

ABSTRACT

Title of Document: CONGRUENCE X EMPLOYMENT TENURE: A STUDY
WITH TRANSITIONING YOUTH WITH DISABILITIES

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Personnel Services

This study examined the relationship between congruence (between individual's inventoried career interests and subsequent job) and employment tenure for transitioning youth with disabilities successfully closed in fiscal year 2008 by the Maryland State Vocational Rehabilitation Agency (DORS) - Region 6 (N = 51). The relationship between employment tenure and demographic variables (gender, ethnicity, education level, disability type, social security benefits status, and length in services) is also assessed. Data was obtained from DORS database, wage checks reports and file reviews. This study did not find support for the relationship between employment tenure and either congruence or demographic variables. Related findings include high frequency of low congruent jobs, and the majority of jobs in janitorial and service areas, part time and with hourly wage between \$5.00 and \$10.00.

CONGRUENCE X EMPLOYMENT TENURE: A STUDY WITH TRANSITIONING YOUTH
WITH DISABILITIES

By

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Dedication

To Tiago, with my deepest love and admiration.

Acknowledgements

Writing this thesis has been a long and arduous journey with many surprises and challenges along the way. I am grateful to a number of people for helping me to complete this important step in my life.

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Chapter 1: Rationale

Transitioning youth is a growing population. The number of students with disabilities graduating from high school has increased over time. In 1987, 53.5% of students with disabilities finished high school, while in 2003 this rate was 70.3%, an increase of almost 17 percentage points (Wagner, Newman, Cameto & Levine, 2005). It is expected that these students, who are finishing secondary school, would enter the workforce and/or postsecondary schools. Unfortunately, this transition has not been easy or smooth. High schools do not always prepare students for the adult world, and students often graduate with neither basic work skills nor vocational self-knowledge. Frequently, educational assistance focuses on the immediate needs of youth, such as living skills, without providing sufficient attention to vocational skills (National Council on Disability [NCD], 2008).

The school system has not found the balance between academic achievement and vocational preparation (Test, Aspel & Everson, 2006). Students may exit schools with a diploma but lack basic vocational skills, career planning and/or self-knowledge related to the world of work. Without knowledge regarding the occupational world, the adolescent may graduate without a defined vocational goal (Fabian, 2007; Morningstar & Kleinhammer-Tramill, 1999), which might contribute to job turnover. The National Council on Disability (2000), referring to the data from the 1987 National Longitudinal Transition Study (NLTS), noted that two years after exiting high school, 69% of the youth with disabilities were working. This rate drops to 59% after three to five years out of school, which might indicate that these students, although able to find a job, are having difficulties in keeping it.

Thus, although more students with disabilities are graduating from high school, they may not be able to hold a job for a significant period of time. The rates of employment and postsecondary enrollment are still far behind of the general population of youth. The employment rate for youth with disabilities is around 55%, whereas for youth without disabilities, it rises to 70% (Fabian, Lent & Willis, 1998; Flexer, Baer, Luft & Simmons, 2008). According to the database of the NLTS-2, 30% of youth with disabilities enroll in postsecondary school after leaving high school, compared to 41% of students without disabilities (Wagner, Newman, Cameto, Levine & Garza, 2006).

Vocational Rehabilitation (VR) agencies are federal/state agencies responsible for assisting individuals with disabilities to find and keep a job that will contribute to an independent and fulfilling life. The goal is to promote employment, economic self-sufficiency, and independence of individuals with disabilities (About DORS, n.d.). Although part of the individuals with disabilities community in general, transitioning youths form a subgroup with its own characteristics. These adolescents may lack either work skills or defined vocational goal, but many of them have positive hopes and expectations for the future. In 2005, 27.8% of the clients served by VR agencies in the U.S. were composed of transitioning youth (NCD, 2008).

VR agencies and counselors must follow state guidelines and targets established by regulations, such as a minimal number of clients that should be successfully closed. Being successfully closed means holding a competitive job for at least three months. The pressure to successfully close cases might lead vocational rehabilitation counselors to repeat the pattern of high schools: attend to the immediate

needs, without fully considering long-term consequences. For example, a client who needs a job and is interested in clerical work might find a custodial job. Instead of discussing and exploring with the client the vocational and personal repercussions of both choices, the counselor may be influenced by the pressure to successfully “close the case” and change the client’s career goal to reflect “custodial job”. In 2006, the employment rate of transitioning youth at the Division of Rehabilitation Services (DORS), the VR agency of the state of Maryland, was 76.07%. However, just over 50% were working 35 hours or more per week and only 20% received employer provided medical insurance (NCD, 2008).

Assisting transitioning youth to find a job has been a national concern since the enactment of rehabilitation and special education laws more than 20 years ago. There has been extensive research on how demographic, contextual, and psychological factors predict employment outcomes (e.g., Benz, Yovanoff & Doren, 1997; Berry, 2000; Fabian, 2007). Also, there have been studies exploring the relationship between career assessment and employment outcomes for individuals with disabilities (e.g., Adelman, Spitznagel & Saxon, 1997; Caston & Watson, 1990; Kosciulek, Prozonic & Bell, 1995). However, these studies examine factors that predict finding a job, without exploring the outcomes such as job satisfaction and/or employment tenure. Few studies assess whether having a job consistent with expressed vocational interests predicts employment tenure for this population. Beveridge and Fabian (2007) explored the relationship between securing a job consistent with one’s expressed goal (congruence) and self-reported job satisfaction

for a sample of State VR clients. The authors, however, did not examine how congruence affects employment tenure.

Different than job satisfaction, which considers just the employee's side, employment tenure incorporates both individual and workplace perspectives. Work Adjustment Theory explores the relationship between individual's abilities and needs, and job's requirements and reinforcements. Satisfaction occurs when the work meets the individual's needs and requirements. Satisfactoriness, on the other hand, deals with the extent to which the individual meets the employer's needs and requirements (Lofquist & Dawis, 1984; Sharf, 2006). Tenure is expected when there is a correspondence between individual's abilities and needs, and job's requirements and reinforcements. In other words, both the individual is satisfied with his/her job *and* the employer is satisfied with individual's performance (Leuty & Hansen, 2009).

Thus, many studies have examined factors that predict finding a job; however, few studies explore factors contributing to job retention for youth with disabilities. Currently, one of the main concerns of the rehabilitation field is how to help individuals with disabilities move beyond just getting a job to starting a meaningful career (Hope & Rice, 1995; Luecking, Fabian & Tilson, 2004; Rumrill & Roessler, 1999). This study addresses the central issue of the relation between congruence (between an individual's assessed career interest and subsequent job) and employment tenure. If rehabilitation counselors, the U.S. Congress, the U.S. Department of Education, parents, teachers, researchers, advocates, and policy-makers are to be effective in helping students with disabilities, information on what influences youth to keep their jobs is of utmost importance.

Statement of Purpose

The purpose of this study is to examine the influence of congruence on employment tenure for transitioning youth who were successfully closed in fiscal year 2008 by the Vocational Rehabilitation Agency of the State of Maryland (DORS). The independent variable, congruence (Holland, 1973), will be defined as a match between participants' interests identified in the career assessment and the subsequent job secured at closure in the VR system. The dependent variable, employment tenure, will be defined as maintaining a job for at least six months. The relation between descriptive variables (such as gender, ethnicity, education level, disability type, social security benefits status, and length of services) and congruence is also explored.

Research Questions

The main research question that drives this study is: Does congruence between individual's assessed career interest and subsequent job relate to employment tenure for a sample of youth with disabilities participating in VR services?

In order to examine this question, the influence of demographic characteristics on employment tenure is assessed. Thus, research question #2 is: Do gender, ethnicity, education level, social security benefits status, disability type, and length in services relate to employment tenure for a sample of youth with disabilities participating in VR services? If there is a relationship between demographic characteristics and employment tenure, this influence will be factored into the analysis of research question #1.

Chapter 2: Literature Review

A growing concern among rehabilitation counselors, special education teachers, and policy-makers is the school to work/postsecondary education transition. It is not unusual for students with disabilities to have difficulties finding and *keeping* a job. The main goal of this study is to analyze to what extent (if any) congruence between an individual's inventoried career interest and subsequent job influences employment tenure. In order to explore this issue, a literature review is presented. It starts with a descriptive model that guides this study. Next, an overview of Holland's theory is provided, followed by a review on how background factors influence employment outcomes for individuals with disabilities. At the end, specific studies that relate career assessment results and employment outcomes for people with disabilities are discussed.

Descriptive Model

A descriptive model was designed by the researcher to illustrate the dynamic and complex interaction of factors that may affect youth employment. The model suggests that background factors influence individuals' skills, interests and preferences, which, in turn, affect stated vocational goals (Holland, 1973). The actual job held may or may not be consistent with the stated vocational goal. There are several factors, such as the job market, market demand, and contextual factors, which may influence someone to secure a job different than the preferred one (see Figure 1).

