results in substantial functional limitations in three or more of the following areas of major life activity:

   (i) Self-care;
   (ii) Receptive and expressive language;
   (iii) Learning;
   (iv) Mobility;
   (v) Self-direction;
   (vi) Capacity for independent living; and
   (vii) Economic self-sufficiency
5. Reflects the individual’s need for a combination and sequence of special, interdisciplinary, or
generic services, supports, or other assistance that is of lifelong or extended duration and is
individually planned and coordinated.

The term developmental disability includes both intellectual disability and physical
disability. Therefore, those who are diagnosed with an intellectual disability are also considered
developmentally disabled. However, a person diagnosed with a developmental disability may not
be intellectually disabled (as is often the case with cerebral palsy).

For the purposes of this study, adults with ID/DD are considered aging if they are over 45
years old. This age was selected in accordance with the World Health Organization’s (2000)
determination that the chronological point for determining age-related change is when people
with intellectual disabilities are in their 50s. However, this is often complicated by the
occurrence of what appears to be premature aging and shortened life expectancy in some
individuals with intellectual disabilities, particularly in persons with profound and multiple
disabilities and frequently those with Down syndrome (World Health Organization, 2000;
Janicki & Dalton, 1999) and is adjusted down accordingly.

Competency-based Professional Development. The National Professional Development Center
on Inclusion (NPDCI) (2008) provides the following definition of professional development
which is applied in this study:

“Professional development is facilitated teaching and learning experiences that are
transactional and designed to support the acquisition of professional knowledge, skills,
and dispositions as well as the application of this knowledge in practice. The key
components of professional development include: (a) the characteristics and contexts of
the learners (i.e., the “who” of professional development, including the characteristics
and contexts of the learners and the people they serve); (b) content (i.e., the “what” of
professional development; what professionals should know and be able to do; generally
defined by professional competencies, standards, and credentials); and (c) the
organization and facilitation of learning experiences (i.e., the “how” of professional
development; the approaches, models, or methods used to support self-directed, experientially-oriented learning that is highly relevant to practice)” (p.3).

In this study the competency base refers to content embedded within the professional development initiative which utilizes a curriculum that is accredited by the NADSP and is based on the community support skills and competency areas as described by NADSP (see Appendix A).

**Credential Completion.** To be considered a credentialed DSP in this study, a DSP must have completed either the Certificate of Initial Proficiency (CIP) or Certificate of Advanced Proficiency (CAP) level of the Ohio Professional Advancement through Training and Education in Human Services Program (OH PATHS). Credentialed DSPs may also have one or more Certificates of Specialized Skill in addition to the CIP or CAP credential (see Chapter 2 for a complete description of the program).

**Worker Characteristics.** Demographic factors including age, gender, tenure, and education will be collected in this study for descriptive and statistical purposes.

**General Self-efficacy.** General Self-efficacy (GSE) is conceptualized according to Eden’s (2001) definition of GSE as one’s belief in one’s overall competence to affect requisite performance across a wide variety of achievement situations. GSE differs from specific self-efficacy which is domain and task specific and is discussed in detail in Chapter 2.

**Job Control/Empowerment.** In this study job control refers to the amount of decision latitude a worker perceives that she/he has on the job and is measured by Thomas and Velthouse’s (1990) operationalization of perceived empowerment. This includes the workers’ perceptions of the meaning of their job to them, their sense of competence on the job, how much self-determination they believe they have in the job, and how much impact they believe they have on their job.
**Job Demand/Stress.** Job demand is defined as a worker’s perception of the extent to which the worker can control the pace of his/her work and the stress or burden felt by the worker. In this study job stress is measured by Doty, Benjamin, Matthias, and Frank’s (1998) stress/burden scale and refers to how stressed home care workers feel when it comes to client safety, family issues, client behavioral problems, their relationship with the client, the client role in their work and their own emotional state.

**Perceived Organizational Support.** Perceived organizational support is defined as an employee’s general belief that their employing organization values their contribution and cares about their well-being (Rhoades & Eisenberger, 2002).

**Job Satisfaction.** Job satisfaction is defined in this study as an overall attitudinal evaluation of the degree to which the employee is satisfied and happy with the job as conceptualized by Hackman and Oldham (1975, 1980).

**Organizational Commitment.** Organizational commitment is defined in accordance with Mowday and Steers (1979) as the strength (or lack thereof) of an individual’s expressed attachment to a particular organization. It includes the extent to which the individual: (1) accepts and believes in the organization’s goals; (2) is willing to exert effort on behalf of the organization; and (3) wants to continue involvement in the organization.

**Turnover Intent.** The intent to turnover is defined as a worker’s cognitive decision to voluntarily stay on the job or to leave it as described by Cammann, Fichman, Jenkins, and Klesh (1983).
Summary

In this chapter, the rationale behind the study, a justification for undertaking it, questions guiding the study, and key concepts utilized in the research were provided. America’s ability to meet our commitment to support people with ID/DD, including those who are aging, in their communities is dependent upon the stability and competency of the direct support workforce. This workforce is in crisis as the supply of workers is insufficient to meet the projected increases in service demand. National experts recommend competency-based professional development as one means by which to stabilize this workforce; however, there is currently little empirical evidence that professional development initiatives help to reduce staff attrition. This study will provide insight into the effect of the completion of a competency-based DSP credential on efficacy, job demand, empowerment, job satisfaction, organizational commitment, and turnover intent, the variables associated with retention/attrition. The next chapter provides a review of the extant literature that is pertinent to the issue of DSP retention in community-based supports for people with ID/DD who are aging and explains the conceptual and theoretical frameworks which guide the study.
CHAPTER 2

REVIEW OF THE LITERATURE

This study explores the multifaceted phenomenon of staff attrition/retention in the disability human services sector and begins with an investigation into the current thought and extant literature on this issue. Electronic databases including Google Scholar, EBSCO, Academic Search Complete, and Web of Knowledge were searched for peer reviewed journal articles published between 1990 and 2011 using a varied combination of relevant key words. Figure 1 shows the Venn diagram used to guide search efforts both by targeted searches for single keywords and by combining two, three, four, and more keywords in an attempt to identify articles that share the empirical heart of this study. This search technique yielded a number of studies that shared at least two key terms. The significance and contributions of these studies to the knowledge in this area follows below.
Research on Direct Support Staff Attrition/Retention

Within the literature, there are many studies that identify factors that affect staff attrition and/or retention in the direct support human services sector. In some cases, staff attrition and retention are approached from an economic perspective and treated as opposite sides of a tangible rewards continuum in which increases to pay and benefits are approached as the primary driver of retention (Castle, Degenholz & Rosen, 2006; Miller, 1996). While poor pay and benefits are linked to job dissatisfaction and staff attrition (Howes, 2005; Seavey & Salter, 2006), these factors alone do not explain voluntary turnover. Many studies find that direct care staff whose work is valued and appreciated by supervisors, and who are listened to and
encouraged to participate in care planning decisions, have higher levels of job satisfaction and are more likely to stay in their jobs in spite of the poor wage and low status that accompanies the work (Bowers, Esmond & Jacobsen, 2003; Brannon, Zinn, Mor & Davis, 2002; Harris-Kojetin, Lipson, Fielding, Kiefer & Stone, 2004). In a 2009 study with personal care attendants, Mittal, Rosen and Leana uncovered differences in the drivers of attrition and retention within this workforce indicating that strategies aimed at reducing turnover should not be assumed to enhance retention; direct care workers have important psychological needs based on factors like interpersonal relationships, spirituality, respect, and esteem; and they concluded that organizational initiatives designed to decrease turnover focusing on salary and benefits, while important, underappreciate the complexity of a direct care worker as a person. Similarly, in a meta-analysis of the literature addressing residential care aides roles, working environments, work satisfaction, and factors affecting retention, Anderson (2009) found frequency effect sizes for factors influencing job satisfaction were largest (45%) for relationships (with residents, families, and colleagues), followed by concern for lack of financial incentive (38%), hierarchical supervisory structures (37.3%), and concerns for personal safety (36.6%). Another meta-analysis of the antecedents to retention and attrition in the human services suggests that when employees remain on the job the primary predictors include a sense of satisfaction from the work that they do and a sense of commitment to the organization or the population served by it (Mor Barak, Nissly & Levin, 2001). Examined together, these recent inquiries suggest that meeting the psychological and support needs of staff may reduce attrition without necessarily requiring a change in wage.

Just as important as research that sheds light on the drivers of retention and attrition in the human services sector are conceptualizations of the processes that underlie an employee’s
decision to stay with or leave a job. A number of models have been developed to explain employee behavior within the human service sector with the common theme that turnover is a multistage process that includes chronological attitudinal, decisional, and behavioral components (Mor Barak, Nissly & Levin, 2001). The attitudes that staff hold about their work, such as their job satisfaction, organizational commitment, and of perceptions of workplace support have been identified as important mediators within the occupational withdrawal process among direct care providers (Hastings & Horne, 2004; Hatton & Emerson, 1993, 1998; Hatton et al., 2001; Lawrence, Glidden, & Jobe, 2006; Neben & Chen, 2010; Razza, 1993) and are of particular interest as regression models have demonstrated that they may represent a critical factor in staffs’ intention to seek other employment (Hatton et al., 2001; Lawrence, Glidden & Jobe, 2006; Razza, 1993). Similarly, occupational strain (Razza, 1993) and the perception of a non-supportive work environment (Hatton et al., 2001) tends to be strongly associated with job dissatisfaction and thereby may indirectly influence occupational withdrawal decisions and subsequent turnover behavior among staff. Human resources research further shows that occupational attitudes are malleable and can be changed over time (Saari & Judge, 2004). Interventions designed to improve the attitudes of human service workers, therefore, demonstrates the potential to reduce the worker’s intent to leave and subsequent separation behavior (Saari & Judge, 2004).

The literature further illustrates that a wide array of variables which include emotional constructs such as burnout, cognitive constructs such as role clarity, and behavioral measures such as absenteeism have been used in research to explain and predict staff turnover/retention; however, given the aforementioned ability of attitudinal factors to intervene on the process thought to underlie turnover, this study focuses on the psychological variables that have been
demonstrated to contribute to human service staff retention/attrition. The relevant extant research on each variable to be measured in this study is described below.

**Worker Characteristics**

Demographic factors are among the most common predictors in the turnover literature. A number of studies find age, education, job level, gender, ethnicity, and tenure with the organization to be significant predictors of turnover (Hatton et al., 2001; Hatton & Emerson, 1993; Jinnett & Alexander, 1999; Kiyak, Namazi & Kahana, 1997). However, in their meta-analysis, Mor Barak, Nissly and Levine (2001) found gender and ethnicity not to have statistically significant correlations with intention to leave. In their analysis, age (being young), lack of work experience, and lack of competence stood out as statistically significant predictors for both intention to leave and turnover (Mor Barak, Nissly & Levine, 2001). Other researchers have likewise determined that younger staff are more likely to consider leaving their jobs, but it is unknown if young staff are less committed to this area of work, find less satisfaction in the area of work, or simply have more opportunity than their older counterparts (Hatton et al., 2001; Larson, Lakin & Bruinicks, 1998; Razza, 1993). Additionally, research has indicated that staff with higher formal educations are more likely to leave (Kiyak, Namazi & Kahana, 1997; Manlove & Guzell 1997); however, level of education has been linked to turnover primarily for employees holding midlevel jobs indicating that those who have highly specialized skills, and those with limited education tend to remain on the job for longer periods of time than those who have a moderate degree of educational attainment (Todd & Deery-Schmitt, 1996). It is suggested that lower job satisfaction among those with greater years of education may reflect a suboptimal use of the workers’ skill set and knowledge within their current work environment (Hatton & Emerson, 1993; McKillip & Mennes, 2011). Finally, there is considerable evidence of an
invers relationship between tenure and turnover. Turnover rates are significantly higher among employees with a shorter length of service than among those who are employed longer (Bloom, Alexander & Nuchols, 1992; Gray & Phillips, 1994; Somers, 1996). This may be because longer tenured employees have more investment in the company and are less likely to leave. However, findings of such a relationship may also result from selection bias in cross-sectional studies (Mor Barak, Nissly & Livine, 2001).

**Empowerment/Control**

Within the research, control reflects the technical aspect of discretion and autonomy in one’s own work as well as the social aspect of control which includes broad decision-making authority. Holman and Wall (2002) reported consistent evidence for the role of control in skill utilization finding greater control enables employees to deploy and develop a wider range of skills and that such skill utilization in turn helps them to cope with demands more effectively. Studies have found that nurses in hospitals who feel empowered and/or more in control over their work environments have higher job satisfaction, more commitment to their employer, and are less likely to voluntarily leave the organization (Kuokkanen & Katajisto, 2003; Larrabee et al., 2003; Radice, 1994). In a study of predicting the job satisfaction of direct care workers, Ejaz and colleagues (2008) found that those who had higher job satisfaction perceived that they were more in control of the stressors of their work due to useful on-the-job training and ongoing continuing education. Conversely, a lack of further training and skill development in ID/DD staff is associated with high turnover (Hatton & Emerson 1993; Rose, 1995).

**Job Demands/Stress**

The literature on stress in the ID/DD service system indicates that between 32.5% (Hatton et al., 1999 a,b) and 25% (Robertson et al., 2005) of staff experience high levels of
stress. There is an association between staff stress, sickness, absenteeism, and turnover (Razza, 1993; Rose, 1995). Research suggests that staff–client interactions may be negatively affected if workers are under acute stress (Lawson & O’Brien, 1994; Rose, Jones & Fletcher, 1998), and stress may impede staffs’ ability to deal effectively with challenging behaviors (Hastings, 2002; Rose, Horne, Rose & Hastings, 2004). Gray-Stanley and colleagues (2010) identified heavy workloads, lack of involvement in organizational decision-making and increased client disability/client care needs to be key stressors for ID/DD staff. Job related stressors were found to be the strongest predictors of job dissatisfaction in nurses’ aides (Ejaz, Noelker, Menne & Bagakas, 2008). Similarly, studies among nurses have found that as perceived work demands increase, job satisfaction decreases (Burke, 2003; Lyons, Lapin & Young, 2003). Not surprisingly, workers experiencing high levels of job stress are more likely to leave their positions than those facing lesser demands (Mor Barak, Nissly, & Levine; 2001). Hatton and colleagues (2001) found four variables were strongly associated with greater intention to leave: less work satisfaction, higher job strain, younger age, and easier subjective labor conditions. Their research indicates that specific job strain, rather than general stress, is most important for intended staff turnover (Hatton, Brown, Caine & Emerson, 1995; Hatton et al., 2001; Hatton, 1999) and demonstrates that both job strain and work satisfaction are important factors for intended turnover (Hatton, 1999, Hatton et al., 2001).

**Organizational Support**

Organizational support perceptions involve employees’ general beliefs that their employing organization values their contribution and cares about their well-being (Rhoades & Eisenberger, 2002). Accumulating evidence suggests that support from coworkers and supervisors is instrumental in worker retention (Mor Barak, Nissly, & Levine; 2001).
Organizational support may include feedback on job performance (Hatton & Emerson, 1993), and both practical and emotional support from colleagues, supervisors and managers (Dyer & Quine, 1998; Hatton & Emerson, 1993; Hatton et al., 1995; Razza, 1993; Rose, 1995; Rose & Schelewa-Davies, 1997). Conversely, a lack of perceived support for staff has been found to indirectly affect intended turnover (Hatton & Emerson, 1993; Larson et al., 1998; Razza, 1993). In a study of certified nurses’ aides, support including involvement in work-related decisions, supervision, and management, and keeping employees informed of professional growth opportunities were significantly related to both turnover reduction and improvements to overall work satisfaction (Parsons, Simmons, Penn, & Furlough, 2003). In a literature review of recent cross-sectional studies utilizing social support in relationship to organizational stress, Knox Haly (2009) found a buffering effect for support in 50% of the studies reviewed, and a direct effect on stress for about 25% of studies reviewed. In longitudinal studies, evidence was found that the impact of social support varies over time, and that it tapers off over longer periods as stressors persist (Knox Haly, 2009). Further, strong positive relationships were found in a meta-analysis of perceived organizational support with affective commitment, job satisfaction, desire to remain with the organization, and turnover intentions (Rhoades & Eisenberger, 2002).

**Job Satisfaction**

Job satisfaction is a consistent attitudinal predictor of turnover behavior, however, there is some debate about whether job satisfaction is a valid predictor of actual turnover (Koeske & Kirk, 1995), and about whether the relationship is direct or indirect via job satisfaction’s impact on organizational commitment (Lum, Kervin, Clark, Reid & Sirola, 1998). In spite of these debates, the negative relationship between job satisfaction and turnover among direct care staff has been established for some time (Waxman, Carner, & Berkenstock, 1984). Employees who
are satisfied with their jobs are less likely to quit (Hellman, 1997; Lum et al., 1998; Manlove & Guzell, 1997; Oktay, 1992; Siefert, Jayaratne, & Chess, 1991; Tett & Meyer, 1993). In a recent study on nurses’ aides, high overall job satisfaction was associated with low scores on thinking about leaving, thinking about a job search, searching for a job, and turnover (Castle, Engberg, Anderson & Men, 2007). Lower levels of work satisfaction was strongly associated with low levels of support from supervisors and colleagues, low influence over work decisions, high stress from being in low status job (Hatton et al., 2001). Similarly, studies have found that job dissatisfaction is strongly associated with job stress and low organizational commitment among nurses (Blegen, 1993; Cohen-Mansfield, 1997; Lyons, Lapin, & Young, 2003; Upenieks, 2000). In the ID/DD sector, direct care worker’s intentions to turnover were found to be directly influenced by dissatisfaction with employment and indirectly influenced by provider strain or burnout (Hatton & Emerson, 1993; Hatton et al., 2001; Razza, 1993). A new study conducted by McKillip and Minnes (2011) indicated that job satisfaction represented the most critical predictor of direct care workers’ intention to leave their current employment. Specifically, workers who expressed lower job satisfaction demonstrated higher intention to leave their employment. Within the study, lower job satisfaction was best predicted by higher occupational strain or burnout, poorer work group quality, and among those workers with more years of education.

**Organizational Commitment**

Organizational commitment is an attitudinal variable that measures the degree of an employee’s expressed attachment toward the employing organization and is often examined in the literature for its effect on employee behavior. There are three components which comprise the construct of organizational commitment: (a) emotional attachments (affective commitment);
(b) the costs of leaving, such as losing attractive benefits or seniority (continuance commitment); and (c) the individual’s personal values (normative commitment) (Meyer & Allen, 1991).

In a 1990 meta-analysis, Randall found positive relationships between organizational commitment and attendance, coming to work on time, and remaining with the organization. Lack of commitment to the organization was found to indirectly affect intended turnover in direct support staff (Larson et al., 1998). Similarly, human services employees who lack in organizational and professional commitment, who are unhappy with their jobs, and who experience excessive burnout and stress but not enough social support are likely to contemplate leaving the organization (Mor Barak, Nissly & Levine, 2001). In an early study with direct care staff in psychiatric hospitals, organizational commitment was found to be more effective than job satisfaction at discriminating stayers from leavers (Porter, Steers, Mowday & Boulian, 1974).

Indeed, several authors find that job satisfaction leads to turnover through its effects on organizational commitment and intention to leave (Krausz, Koslowsky, & Eiser 1998; Price & Muller 1981; Rhodes & Steers 1990; Taunton, Boyle, Woods, Hansen & Bott, 1997). Confirming this, in a 1998 study on turnover among nurses, Lum and colleagues revealed a causal path model in which job satisfaction affected commitment which in turn affected turnover intent, illustrating the mediating role of organizational commitment on turnover intention.

**Turnover Intent**

Intention to quit is the single strongest predictor of turnover (Alexander, Lichtenstein, Oh & Ullman, 1998; Hendrix, Robbins, Miller & Summers, 1999), and it is therefore frequently used as an outcome variable in turnover studies. Many studies use intention to leave instead of, or in addition to, actual turnover for two stated reasons. First, as turnover models suggest, there is evidence that before actually leaving the job, workers typically make a conscious decision to
do so. These two events are usually separated in time (Coward et al., 1995). Second, in a cross-sectional study it is more practical to ask employees of their intention to quit than to follow them via a longitudinal study or to conduct a retrospective study and risk hindsight biases (Mor Barak, Nissly & Levine, 2001). Pioneering research by Mobley, Griffeth, Hand, and Meglino (1979) suggest that intention offers a better explanation than actual turnover since it captures the individual's perception and evaluation of job alternatives. It is important to note that while intention to quit is a commonly occurring predictor of staff turnover, it is not always predictive of actual staff turnover (Hatton & Emerson 1993, 1998; Larson et al., 1998). However, in another seminal study, Mobley, Horner and Hollingsworth (1978) reported moderate to strong correlations between intention to quit, job search, and thinking of quitting, and turnover among hospital employees.

**Research on Staff and People Aging with ID/DD**

A small body of literature was discovered that explores the intersection of staffing, job stress, and supporting people with ID/DD who are aging in community-based settings. Because of the complications of dual-diagnoses, typically both a developmental disability and dementia, the care needs of older adults with developmental disabilities are more complex than those of either younger adults with developmental disabilities, non-developmentally disabled older adults with dementia, or individuals with other age-related functional limitations (McCarron, Gill, McCallion & Begley, 2005; Merrick & Benner, 2004). The diagnosis of dementia in persons with ID is complex, and the increasing of staff skill in the assessment and support of the person with dementia has been reported to be crucial, as is ongoing education on the needs and care issues for the person (McCarron & Lawlor, 2003). Residents with dementia present more demands on staff time with respect to hygiene maintenance and behavior management when
compared to other residents not affected by dementia (Janicki et al., 2005). Sudden changes in residents’ physical and cognitive health are likely increase staff stress (Wilkinson, Cunningham & Rae, 2004) and aging persons with ID/DD are much less likely to be supported to age in place if it puts strain on the agency or staff (Webber, Bowers & McKenzie-Green, 2010). Staff recognize their inability to confidently support people with ID/DD who are aging in both the DD and aging sectors (McCarron et al., 2010; Wilkinson et al., 2004). In a qualitative needs assessment where both ID/DD staff and aging service staff were asked what they perceived as the most critical areas for training and education four primary areas of need emerged: (1) knowledge of the biological and psychological aspects of aging; (2) particular knowledge of developmental disabilities for health care and aging service staff; (3) training and information concerning the appropriateness of skill building techniques, as developed and fostered by the developmental disabilities service network, and skill maintenance techniques, as developed in the field of gerontology and fostered by the aging network; and (4) skills in the taking of medical histories and in assessing changes in psychological or mental status (Gibson, Rabkin & Munson, 1992). Webber, Bowers & McKenzie-Green (2010) identified strategies such as sending staff to training programs to learn the necessary care, actively seeking new staff with aging care or medical experience, supporting workers to take courses in aging care at local college as a means to stabilize the workforce and allow people with ID to age in place.

