

ABSTRACT

Title of Dissertation : THE EFFECT OF WORKING ALLIANCE ON CLIENT DROP-
OUT FOR PERSONS WITH DISABILITIES IN STATE-
FEDERAL REHABILITATION AGENCY

Mary Stapleton, Doctor of Philosophy, 2007

Dissertation directed by: Associate Professor Ellen S. Fabian
Department of Counseling and Personnel

The existence of a working alliance between a counselor and a client has been viewed as a critical component of the therapeutic process in the psychological literature (Bachelor, 1995). The construct of working alliance has been the focus of interest in research literature as a measure of positive therapy outcomes. According to Horvath (2001) two decades of empirical research have consistently linked the quality of the alliance between therapist and client with therapy outcome. The 1998 Amendments to the Rehabilitation Act mandate that persons with disabilities must be “active and full partners” in the rehabilitation process. In the federal-state rehabilitation setting there is limited time to form an alliance(Safran&Muran, 1998), so that the initial interview becomes critical in engaging the client in this process. Therefore, this study measured the working alliance after the initial in-take session.

Working alliance was measured by the Working Alliance Inventory (WAI) developed by Horvath & Greenberg (1989). The dependent variable was the Individualized Plan for Employment (IPE) which represents the agreed upon goals and tasks between the DORS counselor and client. The major hypothesis was that a strong

working alliance between counselor and client would predict an IPE, and a poor alliance would not.

The study participants were 111 persons with disabilities who applied and were found eligible for services in FY 2006 through the Maryland Division of Rehabilitation Services (DORS). The investigation was conducted at 16 DORS offices throughout the state .

The major finding was the lack of any significant relationship between working alliance and IPE . The second major finding was the clients gave generally high WAI scores to DORS counselors and 59 % (66) had an IPE. Despite this positive finding , those with high WAI scores were no more likely to have an IPE .Additionally, there was an effect of disability category upon the WA. In summary, the findings suggest that factors external to the WA may be more significant barriers to employment outcomes for DORS clients. The implications for people with disabilities, counselors, and counselor educators are discussed within the context of these findings.

THE EFFECT OF WORKING ALLIANCE ON CLIENT DROP-OUT FOR
PERSONS WITH DISABILITIES IN A STATE-FEDERAL VOCATIONAL
REHABILITATION AGENCY

by

Mary Stapleton

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

2007

Advisory Committee:

Associate Professor Ellen Fabian, Chair
Professor Emeritus Paul Power
Assistant Professor Kim MacDonald-Wilson
Associate Professor Hanne Mawhinney
Dr. Jo Ann Hutchinson
Assistant Director of Disability Student Services

DEDICATION

For my father Joseph Raymond Stapleton,
with love and gratitude

ACKNOWLEDGEMENTS

The completion of a dissertation is a long and winding journey. There are so many who have traveled it with me, shown me the way, provided maps, picked me up when I stumbled, cheered me on , or in many uncounted ways provided support. Foremost among these was my father who believed in me throughout, but who was not able to be there to celebrate the end of this journey with me. To my mother who is my best public relations specialist, many thanks.

I first must thank my advisor Dr. Ellen Fabian for keeping me on track as a “returning student”, who had many hurdles to negotiate and many detours to avoid in order to arrive at my destination.

My heartfelt thanks to Dr. Rick Parente’ who has been my spirit guide and pathfinder through the field of psychology and academe and without whom I would have been overwhelmed by the complexity of this journey. I thank Rick for his never-ending support, generosity and sense of humor.

I wish to thank my friend Mary Sands who, throughout the many years of the pursuit of this degree, has been the wind beneath my wings and the source of endless support. I have been surrounded by positive energy from Fran Palazzolo, Joanne Weller, Carol and Mark Wheatley, Nell and Victor Wilcox, Jackie Hart, Rosanne Zagorski, Dr Pat Shipman., and last but not least from Lily, Jellica, Storm and Brook.

This research could never have been accomplished without the support of the entire Division of Rehabilitation Services. Special thanks to Robert Burns, Assistant State Superintendent in Rehabilitation Services, Ron Winter, Director of Field Services, Jean

Jackson, Director of the WorkForce and Technology Center, Brenda Isennock, Assistant Director of WTC, and finally Dr. Maya Desai, Medical Director of WTC.

Most of all I wish to thank the persons with disabilities and the many DORS counselors who agreed to participate in this research.

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Chapter I: Introduction

Statement of the Problem

The existence of a working alliance (WA) between a counselor and a client has been viewed as an essential, if not critical, component of the therapeutic process. Bordin (1979) defined the WA as collaboration between the client and the counselor based on an attachment bond as well as a shared commitment to the goals and tasks of counseling. Bordin (1979) theorized that WA has three dimensions, consisting of (1) bonds, (2) tasks, and (3) goals.

The construct of a working alliance has been the focus of interest in counseling psychology research literature as a measure of positive therapy outcomes (Bachelor, 1995; Bordin, 1979; Horvath & Symonds, 1991; Connors et al., 1997; Kokotovic & Tracy, 1990; Horvath, 1994; Luborsky, 1994; Kivlighan & Shaughnessy, 2000). According to Horvath (2001), two decades of empirical research have consistently linked the quality of the alliance between therapist and client with therapy outcome. The magnitude of this relationship appears to be independent of the type of therapy. However, there are few published investigations of the effects of Bordin's model of working alliance on rehabilitation counseling outcome in federal-state vocational rehabilitation settings.