Background Information

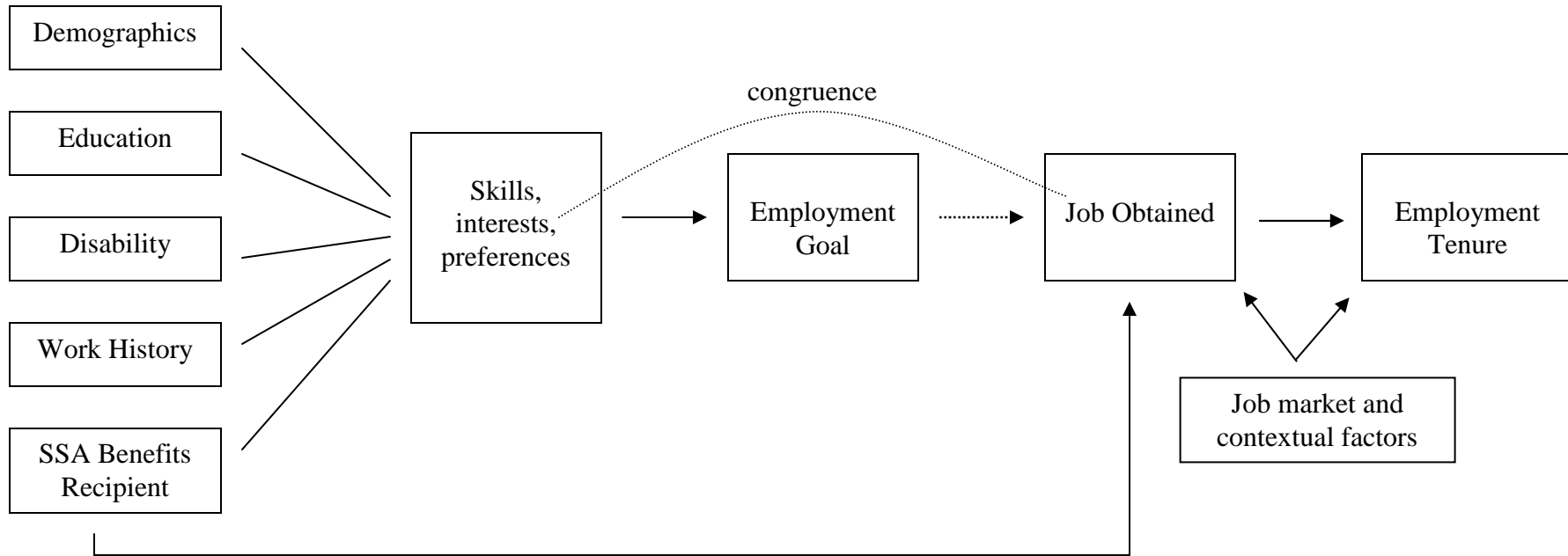


Figure 1. Descriptive Model

Holland's Theory: An Overview

Central to the theoretical model guiding this study is the dynamic relationship between career interests and job choice. Holland's career theory suggests that individuals who have high congruence between interests and job obtained tend to be more satisfied and remain longer in their job. Holland (1996) stated that individuals who have low congruence levels tend to move to more congruent jobs.

The underlying assumption of Holland's theory is that human behavior is a result of the constant interaction between individuals and environments. This theory has three main components: individuals, environments, and congruence (between individuals and environments). These three components lead to three assumptions: individuals look for environments where they can express their abilities and interests; different environments reinforce and reward different patterns of abilities and interests; and individuals thrive in environments that fit their personality type (Holland, 1973).

The theory is structural and interactive. It is structural (or typological) because it organizes and categorizes the vast information about people and jobs. It is interactive because it is based on a person-environment fit model, and it examines the reciprocal and dynamic relationship between the two. Congruence, or the similarity between the individual's personality and the environmental characteristics, captures the interactive dynamic aspect of the theory.

Individuals and environments are classified according to their resemblance to six types: realistic, investigative, artistic, social, enterprising, and conventional. The types reflect characteristics shared by individuals, such as interests and skills, and by environments, such as needs and reinforcements (Holland, 1973). Providing a

comprehensive definition and characterization of each type is not the intention of this overview. However, a brief explanation of the main characteristics of individual and environmental types is provided.

Realistic (R) individuals are characterized by a preference for activities and occupations that involve manipulation of machines, tools and things. Individuals who resemble this type value concrete rewards for tangible accomplishments. Realistic individuals see themselves as practical, and tend to enjoy manual and mechanical skills. Realistic environments require manual and mechanical skills, and use of machinery and tools. This kind of environment values and rewards conforming behavior and practical accomplishment (Holland, 1996).

Investigative (I) individuals enjoy exploration, understanding and prediction of natural and social phenomena. They value development and knowledge acquisition. They see themselves as analytical, intelligent and skeptical. Investigative environments require analytical, technical, and scientific competencies. These environments value and reward skepticism, persistence in problem-solving, and development and documentation of new knowledge (Holland, 1996).

Artistic (A) individuals like literary, musical or artistic activities, and value creative expression of feelings, emotions and ideas. They avoid routines and conformity. Their view of self is characterized by being open to experience, innovative and intellectual. Artistic environment requires competence in innovation, creativity and expressive interaction with others. It demands and rewards imagination, and new and unusual ideas (Holland, 1996).

Social (S) individuals enjoy activities that involve serving others through personal interactions, while avoiding technical and mechanical activities. Among their values are fostering welfare of others and social service. They consider themselves empathic, patient and possessing interpersonal skills. Social environments require interpersonal competencies, such as skills in mentoring, treating, healing, or teaching others. Expressions of empathy, friendliness and sociability are demanded and rewarded by this type of environment (Holland, 1996).

Enterprising (E) individuals prefer activities that involve persuading, manipulating and directing others, and dislike activities that involve scientific or intellectual topics. Material accomplishments and social status are valued by this individual type. Their view of self is characterized by having good sales and persuasive skills. Enterprising environments request competence in manipulation and persuasion of others, rewarding individuals with characteristics of dominance, self-confidence and initiative (Holland, 1996).

Finally, conventional (C) individuals like activities that involve establishing or maintaining orderly routines and application of standards, and dislike ambiguous and unstructured activities. They value material and financial accomplishment and power in social, business and political areas. They view themselves as having abilities in business and production. Conventional environments are characterized by requiring skills in clerical work and competence in meeting precise standards. Organizational ability, conformity, and dependability are personal characteristics demanded and rewarded by this kind of environment (Holland, 1996).

The six types are organized and graphically designed in a hexagon, distributed in RIASEC order. Individuals and environments receive scores according to how closely they resemble each of the six types, forming a profile or pattern. There are several Holland-type inventories, such as the Self-Directed Search (Holland, Powell & Fritzsche, 1997) and the Vocational Preference Inventory (Holland, 1985), used to assess individual and environmental patterns. Patterns can be expressed in one (e.g., A) to six letters (e.g., ASECRI), according to the precision of the information. The combination of letters potentially results in 720 patterns (Smart, Feldman & Ethington, 2000). Usually, however, the profile is expressed in three letters: the first letter is the highest score, the second is the second highest score and the third is the third highest score. This three-letter code provides a brief summary of what an individual or environment is like by demonstrating the degree of resemblance to three occupational or environmental type groups. For example, an individual SCI resembles primarily the Social type, then the Conventional type and then the Investigative type. The degree of each type varies according to the person score in each one of the letters. The person in the example can be much more or slightly more Social than Conventional. So, the same pattern may represent a different degree of resemblance to each type (Miller, 1992).

Besides the pattern, there other aspects of Holland's theory that characterize a person or environment, namely differentiation, consistency and congruence. The first two are intra characteristics; whereas the last one deals with inter characteristics, or the relation between individuals and environments.

Differentiation deals with the difference between the highest and lowest scores of the individual or environment (Holland, 1973). More differentiated individuals have more

specific interests and abilities than less differentiated persons. Consistency, or internal consistency of the pattern, refers to how close the three-letter codes are from one another in the hexagon. Closer letters bear more resemblance (e.g., Artistic are closer to Social than to Conventional – which means that Artistic and Social bear more characteristics in common than Artistic and Conventional).

Congruence, a key aspect to understand this study, deals with the relationship between environments and individuals, and how one meets the needs of the other. In psychology, congruence is defined as “a good fit, or correspondence, between one’s needs, wishes, and preferences on one hand, and situation, rewards, and gratification on the other hand” (Spokane, Meir & Catalano, 2000, p. 139). In Holland’s theory, congruence refers to the degree in which the work environment meets the characteristics and needs of an individual’s personality, such as a Conventional type of person working in a Conventional type of environment. When there is a good fit, the environment requires and rewards the expression of individual’s interests and abilities. The opportunity to express abilities, preferences and interests tends to make a job more satisfying (Holland, 1973).

Individuals are assumed to flourish in an environment of the same type. For example, Enterprising individuals flourish in Enterprising environments, because these environments require activities, tasks, and roles that are congruent with the competencies, interests, preferences and self-beliefs of Enterprising individuals. When there is a good degree of fit (congruence), satisfaction, achievement, and stability are expected. On the other hand, when there is a poor degree of fit (incongruence), lack of motivation,

instability, poor performance, and dissatisfaction are expected (Holland, 1973, 1996; Smart et al., 2000).