Conceptual & Theoretical Framework

The work stress-strain literature in industrial and organizational psychology provides a number of theoretical frameworks by which to explore the phenomenon of staff attrition/retention in direct support services. In Occupational Strain and Efficacy in Human Service Workers, Dollard, Winefield and Winefield (2001) provide a thorough overview of the
primary components of work stress-strain research. Work stressors are defined as environmental situations or events which are potentially capable of producing a source of stress. Stressors can be acute, or short lived such as a violent incident, or chronic where exposure is on-going such as work load. Work stress is produced by work stressors and is the intermediate state of arousal before work strain. Strain is the reaction to the stress condition. Occupational strain may include behavioral, physiological, emotional, and psychological responses. Behavioral strain responses may include the use of alcohol, drugs, and smoking. Physiological strain can be detected by biochemical measures such as increases in blood pressure and cortisol. Emotional strain responses include de-personalization and burnout. Of primary interest to this study, however, are psychological strain responses which include cognitive effects such as job dissatisfaction and moderators to strain such as self-efficacy.

Self-Efficacy

Rooted in social cognitive theory which posits that human motivation and actions are regulated extensively by forethought, the construct of perceived self-efficacy reflects a self-belief that one can perform specific actions to obtain the desired outcome before engagement in a novel or difficult task (Bandura, 1997). Perceived self-efficacy is identified as the foundation of human agency as it plays a central role in the self-regulation of motivation through goal challenges and outcome expectations (Bandura, 2002). As such, it is a prime factor for influencing behavior. According to social cognitive theory, strong self-efficacy is related to perceiving more positive outcomes of future actions and fewer negative outcomes. Self-efficacy beliefs affect behavior indirectly through the formation of goal intentions as well as directly through action implementation. Self-efficacy is prospective in that an individual makes a cognitive prediction about his or her likelihood of success before engaging in the task, and it is operative as an
observable behavior follows. Thus, it can be characterized as being both competence-based and action related (Bandura, 1997).

Self-efficacy beliefs are acquired from four sources, namely enactive mastery, vicarious learning, social persuasion, and physiological arousal. The first source, enactive mastery, occurs when an individual performs a specific behavior, interprets the results of that specific behavior in conjunction with the outcome, and uses that interpretation to develop further beliefs (i.e., self-efficacy beliefs) about his or her capabilities in a future circumstance or activity. These self-efficacy beliefs then direct forthcoming choice and action and, according to Bandura (1986), may improve or diminish depending on how a person interprets the outcome (Stajkovic & Luthans, 1998). Of all the sources of self-efficacy, it is suggested that enactive mastery has the greatest influence on improving or diminishing self-efficacy beliefs (Bandura, 1986; Sheu & Lent, 2007).

Vicarious learning is the second source of self-efficacy beliefs and is especially helpful in the early stages of career development. Vicarious learning occurs when an individual observes, retains, recalls and replicates a model’s performance on a specific task (Bandura, 1986). In practice, the effects of vicarious learning are greatest among individuals who have limited experience at a task or among individuals who are undecided about their own capabilities to perform a task. For example, novice counselors, with limited enactive mastery experiences, are more likely to rate their own self-efficacy for treating clients higher after observing models perform successful counseling sessions (Larson et al., 1999). Vicarious learning is also more effective when the observer relates to some attribute of the model, perceives the model as similar, and identifies the model’s performance as indicative of his or her own, when performing a similar task (Pajares, 2002).
Social persuasion is the third source of self-efficacy. Social persuasion includes positive reinforcements such as effective words of encouragement that work to nurture self-efficacy beliefs and instill the sense that envisioned successes are possible. However, when unfounded social reinforcements are presented and an individual experiences failure, self-efficacy beliefs will decrease since the enactive mastery experience is considered a more credible source of information compared to the disconfirmed social persuasion. Social persuasions in the form of negative reinforcement and punishment may also serve to decrease self-efficacy beliefs and reinforce avoidance or abandonment of difficult tasks (Bandura, 1994).

Finally, self-efficacy beliefs are influenced by somatic and emotional states since physiological and emotional feedback are used to inform individuals about their personal competence for performing a task. For example, when faced with a challenging task, a positive mood may increase confidence in an individual’s competence to perform the necessary actions to achieve success. Conversely, the presence of anxiety and/or negative mood may be interpreted as resulting from a lack of competence to perform a task and, therefore, decrease self-efficacy beliefs (Bandura, 1994).

Self-efficacy beliefs can be either specific or general. Specific self-efficacy is an evaluation of the capability to perform a certain task and the expectation of being able to successfully perform certain behavior (Bandura, 1977). Specific self-efficacy helps the actor to take the necessary action to exert control on the demands of a task (Bandura, 1997). Although people have task-specific self-efficacy beliefs, they also appraise their overall competence and ability to perform successfully in a variety of achievement situations (Bandura, 1997; Schwarzer, 1999). General self-efficacy reflects a generalization across domains of functioning in which people judge how efficacious they are. Schwarzer (1993) defined general self-efficacy as
people’s optimistic belief in their ability to cope with a variety of stressful or challenging situations. Employees who evaluate themselves as competent in general (i.e. have high general self-efficacy) are also likely to evaluate themselves as competent in specific contexts. This is because general self-evaluations tend to “cascade down” into specific life domains and situations, and because general self-evaluations influence how employees react in particular work situations (Chen, Gully, Whiteman & Kilcullen, 2000; Eden, 1988; Gardner & Pierce, 1998). As a broad construct, general self-efficacy explains a range of human behaviors across various domains and is useful when focusing on multiple behaviors simultaneously (Luszczynska, Gibbons, Piko, & Tekozel, 2004). General self-efficacy assesses an expansive and stable sense of personal competence to deal effectively with a variety of stressful situations and can be used to explain behaviors such as goal-setting, effort investment, persistence in face of barriers and recovery from setbacks (Schwarzer & Jerusalem, 1995).

Generalized self-efficacy serves as a moderator of stressor–strain relationships (Bandura & Locke, 2003; Jex & Bliese, 1999) as it impacts the degree to which an employee will engage in behaviors to remedy a problematic situation (Bandura, 1997; Jex, Bliese, Buzzell & Primeau, 2001). An employee with low self-efficacy would doubt her or his capability to remedy a problematic situation and thus may experience helplessness, frustration, and a variety of other forms of psychological and physical strains (Jerusalem & Schwarzer, 1992). Several stressor–strain relations have been shown to be moderated by self-efficacy among employees in Western nations (Jex & Bliese, 1999; Salanova, Peiró, & Schaufeli, 2002; Schaubroeck & Merritt, 1997).

Self-efficacy can change as a result of learning, experience, and feedback, and the magnitude of self-efficacy change corresponds closely to changes in performance (Gist & Mitchell, 1992). In pre/post designs, research has shown that a subject’s self-efficacy can be
increased by his/her participation in relevant task related training (Ammentorp, Sabroe & Kofoed, 2007; Huang, Shyu & Chen, 2003; Lorenz, Gregory, & Davis, 2000). In their 2007 Enhanced Care Assistant Training intervention to address staff attrition, Coogle, Parham, Jablonski and Rachel developed the curriculum to increase self-efficacy, to encourage a more career-focused orientation, and enhance professionalism by enabling care providers to better handle challenging situations and work-related stress, and found that the training increased the participants’ beliefs in their capabilities to organize and execute a course of action to achieve a given goal. Self-efficacy has also been identified as having a direct relationship with performance in organizational settings (Gist, 1987; Gist & Mitchell, 1992), and a significant positive relationship between the strength of self-reported efficacy and intent to remain employed was found in child welfare workers in a two state study (Ellett, 2007). As such, perceived self-efficacy is an important predictor of human behavior and performance.

Research supports the theory that self-efficacy has a strong positive relationship with the attitudinal variables of job satisfaction, control, and commitment, which are related to retention (Gardner & Pierce, 1998; Jex & Bliese, 1999; Mathieu & Zajac, 1990; Saks, 1995). Nota, Ferrari, and Soresi (2007) found that increases in opportunities for social and healthcare professionals to experience professional self-efficacy yielded higher perceived professional satisfaction, an increased sense of personal accomplishment, and demonstrated a lower tendency to feel tired or exhausted and to depersonalize their relationships with service users. Further, self-efficacy can predict the levels of satisfaction and well-being that individuals experience in their jobs, the accuracy, commitment, interest, and motivation workers have in carrying out their activities, coping with tasks and difficulties, and individuals’ persistence in trying to successfully achieve
their own projects (Evers, Tomic, & Brouwers, 2001; Lent, Brown, Nota, & Soresi, 2003; Nota, Ferrari & Soresi, 2007).

**Job Demand/Control/Support Model**

Karasek’s (1979, 1990) Job Demand/Control/Support (JDC(S)) model provides a multidimensional conceptual framework for understanding the factors that impact on staff attrition or retention. The JDC(S) model theorizes that work stress originates in stressors that are primarily in the structural or organizational aspects of the work environment (Karasek, 1979). In this model, job demands refer to stressors in the environment as well as the mental workload and the mental alertness or arousal needed to carry out the job under the given circumstances (Karasek & Theorell, 1990). Job control or decision latitude is comprised of the employee’s autonomy to make decisions on the job and the extent of skills used by the employee on the job (Karasek, 1989). Theoretically, in the JDC model an interaction effect has been described as a joint effect of job demands and control (Karasek, 1989). The various combinations of high and low levels of demands and decision latitude result in four types of work situations: (1) high strain, (2) low strain, (3) active, and (4) passive jobs (see Figure 2 for the JDC model). As occupations where health supports are provided to dependent others (nurses, nurses’ aides, and health technicians) are recognized as high demand work (Karasek et al., 1998), the two hypotheses related to high demand across levels of control are applied to this study. The strain hypothesis maintains that a combination of high job demands and low control leads to job strain such as exhaustion, health complaints, and job dissatisfaction. A combination of both high job demands and high control will increase work motivation, performance, learning, and personal growth. Employees feel a large measure of control, and are able to use all available skills, exhibit
an increased sense of mastery over their job and tasks, and demonstrate effective problem solving techniques (Karasek & Theorell, 1990).

Figure 2
Karasek’s (1979) Job Demand and Control Model.

Johnson and Hall (1988) extended the JDC model with social support, resulting in Karasek and Theorell’s (1990) JDC(S) model (see Figure 3). The predictions of the JDC(S) model are similar to those of the JDC model, assuming that the strain hypotheses of the JDC model will especially apply when support is low, whereas the active learning hypothesis will apply when support is high. The JDC(S) model distinguishes collective and isolated work conditions, such that eight work situations can be defined, namely the four work situations identified in the JDC model in combination with high support, and these four work situations in combination with low social support. The most adverse effects are predicted for a work situation with high demands, low control, and low social support, also termed iso-strain (Johnson & Hall, 1988).
The strain model has been tested in many different populations with a variety of outcomes. Three factors were identified in the research which must be considered when discussing support of the model: (a) statistically significant main effects versus interactions; (b) conceptualization and measurement of demands and control; and (c) the inclusion of moderators in the model.

The JDC(S) model has been tested in two ways. The first method tests the main effects of the variables to determine whether or not those participants who perceive the highest demands and lowest control have the most negative outcomes (Karasek, 1989). The second method involves testing for an interaction between demands and control (Van der Doef & Maes, 1999). When discussing support of the model, it must be noted that there is disagreement about whether or not significant main effects alone constitute support of the model or if a significant multiplicative effect must be demonstrated (de Lange, Taris, Kompier, Houtman & Bongers, 2003; Karasek, 1989). Recognizing that it is difficult to obtain significant results for main effect
terms, Karasek maintained that the implications for job redesign are essentially the same if either significant main effects or significant interactions are found. In both cases job redesign would consist of either decreasing demands or increasing control and support. Others have argued that more quasi-experimental studies are needed to determine the practical value of the model (Van der Doef & Maes, 1999). This controversy has not yet been resolved and it appears that most researchers test and report both main effects and interactive effects. Overall, support for the interaction model is inconclusive (de Lange et al., 2003; Terry & Jimmieson, 1999; Van der Doef & Maes, 1999); however, the main effects model has received more consistent support (de Rijk, Le Blanc, Schaufeli & de Jonge, 1998).

Karasek’s conceptualizations of job demands and control were developed to tap general constructs that are common to a wide range of occupations. Job demands refer to stressors experienced on the job or mental workload (Karasek, 1989). Specifically, the concept of job demands consists of the speed and difficulty of the work, time available to do the work, workload and conflicting demands (Karasek et al., 1998). The concept of control, or decision latitude, is in fact two constructs: skill discretion and decision authority (Karasek, 1989). Skill discretion signifies the level of skill required, the ability to learn, develop skills or use creativity on the job, and the repetitiveness or variety of skills used on the job (Karasek et al., 1998). Decision authority, often referred to as autonomy (Karasek, 1989), speaks to the ability of employees to make decisions regarding work (Karasek et al., 1998).

Based on these conceptualizations, Karasek developed the job content questionnaire (JCQ), which has been used to measure perceived job demands and control (Karasek et al., 1998); however, Karasek’s conceptualizations of job demands and control have been criticized as being imprecise and the measurement of the concepts using the JCQ has been criticized as too
broad (de Jonge & Kompier, 1997; de Jonge, Dollard, Dormann, Le Blanc & Houtman, 2000). It has been suggested that the concept of demands needs to distinguish between psychological demands or workload and the physical and emotional demands experienced on the job (de Jonge, Mulder & Nijuis, 1999). A larger debate has surrounded job control. Like the argument for the greater specification of demands, Ganster and Fusilier (1989) noted that control in the work environment is also multi-dimensional, covering the control over the variety and order of work tasks, the quality or quantity of outputs, the pacing and scheduling of work, the physical environment, organizational goals or policies, and the ability to leave the employer or occupation. This multidimensionality needs to be accounted for when measuring control as a less precise measure may not capture the aspects of the work environment that are important to the stress being experienced by the population under study (Terry & Jimmieson, 1999).

Noting the limitations of the JCQ, many studies have used alternate measures when testing the JDC(S) model (de Jonge et al., 1999; Rodríguez, Bravo, Peiró & Schaufeli, 2001; Tummers, Janssen, Landeweerd & Houkes, 2001). The use of alternate measures also contributes to the imprecision of the concept of control (Fox, Dwyer & Ganster, 1993). For example, measures of autonomy have been used to operationalize the concept of control (de Jonge et al., 1999; Rodríguez et al., 2001), which makes differences between the concepts difficult to specify. The different conceptualizations and measurements of the concepts make it challenging to compare the results of the studies and may contribute to difficulty in determining empirical support for the model.

In spite of the measurement challenges described in the literature, the JDC(S) model is helpful in providing a framework for understanding the high DSP turnover rates reported in the aging and ID/DD sectors. In modern work contexts with hierarchical power structures, such as
human service bureaucracies, workers at the lowest levels have the highest demands combined with the lowest levels of control resulting in the highest work strain (Dollard, Winefield & Winefield, 2001). Workers feel worn out, inadequate, and as their professional efficacy declines they not only leave their jobs, but can also show a number of psychosomatic disorders (Fox, Dwyer & Ganster, 1993; Nota, Ferrari & Soresi, 2007).

The JDC(S) model further provides a useful conceptual frame for retention when the worker’s self-efficacy as a factor that influences control is considered. Few stressors universally result in strains across employees. Cognitive appraisal theories (Lazarus, 1995; Lazarus & Folkman, 1984) suggest that stressors result in strains only to the degree that employees evaluate the stressors as threatening their well-being. When workers have higher confidence in their ability to meet the demands of their work they are less likely to evaluate work stressors as threatening and to experience job strain and the negative consequences that generally follow (Nauta, Lui & Li, 2010) High self-efficacy has been shown to protect workers from the impact of low control on the job as they are less affected by stressful situations than their less efficacious counterparts (Jerusalem & Schwarzer, 1992; Judge, Erez & Bono, 1998; Judge, Locke, & Durham, 1997). Some research has shown that a worker’s task confidence can be improved through supportive supervisory practices, another facet of the JDC(S) model that may be affected by self-efficacy, further highlighting it as an individual difference variable that is likely to protect against strain (Gist & Mitchell, 1992; Wood & Bandura, 1989; Wood, Bandura & Bailey, 1990).

**Self-Efficacy and the Stressor/Strain Relationship**

A final consideration in discussing support for the JDC(S) model is the addition of moderators. Findings that the model is supported for subsets of the samples studied suggest that
factors other than demands, control, and support may need to be considered when applying the model to specific populations (Van der Doef & Maes, 1999). One moderator that has received consistent support in the JDC(S) model is self-efficacy. Support for the demand-control model was found when employees perceived a good fit or had high self-efficacy; however, for those with low self-efficacy increased control may actually increase negative outcomes (Jimmieson, 2000; Schaubroeck, Jones & Xie, 2001; Schaubroeck & Merritt, 1997).

Several studies have examined the role of self-efficacy in stressor-strain relationships (Jex & Bliese, 1999; Jex & Gudanowski, 1992; Schaubroeck, Lam, & Xie, 2000; Schaubroeck & Merritt, 1997). Bandura (1997) states that self-efficacy refers to beliefs in one’s capabilities to meet situational demands and successfully carry out a given course of action. It has been demonstrated that individuals with high self-efficacy are more likely to believe that they can meet job demands despite the presence of stressors (Jex, Bliese, Buzzel & Primeau, 2001). The research of Jex and colleagues (2001), Schaubroeck and Merritt (1997), and Schaubroeck and colleagues (2000) examined the key role that self-efficacy plays in stressor-moderator-strain relationships. Specifically, Jex and colleagues (2001) found two three-way interactions involving self-efficacy (work overload/self-efficacy/avoidance coping and role clarity/self-efficacy/active coping). They concluded that successful coping depends on the congruence between coping methods, the nature of the stressor, and beliefs about one’s capabilities. Using Karasek’s (1979) job demands-control model, Schaubroeck and Merritt (1997) also found three-way interactions involving self-efficacy. Their results for high self-efficacy matched the predictions of the demands-control model. Having high efficacy and high job control can protect against the consequences of demanding jobs and having high efficacy and lack of control can be particularly harmful. However, they found that high demands and high job control have negative health
consequences (in terms of blood pressure) for those reporting low self-efficacy. They concluded that raising self-efficacy may be just as important as increasing job control in decreasing negative cardiovascular effects of demanding jobs. Finally, Schaubroeck and colleagues (2000) found three-way interactions involving self-efficacy. They found that job demands, job control, and self-efficacy interacted in the prediction of several strain measures. They concluded that increasing job control for low efficacy individuals could be harmful and suggest that organizations should focus on increasing self-efficacy. Figure 4 provides a graphic conceptualization of the framework for this study by illustrating the relationship between environmental stressors and observable cognitive strain responses specific to staff attrition/retention. The model further demonstrates the situation of the job demand/control/support model, and self-efficacy as a moderator of control, as person-specific determinants of strain.
Figure 4
Graphic Model of Conceptual Framework.
Research on Competency-based Training

There are no federal training requirements for personal care assistants, such as DSPs (PHI, 2005). For states that offer Medicaid-funded personal care services, the State Medicaid Manual Chapter 4, Section 4480, paragraph E (Centers for Medicare and Medicaid Services, 2005) requires states to develop provider qualifications for personal care assistants but does not list specific qualifications; rather, it offers examples of areas where states may establish requirements including: criminal background checks or screens for attendants before they are employed; training for attendants; use of case managers to monitor the competency of personal care providers; and establishment of minimum requirements related to age, health status, and/or education. Therefore, DSPs are typically limited to employer-developed training delivered post-hire (PHI, 2005).

Competency-based training is a preferred training model in the human services (O’Nell & Hewitt, 2005). All training programs are not equal and it is not sufficient to simply require more training hours in response to recruitment, retention, and quality problems (Stone, 2007). Competency-based training includes job analysis, assessment of initial skill, setting expectations for learning, selection of best curricula and format to deliver training in a setting in which skills can be transferred to job performance and post training evaluation of on-the-job competence (O’Nell & Hewitt, 2005). Stone (2007) acknowledges the pivotal role that quality training can play in creating a competent workforce, but underscores the importance of interactive, hands-on approaches that integrate the education into daily practice. Competency –based training is particularly important in the ID/DD sector as only about 30% of DSPs have college degrees in a discipline related to community support services (Larson, Hewitt, & Knoblauch, 2005) and while direct care trainees are often exposed to large amounts of information during orientation, they do
not necessarily receive specific guidance about how to actually perform the multiple demands of their jobs (Coogle, et al., 2007b). In fact, newly hired workers without experience in providing direct care to developmentally disabled or functionally impaired adults suggest that their initial training lacks comprehensiveness (Hewitt & Larson, 2007). Further, the specific staff development needs of DSPs often become secondary to compliance with regulations (Anderson, Corazzini & McDaniel, 2004). Stone (2007) highlights the need to address a wide variety of topics within educational programs that help the staff to communicate better, resolve conflicts, work in teams, and provide better care to special populations such as those with advanced dementia. It is important for competency-based training to be provided for both workers and supervisors and for it to become integrated into the daily work routine and be supported by the organizational infrastructure and job design (Stone, 2007). Consistent with adult learning techniques, training is recommended to be experiential, hands-on, interactive learning that becomes an ongoing activity rather than a ‘one-shot deal’ (Stone, 2007).

Research suggests competency-based staff development as a crucial pathway toward enhancing retention of direct support workers and the quality of care they provide (Castle, Engberg, Anderson & Men 2007; Parsons, Simmons, Penn, & Furlough, 2003; PHI, 2005). Advanced professional training is associated with increased DSP job satisfaction and lower attrition rates (Castle et al., 2007; Engberg et al., 2009; The Lewin Group, 2008; Wright, 2009). Research in the aging sector suggests specialized training can improve the retention of paraprofessional caregiving staff (Grant, Kane, Potthoff, & Ryden, 1996; Konrad & Morgan, 2006), help direct care staff cope with job-related stress (Schonfeld et al., 1999), decrease absenteeism and reduce burn out (Austrom, 2000), and increase job satisfaction (Braun, Suzuki, Cusick, & Howard-Carhart, 1997; Maas, Buckwalter, Swanson, & Mobily, 1994). Specifically,
staff job satisfaction is increased by promoting the development and use of specialized skills (Maas, Buckwalter, Swanson & Mobily, 1994) which affects the quality of life of the people served (Forbat, 2006). Research suggests that “best practices” for training of DSPs extends beyond physical care, safety, and resident/client rights to include training in resident/client choice, independence, and inclusion (Forbat, 2006). This is substantiated by a 2007 study by Menne, Ejaz, Noelker and Jones in which approximately 45% of all direct care workers sampled reported their continuing education as being either ‘not at all useful’ or ‘somewhat useful’, indicating that modifications are needed in the topics covered and methods used for providing continuing education to staff. The better trained workers are, the more they will feel a sense of efficacy in their everyday interactions with the people they serve, and the more likely they will experience less work related stress creating a more satisfied workforce, and decreased attrition and turnover (Mabry, Kemeny, Chateau & Yasko, 2010).