The goal of the vocational rehabilitation (VR) system is to empower persons with disabilities to achieve employment and self-sufficiency (The Rehabilitation Act of 1973, P.L.93-112). An important focus of rehabilitation research has been to determine the variables involved in successful employment outcomes (Bolton, 1979; Walls & Tseng, 1987; Anthony, 1994; Bolton, Bellini, & Brookings, 2000). The WA between the VR

counselor and client is hypothesized to be an important variable in rehabilitation outcome (Strausser, Lustig, & Donnell, 2004; Lustig, Rice, & Rucker, 2002).

According to a national longitudinal study of VR (1992), approximately 13% or 21.3 million working-age Americans, have a disability, and as many as 3.3 million of those persons might benefit from VR services (Overman & Schmidt-Davis, 2000). In FY 1995, the federal-state VR program served 1.25 million persons or about 37% of those who might have benefited from services (FY1995 RSA data). The VR program accepted more than 80% of those who applied for services. However, 12% of those eligible dropped out of the program prior to initiation of services. An estimated 18% (Winter, 2005) of clients in the Maryland VR program drop out prior to receiving services. The reasons have not been investigated, but have been the focus of speculation and concern.

This study will investigate the effect of working alliance on the client drop-out rate in VR within the Division of Rehabilitation Services (DORS) in Maryland.

The Federal-State Vocational Rehabilitation System

The federal-state vocational rehabilitation (VR) system is one of the largest federal efforts to provide vocational services to persons with disabilities. The Rehabilitation Services Administration (RSA) is an agency within the U.S. Department of Education that implements legislative mandates to provide an array of vocational rehabilitation and independent living services to persons with disabilities. The RSA allocates resources and sets policy for vocational rehabilitation (VR) offices in each state to provide services and support to persons with disabilities who are interested in employment.

The Maryland Division of Rehabilitation Services (DORS), which provides “leadership and support in promoting employment, economic self-sufficiency[,] and independence for persons with disabilities” (DORS, 2004). DORS is the federal-state vocational rehabilitation (VR) system in Maryland, administered by the Maryland State Department of Education (MSDE). Any person with a disability that poses an impediment to employment may apply for rehabilitation services. The definitions of disability and impediment as determined by the Rehabilitation Act of 1973 (Sec. 3.2) are included at the end of this chapter.

Overview of the VR Process

The VR process has three phases: (1) referral, (2) evaluation and rehabilitation planning, and (3) service provision, all of which lead to an outcome at case closure. First, during the referral phase, an individual with a disability applies or is referred to the Division of Rehabilitation Services (DORS) for services. In order to be eligible, the individual must have a documented disability that is an impediment to employment, can benefit from services, and requires services to secure, maintain, or regain employment. The eligibility decision must be made within 60 days. However, with the client’s permission, the time can be extended to a maximum of 18 months for further evaluation or for a trial work evaluation. A counselor cannot find a client ineligible due to the severity of the disability without an extension.

Second, during the rehabilitation planning phase, the counselor and the client decide on an employment goal and the scope of rehabilitation services that are needed to develop an individual plan for employment (IPE). The counselor can use the same data obtained to determine eligibility to create an IPE. If additional data are necessary, the

counselor can conduct a comprehensive assessment of the “unique strengths, resources, priorities, interests, and needs of the individual” (RSM 602). The counselor must develop an IPE within 120 days of the date when the client was found to be eligible.

The IPE lists the steps and services needed to achieve an employment goal. The client may choose several options for development of his or her IPE. The counselor collaborates with the client in the development of the IPE, providing technical assistance, resources, and information as needed, and completes the plan; or, the client may complete a draft of all or any part of the IPE on his or her own or with assistance from others, such as family members or advocates. The 1998 Amendments to the Rehabilitation Act mandate that the individual with a disability must be an “active and full partner” during the entire rehabilitation process. The IPE is an important document that provides evidence of the client-counselor collaboration on the tasks and goals of rehabilitation services.

Third, during the service provision phase, the client begins to receive services that assist in preparing, securing, re-training, or re-gaining employment. During the service delivery phase, services may include counseling, prosthetic devices, vocational training, job search, and job placement. Additionally, the VR counselor can coordinate services for self-employment, supported employment, rehabilitation technology, and transportation.

Finally, the case can be closed as successful if the client maintains employment for 90 days. If the client drops out prior to IPE, the case is considered an unsuccessful closure. DORS uses the VR closure codes, which are explained in the definition section at the end of this chapter.

The initial interview.

In the VR system, the counselor-client relationship begins during the initial interview. A recent DORS directive (DORS 5/05) requires that counselors develop a collaborative relationship with each applicant and eligible individual and promote the individual's full involvement and participation in the rehabilitation process. The counselor, in consultation with the consumer/client, determines what supports are needed for the consumer to fully participate in the counseling relationship and rehabilitation program, and ensures provision of the identified supports. "Establishment of a working alliance with the consumer will be facilitated by listening to the consumer's views of his/her interests, hopes, plans, concerns and priorities" (DORS, 2005) and by review of the information provided. The counselor's role in providing information about and guiding the individual in exploration of options is critical to supporting informed choice by the individual.

DORS counselors are trained to use the rehabilitation services manual (RSM-400) as a guide for conducting the initial interview. The RSM requires that an initial interview be scheduled as soon as possible after referral. The counselor advises the client to bring all relevant medical, educational, and employment information to expedite eligibility determination. The individual may bring a support person(s), e.g., family member, friend, or advocate, to the initial interview and subsequent meetings with DORS staff. The counselor makes every effort to meet individually with the client within 30 days of the date of referral at a location and time mutually agreed to. The counselor addresses any special needs, particularly those that would affect the exchange of information, e.g., need for translator, interpreter, or alternate format.