When there is low degree of congruence, individuals are likely to look for new and more congruent environments, change their present environment, or change their perceptions and behaviors. On the other hand, environments deal with incongruence by expelling incongruent individuals, looking for new and more congruent ones, and/or changing its demands and rewards (Spokane et al., 2000). These ways of dealing with incongruence are reflected on job retention.

Congruence is influenced by the degree of consistency and differentiation within the person and the environment. More consistent and differentiated people and environments are easier to predict, since they have more specific and similar interests, abilities, and needs, or requirements and rewards. A more consistent and differentiated person knows exactly what he/she wants and likes, and has similar interests and abilities, whereas a less consistent and differentiated person might have interests, abilities and preferences across different areas, being unsure about what he/she really wants. Considering environments, a more differentiated and consistent one is characterized by similar demands and rewards in specific activities or tasks, whereas a less differentiated and consistent workplace provides rewards and demands in combined and different areas (Holland, 1973).

There have been hundreds of studies about congruence, which indicate its importance and influence in vocational psychology. Most studies (e.g., Hoeglund & Hansen, 1999; Spokane et al., 2000) found positive, although relatively small, correlations between satisfaction, stability, achievement, and congruence. Spokane

(1985) reviewed 63 studies about the relationship between congruence and job satisfaction, and concluded that there is a "magic .30 correlational plateau" (p. 335) between these variables. Tranberg, Slane, and Ekeberg (1993) reported a .20 mean correlation between vocational congruence and satisfaction. Spokane et al. (2000) conducted a review of 66 studies about congruence's validity and utility and reached the conclusion that "congruence appears to be a sufficient, though not necessary, condition for job satisfaction" (p. 137). These authors conclude that the correlation between congruence and job satisfaction is .25 with .05 of variation. However, with appropriate measurement procedures, the correlation might exceed .25 and reach .40 (Spokane et al., 2000).

Although these are promising studies, there are controversies about the use of Holland's concepts and theory. Tinsley (2000), while recognizing the impact of Holland's theory on vocational psychology, criticizes its validity. According to this author, the hexagon model is flawed, and congruence does not predict satisfaction, employment tenure, or other employment outcomes. Hoeglund and Hansen (1999) conducted a study with 16 samples, and found that 12 of them did not present a correlation between congruence and job satisfaction. The remaining four presented a very small correlation, indicating that "little variation in satisfaction in these samples was accounted for by congruence" (p. 480). Moreover, Assouline and Meir (1987) conducted a meta-analysis on congruence literature and concluded that there was little or no relationship between congruence and job satisfaction.

While the association between congruence and job satisfaction has been extensively studied, the relationship between it and job duration or tenure has not been

widely reported. Donohue (2006) conducted a study comparing 212 career changers and 249 career persisters working in different occupations. This author found that career persisters had higher congruence level than career changers, and that career changers tend to move to more congruent jobs. Congruence explained 4% of the variance in the intention to change or persist in a career, supporting Holland's theory that congruence influences job tenure.

Meir, Esformes and Fridland (1994) found that congruence was positively related to career stability for individuals employed in business ($r = .23$) and technology ($r = .19$), but not in organizational ($r = .05$) occupations. Gottfredson and Holland (1990), in a study of 126 bank tellers over a 4-months period, found a positive but weak association ($r = .13$) between congruence and job persistence.

On the other hand, Meir and Navon (1992) also conducted a study with bank tellers ($N = 95$). However, they found nonsignificant difference in congruence levels between persisters and changers. Feij, Velde, Taris and Taris (1999) conducted a study on congruence between vocational interests and perceived skills requirements in a sample of 492 Dutch individuals. The authors hypothesized that incongruent individuals would seek congruence by changing their jobs and, therefore, would have shorter tenure when compared to congruent individuals. The hypothesis, however, was not confirmed. Harris, Moritzen, Robitschek, Imhoff and Lynch (2001) found that neither congruence nor social support predicted tenure for a sample of 40 men and 64 women working in different occupations in the northeast of the U.S.

Thus, some studies have explored the relationship between congruence and job tenure (or career persistence). These studies yield for mixed results. Some concluded that

congruence was an important factor in explaining job tenure (e.g. Donohue, 2006; Gottfredson & Holland, 1990; Meir et al., 1994), whereas others found no significant relationship (e.g. Feij et al., 1999; Harris et al., 2001; Meir & Navon, 1992). Further research is needed in order to reach a final consensus regarding the relation between congruence and both job satisfaction and job tenure.

Measures of Congruence

Congruence is a complex and dynamic concept. It can be defined as the degree of fit between individuals and environments. According to Spokane et al. (2000), there are more than 15 methods to measure congruence. These methods range from simple and straightforward, such as matching the first letter of the individual type to the first letter of environmental type, to complex, such as statistical procedures or software programs.

One way to assess the continuum of congruence is to check the relative position of the first letter of the individual and environmental types in the hexagon (Spokane et al., 2000). The more proximate the positions, the higher the degree of congruence. High degree of congruence is characterized by an exact match, when the first letter code of the individual and the environmental profile are identical (e.g. Conventional type of person in a Conventional type of environment). A moderate degree of congruence would be when the first letter code of the environment is adjacent to the first letter code of the individual (e.g. Conventional person in a Realistic environment). A low degree of congruence would be characterized by the first letter code of the individual being neither identical nor adjacent to the first letter of the environment (e.g. Conventional person in a Investigative or Artistic environment).

Increasing the number of letters increases the possible degrees of congruence. The method gets more complex since it considers the intra and interrelation between the structures of the individual and the environment profiles (Spokane et al., 2000). A more complex way to measure congruence is using the Iachan Index. This measure is a result of adding specific weights for each letter that appears in both the individual and the environmental profile. The weight of each matching depends on the position of the matching letters in both profiles (Iachan, 1984; Miller, 1992).

The impact of matching one's vocational interests with workplace needs and characteristics, along with some ways to measure congruence, was explained. The next section explores other variables, such as background factors, that may also influence employment tenure.

Background Factors

Background factors include demographics, education level, disability type, social security benefits status and length in service. According to Bolton, Bellini and Brookings (2000), 5% of the difference in employment status of individuals with disabilities can be explained through variables such as age, marital status, education, financial assistance, family income, and disability type. Following, background factors will be examined as they relate to employment outcomes for individual with disabilities.

Demographics

Demographic factors include age, gender, and race/ethnicity.

Younger age was found to be a predictor of employment for individuals with disabilities (Blackwell, Leier, Haupt, Kapitsis & Wolfson, 2004; Bose, Geist, Lam, Slaby & Arens, 1998; Lustig, Strauser, Weems, Donnell & Smith, 2003). However, some

authors (Daniels, 2007; Roessler, Rumrill & Fitzgerald, 2004) found no relationship between age and employment outcomes for VR clients. Regarding the specific group of youth with disabilities, Fabian (2007) found that, although not statistically significant, youth between 17 and 19 years old were more likely to find a job than their older and younger peers.

Studies that examined the connection between gender and employment outcomes present mixed results. The majority of them demonstrate females at a disadvantage in comparison to males, whereas others reach the conclusion that there are no differences between genders regarding employment outcome for individuals with disabilities. Fabian et al. (1998), and Luecking and Fabian (2000) found that gender did not make a statistically significant difference in the employment status of youth with disabilities. Similar results were found by Daniels (2007) regarding VR clients in general.

However, other studies (Benz et al., 1997; Bishof, 2004; Blackorby & Wagner, 1996; Randolph, 2004) found that males are more likely to find a job than females, and that being female is a strong negative predictor of employment status. Berry (2000), exploring the characteristics of working people with disabilities, found that males had a 50% greater chance to be working than females. In a study about factors associated with securing a job for urban minority youth, Fabian (2007) found that boys were more likely than girls to find a job.

According to the National Longitudinal Transition Study-2 (NLTS-2, 2003), youth with disabilities follow the same gender pattern of employment rates as the population of youth in general. The rate of employment among girls increased from 1987, contributing to a shrinking in the gap between genders. However, types of jobs and wages

are still markedly different for each gender. Boys held mostly maintenance jobs (about 33%), while girls worked mainly in personal care jobs (about 50%). Boys usually worked more hours per week and earned more per hour. Over 30% of the boys earned \$6.50 or more per hour, whereas just 16% of girls earned this much. Eleven percent of the boys and 23% of the girls earned less than \$4.50 per hour.

Regarding race/ethnicity, most authors found a connection between this variable and employment outcomes for individuals with disabilities. Finding successful employment is harder for ethnic minority groups than it is for the majority group (Daniels, 2007; Dunham, Schrader & Dunham, 2000; Moore, 2002; Schaller & Yang, 2005). Blackorby and Wagner (1996) found that Hispanics and African Americans were employed at lower rates and receiving lower wages than their White peers. According to Rogers, Anthony, Cohen, and Davies (1997), race and living arrangements were the demographic factors that held stronger association with work skills, which, in turn, were associated with vocational outcomes in adults with psychiatric disabilities. Berry (2000) examined the extent to which race/ethnicity were associated with employment outcome and found that for each Caucasian working, there were 0.63 African Americans working.