Two large scale competency-based professional development initiatives for direct care workers were undertaken in recent years which support the findings reported above. In their Enhanced Care Assistant Training intervention to address staff attrition, Coogle and colleagues (2007b) found that when training was designed to encourage a career-focused orientation, enhance professionalism, increase self-efficacy, improve self-worth, and maximize intrinsic motivational processes, the improved application of training content resulted in a deepened commitment to care work as well. As the training series progressed, there was a linear increase in the reported likelihood that the way participants performed their jobs in the future would improve (Coogle et al., 2007a). Coogle and colleagues (2007b) further suggest that training initiatives intended to address direct care workforce shortages will be more immediately successful with those 18–39 years of age and that continuing education booster sessions across
the course of their careers are an important adjunct to combat middle-aged burnout. They found an advantage to developing curricula that expands beyond a focus on clinical skills development to include topics of practical value that also enhance professionalism, such as coping strategies and optimal team functioning. Similarly, the Workforce Improvement for Nursing Assistants: Supporting Training, Education, and Payment for Upgrading Performance (WIN A STEP UP) initiative was implemented to reduce the turnover rates of direct care workers in nursing homes. In the first evaluation of the WIN A STEP UP program using survey and qualitative data from eight participating nursing homes and 10 comparison nursing homes, Morgan and Konrad (2008) found that participants differed from controls by having (a) more improved nursing care and supportive leadership scores, (b) greater improvement in team care, and (c) stronger ratings of career and financial rewards. They also found that modest 3-month turnover reductions occurred in six settings where the program was fully implemented. In a later evaluation study, Dill, Morgan and Konrad (2010) found that the factors motivating the workers to continue functioning in these complex systems include the need for appreciation, their desire to be part of a helping community where all are valued, and their opportunity for professional and personal development. Results indicate that nursing homes participating in the WIN A STEP UP program were 15% more likely to have below-average turnover over the four year evaluation period than were nonparticipating nursing homes confirming that workforce interventions do have the potential to significantly reduce direct worker turnover, benefiting workers, employers, and residents.
The Ohio (OH) Professional Advancement through Training and Education in Human Services (PATHS) Credentialing Program

Ohio has a direct support workforce, identified by the U.S. Department of Labor under the heading of ‘personal care aides’ which is comprised in part by DSPs, of approximately 13,000 (PHI, 2009). As of December 2010, Ohio has the third largest home and community-based Medicaid (HCBS) waiver program in the country (Ohio Department of Aging, 2010). In 2009, there were over 30,400 residents in Ohio with ID/DD, with 20,500 residing in community settings with six or fewer persons (Braddock, Hemp & Rizzolo, 2011). Almost 630 million dollars was spent on HCBS services in 2009 (Braddock et al., 2011). Direct-care workers employed in home and community-based settings are a growing segment of Ohio’s workforce in both size and significance (PHI, 2009). In Ohio, demand for direct-care worker positions is expected to increase by 31 percent from 2008 to 2018 (PHI, 2009). In contrast, jobs overall are expected to increase by only 4 percent. Direct-care workers in Ohio earn significantly less than the average wage across all occupations in the state (PHI, 2009). Wages for Personal Care Aides, at a median of $9.54, fall below 200 percent of the 2009 federal poverty line for a single individual working full time ($10.42). The 200 percent poverty level is low enough to qualify households for many state and federal assistance programs. Compared to the national civilian workforce (18%), more of Ohio’s direct-care workers are uninsured (25%) (PHI, 2009). Because of low wages, direct-care workers often have difficulty affording private health insurance coverage; however, many earn too much to qualify for Medicaid. Forty-one percent of direct-care worker households in Ohio rely on some form of means-tested public assistance, particularly Medicaid (33%) or food and nutrition assistance (28%) (PHI, 2009). This reliance reflects the generally poor quality of direct-care jobs in terms of wages and benefits, and the part-time nature of many direct-care jobs.
Since 2003, Ohio has been offering a voluntary competency-based DSP credentialing program to address the workforce shortage in the state. The PATHS (Professional Achievement through Training & Education in Human Services) program was developed in 2001 with a grant from the Ohio Developmental Disabilities Planning Council and the Ohio Department of MR/DD to the Ohio Alliance for Direct Support Professionals (OADSP). The project was implemented in January of 2003 with three pilots located in Cincinnati, Cleveland, and Toledo. By 2006, the program was offered statewide. The PATHS mission is to create a competency based and credentialed career path for direct support professionals with the vision of a sufficient, highly skilled human service workforce encouraging and supporting people with disabilities to lead self-directed lives (OADSP, 2010).

The PATHS initiative is nationally accredited by the National Alliance for Direct Support Professionals (NADSP) and incorporates the Community Support Skills Standards as well the NADSP Code of Ethics, therefore, the training is competency-based. Instruction blends theory and practice empowering candidates to expand work-related knowledge and skills. All courses are taught by OADSP certified PATHS instructors who have documented expertise and extensive field experience and who complete a PATHS Instructor Course course that certifies and prepares them to teach the PATHS Certificate of Initial Proficiency (CIP) and Certificate of Advanced Proficiency (CAP) training modules according to the mission and philosophy of PATHS. There are 14 PATHS licenced training entities (OADSP, 2010) who can offer the PATHS CIP and CAP courses to their own employees or to individuals outside their organizations and charge them the approved PATHS tuition. In order to become a Licensed PATHS Training Entity, the entity must do the following: 1. Purchase the CIP and the CAP Training System Kits from OADSP; 2. Agree to follow, sign, and adhere to all the stipulations in
the confidentiality agreement; 3. Agree to follow, sign, and adhere to all the stipulations in the license agreement including agreeing to use only PATHS certified instructors and to provide skill mentors to learners to broaden and deepen the learning experience. Program quality is assured through the coordination and oversight of a state-wide PATHS team (OADSP, 2010).

Voluntary credentials are earned by DSP’s at four levels: Registration level, Certificate of Initial Proficiency (CIP), Certificate of Advanced Proficiency (CAP), and Certificate of Specialized Skill and Knowledge. The registration level is achieved upon submission of a complete application packet by employees in good standing after 320 hours of employment, and 40 hours of basic instruction. The PATHS CIP can be earned by DSPs who have completed the Registration level. The PATHS CIP program requires sixty (60) hours of classroom instruction, including training in community living skills and supports, history of services, self-determination, documentation, positive behavior supports, team communication, advocacy, health and safety management, personal ethics, conflict resolution, and more. The twenty (20) CIP modules, which are each three (3) hours in length, are approved for Ohio Department of Developmental Disabilities (DODD) seminar credit including a 30-hour DODD Seminar Credit in Introduction to Developmental Disabilities and a 30-hour DODD Seminar Credit in Principles of Work/Principles of Habilitation Programming. All modules are also approved for Continuing Professional Development Units (CPDU’s) from the Ohio Department of Developmental Disabilities (DODD). In addition to the completion of the 60 hours of classroom instruction, candidates for the PATHS CIP credential are required to demonstrate their proficiency in specific competency areas through the development of a professional portfolio. The PATHS CIP Portfolio consists of a collection of work samples that demonstrate the candidate’s mastery of skills in a variety of areas. All PATHS CIP candidates are required to work with a skill mentor
whose purpose is to assist in the application of skills to their workplaces, as well as to guide the candidate in the completion of the PATHS CIP Portfolio.

The Certificate of Advanced Proficiency (CAP) program is an education and training program designed for Direct Support Professionals who have completed the Certificate of Initial Proficiency (CIP) and are interested in pursuing a higher level of certification, learning, and skill attainment. The PATHS CAP Program includes 116 hours of classroom instruction in the areas of participant empowerment, understanding and utilizing assessments, facilitation of services, advocacy and self-advocacy, vocational, educational, and career support, community service and networking, crisis intervention, organizational participation, education, training, and self-development, supporting successful community living, advanced benefits management, and effective teaching practices and strategies. The twelve CAP modules are separated into twenty-one classes which vary in length from five to six hours each (OADSP, 2010). In addition to the completion of the 116 hours of classroom instruction, candidates for the PATHS CAP credential are required to demonstrate their proficiency in specific Community Support Skills Standards competency areas through the development of a professional portfolio. The PATHS CAP Portfolio consists of a collection of five work samples that demonstrate the candidate’s mastery of specific skills. All PATHS CAP candidates also work with a skill mentor whose purpose is to assist the candidate in the application of skills to their workplaces, as well as to guide the candidate in the completion of the PATHS CAP Portfolio. Each of the twelve (12) training modules of the PATHS CAP have also been approved for Continuing Professional Development Units (CPDU) through the Ohio Department of Developmental Disabilities. To date, over 800 DSPs from 32 organizations have completed the CIP and 200 have achieved the CAP levels of
the PATHS program (T. Thomas, President of OADSP, personal communication, October, 2011).

Further, a Certificate of Specialized Skill and Knowledge in Supporting Older Clients with ID/DD is available. In this seminar, participants practice utilizing screening tools used with older adults, including assessments relating to incontinence, cognition, activities of daily living, mobility, gait and balance, and mood. In group discussion participants identify and discuss ethical considerations relevant to older adult screenings. In class activities participants practice and discuss select screenings, and work together to generate potential ideas for follow-up evaluation and management. As they learn to conduct screenings correctly, participants will also gain valuable experience in describing the findings of the assessments and formulating follow-up plans based on these findings. Participants then apply what they have learned in this class by identifying older adults with whom they have contact who might benefit from these screenings. Participants also experience researching specific community resources and supports relevant to the needs of older adults, with the information being shared with other class participants. This course consists of one full day of classroom instruction (8 hours), followed two weeks later by one half-day (4 hours) of review. There are no prerequisites for this course. Course participants complete one work sample which demonstrates their skill in utilizing screening instruments (OADSP, 2010). It is anticipated that in early 2012, there will be more than 30 graduates with this specialized credential (T. Thomas, President of OADSP, personal communication, October, 2011). In addition to the certificate in Supporting Older Clients, PATHS Specialized Credential Courses include Autism Spectrum Disorder and the Direct Support Professional, Positive Behavior Supports, and Supporting Individuals with Developmental Disabilities and Mental Illness.
Summary

This chapter presented an overview of the research that has been conducted on the factors that correlate with direct care staff retention/attrition, research on staff supporting people with ID/DD who are aging, the role of competency-based professional development, described the credentialing intervention that will be investigated in this project, and provided a conceptual framework for the study. The literature demonstrates that individual attitudinal variables including intent to turnover, organizational commitment, and job satisfaction are critical predictors of retention or attrition for this population. Within this study, the job demand/control/support model provides a framework for theorizing that supporting people who are aging increases DSP stress, and lessens control which may result in higher job strain. The degree to which stress is perceived as strain is moderated by the worker’s self-efficacy which may be increased if she has completed a competency-based professional development initiative. In the next chapter, the design and sampling procedure will be outlined, instruments used to collect the data will be described, the research hypotheses will be specified, and the data analysis plan and methodological limitations will be offered.
CHAPTER 3

 METHODOLOGY

This study used a cross-sectional online survey design with convenience sampling to access DSPs to participate. As previously described, Ohio (OH) has a population of approximately 13,000 personal care aides, which includes an unspecified number of DSPs, throughout its eight regions. To access the small segment of the DSP population that has completed the OH PATHS credential, the sampling frame for this study was limited to seven organizations which are regional licensed training entities of the PATHS curriculum and were recommended by the OH PATHS executive director, Scott Osterfeld, for participation in the study. These agencies included: Welcome House, Inc., Koinonia Homes, Inc., Living Arrangements for the Developmentally Disabled (LADD), Cincinnati's Optimum Residential Environments (CORE), Inc., Ann Grady Center, Renaissance House, and Filling Home. Combined, these organizations have a direct support staff of approximately 1000 workers (personal communication, S. Osterfeld, 3/15/12).

From this frame, a convenient sample of DSP subjects was obtained by sending a recruitment flier (see Appendix B) via e-mail to the Executive Director of each organization asking for his/her organization’s involvement by encouraging the voluntary participation of his/her staff in the study. To demonstrate credibility and increase organizational participation, the recruitment requests were co-sponsored by the Ohio Alliance for Direct Support Professionals (OADSP) and were co-signed by the OADSP President as well as the OH PATHS Executive
Director. A letter of OADSP’s agreement to support the study and the letter to the organization directors are attached (see Appendices C & D).

Sample

Once an organization agreed to support their staff to participate in the study, there were a number of criteria that were required for referral into the study. Participants were 18 years of age or older to provide voluntary consent for participation. Each subject had to meet the definition of being a DSP in which she must spend 50% or more of his/her work time providing direct non-medical care to adults with ID/DD in a community-based service setting and must have worked for at least 8 weeks as a DSP.

Subjects included both those DSPs who completed the CIP or CAP credential, those who are in the process of taking courses, and those did not participate in the credentialing program for comparison. In a meta-analysis of experimental job enrichment interventions to reduce employee turnover in multiple sectors, McEvoy and Cascio (1985) found a moderate approximated treatment effect size of .35. To further increase the effect size, the non-credentialed group was anticipated to receive only ‘treatment as usual’ conditions in which their level of training was not expected to extend beyond the basic pre-service training courses required by the organization to meet state standards. Power analyses using G*Power 3 (http://wwwpsycho.uni-duesseldorf.de/abteilungen/aap/gpower3/) estimating a conservative effect size of .25, with alpha set at .05 (limiting the chance of making a Type I error to 5%), and power at .80 (setting a 80% chance of statistically detecting differences in comparison groups) (Dattalo, 2008), with 10 predictor variables yielded results indicating that the study required a sample size of approximately 75 total subjects. To increase the likelihood of participation, a $10.00 incentive was offered to each DSP who completed the survey. As a non-probability sampling method was
being employed, requests to refer additional DSPs to complete the survey were made to the leadership of the organizations as needed until the minimum sample size was achieved.

Prior to data collection, the study was fully vetted and approved by the Institutional Review Board at the University of Georgia. A letter explaining the study and the subjects’ rights to refuse participation, as well as the risks and benefits of participating, were included on the first page of the survey (see Appendix E). Informed consent was obtained from each subject contributing to the study.

**Data Collection**

The online survey was programmed, hosted, and managed by the Survey Center at the University of Georgia. A link to the survey was sent, via e-mail, to each of the seven identified licensed training organizations in Ohio to be shared with their staff. To increase the likelihood of subject response, organizations were asked to provide time for their DSPs to complete the survey while on the clock, using work computers. It was anticipated the survey would take an average of 45 minutes to complete. The surveys were confidential and self-administered. The data collected used numeric identifiers to protect the identities of the subjects. To preserve the confidentiality of the participants, the contact information required to receive the $10.00 incentive via the U.S. postal service was collected in a separate survey that was not linked to the data collected in the study survey. Furthermore, the organizations names were coded to preserve the anonymity of the employer and the names will not be disclosed in any publically published reports or presentations. An aggregated report of the findings of the study and implications for practice was sent to each participating organization in appreciation for their support.
Measures & Instruments

Data was collected from DSPs throughout Ohio on the independent variables of theoretical interest: certificate completion, support of aging adults, and general self-efficacy, as well as explanatory variables identified in the literature as antecedents to retention including the worker characteristics of age and tenure, organizational commitment, perceived empowerment, job satisfaction, perceived support, and job stress/demand. The response variable in this study was retention as measured by turnover intent. Data on each of these variables was collected via a number of pre-tested instruments identified in the 2005 Office of the Assistant Secretary for Planning and Evaluation’s publication *Measuring Long-Term Care Work: A Guide to Selected Instruments to Examine Direct Care Worker Experiences and Outcomes* to reduce measurement error, and were compiled into one multi-construct survey as follows:

- **Worker Characteristics** - Demographic factors are among the most common predictors in the turnover literature. In the social services broadly, a number of studies find age, education, job level, and tenure with the organization to be significant predictors of retention (Mor Barak, Nissly, & Levin, 2001) although they are not in agreement on the strength of the association. Data on education level, gender, years as a DSP, identification of the employing organization, and worker’s union status was collected for this study for descriptive purposes. Data on age and tenure was collected and tested as predictor variables.

- **Credential Completion** – Categorical data on the level of credential completed (none, working on it, CIP, CAP, and/or Certificate in Specialized Skill and Knowledge in Older Adults) was collected to test the hypotheses that propose that credentialing relates to DSP retention.
• Average age of persons supported (categorically defined as age 45 and older or age 44 and younger) was collected to test the hypotheses related to the support of older adults and DSP retention. The mean age of 45 years was selected in accordance with the World Health Organization’s (2000) determination that the chronological point for determining age-related change is when people with intellectual disabilities are in their 50s. However, this is often complicated by the occurrence of what appears to be premature aging and shortened life expectancy in some individuals with intellectual disabilities, particularly in persons with profound and multiple disabilities and frequently those with Down syndrome (World Health Organization, 2000; Janicki & Dalton, 1999) and is adjusted down accordingly.

• Occupational retention – To obtain a measure of the number of DSPs in the sample who left the employer they had when they completed the PATHs credential, but stayed in the field and are working for another provider organization at the time of this study, a question asking if the respondent worked for his/her current employer at the time the PATHs credential was completed is included in this survey for descriptive purposes.

• General Self-Efficacy Scale– The New General Self-Efficacy Scale (NGSE), developed by Chen, Gully, and Eden (2001), is a one-dimensional 8 item scale which assesses a general sense of perceived self-efficacy and competence across a variety of achievement situations. Available responses to the statement items are on a likert scale ranging from strongly disagree to strongly agree. The NGSE internal consistencies range between alpha = .85 and .90 (Chen et al., 2001; Chen, Gully, & Eden, 2004). The instrument was validated in two studies against Schwartzer and Jerusalem’s (1995) General Self-Efficacy
Scale and showed improved construct validity and reliability (Chen et al., 2001). It is frequently used in organizational research.

- Psychological Empowerment Instrument- The Psychological Empowerment Instrument (PEI) was designed to measure the four dimensions of empowerment based on Thomas and Velthouse’s (1990) definition of meaning, competence, self-determination, and impact. Meaning refers to the value of the work goals or purposes; it involves a fit between values, beliefs and behaviors and the work role. Competence is a reflection of an individual’s self-efficacy or one’s belief in his/her capability of performing work tasks. Self-determination involves believing that one has a choice in initiating actions in the workplace. Impact is the degree to which an employee can influence the outcomes of the organization. Internal consistency ranges from .62 to .74 for the total scale and from .79 to .85 for the subscales. The 12 item instrument and uses a 7-point likert scale (strongly disagree to strongly agree) where higher scores indicate higher perceived empowerment. The instrument has been validated through use in more than 50 different studies in contexts ranging from nurses to low wage service workers and has a test-retest reliability of .80 (Spreitzer, 1995; 1996).

- Stress/Burden Scale – The Stress Burden Scale (SBS) was developed by researchers at the University of California, Los Angeles (Doty, Benjamin, Matthias & Franke, 1998). Stress refers to how stressed workers feel when it comes to client safety, family issues, client behavioral problems, the client role in their work, and their own emotional state. The instrument was validated in a study with agency-based and home-care workers (Benjamin & Matthias, 2004). Internal consistency ranges from .63 - .75 across
subscales. Stress is assessed over 17 questions using a likert scale where higher score indicate higher stress.

- **Survey of Perceived Organizational Support** – The Survey of Perceived Organizational Support (SPOS) was developed by Eisenberger, Huntington, Hutchison, and Sowa (1986). The scale assesses employee perceptions of the extent to which the organization values their contributions and is concerned about their well-being. The original survey was a 36-item questionnaire from which Eisenberger, Fasolo, and Davis-LaMastro (1990) selected the items with the largest factor loadings to represent a reduced one-dimensional 8 item version of the scale with a likert scale response inventory ranging from strongly disagree to strongly agree so that it could be used with other lengthier surveys. Internal consistency reliability for the short version has been reported to be between .74 and .97 (Rhoades & Eisenberger, 2002). The scale has been found to be related to, but distinguishable from, measures of similar beliefs and attitudes (Eisenberger et al., 1990; Rhoades, Eisenberger & Armeli, 2001; Shore, & Wayne, 1993) and has been validated with employees from diverse occupations and organizations (Rhoades & Eisenberger, 2002).

- **General Job Satisfaction** - General job satisfaction is defined as an overall measure of the degree to which the employee is satisfied and happy with the job. The General Job Satisfaction Scale (GJS) is a short 5-item measure of overall job satisfaction that is derived from the theoretical and conceptual work that resulted in the Job Diagnostic Survey (Hackman & Oldham, 1975; 1980). The GJS has been validated with long-term care staff (Schaefer & Moos, 1996). Internal consistency of scale ranges from .74 – .80. Responses range from strongly agree to strongly disagree on a 7 point likert scale.
• Organizational Commitment Questionnaire - Organizational commitment is the strength (or lack thereof) of an individual’s expressed attachment to a particular organization. In this study, this variable was measured by the Organizational Commitment Questionnaire (OCQ) developed by Mowday and Steers (1979). It is the most thoroughly studied instrument in the literature that measures affective attachment to an organization. The OCQ was developed over a 9-year period on research from diverse samples \((n=2,563)\) including hospital employees and psychiatric technicians. It includes the extent to which the individual: (1) accepts and believes in the organization’s goals; (2) is willing to exert effort on behalf of the organization; and (3) wants to continue involvement in the organization. Construct validity has been determined by correlations with intent to leave, job satisfaction, and supervisor’s ratings of employee commitment. Internal consistency ranges from .80 to .90. The OCQ is a 15 item self-administered survey with a likert scale response inventory ranging from strongly disagree to strongly agree. Higher scores indicate greater organizational commitment.

• Turnover Intent - Turnover intent focuses on an employee’s intention to voluntarily leave his/her job. In this study turnover intention was empirically measured by The Intent to Turnover (ITO) Measure (from the Michigan Organizational Assessment Questionnaire or MOAQ) which was developed initially in 1975 as part of a larger survey instrument measuring employee perceptions. The three-item instrument has been used with many different occupational samples and was validated in a study with home health aides (Cammann, Fichman, Jenkins & Klesh, 1983). This set of items focuses on cognitive intent rather than affective attachment as indicated by the degree of commitment to the organization. Responses range from strongly disagree to strongly agree on a 7 point likert
scale. The internal consistency has been found to be .83. Lower scores reflect a greater intention to stay with the organization.