The counselor explains available services and the rehabilitation process, emphasizing that the primary objective is employment. The counselor provides a copy of *Informed Choice*, a brochure that stresses client choices throughout the rehabilitation process from among available, realistic options. These choices include assessment activities, the employment goal, and input on services and providers.

The counselor is required to be aware of and responsive to the learning style of the client, particularly a person with a cognitive disability such as mental retardation, mental illness, traumatic brain injury, or specific learning disabilities. The counselor should be aware that an individual with a cognitive disability can comprehend information and make appropriate decisions if provided suitable supports and assistance either directly by the counselor or through a knowledgeable and qualified third party (RSM 406). The RSM stresses that DORS counselors need to develop a collaborative relationship with each client's rehabilitation process (406.04 RSM).

Rehabilitation Outcomes

Importance of the working alliance in the VR process.

Although a basic rehabilitation principle is a collaborative client-counselor relationship, its effects have not been thoroughly researched. An important factor in the development of a client-counselor relationship is the formation of a working alliance (Bachelor, 1995). Bordin's (1979) definition of the working alliance as a collaboration involving bonds, tasks, and goals between the client and the counselor is a powerful concept in operationalizing this basic rehabilitation tenet. Horvath and Symonds (1991) found that the working alliance makes it possible for the client to accept and follow

through during the counseling process based on a sense of ownership. The IPE represents evidence of ownership and a positive working alliance in the VR process.

The drop-out problem in the Maryland VR.

Prospective clients who apply for services from the Maryland DORS have significant physical, psychiatric, or cognitive disabilities, as defined by the Rehabilitation Act of 1973, which is included at the end of this chapter. In 2006, 24,888 persons with disabilities applied for and received services (DORS, 2006). Although many persons with disabilities apply for vocational rehabilitation services, a growing percentage will drop out before they develop an IPE with the counselor. According to the DORS Assistant State Superintendent in Rehabilitation Services (Burns, 2004), the drop-out rate is a problem that should be investigated.

The drop-out problem in the VR National Longitudinal Study.

A national perspective of the drop-out problem is presented in a series of four final reports detailing the findings of the Longitudinal Study of the Vocational Rehabilitation (VR) Services Program, a study that (RTI) conducted for the Rehabilitation Services Administration (RSA), U.S. Department of Education (ed.gov/rschstat/eval/rehab/vr-final-report, 2003). The broad purpose of the study was to assess the performance of the state-federal VR services program in assisting eligible individuals with disabilities to achieve positive outcomes as a result of their receipt of VR services. The report examined the extent to which demographics and other characteristics of individuals with disabilities affect their access to and receipt of VR services, as well as the outcomes of those services.

Initiated in the fall of 1992, the longitudinal study tracked VR participation and post-VR experiences, for up to three years following exit from the program, of a nationally representative sample of applicants to and consumers of VR services. The study's sample acquisition and data collection activities began in January 1995 and were completed in January 2000, with sample acquisition occurring over a 2-year period and each of the study's 8,500 participants tracked for 3 years.

The study implemented a multistage design that involved selection of a random sample (with probability proportional to size) of 40 local VR offices (located in 32 state VR agencies in a total of 30 states) and, among those offices, a sample of 8,500 applicants and current and former consumers of VR services. The study implemented a cohort design that involved randomly selecting 25% of the sample from the population of persons at application to VR, 50% of the sample from the population of persons who were already accepted for and receiving services, and 25% of the sample from the population of persons at or after they exited VR services.

Factors associated with VR drop-outs.

This study found that 12% of the VR population nationally dropped out of the program prior to receiving services (p. ES-4). A state-by-state percentage was not provided in this study. An additional 21% dropped out after receiving services without an employment outcome. Although the characteristics of clients receiving services were similar to those who dropped out, they did differ in some ways. The study examined similarities and differences between VR-eligible persons who did obtain services, in comparison with characteristics of persons who dropped out of the program before they actually began receiving services. The study investigated the significance of client

characteristics such as functional and psychosocial abilities, education, career-related knowledge, Social Security Income (SSI) and Social Security Disability Income (SSDI) recipients, employment/earning history, and career interests/motivations.

Likelihood of receiving VR services.

The final logistic regression analyses of the characteristics revealed that receiving SSI or SSDI reduced the likelihood that an eligible individual would pursue VR services, although receipt of other forms of financial assistance (e.g., support from family or friends, general assistance, private insurance) increased the odds of entering VR services. Higher gross motor functioning was associated with receiving services, while having no work history (i.e., never having worked at a job two consecutive weeks) decreased the likelihood of receiving VR services. In terms of career-related knowledge and motivations, greater knowledge of specific jobs, greater job-related information gathering skills, and the desire to obtain assistive technology devices or services increased the odds of receiving VR services. According to the authors, the R-square value (R^2 , 0.241) for the model is fairly low, suggesting that, despite the factors that predict receipt of services, the conclusion that the two groups—clients who entered VR services and those who dropped out—are very different should be interpreted cautiously, at least on the variables the study measured (pp. 3–9).

In summary, clients who were more likely to drop out were receiving Social Security Income (SSI) or Social Security Disability Income (SSDI) and had never worked 2 consecutive weeks. Those clients who were more likely to receive services were receiving financial assistance other than SSI or SSDI, had better gross motor functions, had greater knowledge of specific jobs, and were interested in obtaining assistive

technology as a reason for applying for VR services. The study noted that, since all clients had been accepted for VR services, the differences in these parameters were relatively small.