Considering the specific population of youth with disabilities, although Fabian et al. (1998) found that race did not contribute significantly to predicting employment outcome, Luecking and Fabian (2000) found that minority students with disabilities were half as likely to be employed than their peers from the majority culture. The NLTS-2 (2003) report confirms the relationship between ethnicity and employment outcomes. Youth employment rates are lower for Hispanics (36%) and African Americans (42%)

than for Whites (62%). The same association between race/ethnicity and employment is present in the general population (NLTS-2, 2003).

In sum, considering the transitioning population, the age differences within the group are too small to make a statistically significant difference. Studies on the influence of gender on employment outcomes have mixed results: either with no influence or with being a male increasing the chances of obtaining a job. Although most studies found that ethnicity and employment outcomes are linked, Fabian et al. (1998) found that race did not contribute significantly in predicting employment outcome for a sample of youth with disabilities participating in a career intervention.

Education Level

Education variables include information on years of education, graduation with diploma, certificate, or dropping out. Most studies found that there is a positive correlation between years of education and employment status (Daniels, 2007; Randolph, 2004; Schaller & Yang, 2005). Students who completed high school had greater odds of finding and keeping a job than their peers who dropped out or aged out from school (Blackorby & Wagner, 1996; NCD, 2000). Berry (2000) found that students who completed high school were twice as likely to be employed as youth who did not.

Disability Type

According to the NLTS-2 (2003), employment rates vary a great deal across different types of disabilities. In a one-year period, individuals with learning disabilities, emotional disturbances, health impairments, or speech impairments have the same or better employment rates (50% to 60%) compared to the same age group in the general population. The employment rate for youth with autism is about 15%, with multiple

disabilities, deaf-blindness, or orthopedic impairments it is 25%, and with mental retardation or visual impairments it is about 33%.

Blackorby and Wagner (1996) found that youth with learning impairments, mental retardation and speech impairments have higher employment rates than their peers with other types of disabilities. Luecking and Fabian (2000) found that disability type and ethnicity were two strong predictors of employment for youth with disabilities. In this study, youth with emotional disabilities were almost three times less likely to find and keep a job than their peers with other types of disabilities. In another study, Fabian (2007) found that minority youth with orthopedic impairments were less likely to obtain jobs than their peers with other types of disabilities.

Bolton et al. (2000) studied the relationship between employment outcome and disability type. The types of disability considered in this study were orthopedic, chronic medical, psychiatric, mental retardation, and learning disabilities. The authors found that slightly more individuals with chronic medical and learning disabilities were employed compared to individuals with psychiatric disability. Individuals with mental retardation received substantially lower salaries, whereas individuals with orthopedic and chronic medical disabilities earned the highest salaries among the groups.

Although most studies found differences in employment outcomes when considering disability type, Fabian et al. (1998) found that it did not contribute significantly to predicting employment in a sample of transitioning youth.

Social Security Benefits Status

Regarding the financial situation, Berry (2000) conducted a study aimed at comparing employment characteristics of young adults who receive Supplemental

Security Income (SSI) benefits and those who do not. The author found that the percentage of SSI recipients who reported had ever worked was substantially lower than their non SSI-recipient peers. The chance of being employed was reduced by more than half for individuals who receive SSI. The monthly income was markedly different for the groups: while SSI participants had a mean monthly income of \$607.11, the non participants' mean monthly income was \$1,116.57.

The same pattern was found among transitional youth. Non SSI-recipient students were significantly more likely to find a job than their peers who received this benefit (Fabian, 2007). This is consistent with many other studies in the area which highlight that Social Security and other entitlement beneficiaries are significantly less likely to have a successful employment outcome (e.g., Saunders et al., 2006).

Length in Services

Bolton et al. (2000), in a study with more than 4,000 VR clients, found that individuals closed with competitive employment received slightly more services and had slightly more total services costs than individuals closed unsuccessfully. According to Dunham et al. (2000), in a study with individuals with co-morbid borderline IQ and specific learning disabilities, longer length of time receiving VR services is related to poorer employment outcomes. Berry (2000) found that young adults who have received vocational services were not more likely to find and keep a job than their peers that have never received these services.

As the literature review demonstrates, employment outcome is quite complex and can be influenced by a myriad of factors, such as demographics characteristics, educational level, social security benefits status, and length in services. The next session

explores how the results of career assessment relate to employment outcomes for the population of individuals with disabilities.

Congruence between career assessment results and subsequent job

Career assessment is a process to identify individual characteristics, interests, skills, needs, and preferences. It contributes to the career planning process and provides individuals with insight into their career potential (Rehabilitation Service Manual-2 [RSM-2], 2008). This section examines the relationship between career assessment results and employment outcomes.

Kosciulek et al. (1995) conducted a study to assess congruence among three different phases of the VR process for successfully rehabilitated clients (status 26) in fiscal year 1993. These authors examined congruence among vocational evaluation recommendations, vocational skills training and jobs obtained. Congruence was defined as the matching of the three digit Holland code between each phase. There was a low to moderate congruence across the three phases of the process (40%). Between vocational evaluation and job obtained, the congruence was less than half (46.2%), which means that the majority (53.8%) of the individuals held different jobs than the ones specified in the career assessment.

In a study aimed at assessing the validity of vocational evaluation in predicting employment outcomes for VR clients, Caston and Watson (1990) found that just 31% of the clients who completed a vocational evaluation followed its recommendations. The majority (69%) found a different job than the ones recommended in the evaluation. The authors conclude that “for some reason, the vocational recommendations were frequently not followed” (Caston & Watson, 1990, p. 64).

The above studies examine the proportion of clients who secured a job in the field recommended in the career evaluation. However, these studies do not evaluate the consequences of securing a job that matches (or not) individuals' interests and preferences. Filling this gap, Beveridge and Fabian (2007) conducted a study that examined the effect of congruence between the job specified in the Individualized Plan for Employment (IPE) and the job held upon closure on job satisfaction and wages. Participants were Maryland VR clients successfully closed (status 26) in fiscal year 2002. Congruence was defined as a match between the first letter Holland code of vocational goal on IPE and the first letter code of the job held at closure.

Results of this study indicated no relationship between congruence and job satisfaction. The authors suggested that counselors and clients might consider finding a job a positive outcome by itself, regardless of its congruence with the stated goal in the IPE (Beveridge & Fabian, 2007). Considering demographic variables, Beveridge and Fabian found that VR male clients were more likely to obtain a congruent job than female clients. Also, clients with mental disability were less likely to obtain a congruent job than their counterparts with physical and sensory disabilities.

The study that is being proposed differs from Beveridge and Fabian (2007) in several aspects. First, instead of assessing job outcomes using job satisfaction and wages, the proposed study assesses job outcomes using tenure for at least six months. Tenure can be considered a measure of individual satisfaction and performance, which takes into account both the individual and the environmental perspectives. Tenure is expected when the individual is satisfied with his/her job and the employer is satisfied with the individual's performance (Lofquist & Dawis, 1984). Second, instead of the stated goal on

the IPE, this study focuses on the interests identified on the career assessment. The IPE can be changed many times and does not necessarily reflect the client's interests as specified in the career assessment. Currently, VR policy requires that, in order to close a client successfully, the job held matches the IPE goal (RSM-2, 2008). So, if a client finds a job different than his/her initial goal, the goal on IPE is changed.

Thus, as the literature review demonstrates, there have been studies that examined levels of congruence between career assessment results and job held (e.g., Caston & Watson, 1990; Kosciulek et al., 1995). Beveridge and Fabian (2007) examined the relationship between congruence (between IPE goal and job held at closure) and job satisfaction and wages. However, there is a lack of studies that directly assess the relation between congruence and employment tenure for youth with disabilities. Although job satisfaction is related to employment tenure, it is important to assess the impact of congruence in each of these variables. Filling this gap, this study examines whether congruence between assessed interests and subsequent job affects employment tenure.

Chapter 3: Methodology

The main research question of this study is: Is there a relationship between congruence (between the individual's inventoried career interest and subsequent job) and employment tenure for transitioning youth with disabilities served at DORS Region 6 in fiscal year 2008? As a secondary goal, the relationship between the background factors and employment tenure is explored.

In order to examine these two questions, cases of 51 DORS' clients were reviewed. Participants of this study were transitioning youth who received services from DORS Region 6, including career assessment service, and who were successfully closed fiscal year 2008. Figure 2 details how the sample was constituted.