The full survey had a Flesch-Kincade readability level of 6.8, indicating that it was expected to be comprehensible to those with slightly less than a seventh grade education, to accommodate for the lower reading levels and language barriers that are typical of DSPs. See appendix F for the survey that was used in this study.

**Research Questions & Hypotheses**

The purpose of this study was to empirically investigate if there is a significant difference between DSPs who complete a credentialing program and those who do not obtain a credential when the variables affecting turnover are compared, as well as to explore if there is a difference in retention, as measured by turnover intent, between DSPs who support aging adults with ID/DD and those who do not when the variables affecting turnover are compared. The output of the study was a regression model that reliably predicts DSP retention from the variables under investigation. This study applied a job demand/control/support framework and self-efficacy theory to explore the research questions and, based on the literature reviewed in the previous chapter, offered the following corresponding hypotheses:

1. **Are DSPs who complete a certificate/credential different from those who do not?**
   
   a. **H1**: DSPs who complete a credential will report higher self-efficacy than those who do not.

2. **Are DSPs who primarily support aging adults with ID/DD different from those who support younger adults?**

   a. **H2**: DSPs who support aging adults with ID/DD will report higher stress/demands than other DSPs.
b. H3: DSPs who support aging adults will report lower levels of empowerment/control than other DSPs.

3. What is the relationship between the variables?
   a. H4: Worker characteristics moderate perceived stress/demand and empowerment.
   b. H5: Age of persons supported moderates perceived stress/demand and empowerment.
   c. H6: Perceived organizational support mediates perceived stress/demand and empowerment.
   d. H7: Stress/demand has a negative relationship with job satisfaction.
   e. H8: Empowerment/control has a positive relationship with job satisfaction.
   f. H9: The relationship between empowerment and job satisfaction was moderated by self-efficacy.
   g. H10: Job satisfaction has a positive relationship with organizational commitment.
   h. H11: Organizational commitment mediates job satisfaction and turnover intent.
   i. H12: Organizational commitment has a negative relationship with turnover intent.
   j. H13: There is an interaction between the effects of age of persons’ supported and credential completion.

Figure 5 illustrates the hypothesized relationships between the variables of interest in this study.

4. Does participating in a competency-based professional development initiative predict DSP retention?
   a. H14: At least some of the explanatory variables—credential completion, job stress/demand, self-efficacy, perceived empowerment, perceived support,
organizational commitment, job satisfaction, age, and tenure will reliably predict retention (low turnover intent) in community-based DSPs.

b. H15: Certificate completion will explain a statistically significant amount of the variance in retention found in the regression model.

![Figure 5](image)

**Figure 5**

Hypothesized Relationships between Variables.

**Data Management**

Once the surveys were completed the data was exported from the online container into an Excel spreadsheet and uploaded into the PASW SPSS computer program. For instruments where both summated sub-scale scores and a total score were possible (the Psychological Empowerment Instrument and the Stress/Burden Scale) all scores were recorded. Therefore, each
subject had numerous scores: categorical dummy coded scores for certificate completion and level, and for age of persons’ supported; a total score for stress with four sub-scores, a total score for empowerment with four sub-scores, a total score for perceived support, a total score for self-efficacy, a total score for job satisfaction; a total score for organizational commitment, and a total score for turnover intent. In addition, each subject had data on his/her age, years as a DSP, educational level achieved, gender, union membership status, length of time employed by current provider, and a dummy code indicating if she has a credential and is still with that employer.

**Data Analysis**

A number of descriptive and inferential statistics were run in accordance with the hypotheses proposed in this study. The results are described in detail in Chapter 4.

Univariate descriptive statistics, including the means and standard deviations of the distributions, were run for each of the explanatory variables under study and all of the variables across the three age of persons supported groups (age 45 and older; equal; or age 44 and younger), as well as the credential groups (credentialed; in the process; or non-credentialed), and the employer groups to describe their characteristics.

Univariate descriptive analyses of the variables suggested violations of the assumptions of distribution normality in the continuous variables under study. Given the high number of variables that violate the assumptions needed for parametric testing, nonparametric analyses were selected to test the hypotheses exploring the differences between groups. Nonparametric statistical tests allow for the exploration of the differences in means without the assumptions of normality and homogeneity of variance required by parametric statistical tests by using score ranking to test for differences (Field, 2009). Although sometimes reported as more likely to produce Type II errors, nonparametric tests have been shown to have as much, if not more,
power to accurately detect significant differences between groups when the assumptions of parametric tests are not met (Field, 2009).

Each hypothesis that proposed differences between groups of DSPs was tested using the Kruskal-Wallis test, the nonparametric equivalent to ANOVA, to determine if there were significant differences between credentialed DSPs, those who are in the process of obtaining a credential, and those who are not currently involved in the credentialing process as well as those who support older adults, younger adults, or equal numbers in the variables under study. Post hoc Mann-Whitney tests (nonparametric independent t-tests) were used to determine which groups showed significant differences in mean scores. A Bonferroni correction setting alpha at .0167 (.05/3) was made to limit the chances of making a Type I error over the three post hoc comparisons.

Bivariate correlations and simple linear regressions were used to determine the relationships between variables and the level of association between them. A preliminary understanding of the strength and directionality of the relationship (if any) between variables was assessed through a bivariate correlation matrix using Spearman’s rho – a nonparametric test of association. Spearman’s rho works by ranking the data to determine if associations are significant beyond the probability of chance (Field, 2009). After exploring the bivariate associations, regression analyses were conducted to determine the extent to which the correlated variables influence each other. As simple linear regression is considered robust enough to be used with non-normally distributed data, it was selected to test the predictive ability of the variables’ associations (Field, 2009). The roles of moderating and mediating variables were analyzed using linear regression. Moderators and mediators are considered ‘third variables’ in determining an explanatory relationship between a predictor and an outcome variable wherein a
moderator interacts with the independent variable to modify the strength or direction of its effect on the outcome variable, and a mediator is an intermediary variable that intervenes with, or links, the effect of the independent on the dependent variable (Wu & Zumbo, 2008). To test for moderation, the variables were standardized and the product of the hypothesized moderating variable and the variable it was thought to influence was computed. The variables were then entered in blocks using stepwise selection into the regression equation to analyze the significance of the interaction (moderator*predictor) within the model (Wu & Zumbo, 2008). Mediators were tested using simple regression by first assessing the association between the independent and mediating variable, the mediator and the dependent variable, and then the independent and dependent variables. The extent to which (if any) the mediator alters the association between the predictor and response variable was assessed by entering the independent and mediating variables into a regression model in stepwise blocks (Wu & Zumbo, 2008).

Finally, hierarchical multiple regression analyses were used to produce a parsimonious model that is predictive of retention. Prior to analyses, bivariate residual plots and scatterplots of the predictor variables which were determined to be of significance both by previous research and the bivariate analysis phase of this study were examined for outliers, linearity, and constant variance to determine if the assumptions of regression were met (Pedhazur, 1997). Satisfying this, the variables were entered into the model hierarchically in blocks where the predictors of known significance were entered in the first block and the theoretical predictor was entered in the second block to be sure that the most parsimonious model for predicting retention (low intent to turn over) is created (Field, 2009).

**Methodological Limitations**

As with any research endeavor, there were limitations to this study due to the methods employed. Since this study used cross-sectional data, observed associations are not necessarily
causal. Relationships between the variables were explored, but explanation and causation must be determined through more rigorous designs in future research. The cross-sectional design may also underreport the impact of job demands due to the “healthy worker effect” whereby those with work related health or other problems leave the workforce (Pavalko & Woodbury, 2000). Further, generalization of the findings must be made cautiously as nonprobability sampling introduces selection bias whereby the sample may not be representative of the larger population. In spite of these limitations, exploratory studies using this design can provide useful tentative findings when care is taken not to overgeneralize the findings (Rubin & Babbie, 2005).

**Summary**

In this chapter the design, methods, data collection, hypotheses, and analysis were described. This study used a cross-sectional design with a self-administered, confidential, online survey to obtain data on the variables hypothesized to relate to DSP retention from a convenient sample of DSP volunteers. Subjects were accessed via outreach to seven provider organizations in Ohio that offer the OH PATHS curriculum to their staff. This study was endorsed by the OADSP and the OH PATHS leadership to encourage participation. The hypotheses were tested by analyzing the differences between groups, by exploring the relationships between variables, and by regression analyses. The next chapter will describe the results of the analyses.
CHAPTER 4

FINDINGS

Data were collected over six weeks in March and April of 2012. The survey was open to approximately 1000 direct support workers employed within seven provider organizations in Ohio that indicated an interest in participating in this study. Of the 117 surveys received, twenty were removed for unit nonresponse or because the subject did not meet the eligibility requirements of the study. Ninety-seven surveys were retained. The data were analyzed using the PASW SPSS (Version 20) computer program.

As is often the case in cross-sectional survey research (Raghunathan, 2004), missing data were of concern in this study. Only 66% \( (n=64) \) of the surveys returned were complete. Item nonresponse within the variables under study ranged from .03% (for the Psychological Empowerment Index) to 18.5% (for the Organizational Commitment Questionnaire). Patterns of missing data were identified by the researcher by visually examining the dataset and confirmed by case summary analysis across variables. The pattern suggested that the mechanism for missingness was not at random (MNAR) (Rubin, 1976). Data are MNAR when the probability that a value for a certain variable is missing is related to the scores on that variable itself (Rubin, 1976). Data were considered MNAR when the respondent selected the ‘I choose not to respond’ option to skip a survey question. Table 1 summarizes the frequency of this occurrence. Of the 33 cases with missing data, 55% \( (n=18) \) of respondents who selected this option did so for items included in the Organizational Commitment Questionnaire, which is significantly negatively skewed (see Table 4 for descriptive statistics of the variables under study). Therefore, it is
assumed that these items were intentionally missed because the respondent was uncomfortable entering a score that suggested low commitment to the organization. MNAR data cannot be addressed through imputation, as the missing data are believed to be totally different from the available data (Allison, 2000). Further, modern statistical techniques for addressing missing data such as multiple imputation and maximum likelihood estimation are not recommended for MNAR data as they are prone to substantial bias (Allison, 2000 & 2002; Raghunathan, 2004). Therefore, more traditional handling of the MNAR data is called for and the implications must be considered carefully in the interpretation of the analyses (Allison, 2002). In spite of losing power, and increasing the chance of making a Type II error, cases with missing data were excluded from inferential analysis on a listwise basis in which any case with missing data in a variable under investigation were deleted to preserve the true correlations of the observed data as recommended by Allison (2000 & 2002).

Table 1

*Frequency of “I choose not to respond” responses by variable*

<table>
<thead>
<tr>
<th>Measure</th>
<th>N of Items</th>
<th>N of Items with at least one “I choose not to answer”</th>
<th>N of Cases selecting at least one “I choose not to answer”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Empowerment</td>
<td>12</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Instrument</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Job Satisfaction Survey</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Intent to Turnover Measure</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>15</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Questionnaire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress / Burden Scale</td>
<td>17</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>New General Self-Efficacy Scale</td>
<td>8</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Survey of Perceived</td>
<td>8</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Organizational Support</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Descriptive Analysis

Sample Characteristics

Table 2 summarizes the categorical characteristics of the DSPs represented in this study. The sample was drawn primarily from six provider organizations in Ohio, although eleven respondents identified their employer as being unique to those listed and were placed together in an ‘other’ category to prevent them from being identified. The majority of respondents were white (65%) or African American (26%) women (84%), who work full time (87%) in residential supports (81%) and who are not in a union (89%). A surprisingly small percentage (14%) of the DSPs in the study primarily supports people under the age of 45. Of the remaining, 41% support people who are older than 45, and 45% support an equal number of younger and older adults. Most DSPs have some college education (40%), or a high school diploma or GED (25%), although many (35% combined) have completed a degree. The ages of the DSPs in the sample ranged from 21 to 65, with a mean age of 36.4 and standard deviation of almost 11 years (see Table 3 for a summary of the quantitative characteristics). Although the time spent working as a DSP ranged from one year or less up to 28 years, the average length of time that the respondent had been working as a DSP was 6.4 years ($SD=5.6$) with a median of five years and a mode of one year ($n=13$); and the average length of time that s/he had been working for the stated current employer was 5.5 years ($SD=5.3$), with a median of four years and a mode of one year ($n=16$). A review of cumulative percentages indicated that the majority (56%) of the respondents have been DSPs for five years or fewer with 24% being new (one year or less) to the field. Furthermore, a cross-tabulation of years as a DSP with years with the current employer revealed that 60% ($n=49$) of the DSPs in the sample have not changed employers since they became DSPs.
The DSP’s level of PATHS credentialing was deeply explored in this study. In the sample, 34% \((n=30)\) do not have the credential, 28% \((n=25)\) are in the process of obtaining it, and 38% \((n=34)\) have completed at least one level of the certificate. Of those who are credentialed, twenty-five have the Certificate of Initial Proficiency (CIP), and five have the Certificate of Advanced Proficiency. The vast majority \((94\%, n=32)\) of those who have the credential remain with the employer that they were working for when they completed it. Almost all \((94\%, n=32)\) of the credentialed DSPs in the sample report that they were recognized for their achievement, although only a small number, \(n=6\) and \(n=5\) respectively, received a wage increase or bonus. Twenty-five reported that their accomplishment was recognized in an organizational event, ceremony, or luncheon. In addition to the credential, ten respondents completed the PATHS Certificate in Specialized Skills and Knowledge in Older Adults and 77 indicated that they have other certificates including required training such as CPR, First Aid, and medication administration, as well as unrequired training such as certification in state tested nursing assistance, passive range of motion, medical assistance, g-tube training, chemical dependency, counseling, transport, and non-violent self-defense.

Table 2

*Categorical Demographic or Employment Characteristics \((N=97)\)*

<table>
<thead>
<tr>
<th>Demographic or Employment Characteristics</th>
<th>(N) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>75 (84.3)</td>
</tr>
<tr>
<td>Male</td>
<td>14 (15.7)</td>
</tr>
<tr>
<td>Missing</td>
<td>8</td>
</tr>
<tr>
<td>Age of persons supported</td>
<td></td>
</tr>
<tr>
<td>Most are 44 and younger</td>
<td>13 (14.3)</td>
</tr>
<tr>
<td>Equal number</td>
<td>41 (45.1)</td>
</tr>
<tr>
<td>Most are 45 and older</td>
<td>37 (40.7)</td>
</tr>
<tr>
<td>Missing</td>
<td>6</td>
</tr>
<tr>
<td>Work setting</td>
<td>Residential</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>Vocational</td>
</tr>
<tr>
<td></td>
<td>Day Program</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td>African American/Black</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
</tr>
<tr>
<td></td>
<td>American/Alaskan Native</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
</tr>
<tr>
<td></td>
<td>Multi-racial/Other</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
</tr>
<tr>
<td>Union status</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
</tr>
<tr>
<td>Employer</td>
<td>Anne Grady</td>
</tr>
<tr>
<td></td>
<td>Filling Home</td>
</tr>
<tr>
<td></td>
<td>Koinonia Homes</td>
</tr>
<tr>
<td></td>
<td>LADD</td>
</tr>
<tr>
<td></td>
<td>Renaissance House, Inc.</td>
</tr>
<tr>
<td></td>
<td>Welcome House, Inc.</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
</tr>
<tr>
<td>Work status</td>
<td>Full Time</td>
</tr>
<tr>
<td></td>
<td>Part Time</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
</tr>
<tr>
<td>PATHS credential completion</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Not yet, but I am working on it</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>CIP</td>
</tr>
<tr>
<td></td>
<td>CAP</td>
</tr>
<tr>
<td></td>
<td>With current employer</td>
</tr>
<tr>
<td></td>
<td>Was Recognized</td>
</tr>
<tr>
<td></td>
<td>Received wage increase</td>
</tr>
<tr>
<td></td>
<td>Received bonus</td>
</tr>
<tr>
<td></td>
<td>Recognized in an event</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
</tr>
</tbody>
</table>
Table 3

Quantitative Demographic or Employment Characteristics

<table>
<thead>
<tr>
<th>Demographic or Employment Characteristics</th>
<th>Range</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (n=87)</td>
<td>21 - 65</td>
<td>36.44 (10.93)</td>
</tr>
<tr>
<td>Length of time (years) as a DSP (n=84)</td>
<td>Less than 1 - 28</td>
<td>6.4 (5.64)</td>
</tr>
<tr>
<td>Length of time (years) with current employer (n=84)</td>
<td>Less than 1 - 28</td>
<td>5.51 (5.29)</td>
</tr>
</tbody>
</table>

Variable Characteristics

This study explored one response variable and ten predictor variables. Table 4 summarizes the descriptive statistics for each of the quantitative variables being explored. Table 5 summarizes the categorical variables under study.

Response Variable:

*Intent to Turnover (ITO):* The outcome variable in this study was turnover intent which focuses on an employee’s cognitive intention to voluntarily leave his/her job. In this study, turnover intentions were measured by The Intent to Turnover Measure (Cammann, Fichman, Jenkins & Klesh, 1983), a three item scale with a summated score ranging from 3.0 to 21.0 where higher
scores indicate increased intention to leave the employer. The mean score for turnover intent in this sample was 9.83 (SD= 4.54, n=90) and the Cronbach’s alpha for the scale was .65.

Predictor Variables:

General Job Satisfaction (GJS): General job satisfaction is defined as an overall measure of the degree to which the employee is satisfied and happy with the job. The General Job Satisfaction Scale is a five item measure of overall job satisfaction with a range of 5.0 to 35.0 derived from the Job Diagnostic Survey (Hackman & Oldham, 1975; 1980). The Cronbach’s alpha for the scale was .62 and the mean score of the sample in this study was 25.98 (SD=4.60, n=91).

Psychological Empowerment (PEI): This factor was measured four dimensions (meaning, competence, self-determination, and impact) of work related empowerment based on Thomas and Velthouse’s (1990) definition. The Psychological Empowerment Instrument is a twelve item summative scale ranging from 12.0 to 85.0, in which higher scores indicate higher perceived empowerment. In this study, the Cronbach’s alpha was .94 and the mean score for psychological empowerment was 73.79 (SD=12.56, n=90).

Organizational Commitment (OCQ): Organizational commitment is the strength (or lack thereof) of an individual’s expressed attachment to a particular organization. In this study, this variable was measured by the Organizational Commitment Questionnaire (OCQ) developed by Mowday and Steers (1979), a fifteen item summative scale with a range of 15.0 to 105.0 which captures the extent to which employees believe in the organization’s goals, are willing to exert effort on behalf of the employer, and want to continue employment there. Higher scores indicate greater organizational commitment. In this study, the Cronbach’s alpha was .87 and the mean score was 79.15 (SD=12.89, n=79).
Stress/Burden (SBS): The Stress Burden Scale was developed by researchers at the University of California, Los Angeles (Doty, Benjamin, Matthias & Franke, 1998). Stress refers to how stressed workers feel when it comes to client safety, family issues, client behavioral problems, the client role in their work, and their own emotional state. Stress is assessed over seventeen items with a summative range from 17.0 to 119.0 where higher scores indicate higher stress. In this sample the Cronbach’s alpha for the scale was .75 and the mean was 47.56 (SD=14.95, n=86).

General Self-Efficacy (NGSE): General self-efficacy is a general sense of perceived competence across a variety of achievement situations. In this study it was measured by The New General Self- Efficacy Scale (NGSE), developed by Chen, Gully, and Eden (2001), an eight item scale with a range of 8.0 to 56.0 and a Cronbach’s alpha of .91. In this sample the mean was 52.23 (SD=5.91, n=93).

Perceived Organizational Support (SPOS): This measure assesses employee perceptions of the extent to which the organization values their contributions and is concerned about their well-being. It is operationalized by the Survey of Perceived Organizational Support developed by Eisenberger, Huntington, Hutchison, and Sowa (1986), an eight item scale with a range of 8.0 – 56.0. The Cronbach’s alpha was .92 and the mean was 41.24 (SD=11.47, n=90) in this sample.

Age of the Worker (DSPAGE): Age is simply the chronological age, in years, of the study participant. In this sample the ages of the workers ranged from 21.0 to 65.0 with a mean age of 36.44 (SD=10.93, n=87).

Tenure at the Organization (TENURE): Tenure is the number of years that a worker has been working for their current employer at the time of the study. In this sample, years with the current employer ranged from less than one year to 28 years with a mean of 5.51 (SD=5.29, n=84).
**Credential Completion (CRED):** Credentialing had three levels in this study: No credential \((n=30)\), working on getting the credential \((n=25)\), or having completed the credential \((n=34)\) at either the initial \((n=29)\) or advanced level \((n=5)\). These categorical data were dummy coded for inferential and regression analyses.

**Age of Person’s Supported (CLIENTAGE):** The average age of the people that the worker supports also had three levels: Younger than 45 \((n=13)\), an equal number of people who are 44 and younger and 45 and older \((n=41)\), and over the age of 45 \((n=37)\). Again, these data were dummy coded for inferential and regression analyses.