Ramifications of the Drop-out Problem

The purpose of the present study is to investigate the relationship between the working alliance (WA) and clients who drop out before service initiation begins or an IPE is created. The effect of client drop-out is a problem for several reasons. First, drop-out is a problem for the persons with disabilities who will not receive needed services. An estimated 666,000 people in Maryland (U.S. Census Bureau , A. C. S. Data 2005) have a disability, or 13.1% of the population age 5 and over. There are 352,000 persons with disabilities between the ages of 18-64 who are potentially eligible for DORS services. DORS can only serve a portion of these, given present resources; therefore, drop-outs are using service dollars that might be distributed to others.

Second, drop-out is a problem for the state-federal rehabilitation system, which will enable fewer clients to achieve employment outcomes. Finally, drop-out is a problem for counselor educators who need strategies to provide their student counselors with the necessary skills to form effective relationships with clients to prevent premature drop-out from services.

Relationship Between WA and VR Counselor Time Constraints

The drop-out problem is embedded in the unique counseling setting that exists in the VR system. There are special challenges in the federal-state system, such as the counselors' large caseloads, which may limit the amount of time a counselor has to

develop a good working alliance. The average caseload for a rehabilitation counselor in Maryland is 183 (DORS, 2004). As a result, the counselor is challenged to quickly establish a partnership due to the time constraints.

In Bordin's (1979) WA model, the perception of an alliance includes consensus about, and active commitment to, mutual goals and the means by which these goals can be reached. These tasks are a critical part of the rehabilitation counseling relationship with persons with disabilities. In the federal-state rehabilitation setting, there is limited time to form an alliance (Safran & Muran, 1998). In the VR setting, the initial interview with a rehabilitation counselor is critical for engaging the client in this process.

In a study of the relationship between working alliance and employment outcomes, Lustig (2002) found that DORS counselors must learn to balance directive responses with reflective responses. The short-term, intermittent nature of the counselors' work may cause them to rely too heavily on a directive approach when a more didactic approach to discussing goals and tasks may be preferred. Lustig (2002) pointed out that "clients may feel overwhelmed by the process of finding a job and believe they are not ready to start vocational rehabilitation at the pace suggested by the counselor" (p.30).

A prospective client's first encounter with a rehabilitation counselor is during the initial interview. Because of the issues outlined above, it is important for the counselor to quickly form an alliance with the client. This study will focus on the effect of this alliance, or lack of one, in the very early stages of the client-counselor relationship. Horvath (1994) reported a correlation between alliance and outcome in counseling with measures taken early in the process. In a study of counseling outcomes, he found that "the quality of the working alliance in the initial stages ... is predictive of a significant

proportion of the variance” (p. 2). Failure to engage with the counselor, an inability to agree on what needs to be done, and a lack of trust that it can be done lead to disengagement. It follows that, in a VR setting, a client may drop out after an initial interview with a counselor, if an alliance is not formed. According to Horvath (1994), a client “may arrive with hope, positive expectation, and some anxiety, and if collaboration does not happen quickly, hope may turn to pessimism” (p. 3). This expectation may be especially true for persons with significant disabilities who look to rehabilitation counselors as professionals with well-developed understandings of disability issues.

Importance of the WA in Improving VR Outcomes

Consequently, there is a need to better understand how rehabilitation counselors can facilitate a working, collaborative alliance with clients that will improve positive outcomes. The likelihood of improving rehabilitation outcomes when clients are partners in the process has been well documented (Chan, Shaw, McMahon, Koch, & Strausser, 1997).

This investigation will clarify the link between working alliance and the drop-out problem. The findings will provide recommendations to reduce the number of clients who choose to drop out. Furthermore, results will provide guidelines for practicing rehabilitation counselors to enhance their skills in forming working alliances with their clients in a collaborative relationship. The study will provide information to counselor educators to better teach skills and strategies that engage clients quickly in the rehabilitation process, given the time constraints that are likely to continue in the state-federal system.

Need for Study

One of the most important questions that is asked in rehabilitation research has focused on which variables predict successful rehabilitation outcomes. The answer is of intense interest for several reasons. The assumption is that successful rehabilitation will improve the lives of persons with disabilities and provide increased independence and control over their lives (Bolton, Bellini, & Brookings, 2000). The VR Longitudinal Study (2003) previously cited investigated an array of client characteristics and service delivery variables associated with outcomes. Demographics, employment history, functional limitations, self-esteem, and length and cost of VR services were investigated. Excellent reviews of VR outcomes are provided by Bolton (1979; 1987), Walls and Tseng (1987), and Anthony (1994). These studies emphasize employment outcomes following receipt of services, as opposed to case closures resulting from clients exiting VR prior to receiving services.

However, there is a need to investigate the relationship between the working alliance and the effect on the drop-out rate, which is a largely unexplored area in rehabilitation research literature. A study of the effect of working alliance on the drop-out rate can lead to two important outcomes. First, a lower drop-out rate will increase use of services for persons with disabilities. It is critical that the federal-state rehabilitation system serves as many consumers as possible. If a portion of persons with disabilities drop out and fail to receive needed services, they will be less likely to achieve economic self-sufficiency. The disability population, historically, has a high unemployment rate and is disenfranchised. A lower utilization rate of available public vocational rehabilitation services affects the productivity of society at large. Second, the findings

from this study will lead to recommendations for strategies and interventions that increase the likelihood of forming a good working alliance between counselor and client.