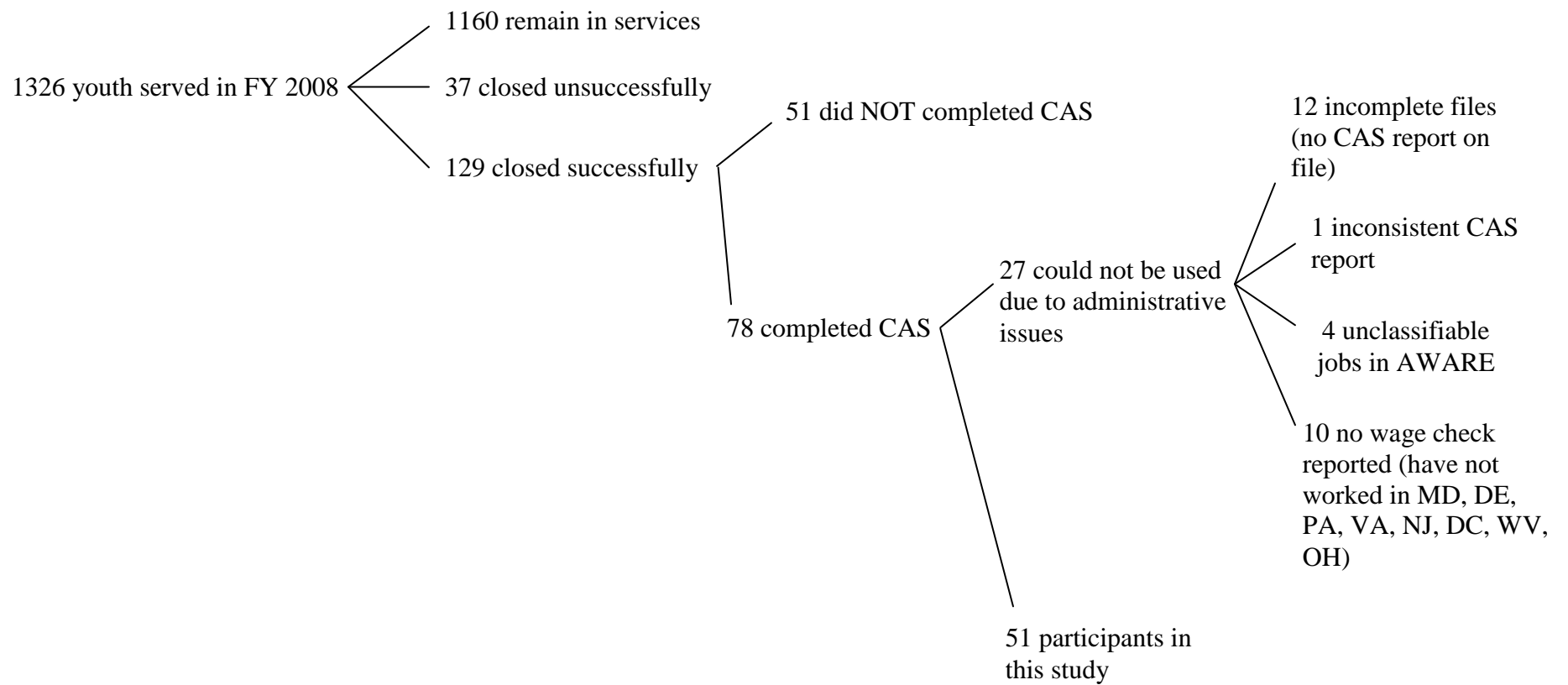


Figure 2. Breakdown of participants

Setting

The goal of the Division of Rehabilitation Services (DORS), the Maryland VR state agency, is to promote employment, economic self-sufficiency, and independence of individuals with disabilities through the provision of rehabilitations services (About DORS, n.d.). Vocational rehabilitation services are offered in a highly standardized and regulated manner (RSM-2, 2008). A detailed review of the rehabilitation services is not the goal of this study, however a brief description of the six basic steps that constitute the process will be provided. For more specific and detailed policies and procedures, a review of the RSM-2 (2008), the DORS manual for policies and procedures, is recommended. The six steps are as follows:

1. Referral and intake: Within 10 days after receiving a referral, VR staff contact the client to provide basic information (such as DORS purpose and application procedures) and to request additional information. As soon as possible (and within 30 days from referral), an intake interview is scheduled. This interview is aimed at establishing rapport, providing more information about services and policies, collecting information, and starting career exploration and counseling.
2. Eligibility determination and order of selection: An applicant is eligible for services when all four criteria are met: the individual has a physical or mental impairment; the impairment(s) substantially affect the individual's capability to find and keep a job; the individual can benefit from rehabilitation services; and the individual requires vocational rehabilitation services in order to find and secure a job in an integrated setting. Since funding is limited, eligible individuals may have to go to a waiting list. Order of selection from this waiting list is determined by the severity of the

disability. Individuals with most significant disabilities are served first. The severity of disability is assessed according to the impact of the impairment on seven life domains (mobility, communication, self-care, self-direction, interpersonal skills, work skills, and work tolerance), the need for multiple vocational rehabilitation services, and the period needed for rehabilitation.

3. Development of individualized plan for employment (IPE): An IPE is developed in a collaborative way with the client within 120 days after entering services. Counselors ensure that the client understands his/her options and make informed choices regarding his/her plan. The plan is composed of the individual's employment goal, which should be consistent with the individual's strengths, resources, priorities, concerns, abilities, capabilities, interests and choices, and of the services required to achieve this goal. Counselors assist clients in choosing meaningful employment goal, beneficial and substantially needed services for reaching the goal, and service providers. Plans are reviewed annually, and can be amended at any time.

4. Delivery of services: Services include but are not limited to career counseling and guidance; referrals; assessments and evaluations (such as career, functional, and assistive technology assessments); trainings (such as post secondary school, trade school, and work adjustment training); employment services (such as placement, supported employment, and job coaching); and support services (such as transportation and personal assistant service). Provided services coincide with services indicated in the IPE. Considering this study, the career assessment is a particularly relevant service, and will be detailed later.

5. Job placement and follow-up: This phase includes activities related to assuring that the individual is adjusting to the position and will retain the job. Activities include evaluating the need for reasonable accommodations, assisting in requesting and implementing them; and follow-up contact with employer and employee to assess progress.

6. Case record closure: The DORS system classifies case closures in two groups. Cases closed rehabilitated (or status 26) is when the client achieves and sustains competitive employment in an integrated setting for three months; whereas closed other (or status 28) is when the case is closed for any other reason than finding and keeping a job, such as when the client declines service, is not available for services, has been determined ineligible, fails to cooperate, or has received services but has not achieved employment outcome.

Considering the importance of the career assessment service for this study, it will be described in more detail. Career assessment service (CAS) can be provided in different phases of the process and is available through community rehabilitation programs (CRPs) and the Workforce and Technology Center, operated by DORS. The objectives of requesting a career assessment vary, including determining eligibility, defining a career goal, assessing feasibility of a chosen career, and exploring options within a field, among others. The individual's unique strengths, resources, priorities, concerns, abilities, capabilities, and interests are explored in order to identify realistic employment options.

There are different types of career assessment, namely:

- itemized assessment;
- focused assessment;

- exploratory assessment;
- community-based assessment; and
- comprehensive assessment (RSM-2, 2008).

Most of the participants of this study went through either an exploratory or comprehensive career assessment. These modalities are the most frequently used with the transitioning youth population. Exploratory assessments are usually conducted in small groups of three or four clients. Comprehensive assessment is the modality of choice when the client requires one to one attention (e.g. due to severity of disability, reading level, behavioral issues, etc), has never worked (or has a significant period of absence from the workforce), and/or needs an extended observation to determine work behaviors. Both modalities utilize career exploration resources and methods “designed to provide information on the next step in long range planning for the individual” (RSM-2, 2008, Section 600, p. 4). They include investigation and education in jobs and career clusters, taking into consideration the individual’s interests, needs, abilities and functional capacities.

Elements of career assessments include the following:

- background information;
- work history;
- behavioral characteristics;
- preferences and interests;
- aptitude and achievement test results;
- medical, mental and physical capabilities; and
- summary and recommendations.

This information is obtained through interviews, testing, work samples, situational assessments, community-based job tryouts, prevailing labor market data, and occupational information (RSM-2, 2008). The choice of instruments is left to the discretion of the evaluator. The ultimate goal is to find realistic job options within the individual's scope of interests and abilities.

Measures

Independent variable: congruence between identified career interests and job held at closure. Two letter Holland code was determined for each individual in the sample and for each occupation. For individuals' interests, Holland codes were determined according to the CAS report; whereas for jobs held at closure, Holland code was determined using the O*NET website (<http://online.onetcenter.org>). O*NET is an extensive database of occupations, which details occupation description, requirements, market outlook and Holland's code. Entering the job title (obtained from AWARE) in the website, the corresponded Holland code was obtained.

Congruence level is measured considering the relative position of the first letter of individual and environmental profiles in the hexagon RIASEC. There are three levels of congruence (Miller, 1992; Spokane et al., 2000):

- High congruence: first letter code of the individual and the environmental profiles are identical;
- Moderate congruence: first letter code of the environment is adjacent to the first letter code of the individual;
- Low congruence: first letter code of the individual is neither identical nor adjacent to the first letter code of the environment.

Dependent variable: employment tenure. In this study, employment tenure is considered a categorical dichotomy variable. For this study, an individual is considered to have obtained employment tenure when he/she has secured a job for at least six months. It could be one or more, consecutive or at the same time, jobs. The defining factor is to have earned some money in the quarter. Six months is the period selected because of the time of the data collection. For clients closed at the end of fiscal year 2008, information available at the time of data collection was for six month after case closure. In addition, considering the high turnover of his population, six month can be considered a reasonable amount of time.