### Table 4

**Quantitative Variable Descriptive Statistics \((N=97)\)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Range</th>
<th>N (% )</th>
<th>Mean (SD)</th>
<th>Skewness (SE) / Kurtosis (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intent to Turnover (ITO)</td>
<td>3.0 – 21.0</td>
<td>90 (93)</td>
<td>9.83 (4.54)</td>
<td>.204 (.254) / -.808 (.503)</td>
</tr>
<tr>
<td>General Job Satisfaction (GJS)</td>
<td>10.0 – 35.0</td>
<td>91 (94)</td>
<td>25.98 (4.60)</td>
<td>-.307 (.253) / .567 (.500)</td>
</tr>
<tr>
<td>Psychological Empowerment Instrument (PEI)</td>
<td>12.0 – 85.0</td>
<td>94 (97)</td>
<td>73.79 (12.56)</td>
<td>-3.548 (.249)* / 14.839 (.493)*</td>
</tr>
<tr>
<td>Organizational Commitment Questionnaire (OCQ)</td>
<td>34.0 – 103.0</td>
<td>79 (82)</td>
<td>79.15 (12.89)</td>
<td>-.904 (.271)* / 1.024 (.535)</td>
</tr>
<tr>
<td>Stress Burden Scale (SBS)</td>
<td>17.0 – 98.0</td>
<td>86 (89)</td>
<td>47.56 (14.95)</td>
<td>.313 (.260) / .620 (.514)</td>
</tr>
<tr>
<td>New General Self-Efficacy Scale (NGSE)</td>
<td>23.0 – 56.0</td>
<td>93 (96)</td>
<td>51.23 (5.91)</td>
<td>-2.014 (.250)* / 5.456 (.495)*</td>
</tr>
<tr>
<td>Survey of Perceived Organizational Support (SPOS)</td>
<td>10.0 – 56.0</td>
<td>90 (93)</td>
<td>41.24 (11.47)</td>
<td>-.564 (.254) / -.380 (.503)</td>
</tr>
<tr>
<td>Age of DSP (DSPAGE)</td>
<td>21.0 – 65.0</td>
<td>87 (90)</td>
<td>36.44 (10.93)</td>
<td>.778 (.258) / -.195 (.511)</td>
</tr>
</tbody>
</table>
Tenure at Employer (TENURE) 0 – 28 84 (87) 5.51 2.057 (.263)*
Missing 13 (5.29) 4.982 (.520)*

*= significant skew / kurtosis in distribution

Table 5

*Categorical Data Descriptive Statistics (N=97)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>N (%)</th>
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<tr>
<td>Credential Completion (CRED)</td>
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</tr>
<tr>
<td></td>
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<tr>
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<tr>
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<td>Age of Persons Supported (CLIENTAGE)</td>
<td>Most are younger than 45</td>
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<tr>
<td></td>
<td>Equal number</td>
<td>41 (45.1)</td>
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<tr>
<td></td>
<td>Most are 45 and older</td>
<td>37 (40.7)</td>
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<tr>
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<td>Missing</td>
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**Group Characteristics**

In addition to understanding the composition of the sample and variables under study as a whole, univariate analyses within the sub-groups of level of credential, level of the ages of people being supported, and employing organization describing the mean scores and deviations of the sample were conducted across variables to gain an understanding of how the sample differed between sub-groups. Table 6 summarizes these characteristics. Please refer to Appendix F for a list of the acronyms used in this study.
Table 6

Descriptive Statistics Within Groups (N=86)

<table>
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<tr>
<th>Credential Completion</th>
<th>ITO</th>
<th>GJS</th>
<th>PEI</th>
<th>OCQ</th>
<th>SBS</th>
<th>NGSE</th>
<th>SPOS</th>
<th>DSPAGE</th>
<th>TENURE</th>
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<tr>
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<td>(6.58)</td>
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<td>49.78</td>
<td>43.10</td>
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<td>(7.97)</td>
<td>(9.81)</td>
<td>(5.11)</td>
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Employing Organization
Note: The names of the organizations are numerically coded for confidentiality purposes.

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<th>CRED</th>
<th>DSPAGE</th>
<th>GJS</th>
<th>ITO</th>
<th>NGSE</th>
<th>PEI</th>
<th>SBS</th>
<th>SPOS</th>
<th>TENURE</th>
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Inferential Analysis

Univariate descriptive analyses of the variables suggested violations of the assumptions of distribution normality in the continuous variables under study. The Kolomogorov-Smirnov (K-S) test of normality was conducted to determine the appropriateness of parametric inferential analyses and showed that PEI $D(57) = .20, p < .001$, OCQ $D(57) = .16, p < .001$, NGSE $D(57) = .19, p < .001$, DSPAGE $D(57) = .16, p < .001$, and TENURE $D(57) = .20, p < .001$ distributions were significantly non-normal. Following this, Levene’s test for homogeneity of variance was run for each continuous variable by age of people supported (CLIENTAGE) and level of credential completion (CRED). This test found the variances for NGSE for the three levels of the credential group were significantly different, $F(2, 52) = 3.27, p < .05$ as were the variances for DSPAGE $F(2, 52) = 3.29, p < .05$. Further, the variances for PEI were significantly different between the three levels of the age of people being supported $F(2, 52) = 3.21, p < .05$. Table 7 summarizes these tests.
Table 7

Tests of Distributional Normality and Homogeneity of Variance

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<th>Levene’s Statistic</th>
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<td>.441</td>
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<td>.867</td>
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<td>.001**</td>
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* = p < .05
** = p < .001

Note:

CLIENTAGE = Age of Persons Served
CRED = Credential Completion
DSPAGE = Age of Direct Support Professional
GJS = General Job Satisfaction
ITO = Intent to Turnover
NGSE = General Self-Efficacy
OCQ = Organizational Commitment
PEI = Psychological Empowerment
SBS = Stress / Burden
SPOS = Perceived Organizational Support
TENURE = Years with Employer
Research Questions:

The first research question asked: *Are DSPs who complete a certificate/credential different from those who do not when variables associated with voluntary turnover are compared?*

This question was explored using the Kruskal-Wallis test, the nonparametric equivalent to ANOVA, to determine if there were significant differences between credentialed DSPs, those who are in the process of obtaining a credential, and those who are not currently involved in the credentialing process on the variables under study. Post hoc Mann-Whitney tests (nonparametric independent t-tests) were used to determine which groups showed significant differences in mean scores. A Bonferroni correction setting alpha at .0167 (.05/3) was made to limit the chances of making a Type I error over the three post hoc comparisons (credentialed vs. none, working on it vs. none, credentialed vs. working on it). Table 8 summarizes these findings. This question offered the following hypothesis:

**Hypothesis #1: DSPs who complete a credential will report higher self-efficacy than those who do not.**

The Kruskal-Wallis test found significant differences in general self-efficacy (NGSE) in the CRED group $H(z) = 13.04, p < .001$, but not in the hypothesized direction. Mann-Whitney follow up tests revealed that DSPs who have a credential (mean= 49.78) have significantly lower general self-efficacy than those who are working on getting the credential (mean = 53.04), $U = 250.50, z = -2.17, p < .05$; and those who are not involved in the credentialing process (mean = 52.11), $U = 281.00, z = -2.09, p <.05$. There was no significant difference in general self-efficacy in DSPs who are working on their credential and those who are not, $U = 286.50, z = -.021, ns.$
In addition to this difference, significant differences in years worked (TENURE) at the employing organization were found between CRED groups \( H(2) = 16.25, p = .001 \). Follow up tests showed DSPs who have a credential have worked significantly longer (mean = 8.55) at the organization in which they are currently employed than those who do not have a credential (mean = 4.56), \( U = 143.0, z = -4.27, p < .001 \), or those who are working on getting the credential (mean = 3.22), \( U = 138.0, z = -4.05, p < .001 \). There was not a significant difference in tenure between those DSPs who are working on a credential and those who are not \( U = 283.0, z = -.095, ns \).

Table 8

*Kruskal-Wallis & Mann Whitney Tests (CRED)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kruskal-Wallis Chi-Square</th>
<th>Asymp.Sig</th>
<th>Mann-Whitney U (z score)</th>
<th>Asymp. Sig</th>
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<td>138.0 (-4.048)</td>
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<td>283.0 (-.095)</td>
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</table>

* = \( p < .05 \)

** = \( p < .001 \)
The second research question asked: Are DSPs who primarily support aging adults with ID/DD different from those who support younger adults when the variables associated with voluntary turnover are compared?

Again, Kruskal-Wallis tests and Mann-Whitney follow up tests with a Bonferroni adjustment to account for three between group CLIENTAGE comparisons (older vs. younger, older vs. equal, and younger vs. equal) were used to explore this question. Table 9 summarizes these findings. The two hypotheses below were proposed:

**Hypothesis #2:** DSPs who support aging adults with ID/DD will report higher stress/demands than other DSPs.

This hypothesis was not supported. There was no significant difference on SBS between CLIENTAGE groups, $H(2) = .89, ns$.

**Hypothesis #3:** DSPs who support aging adults will report lower levels of empowerment/control than other DSPs.

This hypothesis was supported. The Kruskal–Wallis test found significant differences in psychological empowerment (PEI) in the CLIENTAGE group $H(2) = 11.10, p < .01$. Follow up Mann-Whitney tests showed DSPs who primarily support adults with ID/DD who are over the age of 45 report significantly lower psychological empowerment (PEI) scores (mean = 72.60) than those who support an equal number of younger and older people with ID/DD (mean = 79.23), $U = 388.50, z = -3.015, p < .01$. Within this comparison, in addition to showing significant differences on the summative score for PEI, DSPs who support older adults report lower scores on the sub-scales of self-determination (PEI-S-SD) $U = 461.0, z = -2.25, p < .05$, and impact (PEI-S-I) $U = 431.0, z = -2.56, p < .05$. There were no significant differences between DSPs who support aging adults and those who support younger adults on PEI, $U =$
138.8, \( z = -1.87, \ ns \); nor between those who support an equal number of younger and older adults and those who primarily support younger adults, \( U = 255.5, z = -0.093, \ ns \).

Table 9

*Kruskal-Wallis (N=55) & Mann Whitney Tests (CLIENTAGE)*

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<tr>
<th>Variable</th>
<th>Kruskal-Wallis Chi-Square</th>
<th>Asymp.Sig</th>
<th>Mann-Whitney U (z score)</th>
<th>Asymp. Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEI</td>
<td>11.098</td>
<td>.004**</td>
<td>388.5 (-3.015)</td>
<td>.003**</td>
</tr>
<tr>
<td></td>
<td>Older vs. Equal (n=73)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equal vs. Younger (n=53)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Younger vs. Older (n=46)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GJS</td>
<td>3.293</td>
<td>.193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITO</td>
<td>1.215</td>
<td>.545</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCQ</td>
<td>4.487</td>
<td>.106</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SBS</td>
<td>.890</td>
<td>.641</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSPAGE</td>
<td>.091</td>
<td>.955</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NGSE</td>
<td>1.822</td>
<td>.402</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TENURE</td>
<td>2.266</td>
<td>.322</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**= \( p < .01 \)

**Relationships between Variables**

The third research question asked: *What is the relationship between the variables associated with DSP retention/turnover?* Since the process of voluntary turnover is a relatively understudied phenomenon in disability services and the literature is unclear about the relationship and direction of the factors that are correlated with turnover intent, the observed relationships between variables were analyzed. One-tailed tests (as differences were predicted to be directional) found notable significant relationships. Table 10 summarizes the significant bivariate correlations found, the direction (positive or negative) of the relationship, and significance level.
Table 10

Bivariate Spearman’s Rho Correlation Matrix (N=55)

<table>
<thead>
<tr>
<th></th>
<th>ITO</th>
<th>GJS</th>
<th>PEI</th>
<th>OCQ</th>
<th>SBS</th>
<th>NGSE</th>
<th>SPOS</th>
<th>CLIENTAGE</th>
<th>DSPAGE</th>
<th>TENURE</th>
<th>CRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITO</td>
<td>1.00</td>
<td>-0.54**</td>
<td>-0.09</td>
<td>-0.52**</td>
<td>0.195</td>
<td>0.285*</td>
<td>-0.358**</td>
<td>0.093</td>
<td>0.068</td>
<td>-0.080</td>
<td>-0.081</td>
</tr>
<tr>
<td>GJS</td>
<td>1.00</td>
<td>0.217</td>
<td>0.671**</td>
<td>-0.386**</td>
<td>0.084</td>
<td>0.569**</td>
<td>-0.222</td>
<td>0.225</td>
<td>0.156</td>
<td>0.081</td>
<td></td>
</tr>
<tr>
<td>PEI</td>
<td>1.00</td>
<td>0.274*</td>
<td>-0.202</td>
<td>-0.005</td>
<td>0.307*</td>
<td>-0.370**</td>
<td>0.111</td>
<td>0.166</td>
<td>0.180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCQ</td>
<td>1.00</td>
<td>-0.381**</td>
<td>0.132</td>
<td>0.754**</td>
<td>0.002</td>
<td>0.46</td>
<td>0.154</td>
<td>0.016</td>
<td>0.076</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SBS</td>
<td>1.00</td>
<td>-0.110</td>
<td>-0.497**</td>
<td>0.094</td>
<td>-0.136</td>
<td>-0.125</td>
<td>0.144</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NGSE</td>
<td>1.00</td>
<td>0.104</td>
<td>-0.021</td>
<td>0.247</td>
<td>0.161</td>
<td>0.182</td>
<td>0.147</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPOS</td>
<td>1.00</td>
<td>-0.172</td>
<td>0.432**</td>
<td>0.356**</td>
<td>0.281*</td>
<td>0.105</td>
<td>0.000</td>
<td></td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLIENTAGE</td>
<td>1.00</td>
<td>-0.040</td>
<td>-0.179</td>
<td>-0.253*</td>
<td>0.387</td>
<td>0.095</td>
<td>0.031</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSPAGE</td>
<td>1.00</td>
<td>0.294*</td>
<td>0.183</td>
<td>0.015</td>
<td>0.091</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TENURE</td>
<td>1.00</td>
<td>0.534**</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**= p<.01 (1-tailed)
*= p <.05 (1-tailed)
After exploring the bivariate associations, regression analyses were conducted to determine the extent to which the correlated variables influence each other. A summary of the findings of these analyses can be found in Table 11.

The following hypotheses about the relationship between the variables were offered:

**Hypothesis #4: Worker’s characteristics of age (DSPAGE) and years with the current employer (TENURE) moderate perceived stress/demand (SBS) and empowerment (PEI).**

This hypothesis was not supported. Neither the interaction of DSPAGE*SBS, nor the interaction of TENURE*SBS were found to significantly explain the variance in PEI. Additionally, neither DSPAGE nor TENURE was significantly correlated with PEI. However, PEI and SBS were found to have a slight but significant negative relationship, \( r = -.234, p < .05 \). Regression of SBS on PEI found that PEI explained a very small (.07%) amount of the variance of SBS (\( F(1,81) = 5.86, p < .05 \)) where for each 1 unit decrease in perceived empowerment stress increases by .23.

**Hypothesis #5: Age of persons supported (CLIENTAGE) moderates perceived stress/demand (SBS) and empowerment (PEI).**

This hypothesis was not supported. The interaction of CLIENTAGE*SBS was not found to be significant within the regression model. Additionally, CLIENTAGE was not found to explain a significant amount of the variance in either SBS or PEI.

**Hypothesis #6: Perceived organizational support (SPOS) mediates perceived stress/demand (SBS) and empowerment (PEI).**

This hypothesis was not supported. Although SPOS has a significant association with SBS, \( F(1,79) = 37.43, p < .001 \), where SBS accounts for 32% of the variance in SPOS; and PEI also has a small but significant association with SPOS, \( F(1,85) = 3.95, p < .05 \), where SPOS accounts for 4% of the variance in PEI; and PEI has a significant relationship with SBS, \( F(1,81) = 5.86, p < .05 \), where PEI accounts for 7% of the variance in SBS,
the final regression of PEI on both SBS and SPOS determined that the association between SBS and PEI was not mediated by SPOS ($t=.623$, $ns$).

**Hypothesis #7: Stress/demand (SBS) has a negative relationship with job satisfaction (GJS).** This hypothesis was supported. In this sample, SBS has a significant moderate negative relationship with GJS, $r = -.386$, $p < .01$. A simple regression of GJS on SBS found that SBS explains 24% of the variance in job satisfaction ($F(1,79) = 25.18$, $p < .001$), where a 1 unit increase in stress results in a .15 decrease in job satisfaction. Additionally, it was discovered that SPOS has a significant positive association where 30% of the variance with GJS can be accounted for by perceived organizational support ($F(1,84) = 35.93$, $p < .001$), in which a 1 unit increase in organizational support increases job satisfaction by .22. A further regression analysis revealed that SPOS significantly mediates the association between SBS and GJS $F(2,75)=20.04$, $p<.001$, and together SBS and SPOS explain 35% of the variance in GJS.

**Hypothesis #8: Empowerment/control (PEI) has a positive relationship with job satisfaction (GJS).** There is a weak positive relationship ($r=.217$) between PEI and GJS, but it is not significant. This hypothesis was not supported.

**Hypothesis #9: The relationship between empowerment (PEI) and job satisfaction (GJS) will be moderated by self-efficacy (NGSE).** This hypothesis was not supported. The interaction of NGSE*PEI did not significantly explain the variance in GJS. Further, neither NGSE nor PEI were found to be significantly related to GJS.

**Hypothesis #10: Job satisfaction (GJS) has a positive relationship with organizational commitment (OCQ).** This hypothesis was supported. There is a significant strong positive relationship between GJS and OCQ, $r = .671$, $p < .01$ in this sample. Regression of OCQ on GJS
found GJS explains 40% of the variance in OCQ ($F(1.75)= 49.81, p < .001$) where a 1 unit increase in job satisfaction results in a 1.83 unit increase in organizational commitment.

**Hypothesis #11**: Organizational commitment (OCQ) mediates job satisfaction (GJS) and turnover intent (ITO). This hypothesis was not supported. Although regression of OCQ on GJS was significant, $F(1.75)=49.81, p < .001$, where GJS accounted for 40% of the variance in OCQ; and regression of ITO on OCQ was also significant, $F(1.74) = 21.08, p < .001$, where OCQ explained 22% of the variance in ITO; and regression of ITO on GJS was significant as well $F(1.84) = 43.11, p < .001$, where GJS accounted for 34% of the variance in ITO, the final regression of ITO on both GJS and OCQ determined that the association between GJS and ITO was not significantly mediated by OCQ ($t = -1.15, ns$).

**Hypothesis #12**: Organizational commitment (OCQ) has a negative relationship with turnover intent (ITO). This hypothesis was supported. There is a significant and moderately strong negative relationship between OCQ and ITO, $r = -.526, p < .01$. A regression of ITO on OCQ found OCQ explains 22% of the variance in ITO ($F(1.74) = 21.08, p < .001$) where a 1 unit increase in organizational commitment decreases intent to turnover by .18.

**Hypothesis #13**: There is an interaction between the effects of age of persons’ supported and credential completion. This hypothesis was not supported. A Factorial ANOVA exploring the three levels of CLIENTAGE across the three levels of CRED when ITO was measured did not find a significant interaction between CLIENTAGE*CRED ($F(4)= .849, ns$), nor were there significant differences in CRED on ITO ($F(2)= 2.26, ns$), or CLIENTAGE on ITO ($F(2)= .107, ns$).
Table 11

*Bivariate Linear Regressions*

<table>
<thead>
<tr>
<th>Outcome / Dependent Variable</th>
<th>Predictor / Independent Variable</th>
<th>N</th>
<th>R Square</th>
<th>Beta</th>
<th>F statistic</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEI</td>
<td>DSPAGE</td>
<td>84</td>
<td>.002</td>
<td>.041</td>
<td>.143</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>TENURE</td>
<td>81</td>
<td>.02</td>
<td>.135</td>
<td>1.490</td>
<td>ns</td>
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<tr>
<td></td>
<td>CLIENTAGE</td>
<td>87</td>
<td>.00</td>
<td>-.010</td>
<td>.009</td>
<td>ns</td>
</tr>
<tr>
<td>SPOS</td>
<td>SBS</td>
<td>80</td>
<td>.32</td>
<td>-.567</td>
<td>37.43</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>PEI</td>
<td>86</td>
<td>.04</td>
<td>.211</td>
<td>3.95</td>
<td>p &lt; .05</td>
</tr>
<tr>
<td></td>
<td>DSPAGE</td>
<td>81</td>
<td>.09</td>
<td>.305</td>
<td>8.23</td>
<td>p &lt; .05</td>
</tr>
<tr>
<td>TENURE</td>
<td>DSPAGE</td>
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<td>.06</td>
<td>.245</td>
<td>5.17</td>
<td>p &lt; .05</td>
</tr>
<tr>
<td></td>
<td>CRED</td>
<td>83</td>
<td>.16</td>
<td>.397</td>
<td>15.36</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td>GJS</td>
<td>SBS</td>
<td>80</td>
<td>.24</td>
<td>-.492</td>
<td>25.18</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>SPOS</td>
<td>85</td>
<td>.30</td>
<td>.547</td>
<td>35.93</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>PEI</td>
<td>87</td>
<td>.01</td>
<td>.118</td>
<td>1.12</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>NGSE</td>
<td>86</td>
<td>.01</td>
<td>.114</td>
<td>1.12</td>
<td>ns</td>
</tr>
<tr>
<td>OCQ</td>
<td>GJS</td>
<td>76</td>
<td>.40</td>
<td>.632</td>
<td>49.81</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td>ITO</td>
<td>OCQ</td>
<td>75</td>
<td>.23</td>
<td>-.471</td>
<td>21.08</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>GJS</td>
<td>85</td>
<td>.34</td>
<td>-.582</td>
<td>43.11</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td>SBS</td>
<td>NGSE</td>
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<td>.06</td>
<td>-.241</td>
<td>5.052</td>
<td>p &lt; .05</td>
</tr>
<tr>
<td></td>
<td>PEI</td>
<td>82</td>
<td>.07</td>
<td>-.260</td>
<td>5.86</td>
<td>p &lt; .05</td>
</tr>
</tbody>
</table>

*Note:*

CLIENTAGE = Age of Persons Served  
CRED = Credential Completion  
DSPAGE = Age of Direct Support Professional  
GJS = General Job Satisfaction  
ITO = Intent to Turnover  
NGSE = General Self-Efficacy  
OCQ = Organizational Commitment  
PEI = Psychological Empowerment  
SBS = Stress / Burden  
SPOS = Perceived Organizational Support  
TENURE = Years with Employer
Revised Relationship Model

The analyses of the relationships of the variables described above demonstrated that the hypothesized model of the associations between the variables associated with turnover in Chapter 3 (Figure 5) was incorrect. The test of the hypotheses above along with the described additional regression analyses to assess unpredicted mediation within the variables revealed that general job satisfaction (GJS) is a mediator between organizational commitment (OCQ) and perceived organizational support (SPOS). Further, perceived organizational support (SPOS) was found to be a mediator between general job satisfaction (GJS) and stress (SBS).

Given the findings of this study, the associations between the variables were re-conceptualized and the revised relationship model is presented in Figure 6.

Figure 6
Model of Significant Associations Between Variables Predicting Turnover.
Multiple Regression Analysis

The final research question asked: *Does participating in a competency-based professional development initiative predict DSP retention?* To answer this question, a multiple regression analysis was performed wherein all of the variables (GJS, OCQ, and SPOS) which had been determined to be associated with the outcome variable, intent to turnover (ITO), were entered into a regression model. The variables were entered into the model hierarchically in blocks where the predictors of known significance (GJS, OCQ, and SPOS) were entered in the first block and the theoretical predictor (CRED) was entered in the second block. Table 12 summarizes this model. This research question offered the following hypotheses:

**Hypothesis #14:** Certificate completion will explain a statistically significant amount of the variance in retention found in the regression model. This hypothesis was not supported. In this study, the null hypothesis was retained, as there is not enough evidence to conclude the intent to turnover can be reliably predicted using credential completion at the alpha = .05 level, $t(67) = -.679$, $p = .500$.