Purpose of Study

Relationship of the WA to the Drop-out Problem

The purpose of this study is to increase understanding of the relationship between the drop-out problem and the formation of a working alliance. This will be accomplished by gathering data using the Working Alliance Inventory (WAI) developed by Horvath and Greenberg (1989). The drop-out rate is defined as the number of clients who drop out prior to service initiation before developing an Individualized Plan for Employment (IPE). The IPE represents the agreed-upon goals and tasks between counselor and client, which relates to the definition of the WA.

The major hypothesis is that a strong working alliance between counselor and client, the independent variable, will result in continued engagement in the rehabilitation process, and a poor alliance will result in disengagement from the process. The dependent variable is simply defined as whether the client chooses to drop out from the VR prior to receiving services. If this hypothesis is supported by the data, results of this study will be used to provide meaningful information to decrease the drop-out rate. Results of this study will provide guidelines regarding specific counseling approaches used in vocational rehabilitation settings to foster stronger working alliances. Results will provide knowledge of which dimensions, i.e., tasks, goals, and bonds, of the working alliance are significantly related to engagement in the rehabilitation process.

Context of the Study

Rehabilitation Legislation

It is important to understand the history of federal legislation as a context for the significance of this study. There are 91 separate pieces of legislation affecting employment services for persons with disability (Jenkins, W.M., Patterson, J.B., & Szymanski, E.M. 1992). For more than 70 years rehabilitation legislation has assisted persons with disabilities to become employed and develop economic self-sufficiency through vocational services, civil rights protections, and related programs. The body of laws has grown from a small temporary program for persons with physical disabilities (Vocational Rehabilitation Act of 1920, P.L. 66-236) to an ever-increasing number of programs expanded to include people with physical, mental, and emotional disabilities (The Rehabilitation Act of 1973, P.L. 93-112).

The rehabilitation legislation under which VR services are currently provided is the Rehabilitation Act of 1973 and its amendments. The 1998 Workforce Investment Act (P.L. 105-220) extended the 1973 law to include consumers with the most significant disabilities, increase consumer choice and involvement, and provide greater accountability for outcomes of services. The term “rehabilitation” is not defined in the act, but is generally considered to encompass a “comprehensive sequence of services, mutually planned by the consumer and rehabilitation counselor, to maximize employability, independence, integration, and participation of people with disabilities in the workplace . . .” (Jenkins et al., 1992, p. 28).

Americans with Disabilities Act of 1990

Of monumental importance to rehabilitation consumers and VR counselors is the Americans with Disabilities Act of 1990 (ADA: P.L. 101-336). It is the most comprehensive civil rights legislation ever passed for persons with disabilities (Adams, 1991; Jones, 1991; Rains, 1992). The Rehabilitation Act of 1973 introduced many of the fundamental principles contained in the ADA (West, 1991). The ADA definition of disability is the same as that in the 1973 Act, with a change in wording from handicap to disability. An individual with a disability has (a) physical or mental impairment that substantially limits one or more life activities, (b) has a record of such impairment, or (c) is regarded as having such impairment (Sec. 3.2).

Of particular relevance to this study is the major philosophical emphasis that ADA places upon consumer involvement and empowerment (Danek et al., 1996). Counselors “must understand how the ADA and its mandates directly influence . . . people with disabilities” (Satcher & Hendren, 1991).

The 1992 Amendments to the Rehabilitation Act

The 1992 Amendments to the Rehabilitation Act incorporate the values of the Americans with Disabilities Act, which stresses “respect for individual dignity, personal responsibility, self-determination, and pursuit of meaningful careers, based on informed choice” [Rehabilitation Act Amendments, Sec 2 (c)(1)]. Two topics affecting the counselor-client relationship (Danek et al., 1996) addressed in the amendments are emphasis on qualified rehabilitation counselors and the improvement of client choice.

Qualified VR counselors.

According to Danek et al. (1996), in the state agencies, the “skills of the rehabilitation counselor are essential to adequately provide individualized program planning . . . they must work with the client to identify needs and the mutually plan a program” (p. 51). Szymanski (1991) has found a relationship between VR counselors with higher levels of training and education and positive rehabilitation outcome. The Rehabilitation Act has funded training programs for rehabilitation counselors since 1954 and has required that personnel serving individuals with disabilities be “qualified” since 1984 (Walker & Myers, 1988). Amendments to the act now specify that each state’s program have “qualified rehabilitation counselors . . . to facilitate the accomplishment of the employment goals and objectives of the individual” [Sec. 100(a)(3)(E)]. States must also describe the training that is provided to VR counselors to meet these quality standards. According to a recent DORS directive (2005), the ability to create a working alliance is considered an important skill of a qualified rehabilitation counselor and is now a training objective within the Maryland VR system.

Consumer choice.

According to Rubenfield (1988), a criticism of the client-VR counselor relationship is that the counselor is often viewed as in control of the client’s career choice. Despite the legislative safeguards, clients “frequently feel powerless and depend on authority figures to make decisions for them” (Danek, 1996, p. 56). In response to consumer concerns, the 1992 amendments acknowledge this issue, and go a step further by authorizing demonstration projects to increase client choice, e.g., the selection of providers of VR services. Danek (1996) cites Szymanski (1985): “they reinforce the

admonition that counselors must be partners with persons with disabilities and encourage self-determination and full participation . . .” (p. 56).