Employment tenure was measured according to clients' wage checks. Wage checks report the total earning by quarter, and do not provide information on number of hours worked. In other words, the information obtained is the amount of money the individual earned at each quarter. The Maryland Department of Labor, Licensing and Regulation (DLLR) Wage History database provided information on wage checks of individuals working in Maryland (MD). Information on individuals working in Delaware (DE), Pennsylvania (PA), Virginia (VA), New Jersey (NJ), District of Columbia (DC), West Virginia (WV) and Ohio (OH) were obtained through a partnership between DORS and the University of Baltimore. DORS personnel provided the author with wage checks for each participant from the time of DORS closure to the last quarter of calendar year 2008, which corresponds to six months after the end of fiscal year 2008 (June, 2008). DORS personnel have no access to wage checks of clients working in different states from the ones mentioned above, self-employed or working for the Federal government.

Demographic data, including information on clients' occupation and wages at closure, were obtained through the DORS electronic case management database, called Accessible Web-based Activity and Reporting Environment (AWARE). AWARE "streamlines documentation, purchase of goods and services and data collection and provides both caseload, regional and statewide reports to support attainment of federally-required performance standards and indicators" (RSM-2, 2008, Section 300, p. 4). DORS information technology personnel conducted queries from AWARE database and exported them to an Excel spreadsheet. The author received an Excel spreadsheet with the information requested.

Table 1 specifies and summarizes variables collected, their sources and procedures.

Table 1

Variables, Source and Procedures

SOURCE	VARIABLE	PROCEDURE
AWARE	<ul style="list-style-type: none"> • Closure Outcome (26 or 28) • Date of closure • Reason for closure (if it is 28) • Office location • SSI/DI recipient status • Race/Ethnicity • Date of birth • Gender • Level of education at application 	<p>DORS information technology personnel provided data from AWARE database exported to an excel spreadsheet</p>

	<ul style="list-style-type: none"> • Level of education at closure • Disability category • Cause of disability • Date of the first plan • Occupation at closure (job title) • Hourly wage at closure • Hours worked per week at closure 	
Wage check	<ul style="list-style-type: none"> • Wage checks from closure to present 	DORS personnel provided reports
File review	<ul style="list-style-type: none"> • Interests (Holland codes) from CAS • Date of Career Assessment 	Researcher reviewed clients' files

Procedures

The research project was submitted to the Assistant State Superintendent in Rehabilitation Services, who conceded permission to conduct this study. Upon approval from the University of Maryland Institutional Review Board (IRB), data was obtained.

Data on demographics, career interests, jobs held at closure, and tenure were obtained as described above (measures section). Occupation held at closure were transformed to Holland's code using O*NET website, and then congruence level was determined according to the three levels specified in the measures section.

Research Design

This is a correlational longitudinal study based on review of existing records. It is correlational because there is no manipulated independent variable, and the goal is assess the relationship between two variables of interest: congruence (between the individual's

inventoried career interest and subsequent job) and employment tenure. It is longitudinal because it looks to the participant's employment outcome over time: from closure to at least six months after closure. It is a historical study because existing records were used. Variables were assessed based on DORS database and files. According to Hinkle, Wiersma, and Jurs (2003), in historical research, the assessment of the relationship among variables is conducted exclusively through a careful review of documents and other materials.

Participants

Participants of this study were transitioning youth who received services from DORS Region 6, including career assessment service, and were successfully closed in fiscal year 2008. According to the Rehabilitation Services Manual (RSM-2, 2006), transitioning youth are all individuals 19 years old and younger at the time of DORS application regardless of whether they are in secondary school; and 20 and 21 years of age if they are in secondary school at the time of application to DORS. In sum, the criteria to be included in the sample were:

- Be a transitional youth;
- Have received services at the Division of Rehabilitation Services (DORS), Region 6 (Montgomery and Prince George Counties);
- Be successfully closed (status 26) in fiscal year 2008; and
- Have done a career assessment as part of DORS services.

The Vocational Rehabilitation agency of the state of Maryland, DORS, served 21,701 clients in fiscal year 2008. Of those, 6,330 were transitioning youth. DORS Region 6, Montgomery and Prince George's Counties, served 4421 clients in fiscal year

2008, with almost 30% (or 1,326 individuals) of those being transitioning youth. One hundred and sixty and six of these individuals were closed: 129 successfully (status 26) and 37 unsuccessfully (status 28). The remaining individuals were still open and receiving services in fiscal year 2009. Reasons individuals' cases were closed are described in Table 2.

Table 2

Reason for Closure (N = 166)

Reason	no.	%
Successful Closure	129	77.7
Unsuccessful Closure		
Unable to Locate, Contact or Moved	17	10.2
Refused Services or No Further Services	6	3.6
Failure to Cooperate	12	7.2
Transferred to Another Agency	1	0.6
Other or not completed	1	0.6

From the successfully rehabilitated transitioning youth closed in fiscal year 2008 at Region 6 (129 individuals), 78 completed a career assessment, meeting all criteria to be in this study. However, from the 78 individuals, 27 could not be included, because of administrative issues, such as incomplete files, inconsistent CAS reports, unspecified job held at closure (such as "all other professional and paraprofessional"), and no wage checks reported (see Figure 2). Thus, the sample for this study is 51 individuals. Demographics characteristics of the sample, such as district, age, gender,

ethnicity, number of impairments, type of disability, education level, and social security recipient status, are reported below.

All four districts (Lanham, Oxon Hill, Wheaton and Germantown) of Region 6 were represented in the sample. Participants applied for services between the ages of 15 and 22 years-old. The average age at application was 19.29 years of age, with SD of 1.62 years. The majority of the sample was between 18 and 20 years of age, male, non-white, and had a cognitive disability (see Table 3).

Table 3

Demographics (N = 51)

Variable	no.	%
Districts		
Lanham	11	21.6
Oxon Hill	12	23.5
Wheaton	12	23.5
Germantown	16	31.4
Age		
15 – 17 years old	5	9.8
18 – 20 years old	36	70.6
21 – 22 years old	10	19.6
Race/Ethnicity		
Black/African American	28	54.9
White	16	31.4
Latin	5	9.8

Asian	2	3.9
Gender		
Male	39	76.5
Female	12	23.5
Number of Impairments		
1	25	49.0
2 or more	26	51.0
Disability Type		
Cognitive	28	54.9
Mental	13	25.5
Sensory	9	17.6
Physical	1	2.0

Length of time in service ranged from 5 to 109 months, with mean of 25.6 and SD of 21.8 months. Most of the participants received services for a period of time between one and two years. Regarding the cost of services, DORS spent between \$604.00 and \$44,167 with each client. The mean of cost of services is \$5,680 and SD is \$8,685 (see Table 4).

Table 4

Service Data (N = 51)

Variable	no.	%
Length of Services		
Less than one year	6	11.8
Between 1 and 2 years	28	54.9

Between 2 and 3 years	9	17.6
More than 3 years	8	15.7
Total Costs of Services		
< \$1,000	11	21.6
\$1,000 - \$5,000	25	49.0
\$5,000 - \$10,000	8	15.7
\$10,000 - \$20,000	4	7.8
> \$20,000	3	5.9

The level of education of the participants was assessed twice: at the time of application and closure. At the time of application, 14 participants had high school diploma; at closure, this rate more than doubles – 23 participants graduated from high school while in services. Social Security benefits status (SSI and SSDI) was assessed at application and closure. The number of individuals that receives social security benefits increased just slightly (see Table 5).

Table 5

Education Level and Social Security Benefits Status (N = 51)

Education level	Application		Closure	
	no.	%	no.	%
Less than high school diploma or equivalency	35	68.6	12	23.5
High school graduate or equivalency certificate	14	27.5	33	64.7
Some college	2	3.9	3	5.9
Bachelor's degree	0	0	3	5.9

Social Security Benefits Status

Receiving	12	23.5	16	31.4
Not receiving	39	76.5	35	68.6

Thus, the majority of the 51 participants in the sample were between 18 and 20 years old at application for services, Black/African American and male. At closure, most of the participants had a high school diploma or equivalency, and around one third were receiving Social Security benefits. Half of the participants had two or more impairments, received services for one to two years, and had the costs of services provided between \$1,000 and \$5,000. The most common type of disability was cognitive.

Data Analysis

Data analysis includes descriptive and inferential statistics. Descriptive statistic deals with summarizing and communicating information about the nature of variables (Hinkle et al., 2003). Descriptive information that characterized transitioning youth served by DORS Region 6 in fiscal year 2008, such as employment data, will be provided.

Inferential statistic deals with making inferences about a population from a sample (Hinkle et al., 2003; Norman & Streiner, 2003). Chi-Square Test was used to assess the association between a single categorical independent variable (employment tenure) and nominal dependent variables. This statistical procedure allows examination of whether congruence (between identified career interests and job held at closure) and background variables are related to employment tenure.

Research questions

1. Does congruence between individual's inventoried career interest and subsequent job relate to employment tenure for transitioning youth with disabilities served at DORS Region 6 in fiscal year 2008?

2. Do gender, ethnicity, education level, Social Security benefits status, disability type, and length in services relate to employment tenure for transitioning youth with disabilities served at DORS Region 6 in fiscal year 2008?