**Hypothesis #15:** At least some of the explanatory variables will significantly predict retention (low turnover intent) in community-based DSPs. Using stepwise selection where the probability to enter (PIN) was set at .05 and the probability to remove (POUT) a variable from the equation was set at .10, the regression model showed that general job satisfaction (GJS) was the only variable that was needed to significantly predict turnover intent, $F(64) = 40.82$, $p < .001$. Alone, GJS was determined to have a strong negative relationship ($r = -.621$) with ITO, and it accounted for 39% of the variance in intent to turnover where a 1 unit increase in job satisfaction decreases turnover intent by .64.
Table 12

**Multiple Regression on Intent to Turnover (N= 67)**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE b</th>
<th>Beta</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>GJS</td>
<td>-.525</td>
<td>.139</td>
<td>-.510</td>
<td>.000*</td>
</tr>
<tr>
<td>OCQ</td>
<td>-.100</td>
<td>.065</td>
<td>-2.640</td>
<td>.132</td>
</tr>
<tr>
<td>SPOS</td>
<td>.047</td>
<td>.063</td>
<td>.749</td>
<td>.457</td>
</tr>
<tr>
<td>CRED=Yes</td>
<td>-.552</td>
<td>.974</td>
<td>-.056</td>
<td>.500</td>
</tr>
</tbody>
</table>

F(64) = 40.82 *

Adjusted $R^2$ = .38

$R^2$ change = .39

*= p<.001

Note:

CLIENTAGE = Age of Persons Served
CRED = Credential Completion
DSPAGE = Age of Direct Support Professional
GJS = General Job Satisfaction
ITO = Intent to Turnover
NGSE = General Self-Efficacy
OCQ = Organizational Commitment
PEI = Psychological Empowerment
SBS = Stress / Burden
SPOS = Perceived Organizational Support
TENURE = Years with Employer

**Summary**

This chapter described the data that were collected, the way missing data were handled, the analyses used to explore the research questions and to test the hypotheses that were proposed, and summarized the findings of those analyses. The results of the statistical tests show that DSPs who have a credential have worked with their employing organization significantly longer than those who are working on obtaining their credential and those who aren’t pursuing a credential, and that they have significantly lower general self-efficacy than both comparison groups. DSPs that primarily support aging adults with disabilities reported significantly lower psychological empowerment, specifically in the areas of self-determination and impact, than those who support
younger adults or those who support equal numbers of younger and older people. It was also
determined that having a credential is not a significant predictor of retention. Job satisfaction was
found to significantly, and independently, predict turnover intent in which higher job satisfaction
lowers a DSP’s intent to turnover. Further, the relationships between the variables were explored
using regression and a model of the path of the associations between the variables was presented.
An interpretation of these findings and the implications for practice, policy, and future research
in the field of social work as it applies to the intellectual and developmental disability sector will
be offered in the next chapter.
CHAPTER 5

DISCUSSION

Across most of the country, evidence suggests the existence of high turnover and vacancy rates for direct support professionals (DSPs), shortages of qualified staff, and difficulties recruiting and retaining workers (Seavey & Marquand, 2011). A 2006 U.S. Department of Health and Human Services report observed that is will be critically important to improve the retention of existing DSPs in order to meet the increased need for supports over the coming decades. Certificate/credentialing programs which offer competency-based advanced professional development have been recommended as a means by which to improve DSP retention (Hewitt & Larson, 2007; National Direct Service Workforce Resource Center, 2008; Stuart, Hoge, Morris, Adams & Daniels, 2009). However, to date there has been a marked lack of research that provides insight into the relationship between the implementation of credentialing programs in the ID/DD sector and DSP job satisfaction, perceived empowerment, stress, organizational support, organizational commitment, and turnover intent – the variables demonstrated in the literature to correlate with retention (see Chapter Two). Additionally, there is a lack of research examining if these variables differ when DSPs primarily support aging adults with ID/DD.

Using the job demand/control/support (JDC(S)) model as a conceptual framework and self-efficacy as a theoretical guide, this study explored if there is a significant difference in retention, as measured by turnover intent, between DSPs who complete a credentialing program and those who do not have a credential and if there is a difference between DSPs who support
aging adults with ID/DD and those who do not when the variables affecting turnover are compared. This study sought to add to the knowledge base by answering the following questions:

1. Does participating in a competency-based professional development initiative predict DSP retention?

2. When the variables associated with job retention/attrition are compared, are DSPs who obtain a competency-based credential different from those who do not?

3. When the variables associated with job retention/attrition are compared, are DSPs who primarily support aging adults with ID/DD different from those who support younger adults?

4. What is the relationship between the variables associated with job retention/attrition?

In the sections that follow, the findings for each of these research questions are interpreted, the limitations of the study are shared, and implications for practice, policy, and future research are offered.

**Predictors of DSP Retention**

This study sought to add to the evidence that workforce development projects which professionally develop direct care workers show potential to lower the turnover rates of the direct support workforce (Coogle et al., 2007 a & b; Dill, Morgan & Konrad, 2010), but found that job satisfaction alone was the most important predictor of intended turnover. This supports a recent finding by McKillip and Minnes (2011) which indicated that job satisfaction represented the most critical predictor of direct care workers’ intention to leave their current employment. Specifically, the current study found that low intent to turnover was predicted by high levels of job satisfaction among the DSPs in this study. In turn, high job satisfaction was predicted by high perceived organizational support and low work related stress. These findings align with the 2011
report *Caring in America*, in which Seavey and Marquand highlight that a direct-care worker’s expressed intent to leave his or her job is strongly associated with his or her level of job satisfaction, that high job satisfaction is associated with positions where stress is lowered via balanced workloads, and the workers are supported via environments that promote respect, independence, and positive relationships with supervisors. Indeed, research has shown that job satisfaction and of perceptions of workplace support are important mediators within the occupational withdrawal process among direct care providers (Hastings & Horne, 2004; Hatton & Emerson, 1993, 1998; Hatton et al., 2001; Lawrence, Glidden, & Jobe, 2006; Neben & Chen, 2010; Razza, 1993). It is worthy to note that while in this study it was not a significant predictor of either job satisfaction or turnover intent, advanced professional training is directly associated with increased DSP job satisfaction and lower attrition rates in many recent studies (Castle et al., 2007; Engberg et al., 2009; The Lewin Group, 2008; Wright, 2009).

An interesting finding of this study was that there is a significant association between perceived organizational support, a strong predictor of job satisfaction ($B = .547, p < .001$), and having a PATHS credential by way of DSP age and organizational tenure. The results of single regression analyses show that perceptions of organizational support are positively associated with the age of the DSP wherein perceptions of support are higher in older DSPs ($B = .305, p < .05$). Age, in turn, has a positive relationship with tenure ($B = .245, p < .05$), wherein the older the DSP is the greater the number of years she has spent working for her current employer. Finally, organizational tenure has a positive relationship with credential completion ($B = .397, p < .001$) wherein DSPs who have more years with their current employer also possess a PATHS credential at the CIP or CAP level. Cross-sectional research does not allow for interpretations of causality (Rubin & Babbie, 2005), however, this association is interesting nonetheless as it
suggests that completing a certificate program contributes to a DSP staying with the employer for whom she worked when the certificate was obtained for a longer period of time than those without a credential, and increased perceptions of organizational support may result over time. This interpretation is supported by the descriptive analysis of the credentialed DSPs in this study where, when asked if she currently works for the employer she was with when she completed the PATHS certificate, 94% of credentialed DSPs stated that she does. While tenure itself was not determined to be a significant predictor of turnover intent in this study, research has shown that turnover rates are significantly higher among employees with a shorter length of service than among those who are employed longer (Bloom, Alexander & Nuchols, 1992; Gray & Phillips, 1994; Somers, 1996). If completing a credential significantly impacts upon organizational tenure, then it may also affect turnover intent either directly as suggested by the above research, or indirectly via perceived organizational support, as suggested by this study. A search for additional literature on the association between organizational tenure and DSP credentialing revealed an absence of research on this topic which indicates that there is a need for future research to confirm or refute this interpretation.

Differences between Credentialed and Non-credentialed DSPs

Analyses of the significant differences between DSPs who have an OH PATHS credential, those who are working toward it, and those who are not participating in the certificate program show that the groups differ in their tenure with the employing organization, and in their level of general self-efficacy. These findings are interpreted below.

A significant difference in tenure, or amount of time spent working for the current employer at the time of this study, was found between credentialed DSPs and those in the process of obtaining the certificate ($p < .001$), as well as with those not involved in the
credentialing program ($p < .001$). A comparison of the average years on the job show that those with a credential have worked for their current employer significantly longer at the time of this study (at an average of 8.6 years) than those who do not have a credential (averaging 4.6 years) or those who are in the process of earning the credential (averaging 3.2 years). As discussed above, while causality cannot be inferred, this finding suggests that those DSPs who choose to commit to the credentialing process are more likely to stay with the employer they were working for when the certificate was obtained. Again, as there is an absence of studies in the extant literature to compare this finding with, more research must be conducted to verify this interpretation.

A very surprising finding was made when the general self-efficacy of the groups was compared in which DSPs who have a credential demonstrated significantly lower general self-efficacy than both those without a credential or those whom are working on it at the $p < .05$ level. This result contradicts research which shows that self-efficacy is increased by relevant task related training broadly (Ammentorp, Sabroe & Kofoed, 2007; Huang, Shyu & Chen, 2003; Lorenz, Gregory, & Davis, 2000), and research which shows that advanced professional training increases the self-efficacy of direct care workers specifically (Mabry, Kemeny, Chateau & Yasko, 2010). Interestingly, DSPs with the highest reported general self-efficacy were those who were in the process of obtaining the credential (mean = 53.04), followed by those who are not involved in the certificate program (mean = 52.11) and finally, with the lowest score, the credentialed group (mean = 49.78). Two interpretations for this finding are offered below.

The first interpretation of this finding is that general self-efficacy diminishes over time following the completion of the certificate program if the skills and knowledge gained during the training process are not able to be successfully implemented on the job. This explanation is
supported by Coolege, Parham, Jablonski, and Rachel (2007a) who, in an evaluation study of an enhanced care assistant training curriculum for geriatric home care workers, found that there was increased frustration among the participants when newly learned enlightened practices could not be applied due to organizational barriers and bureaucratic inefficiency. According to Bandura (2002), strong self-efficacy is related to perceiving more positive outcomes of future actions and fewer negative outcomes. Of all the sources of self-efficacy, it is suggested that enactive mastery has the greatest influence on improving or diminishing self-efficacy beliefs (Bandura, 1986; Sheu & Lent, 2007). Enactive mastery occurs when an individual performs a specific behavior, interprets the results of that specific behavior in conjunction with the outcome, and uses that interpretation to develop further beliefs about his or her capabilities in a future circumstance or activity. Bandura’s (1997) concept of enactive mastery relies on both the individual and the individual’s learning and working environment to help shape one’s feelings of self-efficacy. These self-efficacy beliefs then direct forthcoming choice and action (Stajkovic & Luthans, 1998) and may improve or diminish depending on how a person interprets the outcome (Bandura, 1986). Therefore, it is possible that the lowest reported general self-efficacy is demonstrated by the group with the highest level of completed training because specific behaviors and actions learned during the credentialing process result in negative outcomes in practice. If the curriculum that guides the credentialing program teaches DSPs to master skills that they are unable to implement, or find consistently ineffective, it stands to reason that their interpretation of their ability to confidently perform job related tasks will diminish over time. This has important ramifications for organizational practice which will be discussed in the implications section.
The second interpretation focuses on the high general self-efficacy reported by DSPs who are working toward obtaining the credential. Although it was not found to be statistically significant, the group who are in the process of earning the certificate also had the highest work related stress/burden scores (mean = 50.38), of the three groups (those with a credential had a mean score of 47.70, and those without had a mean of 44.97). Given the comparatively high job related stress reported by this group, high self-efficacy may be accounted for by considering the role of the skills mentor in the OH PATHS credentialing program. Each DSP who is enrolled in the PATHS program and is working on obtaining a credential at either the initial or advanced proficiency level is required to be supported by a skills mentor (OADSP, 2010). All skills mentors are trained by the PATHS program to obtain the skills and attitudes needed to be an effective mentor by role modeling and assisting a mentee to develop the skills and behaviors needed to reach professional goals (OADSP, 2010). Further, mentors are practiced in helping others to problem solve creatively, manage multiple priorities, and set and attain goals. They provide feedback and support their mentees in solving performance related problems (OADSP, 2010). The social modeling and verbal support provided by the skills mentor accounts for two of the sources of self-efficacy: vicarious learning, and social persuasion. Vicarious learning occurs when an individual observes, retains, recalls, and replicates a model’s performance on a specific task (Bandura, 1986). In practice, the effects of vicarious learning are greatest among individuals who have limited experience at a task or among individuals who are undecided about their own capabilities to perform a task (Pajares, 2002). Similarly, verbal or social persuasion can affect whether an individual, particularly someone who is in the early stages of attempting a complex activity, develops feelings of self-efficacy (Bandura, 1997). Social persuasion includes positive reinforcements such as effective words of encouragement and supportive and directive feedback.
on performance that work to nurture self-efficacy beliefs and instill the sense that envisioned successes are possible resulting in feelings of self-efficacy (Bandura, 1997). This interpretation is supported by research which has shown that a worker’s task efficacy is improved through supportive supervisory practices and it is this heightened self-efficacy that protects against job related strain (Gist & Mitchell, 1992; Wood & Bandura, 1989; Wood, Bandura & Bailey, 1990).

As the skills mentor is provided to the DSP during the period of time that the credential is being earned, it is likely that his/her presence increases the self-efficacy of the mentee. It is presumed that once the credentialing process is completed, the skills mentor is no longer supporting the DSP, and her level of self-efficacy will then depend upon her ability to enact the skills she has learned while on the job and assess her efficacy from the outcomes that result. There was no literature found that uses a repeated measures framework to measure the self-efficacy of direct care workers who enroll in a mentored training program over time to compare this interpretation with, again highlighting the need for future research in this area.

A final note on the differences in general self-efficacy found between the levels of credentialing must be made regarding the form of measurement used in this study. The instrument used measured general self-efficacy which reflects a generalization across domains of functioning in which people judge how efficacious they are (Schwarzer, 1999). However, for self-efficacy inventories to have sufficient explanatory and predictive validity, they must be developed at an appropriate level of specificity (Bandura, 2006). Specific self-efficacy is an evaluation of the capability to perform a certain task and the expectation of being able to successfully perform specific behaviors (Bandura, 1977). In his guide for constructing self-efficacy scales, Bandura (2006) highlights the need to tailor inventories to particular domains of functioning. At the time of this study, no instrument was available to measure the specific self-
efficacy of DSPs in the domain of ID/DD services so a previously validated and reliable general self-efficacy tool, the New General Self-Efficacy Scale (Chen, Gully & Eden, 2001) was selected. An index specific to measuring the self-efficacy of community-based DSPs (SEI-DSP) has been developed using Bandura’s (2006) guidelines, pilot-tested, and presented at a national conference by the researcher (Laws, C.B., 2011), and will be used in future research to test the self-efficacy findings of this study.

**Differences between DSPs who Support Older vs. Younger Adults with Disabilities**

This study found significant differences in psychological empowerment, particularly in the areas of self-determination and impact, between DSPs who primarily support aging adults with ID/DD and those who support an equal number of younger and older people at the $p < .05$ level. Interestingly, no significant difference was found between those who support older adults and those who primarily support younger adults with disabilities, possibly due to the small number ($n=13$) of the latter in the sample. In this study, DSPs who primarily support adults with ID who are over the age of 45 were found to feel markedly less empowered on the job. The Psychological Empowerment Instrument (Thomas & Velthouse, 1990), used in this study measures how meaningful a worker finds her job to be, how confident she is in her work role, how much autonomy she feels she has in going about her work, and how much impact she feels that she has in her department. These factors closely match the two constructs that comprise Karasek’s (1989) conceptualization of job control: skill discretion and decision authority. Skill discretion signifies the level of skill required to perform job duties, the ability to learn, develop skills, or use creativity on the job, and the repetitiveness (or variety) of skills used on the job (Karasek et al., 1998). Lower comparative scores assessing the meaningfulness of the work and a DSP’s confidence in her ability to do her job suggest that DSPs who support aging adults with
ID/DD feel that they have less skill discretion than their co-workers. The largest significant difference between groups existed in the sub-scales of self-determination and impact which reflect the construct of decision authority and speaks to the ability of employees to make decisions regarding their work (Karasek et al., 1998). This suggests that DSPs who support people who are aging feel less able to independently go about the tasks of their job and that they have low control and influence over what happens within their department. These findings are important as Karasek and Theorell’s (1990) strain hypothesis maintains that a combination of the high job demands found in health support occupations (Karasek et al., 1998) and low control, such as that found in this study, leads to job strain such as exhaustion, health complaints, and job dissatisfaction.

It is also interesting to note, although not found to be significant, descriptive analyses revealed that DSPs who support older people with disabilities had mean scores that were higher than both comparison groups on intent to turnover, job related stress, and DSP age, while being lower than the other groups on general job satisfaction, organizational commitment, general self-efficacy, and perceived organizational support (see Table 4). These descriptive data suggest that DSPs who support people with ID/DD who are aging may be facing challenges on the job which could result in negative outcomes such as increased strain and turnover. This contention is supported by previous research which finds increased job related stress (Janicki et al., 2005, Webber, Bowers & McKenzie-Green, 2010, Wilkinson, Cunningham & Rae, 2004) and attrition (Donaldson, 2002) in staff that support aging adults with disabilities.

The Relationship between the Variables

Voluntary staff turnover has been conceptualized as a multistage process that includes chronological attitudinal, decisional, and behavioral components (Mor Barak, Nissly & Levin,
More specifically, the attitudes that staff hold about their work, such as their job satisfaction, organizational commitment, and of perceptions of workplace support have been identified as important mediators within the occupational withdrawal process among direct care providers (Hastings & Horne, 2004; Hatton & Emerson, 1993, 1998; Hatton et al., 2001; Lawrence, Glidden, & Jobe, 2006; Neben & Chen, 2010; Razza, 1993), however, there is disagreement in the literature about the path of these associations. Gaining an understanding of the relationships that exist between the factors that precede voluntary turnover is important for the development of interventions to thwart staff attrition. Therefore, this study used variables identified in the literature as preceding voluntary turnover and applied Karasek and Theorell’s (1998) job demand/control/support (JDC(S)) framework to better understand the associations between the factors that lead to organizational attrition or retention. Figure 6 illustrates the relationships found to be significant in this study.

Although there was a dearth of literature applying the JDC(S) framework to the process of voluntary attrition within the direct care sector, it was found to be a highly applicable, and relevant, framework by which to gain an understanding of factors that contribute to a DSP’s intentions to stay with or quit a job. A significant negative association was found between the level of control a DSP perceives that she has and her level of work related stress or demands, where a lower perception of empowerment predicts higher levels of stress. This aligns with Holman and Wall (2002) who reported consistent evidence for the role of control in skill utilization finding greater control enables employees to deploy and develop a wider range of skills and that such skill utilization in turn helps them to cope with demands more effectively. Gray-Stanley and colleagues (2010) specifically identified lack of control over workloads and low involvement in organizational decision-making along with increased client disability/client
care needs to be key factors associated with increased stress in ID/DD staff. Finally, in a study predicting the job satisfaction of direct care workers, Ejaz and colleagues (2008) found that those care workers who perceived that they were more in control of the stressors of their work had higher job satisfaction.

General self-efficacy was also found to be a significant predictor of the job related stress of DSPs where higher self-efficacy predicted lower job related stress. This finding supports research which finds that workers who have higher confidence in their ability to meet the demands of their work they are less likely to evaluate work stressors as threatening and to experience job strain and the negative consequences that generally follow (Nauta, Lui, & Li, 2010). Furthermore, high self-efficacy has been shown to protect workers from the impact of low control on the job as they are less affected by stressful situations than their less efficacious counterparts (Jerusalem & Schwarzer, 1992; Judge, Erez & Bono, 1998; Judge, Locke, & Durham, 1997).

This study found that perceived empowerment, the level of stress or demands on a DSP, and the age of the DSP all directly associate with how well supported by her organization a worker feels she is. A high level of control/empowerment predicts perceptions of high support. High levels of stress/demand predict low levels of perceived support from her organization. The older a worker is, the higher the amount of support from her organization she perceives she has. The relationship between emotional support and instrumental support from co-workers and supervisors and job related stress has been long established, although in most research support is used as an explanatory construct (Knox Haly, 2009). In this study, level of perceived support was found to have a mediating effect on job satisfaction as an outcome of stress and control. This finding is supported by the recent research by Delp, Wallace, Geiger-Brown, and Muntaner.
(2010), which finds that social support intervenes with the level of strain experienced by home care workers and increases job satisfaction. Similarly, Gray-Stanley and colleagues (2010) identify the moderating role of workplace support on control and stress. The relationship between a worker’s age and support is a bit more challenging to interpret; however, as tenure predicts chronological age, it stands to reason that the more time a DSP spends working for the agency, as she ages, the more established her relationships with colleagues and administrators become which result in increased feelings of support. This interpretation aligns with a meta-analysis of the antecedents to retention and attrition in the human services which suggests that employees remain on the job due to both satisfaction from the work that they do, supportive relationships, and a sense of commitment to the organization or the population served by it (Mor Barak, Nissly & Levin, 2001).

Perceived support from the employing organization, in turn, predicts job satisfaction in DSPs where workers are more highly satisfied with their job when they feel that they have high levels of organizational support. Organizational support may include feedback on job performance (Hatton & Emerson, 1993), and both practical and emotional support from colleagues, supervisors, and managers (Dyer & Quine, 1998; Hatton & Emerson, 1993; Hatton et al., 1995; Razza, 1993; Rose, 1995; Rose & Schelewa-Davies, 1997). Support from coworkers and supervisors is instrumental in worker retention (Mor Barak, Nissly, & Levine; 2001). This study’s findings support previous research which found that low levels of support from supervisors and colleagues, low influence over work decisions, and high stress from being in a low status job were strongly associated with job dissatisfaction (Hatton et. al, 2001). This study also aligns with research which found that organizational support has a positive relationship with job satisfaction, desire to remain with the organization, and low turnover intentions (Rhoades &
Eisenberger, 2002), and that which shows lack of perceived support for staff indirectly affects intended turnover (Hatton & Emerson, 1993; Larson et al., 1998; Razza, 1993).