Practical Significance of the Study

This study is both theoretically and practically significant. If the drop-out rate can be lowered, more individuals with disabilities will receive rehabilitation services for which they are eligible. Understanding the dimensions of the working alliance will lead to recommendations for enhanced skill development for rehabilitation counselors in the formation of a working alliance. The analysis of the three dimensions of the WA (bonds, goals, and tasks) will provide insight and increase understanding of their importance in a vocational rehabilitation setting. Bordin’s (1979) concept of working alliance includes one general factor and three dimensions. However, the importance of these dimensions may vary partly depending on the setting. This study will provide further clarification of the role of bonds, goals, and tasks in a vocational rehabilitation context for persons with disabilities.

Practically, the study will also provide information to Maryland DORS, which will guide policy and program enhancement to address the drop-out problem. In addition, the study will provide direction for future research in the investigation of disability, gender, and ethnicity as variables in the working alliance.

Research Questions

This study will examine the relationship between the measured level of working alliance and the pursuit of rehabilitation services for persons with disabilities. The primary research hypothesis is that the quality of the working alliance is related directly

to rehabilitation outcome. Specifically, a lower level of alliance will predict higher drop-out. Conversely, a higher level of alliance will predict continued pursuit of rehabilitation services. Based on this hypothesis, the research questions are as follows:

1. Does the level of WA between a rehabilitation counselor and an individual with a disability predict drop-out prior to service initiation and the creation of an individualized plan for rehabilitation services (IPE)?
2. Do the three dimensions of alliance, i.e., goals, bonds, and tasks, hypothesized by Bordin (1979) predict drop-out equally well? Which of the dimensions is the most sensitive of the predictors?
3. What is the magnitude of the effect of gender, ethnicity, and type of disability on the client's working alliance with a rehabilitation counselor?

Limitations of the Study

This study will be conducted in the context of a federal-state rehabilitation agency in Maryland and, therefore, may not represent the experience of working alliance in other settings providing rehabilitation services. Thus, the findings may reflect unique sample characteristics. The results may not be generalized outside of this context.

The WAI-C client form is the client's view of the strength of the alliance. Although the literature supports the view that client ratings of the alliance are stronger predictors of outcome than counselor ratings (Horvath & Symonds, 1991), the significance may be increased by measuring the dyad of counselor-client ratings as utilized by Kivlighan (2004).

The results may be affected by the dual role of the primary investigator, who is also an employee of the DORS agency. The counselors may alter typical behavior if they

are aware that clients are being surveyed. However, the counselors will not have knowledge of the items on the WAI.

This investigation is not a true experimental design nor is it randomized. However, every effort has been made to survey a representative sample of DORS clients in Maryland.

Definitions

AWARE. Accessible Web-Based Activity and Reporting Environment. AWARE is the electronic case management system used by DORS for data collection and documentation.

VR Status Codes. Codes that explain the progress of a client's case throughout the DORS service delivery system. These codes are used in the AWARE system to track cases.

1. Referral (00)
2. Application (02)
3. Eligibility (10)
4. Extension:
 - More than 60 days needed for eligibility determination;
 - Trial Work;
 - Extended Evaluation) (Extended Eval/Trial Work 06)
5. Delayed Status (04)
6. Plan (12)
7. Service (16)
8. Job Ready (20)

- 9. Employment (22)
- 10. Closed Rehabilitated (26)
- 11. Closed Other (08, 28, 30, 38)
- 12. PES (Post Employment) (32)
- 13. Closed PES (33)

VR Closure Codes. A case is closed in the AWARE system as closed rehabilitated (Status 26) or closed as other than rehabilitated (Status 08, 28, 30, 38). For the purposes of this study, only persons in status 30 will be defined as closed.. Such closures occur prior to the initiation of services.

Extended Evaluation. In the event that there are serious doubts about the client's ability to benefit from VR services, an extended evaluation of this ability is planned.

Trial Work. Experience A VR status used only if there are serious doubts about the client's ability to benefit in terms of an employment outcome because of the severity of the disability. The counselor develops a Trial Work Plan, which includes experiences in integrated employment settings to allow the individual to demonstrate that he or she has the potential to work.

Significant Disability. An individual who has a severe physical or mental impairment that seriously limits three or more functional capacities (such as mobility, communication, self-care, self-direction, interpersonal skills, work tolerance, or work skills) in terms of an employment outcome; and whose vocational rehabilitation can be expected to require multiple vocational rehabilitation services, such as physical and mental restoration,

counseling, training (vocational, educational, etc.) and supported employment, over an extended period of time.

IPE (Individual Plan for Employment). A plan developed between the client and VR counselor that outlines the vocational goals and the services necessary to reach them. The IPE must be written within 120 days of the initial referral for services.

ADA Americans With Disabilities Act of 1990 (ADA: P.L. 101-336). Comprehensive civil rights legislation for persons with disabilities.

Rehabilitation Act of 1973. The federal rehabilitation legislation under which VR services are currently provided.

Chapter II: Literature Review

In this chapter, a review of the literature on the theoretical development of working alliance, the common factors model, Bordin's model of the WA, VR outcomes, and finally the development of the Working Alliance Inventory (WAI) is presented. A review of these findings provides a context for the present study on WA within VR. The purpose of this review is to identify a common thread that leads to the hypothesis that the strength and quality of the relationship between counselor and client is an important variables in rehabilitation outcome.