Chapter 4: Results

Descriptive Statistics

The most common jobs obtained were service and cleaning/janitorial occupations (45%). Almost 40% of the sample was working full time and almost two thirds were earning between \$5.00 and \$9.99 per hour (see Table 6). The minimum hourly wage was \$4.49 and the maximum was \$20.00, with mean of \$9.15 and SD of 3.41. Regarding hours worked per week, the mean was 29 hours and the SD 11 hours. The majority of the sample held a job for more than 6 months. More than half of participants held more than one job during the six months period. More than 40% of the sample had low degree of congruence between individual interests and job held (see Table 6).

Table 6

Employment Data (N=51)

Variable	no.	%
Occupation		
Service	12	23.5
Cleaning and janitorial	11	21.5
Stock and order clerks	8	15.7
Sales	4	7.8
Food service	4	7.8
Teacher aide	2	3.9
Other occupations	10	19.8
Hours Worked / Week		
≤ 19 hours	9	17.6

20 – 39 hours	22	43.2
40 hours	20	39.2
Hourly Wage		
< \$4.99	1	2.0
\$5.00 - \$9.99	33	64.7
\$10.00 - \$14.99	13	25.5
\$15.00 - \$20.00	4	7.8
Tenure		
< 3 months	3	5.9
3 – 6 months	8	15.7
> 6 months	40	78.4
Number of jobs		
1 job	24	47.1
2 or 3 jobs	21	41.2
> 3 jobs	6	11.7
Degree of Congruence		
Low	23	45.1
Moderate	12	23.5
High	16	31.4

Inferential Statistics

The main research question deals with the relationship between congruence and employment tenure. Chi-Square test of independence was used; No evidence that supports this relationship was found ($p = .442$) (see Table 7).

Chi-Square test of independence was also used to assess if gender, ethnicity, education level, social security benefits status, disability type, and length in services are related to employment tenure. There was no evidence that these variables are related to employment tenure ($p \geq .05$) (see Table 7).

Table 7

Background Variables and Congruence X Employment Tenure (N = 51)

Variable	X ²	df	p
Congruence	1.632	2	.442
Gender	.223	1	.637
Ethnicity	.162	1	.687
Social Security Benefits Status	1.292	1	.256
Disability type	.766	3	.858
Education Level	5.814	3	.121
Length of services	7.087	3	.069
Costs of Services	5.859	5	.320

Chapter 5: Discussion

This chapter discusses the results from the descriptive and inferential statistical analysis. Findings are examined in the light of previous research.

Before proceeding to the discussion of findings, it is important to outline some limitations of this study. Sample size is one of them. Differences must be very evident to achieve significance in statistical tests with a small sample size in a correlational field study. Small differences are not likely to appear. Although the first plan was to enroll a larger sample size, it was not feasible. Sample size started with all transitioning youth closed successfully at DORS Region 6 in FY 08 (129). However, after examining for one of the main criteria to be part of the study (namely having participated in a career assessment), this number dropped to 78. Due to administrative issues, the sample size ended with 51 individuals. Problems with files, in storing documents (CAS report), and lack of specificity in entering data (employment goal) were part of the administrative issues faced during the data collection for this study.

There were also some limitations regarding the variable employment tenure. First, there was no information on employment tenure for individuals who were self-employed, working for the Federal government and in states other than MD, DC, DE, PA, VA, NJ and OH. Secondly, even for clients working in these states, the information available was the earnings per quarter. There was no data regarding hours worked or specific work period within the quarter. So, participants might have worked full time in the same place, or have had changed jobs many times, or even have held a job for just one month each quarter. Another related limitation is that congruence was computed considering the matching of participants' interests and job held at closure, or first job after being at

DORS. If an individual changed jobs, congruence was not computed for second and third jobs since there was no information on these job titles available.

Discussion of Findings of Descriptive Analysis

The employment data collected sheds light on some important issues considering the population of youth with disabilities. Most of the individuals were working part time in service and cleaning/janitorial positions, and earning between \$5.00 and \$10.00. The majority of jobs were low and non skilled. Although this information might be related to their age, lack of work experience, and the fact that this may be their first job, one can question how much the VR system is helping these youth in getting a career, becoming independent and developing viable vocational/life plans. The goal of DORS is to promote employment, economic self-sufficiency, and independence of individuals with disabilities (About DORS, n.d.).

The trend of low skilled job is congruent with the NLTS-2 (2003) database, which highlights that the most common jobs are maintenance and personal care, and just 25% of the youth earn more than \$6.50 per hour. NLTS-2 is a national database, whereas this study deals with a local community that lives in Prince George and Montgomery Counties, Maryland. This fact might explain why individuals of this sample earn more than the NLTS-2 participants. Half of the participants in this study were earning more than \$8.00 per hour.

The types of jobs held by youth with disabilities are not too different from the patterns of the youth population in general. The patterns of paid employment of youth with learning disabilities, emotional disturbances, and speech, hearing, or other health impairments are similar to those of youth in the general population (NLTS2, 2003).

According to the Bureau of Labor Statistics (2009), 25% of the youth in the general population worked in the leisure and hospitality industry (which includes food services) and 20% worked in the retail trade industry. Thus, the trend observed in this study might reflect adolescent work behaviors, which is characterized by work trials and searching for different experiences. These first jobs are part of career exploration, or the process individuals go through in order to find out who they are and what they want to do (Sharf, 2006).

However, some differences between youth with disabilities and the general population of youth are present and likely to influence the long term vocational life. Among these differences are the levels of support that youth in general and youth with disabilities can rely on, and the extra needs or demands placed on youth with disabilities. Besides career and self exploration and search for identity, youth with disabilities have to deal with other demands, such as how to navigate the system (including DORS), where to go for support, how to deal and negotiate with the limitations associated with the disability (the limitations from the disability and the barriers society imposes on them), how to advocate from themselves, how to incorporate the disability in their identity, among others.

So, although the trend of first jobs might be similar in both groups, their needs and paths might be different. DORS should assist its clientele to make these first jobs a step in their career development, and not the final goal. In this sense, DORS policies can be considered ambiguous. At the same time that the goal is to promote employment, independence and economic self sufficiency, keeping a job for three months is considered a success and the case is closed.

Another striking point from the descriptive analysis is the low number of individuals with high congruent jobs. Around 30% of the participants held a job highly congruent with their assessed interests. On the other hand, many individuals were not working in a job that matched their interest preferences. Similar results are reported in the literature. Kosciulek et al. (1995) found that almost 54% of individuals obtained different jobs than the ones specified in the career assessment. Caston and Watson (1990) found that the index of individuals that actually followed the career assessment recommendations were just 31%.

Low congruent jobs corresponded to almost half (45%) of the cases. In a period when consumers' choices and preferences are regarded as highly important, the low levels of congruence are striking. If individuals are assessed and have identified interest and preferences, why are they getting jobs so different than their initial goal? Some factors not measured in this study are hypothesized to have an influence on this phenomenon: pressure counselors endure to have successful closures, counselors' caseload size, and consumers' need for income (and their willingness to take any job). In the current economy, when the unemployment rate is 9.7% (<http://www.bls.gov/cps/>), having a job, any job, might be considered a success. Subtle or invisible aspects are also likely to have an influence: Internalized stigma or low self efficacy influences one's choice or acceptance of a job. External factors, such as societal stigma and prejudice, may re-enforce the idea that individuals with disabilities can only work in low skilled positions, creating societal barriers to other jobs.

Another important aspect to consider is the environment where the individual was working. Unfortunately this information was not available. Considering the fact that the

positions were low skilled, the environment is extremely important. For an Investigative type of individual, to obtain a janitorial job in a policy agency might be more interesting than in a fast food chain. Being in the preferred environment may have an important role to keep an individual interested in working and developing professionally.

These aspects should be studied in depth in order to understand this phenomenon and effectively help youth in becoming independent and economically self sufficient. Rehabilitation counselors must have in mind and discuss issues such as societal stigma, current job market trends, and implications of getting a job different than the preferred ones in order to help clients to make informed choices. Do counselors have the time to do career counseling and exploration with their clients? Are counselors and clients really taking into consideration the CAS results? Is finding a meaningful job the goal, or just find *a* job? Devoting time to exploring these issues with clients has implications for the VR system. Counselors often have large caseloads (usually more than 100 individuals), which decreases the time counselors can spend with each client. In order to allow more time per client, case load size would have to diminish, which implies new hiring by the VR agencies.

However, when analyzing the levels of congruence for these individuals, a point must be clear: congruence was measured according to the individuals' interests and the job at closure, or the first job. More than half of the participants held more than one job during the six months period. Congruence with the second jobs was not computed since this information was not available. It is not known if individuals moved to more congruent jobs or not. This information is of fundamental importance. If individuals are moving to more congruent jobs, the first job, and DORS assistance, can be considered an

important step in the career development. It would be helping these youth to enter the workforce, develop self confidence and self esteem, which in turn might motivate the youth to apply for new jobs that end up being more consistent with their vocational interests. However, if the second jobs are just an indication that the youth are jumping from one job to another, without finding satisfaction and fulfillment, the first job might have been detrimental for the youth. It might be seen as a confirmation that they cannot do more, or secure a job they would find more enjoyable. Again, more research, with more data available, should be conducted in order to elucidate this aspect.