Job satisfaction was found to have direct relationships with both organizational commitment and turnover intent in which high organizational commitment and low turnover intent were both predicted by high job satisfaction. Within the literature, there has been a debate about whether the relationship between job satisfaction and turnover intent is direct or indirect via job satisfaction’s impact on organizational commitment. Lum and colleagues (1998) revealed a causal path model in which job satisfaction affected organizational commitment, which in turn directly affected turnover intent, illustrating the mediating role of organizational commitment on turnover intention. Larson and colleagues (1998) reported that lack of commitment to the organization was found to indirectly affect intended turnover in direct support staff. The findings of the current study do not support either of these contentions, having found that both job satisfaction and organizational commitment, while positively associated with one another, are direct predictors of turnover intent. Neither mediates the other’s relationship with intent to turnover. However, in the final model for predicting turnover intent, job satisfaction was found to be the best predictor. This supports Castle and colleagues (2007) determination that job satisfaction was associated with low scores on thinking about leaving, thinking about a job search, searching for a job, and turnover. The path of association found in this study also confirms research which shows that direct care worker’s intentions to turnover were found to be directly influenced by dissatisfaction with employment and indirectly influenced by provider strain or burnout (Hatton & Emerson, 1993; Hatton et al., 2001; Razza, 1993).

Finally, taken as a whole, the path of the association between the variables illustrates that organizational commitment and job satisfaction both directly predict voluntary turnover, with job
satisfaction being the best statistical predictor. Job satisfaction mediates commitment to the organization and perceived organizational support. The level of support a DSP feels that she receives from her employer mediates the effects of stress and lack of control on job satisfaction. Having a credential indirectly affects perceived organizational support via tenure at the organization and the age of the worker. Increasing the self-efficacy of DSPs and/or empowering them to have more control on the job directly decreases the level of job related stress reported. This study aligns surprisingly well with a meta-analysis synthesizing research on staff attrition which shows that human services employees who lack in organizational and professional commitment, who are unhappy with their jobs, and who experience excessive burnout and stress and not enough social support are the most likely to contemplate leaving the organization (Mor Barak, Ni ssly & Levine, 2001).

**Limitations of the Study**

While this study contributes in many important ways to the knowledge base surrounding the phenomenon of DSP retention and voluntary turnover, it has a number of limitations which should be addressed in future research.

The first limitation is that there was likely selection bias introduced into the study due to the convenient sampling method employed and the use of a cross-sectional survey design. As the descriptive analyses revealed, most of the DSPs who participated in the study were either new to their employing organization or had significant tenure with the employer indicating a lack of turnover amongst sample. This level of stability is atypical of the national data on attrition within this workforce (see Chapter One); however, at the time of this study unemployment rates in Ohio were at 7.5% with approximately 438,000 people out of work (Ohio Department of Job and Family Services, May 18th, 2012), which may account for this. Further, the non-random missing
data and skewed distributions of many of the variables suggest that a DSP was less likely to respond to a statement that she felt may compromise her employment. Therefore, the sample is not considered to be an unbiased estimator of the larger population of DSPs. In the future, a probability sampling method which decreases selection bias and a research design which encourages DSPs to complete the survey outside of their employing agency may allow for a more representative sample of DSPs to be accessed.

A second limitation is that the organizations that volunteered for the study were all licensed PATHS training entities which are not culturally representative of all the provider organizations in Ohio. To be able to offer the PATHS credentialing program, an organization must purchase the PATHS training system kit which includes the full curriculum, be trained on the administration of the learning system, and be able to provide PATHS certified instructors and skills mentors to the DSPs enrolled in the program (OADSP, 2010). This level of commitment to the professional development of frontline staff is likely uncommon amongst provider organizations in the state and data collected from staff employed at these agencies are likely to be significantly different than their counterparts. In future research, the sampling method should include organizations who do not offer the PATHS curriculum as a comparison group so that more robust data can be collected and interpreted.

A third limitation is the likelihood that differences between comparison groups were not detected in analysis due to the reduction in sample size once listwise deletion of cases of missing data was employed. Reducing the sample size decreases the statistical power of the study and increases the chance of making a Type II error (Rubin & Babbie, 2005). Additionally, the non-parametric tests used to analyze the data may have contributed to non-significant findings. In the follow up research it will be helpful to oversample to be sure that the needed statistical power is
achieved, and to obtain a more diverse sample which will increase the likelihood of the data being normally distributed and therefore appropriate for parametric testing.

A final limitation is that the path of the associations between the variables modeled in Figure 6 is based solely off the sample obtained for this study. In order to test the validity of the model, a much larger sample of DSPs should be obtained and structural equation modeling should be used to add further insight into the pathway to voluntary turnover or retention.

Given these limitations, generalizing the findings of this study beyond the sample must be made with caution; however, as this was exploratory research on a topic that is currently understudied, the findings are important to inform future workforce development efforts nonetheless.

**Implications for Practice**

The results of this study have numerous implications for organizational practice in the field of social work broadly and the disability human service sector specifically. Social work practitioners have long been concerned about the strain the developmental disabilities service network will face as elderly parents become unable to continue providing care and large numbers of aging persons with developmental disabilities move to community supports (Gibson, Rabkin & Munson, 1992). As previously described, retention of direct support workers will be imperative to meet the growing needs for community-based supports in this sector and, hence, the recognition of the civil rights of people with ID/DD. As social workers already serve people with ID/DD in a variety of practice settings including social service provider agencies, clinics, and residential support organizations in both frontline and administrative positions (Laws, Parish, Scheyett & Egan, 2010), they are optimally positioned to use their values and expertise to
work toward addressing the workforce crisis in long-term care (Parish & Lutwick, 2005). The results of this study can inform those activities.

This study found that job satisfaction is the most critical predictor of a DSP’s intention to leave her job. This study also found that the level of support that a DSP perceives that she is receiving from her employer will have a direct impact on her level of job satisfaction. There are many things that social workers employed within an organization can do to increase the level of support a DSP receives in order to improve her job satisfaction. Those that were identified within this study are discussed below.

This study found that completing a credential may influence the amount of tenure that a DSP has with her employer and, over time, increases her perceptions of support from the organization. This suggests that organizations who wish to retain staff should make the opportunity to earn a credential known to all of their newly hired DSPs, and encourage them to commit to the process of working toward it. The time invested in the credentialing process keeps DSPs with the organization, and leads to feelings of increased support, higher job satisfaction, and lower intention to leave over time.

This study also identified the self-efficacy of the DSP as having a direct relationship to the level of job related stress reported. Findings show, in spite of reporting high stress, DSPs who are in the process of working toward a credential have higher self-efficacy than others which may be attributable to the presence of a skills mentor. Regardless of whether a DSP is seeking credentialing, organizations should consider establishing a mentoring program to match less experienced DSPs with those who have been on the job longer, and who are trained to be efficient and encouraging career guides. This recommendation is supported by Menne and colleagues (2007) study on direct care worker’s recommendations for training in which 97% of
workers responded that having a mentor is very or somewhat useful; and Larson and Hewitt (2005) in which mentoring was identified as an effective deterrent to turnover. The vicarious learning and verbal support provided by this relationship may increase the confidence of the DSP and reduce the stress she feels on the job thereby increasing organizational support, improving job satisfaction, and lowering turnover intent. Likewise, the self-efficacy of DSPs who obtain a credential must be supported. This study found that DSPs who completed the credentialing process had lower general self-efficacy than the other groups. In order to prevent DSPs from losing confidence and perhaps leaving the organization after the investment into her professional development, the leadership within an organization should thoroughly understand the values, competencies, and skills that are being instilled in DSPs through the credentialing program and provide opportunities for graduates to be able successfully implement them on the job. Continuation of an on-the-job peer mentoring component following credential completion may help DSPs to apply their acquired skills successfully in practice and provide needed support if outcomes are disappointing.

The level of empowerment that a DSP feels that she has, in terms of both skills discretion and decision authority, directly influences the level of stress she feels as well as how supported by her organization she perceives herself to be. This study suggests employers can increase the level of control DSPs feel that they have on their jobs by properly preparing them to perform the duties of the job through relevant skill-based, learner-centered training. Allowing DSPs to work autonomously and make informed decisions regarding their work will further empower them on the job, as will involving DSPs in departmental meetings and decisions that influence their workloads, their practice, and the outcomes of the people they support (National Direct Service Resource Center, 2008). If a DSP feels that she has a meaningful role in the organization and is
in control of the way her work is performed, she is likely to feel less stressed by her job and more likely to feel supported by her employer.

DSP’s who primarily support aging adults with ID/DD were found to feel that they have significantly less control over their work than other DSPs suggesting that building their skills, empowering them to work autonomously, and including them in departmental decisions is particularly important. A recent national report identifies that staff must have knowledge and skills related to aging as it affects adults with an intellectual disability which includes a basic understanding of normal and atypical aging process from a biological, social, and psychological perspective; a basic understanding of cognitive decline (including early onset features), mild cognitive impairment, and dementia in its different forms, along with their different manifestations and progressions; an understanding of best practices for providing day-to-day specialized dementia support; a familiarity with adaptations and modifications to the physical and social environments as well as to activities so as to promote active engagement; and a familiarity with the range of resources available to help support people with dementia and their families (National Task Group on Intellectual Disabilities and Dementia Practice, 2012). Furthermore, it is recognized that the decision authority and contributions of DSPs to the outcomes of the people they support needs to be enhanced through new models of care that expand the roles of direct-care workers who care for older adults by allowing them to move across settings and work in interdisciplinary teams (Seavey & Marquand, 2011). In this study, the data provided by DSPs who support adults who are aging show that they may be particularly vulnerable to turnover. As the ability of people with ID/DD to age in place in their communities relies on this workforce, specific attention should be paid to improving the organizational support provided to them so that they may be better satisfied with their work.
Application to Public Policy

The findings of this study also have applications to state and national policy. Home care and personal assistance workers now constitute one of the largest and fastest-growing occupational groups in the United States, fueled by sweeping increases in the demand for home and community-based services (Seavey & Marquand, 2011). This demand is prompting the government to invest in programs which allow for the ‘re-balancing’ of services, that is, the expansion of home and community-based services relative to those provided in more facility-based settings, such as developmental centers and nursing homes. In fact, a meta-analysis of 30 years of research on the outcomes of community living versus institutionalization found a “high preponderance of evidence” that individuals moving from institutional to community settings consistently develop daily living skills beyond that of matched peers in institutional settings, or beyond that which they had prior to living in the community (Lakin, Larson, & Kim, 2011). One of the primary means by which this movement is facilitated is by the Money Follows the Person (MFP) initiative. A total of 44 states have received funding to transition people out of institutional settings through MFP (Kaiser Commission on Medicaid and the Uninsured, 2011). The goal of MFP is to serve individuals with long-term service and supports needs in a safe, more cost-effective setting and one in which individuals can retain independence and freedom. However, as more Medicaid beneficiaries are identified to transition to the community, and as the population continues to age, more community-based workers will be needed (Kaiser Commission on Medicaid and the Uninsured, 2011). In fact, 50% of MFP states reported an inadequate supply of direct care workers in the community impacting on the success of MFP transitions (Kaiser Commission on Medicaid and the Uninsured, 2011).
In order to support these deinstitutionalization efforts, the federal government is providing financial incentives to support the development of the community-based workforce. The 2010 Health Care and Education Reconciliation Act includes Elder Justice Act provisions (Title VI, Subtitle H, Sec 6703) which amends the Social Security Act to contain provisions, including grants and incentives to enhance recruitment and retention of direct-care staff and improve management practices affecting retention in community-based programs or settings (PHI, 2010b). Recruitment and retention grants were awarded to community-based long-term care agencies in both the aging and disability sectors to implement programs that offer employees improved training, career ladders, and wage/benefits increases over the course of FY 2011–14. Grants are being used to improve the management practices that affect retention, and by providers to address human resource policies, work organization and supports, and workplace culture issues (PHI, 2010b). Funding for both the recruitment and retention and the management improvement grants were authorized at $20 million for FY 2011 with $67.5 million authorized over the course of FY 2011-14 (PHI, 2010b). Further, the U.S. Department of Labor supports innovative training and credentialing programs for home care and personal assistance workers to help professionalize these occupations (Seavey & Marquand, 2011).

This study applies to these national policy initiatives as it provides a framework for informing and guiding workforce retention efforts in the ID/DD sector with unique insight into the challenges of supporting people with disabilities who are aging. At the macro social work practice level, national health and social policies that are inclusive of people with intellectual disabilities and provide for special supports and assistance into old age are much needed; as are education and training initiatives, diagnostic procedures, presentation of interventions, and provision of supports (World Health Organization, 2000). The findings of this study may be used
by states who are interested in building their capacity to support MFP transitions through the
implementation of credentialing programs as it provides insight into the association between the
factors that predict retention. Further, the findings of this study may be compared to the
outcomes of the national retention grant funded projects to gain deeper insight into the
complexities of staff stabilization in community-based supports. Finally, the insight provided by
this study may be used by the National Alliance for Direct Support Professionals (NADSP) to
provide technical assistance and education to national, state, and organizational leaders on the
factors that were found to contribute to staff retention, the role of self-efficacy and competency-
based training, and the specific support and training that is needed to empower DSPs who
support aging people with ID/DD to be more satisfied with their jobs.

**Directions for Future Research**

The findings of this study answer many questions, but also raise a number of new
inquiries into the phenomenon of staff retention in community-based supports which can be
empirically investigated. First, future replication studies exploring credentialing as a predictor of
staff retention should be undertaken with other state level credentialing programs in the country
for comparison. An expansion of research in this area will provide insight into whether the
findings of this study are unique to the sample or are more broadly generalizable. Second, the
Self-Efficacy Index for Direct Support Professionals (Laws, 2011), should be administered to a
broad cross-section of DSPs so as to be tested for validity and reliability and assessed for its
utility as a domain specific measure of efficacy. If found to be a useful tool, in future exploratory
replication studies the specific self-efficacy of DSPs should be measured, instead of the broader
construct of general self-efficacy which was operationalized in this study, for more precise
interpretations. Third, as previously mentioned, the relationship between credentialing and
organizational tenure is vastly unstudied and should be explored using a longitudinal design to determine if the credentialing process does indeed increase organizational tenure as suggested by this study. Fourth, as this was a pre-experimental design, more rigorous research approaches can provide deeper insight into the research questions proposed in this study. Pre/post designs measuring DSP self-efficacy and DSP attitudes as they relate to turnover factors before and after participation in a competency-based professional development program would offer rich data for comparison. Similarly, repeated measures designs which empirically investigate changes in these factors over time will provide insight into the fluctuations that occur in DSP attitudes and efficacy chronologically. Fifth, quasi-experimental designs in which DSPs who partake in a credentialing program are measured and compared to those who do not participate both before and after program completion will afford the researcher the ability to make inferences of causality that may illustrate the effect of participation in a credentialing program on the factors that contribute to retention. Finally, qualitative research in which DSPs are interviewed or focus groups are conducted to more deeply understand how competency-based professional development programs effect DSPs will allow for a better understanding of findings of this study and provide insight into the accuracy of the interpretations offered.

Summary

This chapter provided a discussion of the findings of the analyses of this study and offered implications and recommendations for practice, policy, and future research. DSPs that have a credential have more years on the job with their employer which indicates that workers stay longer when they commit to the credentialing process. DSPs with a credential also report having low general self-efficacy which was interpreted as an inability to enact the skills learned in the program effectively. High levels of self-efficacy were reported by those who were working
on obtaining the credential which was attributed to the positive influence of a skills mentor. DSPs that support aging adults were found to report low feelings of empowerment / control which may be due to inadequate skills, lack of autonomy, and lack of involvement in departmental decision making. Job satisfaction was found to be the most critical predictor of turnover intent amongst DSPs and the path of association between the variables that lead to job satisfaction was described. Social workers employed on the frontline and in administrative roles in organizations that provide social services to people with ID/DD are recommended to improve support to DSPs by increasing their self-efficacy through mentoring, building their skills through relevant learner-focused training, empowering them to work autonomously, and involving them in departmental processes as the primary means by which to raise job satisfaction. As national policies demonstrate a growing interest in supporting people to live in community settings, future social work research should include replication studies, longitudinal and repeated measures inquires, and rigorous quasi-experimental designs to deepen the knowledge base in this understudied area, and provide further insight into interventions that show promise for stabilizing this critical workforce.
REFERENCES


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doi:10.1093/sw/50.4.345


doi: 10.1146/annurev.publhealth.25.102802.124410


doi:10.1002/job.4030110504


APPENDICES
Appendix A

National Alliance for Direct Support Professionals Competency Areas

1) Participant Empowerment

*Competency Statement: The Direct Support Professional enhances the ability of the participant to lead a self-determining life by providing the support and information necessary to build self-esteem, and assertiveness; and to make decisions.*

*Skill Statements:*

- The competent DSP assists and supports the participant to develop strategies, make informed choices, follow through on responsibilities, and take risks.
- The competent DSP promotes participant partnership in the design of support services, consulting the person and involving him or her in the support process.
- The competent DSP provides opportunities for the participant to be a self-advocate by increasing awareness of self-advocacy methods and techniques, encouraging and assisting the participant to speak on his or her own behalf, and providing information on peer support and self-advocacy groups.
- The competent DSP provides information about human, legal, civil rights and other resources, facilitates access to such information and assists the participant to use information for self-advocacy and decision making about living, work, and social relationships.

2) Communication

*Competency Statement: The Direct Support Professional should be knowledgeable about the range of effective communication strategies and skills necessary to establish a collaborative relationship with the participant.*

*Skill Statements:*

- The competent DSP uses effective, sensitive communication skills to build rapport and channels of communication by recognizing and adapting to the range of participant communication styles.
- The competent DSP has knowledge of and uses modes of communication that are appropriate to the communication needs of participants.
- The skilled DSP learns and uses terminology appropriately, explaining as necessary to ensure participant understanding.

3) Assessment

*Competency Statement: The Direct Support Professional should be knowledgeable about formal and informal assessment practices in order to respond to the needs, desires and interests of the participants.*
Skill Statements:

- The competent DSP initiates or assists in the initiation of an assessment process by gathering information (e.g., participant's self-assessment and history, prior records, test results, additional evaluation) and informing the participant about what to expect throughout the assessment process.
- The competent DSP conducts or arranges for assessments to determine the needs, preferences, and capabilities of the participants using appropriate assessment tools and strategies, reviewing the process for inconsistencies, and making corrections as necessary.
- The competent DSP discusses findings and recommendations with the participant in a clear and understandable manner, following up on results and reevaluating the findings as necessary.

4) Community and Service Networking

Competency Statement: The Direct Support Professional should be knowledgeable about the formal and informal supports available in his or her community and skilled in assisting the participant to identify and gain access to such supports.

Skill Statements:

- The competent DSP helps to identify the needs of the participant for community supports, working with the participant's informal support system, and assisting with, or initiating identified community connections.
- The competent DSP researches, develops, and maintains information on community and other resources relevant to the needs of participants.
- The competent DSP ensures participant access to needed and available community resources coordinating supports across agencies.
- The competent DSP participates in outreach to potential participants.

5) Facilitation of Services

Competency Statement: The Direct Support Professional is knowledgeable about a range of participatory planning techniques and is skilled in implementing plans in a collaborative and expeditious manner.

Skill Statements:

- The competent DSP maintains collaborative professional relationships with the participant and all support team members (including family/friends), follows ethical standards of practice (e.g., confidentiality, informed consent, etc.), and recognizes his or her own personal limitations.
- The competent DSP assists and/or facilitates the development of an individualized plan based on participant preferences, needs, and interests.
- The competent DSP assists and/or facilitates the implementation of an individualized plan to achieve specific outcomes derived from participants’ preferences, needs and interests.
• The competent DSP assists and/or facilitates the review of the achievement of individual participant outcomes.

6) Community Living Skills & Supports

 competency statement: The Direct Support Professional has the ability to match specific supports and interventions to the unique needs of individual participants and recognizes the importance of friends, family and community relationships.

 skill statements:

• The competent DSP assists the participant to meet his or her physical (e.g., health, grooming, toileting, eating) and personal management needs (e.g., human development, human sexuality), by teaching skills, providing supports, and building on individual strengths and capabilities.
• The competent DSP assists the participant with household management (e.g., meal prep, laundry, cleaning, decorating) and with transportation needs to maximize his or her skills, abilities and independence.
• The competent DSP assists with identifying, securing and using needed equipment (e.g., adaptive equipment) and therapies (e.g., physical, occupational and communication).
• The competent DSP supports the participant in the development of friendships and other relationships.
• The competent community based support worker assists the participant to recruit and train service providers as needed.

7) Education, Training & Self-Development

 competency statement: The Direct Support Professional should be able to identify areas for self-improvement, pursue necessary educational/training resources, and share knowledge with others.

 skill statements:

• The competent DSP completes required training education/certification, continues professional development, and keeps abreast of relevant resources and information.
• The competent DSP educates participants, co-workers and community members about issues by providing information and support and facilitating training.

8) Advocacy

 competency statement: The Direct Support Professional should be knowledgeable about the diverse challenges facing participants (e.g., human rights, legal, administrative and financial) and should be able to identify and use effective advocacy strategies to overcome such challenges.

 skill statements:

• The competent DSP and the participant identify advocacy issues by gathering information, reviewing and analyzing all aspects of the issue.
• The competent DSP has current knowledge of laws, services, and community resources to assist and educate participants to secure needed supports.
• The competent DSP facilitates, assists, and/or represents the participant when there are barriers to his or her service needs and lobbies decision-makers when appropriate to overcome barriers to services.
• The competent DSP interacts with and educates community members and organizations (e.g., employer, landlord, civic organization) when relevant to participant's needs or services.

9) Vocational, Educational & Career Support

**Competency Statement:** The Direct Support Professional should be knowledgeable about the career and education related concerns of the participant and should be able to mobilize the resources and support necessary to assist the participant to reach his or her goals.

**Skill Statements:**

• The competent DSP explores with the participant his/her vocational interests and aptitudes, assists in preparing for job or school entry, and reviews opportunities for continued career growth.
• The competent DSP assists the participant in identifying job/training opportunities and marketing his/her capabilities and services.
• The competent DSP collaborates with employers and school personnel to support the participant, adapting the environment, and providing job retention supports.

10) Crisis Prevention and Intervention

**Competency Statement:** The Direct Support Professional should be knowledgeable about crisis prevention, intervention and resolution techniques and should match such techniques to particular circumstances and individuals.

**Skill Statements:**

• The competent DSP identifies the crisis, defuses the situation, evaluates and determines an intervention strategy and contacts necessary supports.
• The competent DSP continues to monitor crisis situations, discussing the incident with authorized staff and participant(s), adjusting supports and the environment, and complying with regulations for reporting.