Development of the WA

The alliance was the first concept put forward to explain the unique role of the relationship between healer and client (Horvath, 1994). The concept of a therapeutic alliance dates back to the early studies of psychoanalysis, which stressed the importance of transference between patient and therapist as a necessary condition to move forward into insight and resolution of psychological defenses (Freud, 1912/1966). By the 1970s, this basic construct was reworked in light of the possibility that the alliance was thought to be a core element in all forms of therapy. Several researchers reported (Bordin, 1975; Luborsky, 1976) that different therapies produced comparable results despite differences in etiology, therapeutic assumptions, and vastly differing techniques. Because positive change occurred despite diverse techniques, attention shifted to the nature of the therapeutic relationship itself as the common factor in all forms of helping relationships. At the core of this idea is the experience of collaboration and the formation of a

partnership between counselor and client. The technical skills of the counselor and the relationship between the counselor and client seem interdependent.

The WA and the Common Factors Model

A recent review of therapeutic effectiveness models (Reisener, 2005) found that a number of common factors may bring about therapeutic change independent of the therapist's specific techniques. In general, his review examined the view that psychotherapy appears to be effective and that common factors account for more of the variance than specific techniques. The working alliance is often cited as being one of the common factors linked to this success (Aasay & Lambert, 1999; Castinguay, Goldfried, Wiser, Raue, & Hayes, 1996; Lambert & Barley, 200x; Lubrosky et al., 1986).

Jerome Frank (1974), one of the major theorists in the common factors model, suggested that the role of the therapist is found in all cultures. In some cultures this role is fulfilled by the shaman, whereas in modern Western cultures this role is played by the psychotherapist. The assumptions of the culture and historical context determine the type of healer that persons looking for help seek out. According to Frank (1974), both use forms of persuasion to modify the inner worlds of their clients so they adjust better to their environments. In his view, all therapies hold in common certain processes of change.

Rosenzweig (1936) is credited with originating the common factors model of positive therapeutic change. He introduced this concept with a quote from Lewis Carroll's (1865/1993, p. 16) *Alice in Wonderland*: At last, the Dodo said, "Everybody has won, and all must have prizes." Rosenzweig (1936) suggested that all therapies are effective and may produce positive results as the result of factors common to all

therapies. Consequently, when a given therapy obtains positive results, this success does not prove the correctness of the therapy's underlying theory. According to Lubrosky, Singer, and Lubrosky (1975) empirical research has supported the idea of the relative equality of therapies in terms of effectiveness, and this effect was labeled "the Dodo Bird Verdict." A subsequent meta-analysis upheld the Dodo Bird Verdict (Wampold et al., 1997).

The WA as a Common Factor in Psychotherapy Outcome

Wampold (2001) provides an extensive review of the relationship of common factors to outcome in psychotherapy. Wampold cites Grencavage and Norcross (1990) in concluding that the "alliance between the client and the therapist is the most frequently mentioned common factor in the psychotherapy literature" (p.149). The reasons the alliance is chosen so frequently is that it is mentioned prominently in the psychotherapy literature and has drawn attention from theorists across many approaches. The alliance has been described as the "quintessential integrative variable" of psychotherapy (Wolfe & Goldfried, 1988, p. 449). The alliance has been the focus of a number of studies investigating the association between alliance and outcome using a variety of well-developed and accepted measures (Wampold, 2001).

Horvath and Symonds (1991) conducted the first meta-analysis to examine the alliance-outcome relationship. They reviewed 20 studies that assessed the alliance, as rated by the client, therapist, or observers, assessed outcome, and reported a quantitative measure of the relationship between the alliance and the outcome of the therapy. The studies were published between 1978 and 1990, contained an average of 40 participants, involved treatments that lasted an average of 21 sessions, and used therapists with an

average of 8 years of experience (Wampold, 2001). Horvath and Symonds (1991) used meta-analytic methods to aggregate correlation coefficients across studies. They reported an aggregated correlation coefficient of .26, which was significant ($z = 8.48, p < .001$) and an effect size of 0.54, which is a medium-sized effect, accounting for 7% of the outcome variance. Wampold (2001) found that the differences among treatments, produced an effect size of 0.20, which accounts for only 1% of the outcome variance. He concluded that “one common factor, the alliance, accounted for at least seven times the variance due to treatment differences’ (p. 151). Wampold (2001) further reported that the client’s perspective of the alliance is the most strongly related to outcome as presented in Table 1.

Table 1

Aggregate Correlation Coefficients of Alliance and Outcome by Rater Perspective

Outcome rater	Client	Therapist	Observer	Row aggregate
Client	.31	.13	.20	.21
Therapist	.22	-.20	.31	.17
Observer	.29	-.17	.18	.10
Column aggregate	.27	-.03	.23	.20

Source A..O. Horvath and B.D. Symonds, 1991

Horvath and Symonds (1991), in their meta-analysis present further evidence that the alliance is responsible for the outcome of therapy rather than vice versa. They speculated that clients who experience progress in therapy may form a better alliance with the therapist than clients who do not have a positive experience. If such were the case, then the correlation between alliance and outcome would be small when measured in early sessions before progress had been achieved. However, Horvath and Symonds (1991) found the correlations taken early and late in therapy to be virtually identical. The correlation based on assessment of the alliance early in therapy was .31; whereas the correlation based on the assessment of the alliance late in therapy was .30.

Horvath and Symonds (1991) found additional evidence of the importance of the alliance as a common factor across different therapies by segregating the therapies into three classes: psychodynamic and client centered, mixed-eclectic, and cognitive therapies. They found that the alliance-outcome correlations were .17 for psychodynamic, .28 for mixed-eclectic, and .26 for cognitive therapies. The differences were not statistically significant.