Discussion of Findings of Inferential Statistical Analysis

Statistical analyses were conducted to examine the relation between employment tenure and congruence, as well as demographic variables. No support was found for either.

Research question #1

Congruence Level. The results of this study did not support that congruence between interests and job held is related to employment tenure. According to Holland's theory, individuals flourish in environments that are congruent with their individual profile, because the environment requires and rewards the individual's competencies, interests and preferences, which tends to increase satisfaction and job tenure (Holland, 1973; Smart et al., 2000). Findings of this study, however, did not support these ideas.

Literature reviews regarding congruence and its influence on job satisfaction and job tenure present mixed results. Tinsley (2000) concluded that congruence is "not a useful predictor of important vocational outcomes" (p. 174). Spokane et al. (2000), after reviewing 66 studies about congruence's validity and utility, reached the conclusion that

“congruence appears to be a sufficient, though not a necessary, condition for job satisfaction” (p. 137). Thus, although some studies (e.g. Donohue, 2006; Gottfredson & Holland, 1990; Meir et al., 1994) concluded that congruence was an important factor in explaining job satisfaction and job tenure, others (e.g. Assouline & Meir, 1987; Feij et al., 1999; Harris et al., 2001; Meir & Navon, 1992) found no relation between these factors.

Before drawing any conclusion regarding the validity or usefulness of the concept of congruence based on the present study, the size of the sample should be considered. It is difficult to find statically significant differences in a small sample. With a larger sample, small differences might become more evident. Besides, employment tenure was defined as maintaining a job for at least six month. Six months is a short period of time to determine employment tenure. Longer time might produce different results.

Moreover, congruence was measured considering just the first letter of individual and environmental profiles and their relative position in Holland’s hexagon. Related factors, such as differentiation and consistency, were not considered in this study, although they may bear an influence. For example, individuals with low differentiation are more likely to adapt and enjoy different work environments; whereas highly differentiated and consistent individuals tend to have more specific and detailed preferences (Holland, 1973). According to Camp and Chartrand (1992), congruence indices do not necessarily measure the construct well.

Most of the participants of this study, although working in jobs different than the ones recommended in the career assessment, held the job for at least six month. Besides vocational interests, there are many factors not measured in this study that may have an impact on tenure. These factors include relationship with co-workers and supervisors,

compensation, opportunities for advancement, culture of the work environment, expectations, and overall economy (Dawis & Lofquist, 1984; Hoeglund & Hansen, 1999). Besides, as Beveridge and Fabian (2007) indicated, finding a job might be seen as a positive outcome by itself, encouraging the individual to keep the job. Meir (1995) suggested that labor market and social pressure might be some of the reasons that lead employees to stay in the job.

Moreover, psychological factors, such as self esteem, self efficacy, motivation, and locus of control are likely to have an influence on employment tenure. Daniels (2007) found statically significant difference between employed and non employed individuals in the VR system regarding psychosocial characteristics. Individuals with higher self esteem and internal locus of control tend to be employed at higher rates than their peers with low self esteem and external locus of control.

In sum, human beings and working relationships are complex, and influenced by a myriad of factors. Although this study did not support the relation between congruence and employment tenure, more studies, with larger sample sizes, are needed in order to verify this result.

Research Question #2

Gender. Results of this study did not support that gender is related to employment tenure. The literature review indicates mixed results. Fabian et al. (1998), and Luecking and Fabian (2000) found that gender did not make a statistically significant difference in the employment status of youth. Similar results were found by Daniels (2007) regarding VR clients in general. It is worth noting, however, that this sample was predominantly male. Females constituted little over 20%, which might have influenced this result.

Ethnicity. Different than other studies (e.g. Blackorby & Wagner, 1996; Daniels, 2007; Dunham et al., 2000; Moore, 2002; Schaller & Yang, 2005), this one did not find support for the relation between race/ethnicity and employment tenure. The same result was found by Fabian et al. (1998).

Social Security Benefits Status. The results of this study did not support that receiving social security benefit is related to employment tenure. However, six months is a short time to assess the impact of receiving social security benefits on employment tenure. An individual might need more time working before getting to the point in which he/she has to make a decision between remaining employed or maintaining benefits.

Disability Type. The results of this study did not support that disability type is related to employment tenure. Although most studies found a relationship between disability type and employment outcomes (e.g., Blackorby and Wagner, 1996; Fabian, 2007; Luecking & Fabian, 2000; NLTS-2, 2003), these results are not consistent. For example, some studies (e.g., NLTS-2, 2003) found that individuals with emotional disabilities have the same or better rates of employment than the general population, whereas others (e.g., Luecking & Fabian, 2000) found that individuals with emotional disabilities were three times less likely than their peers with other types of disabilities to find and keep a job. More studies, with larger samples, are needed to clarify possible relations between disability type and employment outcomes.

Education Level. The results of this study did not support the hypothesis that education level is related to employment tenure. This is contrary to most studies in the area (e.g., Berry, 2000; Blackorby & Wagner, 1996; Daniels, 2007; NCD, 2000;

Randolph, 2004; Schaller & Yang, 2005), which specifies that as educational levels go up, clients achieve better employment outcomes.

A related issue worth mentioning is the number of individuals that improved their education level while receiving services at DORS. At application, 14 participants had a high school diploma; at closure, this rate more than doubles – at least 19 participants graduated from high school while in services. Three individuals finished their bachelor's degree while in services. As a group, a trend towards improvement on education level is clear, although length of time in services may account for these differences as well. Although education is not the primarily goal of DORS, it is an important factor in order to become more independent and self-sufficient.

Length of Services. The results of this study did not support that length in services is related to employment tenure. The literature review indicates mixed results. Bolten et al. (2000) found that length of time in services did not influence chances to obtain a job. However, Dunham et al. (2000) found that longer time in service was related to poorer employment outcomes for individuals with co-morbid borderline IQ and learning disabilities. Again, more studies are needed to clarify the possible relation between length of services and employment outcomes. These studies, however, should be done with caution. Length in service is probably a result of other factors, such as degree of limitations, work skills, motivation, among others, and may not be a factor that has an influence by itself.

In sum, this study did not find support that demographic variables (gender, ethnicity, education level, disability type, social security benefits status, and length in

service) are related to employment tenure. All the findings should be looked at carefully, though, considering the size of the sample.

Chapter 6: Conclusions and Implications

This study addressed the issue of employment tenure for the population of transitioning youth. More specifically, it examined the influence of congruence on employment tenure for a sample of 51 transitioning youth who were successfully closed in fiscal year 2008 by the Vocational Rehabilitation Agency of the State of Maryland (DORS). Congruence was thought to be a factor related to tenure. However, this study did not support this idea. Results of statistical analysis must be looked at carefully though. Due to sample size, no final conclusion can be reached.

More studies, with larger sample sizes, must be conducted in order to explore the relationship between congruence and employment tenure. Research that considers not just congruence, but also consistency and differentiation, might elucidate this relationship. Moreover, in order to adequately evaluate the effect of congruence on employment, other factors, such as self-esteem and self-efficacy, as well as demographics, should be controlled. Future studies should consider employment tenure not as a dichotomous variable, but as a continuum and for a longer period of time.

In addition, studies aimed at finding other factors which contribute to employment tenure are needed. Evaluating psychological, societal, and contextual factors and their impact on employment tenure may clarify the complex reasons why some youth remain in the job longer than others.

Although no support for the relation between congruence and employment tenure was found, this study sheds light on some important issues, such as the high number of cases with low congruence. Individuals are completing career assessments that identify their interests and preferences, and are securing completely different jobs. If DORS'

counselors are to help individuals to find meaningful careers, and become more independent, this issue should be addressed more in depth. What are the implications of finding a job different than the ones the individual is interested in? Considering that this might be their first job, what are some of the consequences for individuals' relationships with work, and for their long term careers?

Another point to be highlighted is the fact that almost all positions were low skilled or non skilled. These might be their first jobs, but it is very difficult to be economically independent working 20 hours a week and earning approximately \$8.00/hour. VR counselor should focus on long term goals as well.

Thus, transitioning youth is a growing population which has been the focus of policies and governmental initiatives. However, as per this study, it appears that their needs have not been fully addressed. Although this study did not support the relationship between congruence and employment tenure, some important issues came to light. Transitioning youth may be able to get a job once they graduate from high school; nevertheless, their jobs have been characterized by being part time, entry level, low skilled, and not within the interest range of the individuals. DORS is able to successfully close many clients, but is not necessarily fulfilling its mission, namely to promote employment, economic self-sufficiency, and independence of individuals with disabilities (About DORS, n.d.). Maintaining a job for three months can be seen in a positive light, since it might be the entrance of the youth in the workplace and have a positive impact on youth self esteem and self confidence. However, these first jobs, as well as volunteer and internship experiences, should be considered steps for career development, and not the

final goal. DORS has been successful with job placement, but not necessarily with career development. Although helpful, DORS services seem to end prematurely.

The fact that most jobs were not congruent with assessed interests must be reviewed. If students are taking their time and effort to complete a career assessment, and the government is funding this service, this document should be fully considered when assisting these youth to find employment. Counselors, supervisors and policy makers should re-think their policies and procedures in order to make a difference in the life of these youth.

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