11) Organizational Participation

**Competency Statement:** The Direct Support Professional is familiar with the mission and practices of the support organization and participates in the life of the organization.

**Skill Statements:**

• The competent DSP contributes to program evaluations, and helps to set organizational priorities to ensure quality.
• The competent DSP incorporates sensitivity to cultural, religious, racial, disability, and gender issues into daily practices and interactions.
• The competent DSP provides and accepts co-worker support, participating in supportive supervision, performance evaluation, and contributing to the screening of potential employees.
• The competent DSP provides input into budget priorities, identifying ways to provide services in a more cost-effective manner.

12) Documentation

*Competency Statement: The Direct Support Professional is aware of the requirements for documentation in his or her organization and is able to manage these requirements efficiently.*

*Skill Statements:*

• The competent DSP maintains accurate records, collecting, compiling and evaluating data, and submitting records to appropriate sources in a timely fashion.
• The competent DSP maintains standards of confidentiality and ethical practice.
• The competent DSP learns and remains current with appropriate documentation systems, setting priorities and developing a system to manage documentation.

13) Building and Maintaining Friendships and Relationships

*Competency Statement: Support the participant in the development of friendships and other relationships.*

*Skill Statements:*

• The competent DSP assists the individual as needed in planning for community activities and events (e.g., making reservation, staff needs, money, materials, accessibility).
• The competent DSP assists the individual as needed in arranging transportation for community events.
• The competent DSP documents community activities and events.
• The competent DSP encourages and assists the individual as needed in facilitating friendships and peer interactions.
• The competent DSP encourages and assists the individual as needed in communication with parents/family (e.g., phone calls, visits, letters).
• The competent DSP implements individual supports regarding community activities.
• The competent DSP provides incentive or motivation for consumer involvement in community outings.
• The competent DSP assists the individual as needed in getting to know and interacting with his/her neighbors.
• The competent DSP encourages and assists the individual as needed in dating.
• The competent DSP encourages and assists the individual as needed in communicating with social workers and financial workers.
14) Provide Person Centered Supports

Skill Statements:

- The competent DSP provides support to people using a person centered approach.
- The competent DSP modifies support programs and interventions to ensure they are person centered.
- The competent DSP challenges co-workers and supervisors to use person centered practices.
- The competent DSP is knowledgeable about person centered planning techniques.
- The competent DSP assists individuals in developing person centered plans.

15) Supporting Health and Wellness

Competency Statement: The competent DSP promotes the health and wellness of all consumers.

Skill Statements:

- Administers medications accurately and in accordance with agency policy and procedures.
- Observes and implements appropriate actions to promote healthy living and to prevent illness and accidents.
- Uses appropriate first aid/safety procedures when responding to emergencies.
- Assists individuals in scheduling, keeping, and following through on all health appointments.
- Assists individuals in completing personal care (e.g., hygiene and grooming) activities.
- Assists with identifying, securing and using needed adaptive equipment (i.e. adaptive equipment) and therapies (e.g., physical, occupational, speech, respiratory, psychological).
- Assists individuals in implementing health and medical treatments.
- Assists individuals to take an active role in their health care decisions.
Appendix B

Recruitment Flier
Do you answer YES to these 3 questions? If so, your insight is needed!

✓ Are you currently employed as a Direct Support Professional (DSP*) who supports people with developmental disabilities in the community?
  * A DSP provides non-medical care to people with disabilities at least 50% of her work time.

✓ Are you an adult between the ages of 18 and 65?

✓ Do you work for your employer full time?

If you can answer YES to all of these, I would like your help in a research project.

I am a graduate student at The University of Georgia’s School of Social Work.

I was also a DSP, like you.

My study explores how your training and the age of the people you support affects your feelings about your job.

If you volunteer, you will be asked to complete an online survey which is expected to take about 45 minutes to complete. All information shared will be confidential and will go directly to the University of Georgia. You will have the option of being mailed $10 in appreciation for your participation.

Your employer has agreed to give you a private computer and time to take the survey.

You can access the survey here:


The survey will be open until March 31st, 2012.

If you would like more information about this project please contact:

Carol Britton Laws, MSW
PhD Candidate, under the direction of Dr. Stacey Kolomer, University of Georgia, School of Social Work
Cell phone: 706-201-6495 or E-mail: BritCar@uga.edu
Appendix C

OADSP Letter of Support
July 28, 2011

To Whom It May Concern:

This letter confirms that the Ohio Alliance of Direct Support Professionals (OADSP) Professional Achievement through Training & Education in Human Services (PATHS) has volunteered to serve as a research site for conduction of the dissertation study *Competency-based Professional Development as a Predictor of Direct Support Professional Retention in Community-based Supports for Aging Adults with Intellectual and Developmental Disabilities* for University of Georgia, School of Social Work doctoral candidate Carol Britton Laws under the direction of Dr. Stacey Kolomer, Ph.D.

We agree to provide Ms. Laws information on, including names and contact information, of OADSP PATHS graduates at both the CIP and CAP levels as well as the contact information for participating support provider organizations for her survey needs.

Ms. Laws agrees to provide OADSP with a report on the findings of her data to inform our program evaluation efforts.

We give Ms. Laws permission to use the data produced, as well as our organization’s name in any publishable or professional work.

Sincerely,

Tony Thomas
President
Ohio Alliance of Direct Professionals
Appendix D

OH PATHS Organizational Recruitment Letter
3/1/12

Dear Executive Director,

The Ohio Alliance for Direct Support Professionals (OADSP) and the PATHS Credentialing program encourage your organization to participate in a dissertation study entitled *Credentialing as a Predictor of Staff Retention in Supports for Aging Adults with Developmental Disabilities* conducted by Carol Britton Laws, MSW, Doctoral Candidate, at the University of Georgia (UGA), School of Social Work under the direction of Dr. Stacey Kolomer, PhD. Ms. Laws is the Co-chair of the National Alliance for Direct Support Professionals (NADSP) Education, Training, and Workforce Development Committee and has over a decade of experience in the ID/DD sector, including the provision of direct supports.

The purpose of the study is to explore if there is a difference in retention, as measured by turnover intent, between DSPs who complete the PATHS credentialing program and those who do not obtain the credential. In addition, this study will explore if there is a significant difference between DSPs who support aging adults with ID/DD and those who do not when the variables affecting voluntary turnover are compared.

Both Direct Support Professionals (DSPs) who completed either the CIP or CAP level of the PATHS credential, as well as those who have not participated in the PATHS program who support adults of all ages are needed for this study. All DSPs who are over the age of 18, are employed for you full time, have worked for at least 8 weeks, and who provide non-medical support to adults with ID/DD over 50% of their work time are encouraged to volunteer for participation. The enclosed recruitment flyer can be used to notify staff of this research project. Staff participation is voluntary. A confidential, self-administered, online survey, hosted by the Survey Research Center at the UGA, is being used to collect data. The survey can be accessed online here [http://bit.ly/OhioDSPSurvey](http://bit.ly/OhioDSPSurvey) and will be sent to you to share with your staff in a separate e-mail. The survey reads at slightly less than a 7th grade level, is comprised of 68 likert scaled questions, and is anticipated to take about 45 minutes to complete. Each DSP who completes a survey will have the option of being mailed $10.00 from UGA in appreciation of her time. We encourage you to post and/or e-mail the recruitment flyer for this study to your staff, and if possible, provide them with a private computer and time to complete the survey. Your participation will help us strengthen our field and understand how the PATHS program impacts your organization.

In appreciation for your time and support, Ms. Laws will share the results of her study with OADSP, the PATHS program, and all of the organizations that support their staff to participate in the study.

We thank you for your support of this project and your willingness to help us understand how PATHS is changing lives.

Sincerely,

Scott Osterfeld, M.S.
OADSP/PATHS
Chief Operating Officer
sosterfeld@cinci.rr.com
513-300-7038

PATHS is a program of the Ohio Alliance of Direct Support Professionals. The Alliance’s mission is to develop and offer a credentialing program for Direct Support Professionals in Ohio.

www.ohiopaths.org
Appendix E

DSP Survey
Dear participant,

This letter is to inform you of your rights as a research subject. I am a doctoral candidate at the University of Georgia, School of Social Work. This project is under the direction of Dr. Stacey Kolomer, faculty at the School of Social Work. The purpose of this study is to explore if the age of the people you support and/or the completion of an OH PATHS credential relate to voluntary employee retention. Your completion of this survey will help me to do this. When the survey is submitted, you will have the option of receiving $10.00 in appreciation of your participation. To receive this, you will be asked to provide your name and address in a separate survey so payment can be mailed to you. This information will not be linked to the data that you provide in the study survey. Your contact information will only be shared with the UGA business office to send you the money, and will not be used for any other purposes. You may also choose not to receive this payment by simply skipping the option of providing your mailing information. By completing this survey, you are agreeing to participate in the above described research project. Your involvement in the study is voluntary, is expected to take approximately 45 minutes, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. You will not be asked to provide any personally identifying information and no identifiers will be linked to your data. Please note that Internet communications are insecure and there is a limit to the confidentiality that can be guaranteed due to the technology itself. Once the data are compiled by the researcher, standard confidentiality procedures will be employed. The raw data will not be shared with anyone other than the principal investigators of this study. Your identity will not be associated with your responses in any published format. The published results will be presented in summary form only. The findings from this project may provide insightful information on how completing a credentialing program relates to staff retention. There are minimal risks or discomforts associated with this research. The primary risk is potential harm to employability if there is a breach to confidentiality such as workstation monitoring. To mitigate this risk, you can choose not to answer a question, or print the survey results and mail them to the researcher with no return address on the envelope. There is also the possibility of discomfort due to lack of privacy since other DSPs may be completing the survey near you. If you are uncomfortable, you may choose to complete the survey at another time and place. You can print a copy of this consent information for your records. Questions or concerns about your rights as a research participant should be directed to the chairperson, University of Georgia institutional review board, 629 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email address: irb@uga.edu. If you have any questions or concerns about this research project, please do not hesitate to e-mail me at: britcar@uga.edu Thank you for participating in my study. I am very happy that you will help me to understand how credentialing impacts our field. Carol Britton Laws, MSW Doctoral Candidate, The School of Social Work, University of Georgia.

Please click the “I Agree” button to begin the survey.

Instructions: The statements below relate to your experience as a Direct Support Professional (DSP) supporting people with disabilities. There are no right or wrong answers. All responses are anonymous. Your name is not required.
Q3 For each statement below, please select your level of agreement using the scale below. There are no right or wrong answers.

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<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
<th>Moderately Disagree (2)</th>
<th>Slightly Disagree (3)</th>
<th>Neither Agree Nor Disagree (4)</th>
<th>Slightly Agree (5)</th>
<th>Moderately Agree (6)</th>
<th>Strongly Agree (7)</th>
<th>I Choose Not To Answer (8)</th>
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<td>The work I do is meaningful.</td>
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<td>I am confident about my ability to do my job.</td>
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<td>I am self-assured about my capability to perform my work.</td>
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<td>I have mastered the skills necessary for my job.</td>
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<td>I have significant autonomy in determining how I do my job.</td>
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<td>I can decide on my own how to go about doing my work.</td>
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<td>I have considerable opportunity</td>
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<td>for independence and freedom in how I do my job. (9)</td>
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<td>My impact on what happens in my department is large. (10)</td>
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<td>I have significant influence over what happens in my department. (12)</td>
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Q4 For each statement below, please select your level of agreement using the scale below. There are no right or wrong answers.

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<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>Moderately Disagree (2)</th>
<th>Slightly Disagree (3)</th>
<th>Neither Agree Nor Disagree (4)</th>
<th>Slightly Agree (5)</th>
<th>Moderately Agree (6)</th>
<th>Strongly Agree (7)</th>
<th>I Choose Not To Answer (8)</th>
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<td>Generally speaking, I am very satisfied with this job. (1)</td>
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<td>I frequently think of quitting this job. (2)</td>
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<td>I am generally satisfied with the kind of work I do in this job. (3)</td>
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<td>People on this job often think of quitting. (5)</td>
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</table>
Q5 For each statement below, please select your level of agreement using the scale below. There are no right or wrong answers.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
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<td>I will probably look for a new job in the next year.</td>
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<td>I often think about quitting.</td>
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<tr>
<td>It is likely that I could find a job with another employer with</td>
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<tr>
<td>about the same pay and benefits I now have.</td>
<td>(3)</td>
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</tr>
</tbody>
</table>
Q6 For each statement below, please select your level of agreement using the scale below. There are no right or wrong answers.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
<th>Moderately Disagree (2)</th>
<th>Slightly Disagree (3)</th>
<th>Neither Agree Nor Disagree (4)</th>
<th>Slightly Agree (5)</th>
<th>Moderately Agree (6)</th>
<th>Strongly Agree (7)</th>
<th>I Choose Not To Answer (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.</td>
<td>0</td>
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<tr>
<td>I talk up this organization to my friends as a great organization to work for.</td>
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<tr>
<td>I feel very little loyalty to this organization.</td>
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<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>I would accept almost any type of job assignment in order to keep working for this organization.</td>
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<tr>
<td>I find that my values and the organization’s values are very similar.</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
</tr>
</tbody>
</table>
I am proud to tell others that I am part of this organization. (6)
I could just as well be working for a different organization as long as the type of work was similar. (7)
This organization really inspires the very best in me in the way of job performance. (8)
It would take very little change in my present circumstances to cause me to leave this organization. (9)
I am extremely glad that I chose this organization to work for over others I was considering at the time I joined. (10)
There’s not too much to be gained by sticking with this organization indefinitely.
<p>| | | | | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>11</td>
<td>Often, I find it difficult to agree with this organization's policies on important matters relating to its employees.</td>
<td></td>
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<tr>
<td>12</td>
<td>I really care about the fate of this organization.</td>
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<tr>
<td>13</td>
<td>For me this is the best of all possible organizations for which to work.</td>
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<tr>
<td>14</td>
<td>Deciding to work for this organization was a definite mistake on my part.</td>
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</tbody>
</table>
Q7 For each statement below, please select your level of agreement using the scale below. There are no right or wrong answers.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
<th>Moderately Disagree (2)</th>
<th>Slightly Disagree (3)</th>
<th>Neither Agree Nor Disagree (4)</th>
<th>Slightly Agree (5)</th>
<th>Moderately Agree (6)</th>
<th>Strongly Agree (7)</th>
<th>I Choose Not To Answer (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I worry that my client might do something dangerous when I am not there, like not turning off the stove. (1)</td>
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<tr>
<td>I worry about my client’s safety when I am not there. (2)</td>
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<td>I worry that someone could easily take money or other things from my client when I am not there to protect him/her. (3)</td>
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<td>Some of my clients’ family members do not trust me. (4)</td>
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<tr>
<td>Some of my clients’ family members criticize the work that I do. (5)</td>
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<td>Issue</td>
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<tr>
<td>My clients’ family expects me to do things that are not part of my job. (6)</td>
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<tr>
<td>My clients’ family appreciates what I do. (7)</td>
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<tr>
<td>A client has yelled at me in the past 6 months. (8)</td>
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<tr>
<td>A client has threatened me in the past 6 months. (9)</td>
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<td>I often experience conflict between what a client wants me to do and what I want to do. (10)</td>
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<td>My client often has behavior problems. (11)</td>
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<td>A client has made unreasonable demands like wanting me to do tasks I shouldn’t do. (12)</td>
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<td>I have injured myself while working as a home care provider. (13)</td>
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</tbody>
</table>
| A client has made unwanted sexual advances toward me.  
   (14)  |   |   |   |   |   |   |   |   |   |
| During the past month I have often had a lot of energy.  
   (15)  |   |   |   |   |   |   |   |   |   |
| During the past month I have often felt calm and peaceful.  
   (16)  |   |   |   |   |   |   |   |   |   |
| During the past month I have often felt downhearted and blue.  
   (17)  |   |   |   |   |   |   |   |   |   |
Q8 For each statement below, please select your level of agreement using the scale below. There are no right or wrong answers.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>Moderately Disagree (2)</th>
<th>Slightly Disagree (3)</th>
<th>Neither Agree Nor Disagree (4)</th>
<th>Slightly Agree (5)</th>
<th>Moderately Agree (6)</th>
<th>Strongly Agree (7)</th>
<th>I Choose Not To Answer (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, I think that I can obtain outcomes that are important to me. (1)</td>
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<td>I believe I can succeed at most any endeavor to which I set my mind. (2)</td>
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<td>I will be able to successfully overcome many challenges. (3)</td>
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<td>I am confident that I can perform effectively on many different tasks. (4)</td>
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<tr>
<td>Compared to other people, I can do most tasks very well. (5)</td>
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<td>Even when things are tough, I can perform quite well.</td>
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<tr>
<td><strong>(6)</strong></td>
<td>I will be able to achieve most of the goals that I have set for myself. (7)</td>
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<tr>
<td><strong>(7)</strong></td>
<td>When facing difficult tasks, I am certain that I will accomplish them. (8)</td>
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</tbody>
</table>
Q9 For each statement below, please select your level of agreement using the scale below. There are no right or wrong answers.

<table>
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<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
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<th>Moderately Agree (6)</th>
<th>Strongly Agree (7)</th>
<th>I Choose Not To Answer (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The organization values my contribution to its well-being. (1)</td>
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<tr>
<td>The organization fails to appreciate any extra effort from me. (2)</td>
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<td>The organization would ignore any complaint from me. (3)</td>
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<tr>
<td>The organization really cares about my well-being. (4)</td>
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<tr>
<td>Even if I did the best job possible, the organization would fail to notice. (5)</td>
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<tr>
<td>The organization cares about my general satisfaction at work. (6)</td>
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<tr>
<td>The organization shows very little concern for me. (7)</td>
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<tr>
<td>The organization takes pride in my accomplishments at work. (8)</td>
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</tbody>
</table>
Q10 Do you currently work as a Direct Support Provider (DSP) providing care to people with disabilities at least 50% of your work time?

- Yes (1)
- No (2)

Q11 How many people do you support?

- Most of the people I support at work are 45 years old or older. (1)
- Most of the people I support at work are younger than 45 years old. (2)
- I support an equal number of people who are older than 45 and younger than 45 (3)

Q12 In what setting do you currently work?

- Residential (1)
- Vocational (2)
- Day Program (3)
- Other (4) ________________

Q13 How long have you worked as a DSP?

Q14 What is your age?

Q15 What is your gender?

- Male (1)
- Female (2)

Q16 What is your ethnicity?

- White (1)
- African-American/Black (2)
- Asian/Pacific Islander (3)
- Native American/Alaskan Native (4)
- Hispanic (5)
- Other/Multi-Racial (6)
Q17 Are you an union member?
- Yes (1)
- No (2)

Q18 The name of the provider organization I work for is (this will be kept confidential):

Q19 How long have you worked for this organization? (years)

Q20 Do you work for this organization full time?
- Yes (1)
- No (2)

Q21 Did you complete a PATHS credential?
- No (1)
- Not yet, but I am working on it (2)
- Yes (3)

Q22 What is the highest level that you completed?
- CIP (1)
- CAP (2)

Q23 Did you work for your current employer when you completed the PATHS credential?
- Yes (1)
- No (2)

Q24 Were you recognized by your employer for obtaining the credential?
- Yes (1)
- No (2)
Q25 How were you recognized? Please check all that apply.

- I received a wage increase. (1)
- I received a bonus. (2)
- I was recognized in an organizational ceremony/luncheon/event. (3)
- Other (4) ____________________

Q26 Did you complete the PATHS Certificate of Specialized Skill and Knowledge in Older Adults?

- Yes (1)
- No (2)

Q27 What is your highest level of education achieved?

- Some high school (1)
- High school / GED (2)
- Some college (3)
- Associates Degree (4)
- Bachelor’s Degree (5)
- Master’s Degree (6)

Q28 Have you completed any other certificates or credentials? Please list:
Appendix F

**List of Acronyms**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADL</td>
<td>Activities of Daily Living</td>
</tr>
<tr>
<td>CAP</td>
<td>Certificate of Advanced Proficiency</td>
</tr>
<tr>
<td>CIP</td>
<td>Certificate of Initial Proficiency</td>
</tr>
<tr>
<td>CLIENTAGE</td>
<td>Age of Person’s Supported</td>
</tr>
<tr>
<td>CRCC</td>
<td>Community Residential Core Competencies</td>
</tr>
<tr>
<td>CRED</td>
<td>Level of Credentialing</td>
</tr>
<tr>
<td>CSSS</td>
<td>Community Support Skill Standards</td>
</tr>
<tr>
<td>DODD</td>
<td>Ohio Department of Developmental Disabilities</td>
</tr>
<tr>
<td>DSP</td>
<td>Direct Support Professional</td>
</tr>
<tr>
<td>DSPAGE</td>
<td>Direct Support Professional Age</td>
</tr>
<tr>
<td>GJS</td>
<td>General Job Satisfaction</td>
</tr>
<tr>
<td>GSE</td>
<td>General Self-Efficacy</td>
</tr>
<tr>
<td>HCBS</td>
<td>Home and Community Based Services</td>
</tr>
<tr>
<td>ID/DD</td>
<td>Intellectual Disabilities / Developmental Disabilities</td>
</tr>
<tr>
<td>ITO</td>
<td>Intent To Turnover</td>
</tr>
<tr>
<td>JCQ</td>
<td>Job Content Questionnaire</td>
</tr>
<tr>
<td>JDC(S)</td>
<td>Job Demand/Control/Support Model</td>
</tr>
<tr>
<td>MNAR</td>
<td>Missingness Not At Random</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>--------------</td>
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<tr>
<td>NADSP</td>
<td>National Alliance for Direct Support Professionals</td>
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<tr>
<td>NGSE</td>
<td>New General Self-Efficacy</td>
</tr>
<tr>
<td>OADSP</td>
<td>Ohio Alliance for Direct Support Professionals</td>
</tr>
<tr>
<td>OCQ</td>
<td>Organizational Commitment Questionnaire</td>
</tr>
<tr>
<td>OH PATHS</td>
<td>Ohio’s Professional Advancement through Training and Education in Human Services program</td>
</tr>
<tr>
<td>PASW SPSS</td>
<td>Predictive Analytic Software Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>PATHS</td>
<td>Professional Advancement through Training and Education in Human Services</td>
</tr>
<tr>
<td>PEI</td>
<td>Psychological Empowerment Instrument</td>
</tr>
<tr>
<td>SBS</td>
<td>Stress Burden Scale</td>
</tr>
<tr>
<td>SPOS</td>
<td>Survey of Perceived Organizational Support</td>
</tr>
<tr>
<td>TENURE</td>
<td>Tenure with Current Employer</td>
</tr>
</tbody>
</table>