More recently, Martin et al. (2000) conducted another meta-analysis to confirm the alliance-outcome relationship. Their study included an additional factor of whether the relationship is a function of the instrument used to measure the alliance. These authors reviewed 79 studies that contained quantitative measures of the alliance-outcome relationship, focused on clinical populations, involved individual therapy, and appeared between 1977 and 1997. The overall alliance-outcome correlation was .22, which was slightly smaller than the Horvath and Symonds (1991) estimate of .26, but still in the medium-sized effect range of $d=.45$, accounting for 5% of the outcome variance

associated with the alliance. Martin et al. (2000) also concluded that the evidence of the strong relationship between alliance and outcome is not dependent on the particular instrument used to measure the alliance.

The common factors model literature appears to support the construct of WA, particularly Bordin's (1976) model, as a common positive therapeutic factor between client and therapist. Parloff (1986) suggested that effective common factors in therapy include establishing a credible, trusting, therapeutic relationship, helping the client to test reality and overcome fears, to learn new ways to think about and solve problems, and to increase a sense of mastery and self-esteem. This description is similar to Bordin's (1975) definition of bond, task, and goal components in the WA.

Definition of the WA

The definition and theoretical model of WA used in this investigation is the one proposed by Bordin (1975, 1976, 1980, 1989). According to Bordin (1976), working alliance is a relationship between client and counselor, which consists of "mutual trust, respect, and involvement in the counseling process." The construct of WA was defined by Bordin (1976) as collaboration between counselor and client based on the development of an attachment bond as well as shared commitment to the goals and tasks of counseling. Horvath (1994) explained Bordin's (1975) pantheoretical model of the WA as the "active relational element in all change-inducing relationships" (p.110) consisting of three components: tasks, bonds, and goals. In a sequence of writings, Bordin explained his idea of the therapeutic relationship, which distinguished between the unconscious projections of the client's transference and the alliance. Bordin's construct of the WA focused on the importance of the client's collaboration with the

therapist against the common enemy of the client's pain and self-defeating behaviors.

According to this model, the alliance has three constituent elements: task, bond, and goal.

Task refers to the in-therapy activities that form the substance of the therapeutic process.

In a strong functioning working alliance, both client and therapist must view these tasks as relevant and effective, and each must accept responsibility to act on these tasks. Goal refers to the client and the therapist mutually endorsing and valuing the proposed outcomes that are the goals of the intervention. Bond embraces the network of positive personal attachments between the client and the therapist such as trust, acceptance, and confidence.

The role of the WA in counseling does not replace the therapist's skill or techniques as the active ingredient in a positive outcome; WA is what makes it possible for the client to engage in the change process.

Bordin's model provides an important bridge between the relationship and the technical skills aspect of a counseling intervention. The goals negotiated and agreed on communicate the client's choice within the counselor's theoretical and practical framework. Tasks represent the means to achieve these ends and the client's willingness to engage in solving the problem in a new way. The WA is not seen by Bordin as a separate or independent process but as an active collaboration. The act of negotiating and defining this agenda is central to the development of a strong positive alliance and to the change process. Although the WA takes into account the generic factors common to all positive relationships, such as liking, trust, and compatibility, Bordin emphasizes those components of interpersonal dynamics that are specific to counseling. These components

include commitment to realistic goals and active endorsement of tasks that will enable the client to reach those objectives.

Strausser, Lustig, and Donnell (2004, p. 216) further explained Bordin's (1976) goals as the targets of intervention, tasks as the in-counseling behaviors and cognitions of the counselor and the client, and bonds as the interaction between counselor and client in a shared activity (Bordin, 1994). Bordin's definition most closely operationalizes the VR counselor's role in carrying out the spirit and intent of client collaboration as expressed in the Rehabilitation Act of 1973 as amended and the Americans with Disabilities Act of 1990.

Horvath (1994) provides an excellent overview of the many variations of the definition of WA, which were largely founded on early psychoanalytic terminology, with infusions from many other psychotherapeutic approaches. Bordin's definition reflects both Otto Rank's (1945) and Carl Rogers's (1951) work, who focused attention on the client as the active force in the change process in counseling. They theorized that the healing power of the therapeutic relationship was important. Beck (1976), who emphasized the importance of analyzing client cognitions as the means of change, also paid some attention to establishing collaboration with the client, which avoids turning counseling into an intellectual debate between adversaries.

Bordin (1994) states that "I differ with both the client-centered and psychoanalytic methods in emphasizing the more explicit negotiation of detailed aspects of goals and tasks as important steps in alliance building" (p. 15). He further elaborates his clinical use of the term WA as "the goal and task aspects of the alliance are somewhere between the silent treatment of the client centered and psychoanalytic

approach and the very specific form it takes in the cognitive and behavioral approaches” (p. 15).

History and Development of Alliance Theory

The terms “working alliance” and “therapeutic alliance” are used interchangeably in the literature. There are many and varied formulations of the therapeutic working alliance theory, because its theoretical roots are based on psychoanalytic terminology and also because some aspects of WA theory were concurrently developed as part of other psychotherapeutic approaches.

There are five major alliance research groups involved in studying the alliance (Horvath & Greenberg, 1994): Lubrosky at the University of Pennsylvania, Hans Strupp and William Henry’s team at Vanderbilt University, Louise Gaston at McGill University and Charles Marmar at the Langlely Porter Institute, and Adam Horvath’s group from Simon Fraser University in Vancouver. The WAI used in this study is derived from Horvath’s alliance measurement research (1989) based on the Bordin (1979) model of WA.

Bordin’s (1976) formulation was built on Greenson’s (1967) concept of the real relationship and the alliance, but his theory draws on the work of Rank (1945) and Rogers (1951). Each of these theorists focused attention on the client as an active force in the change process. Both Rogers and Rank argued it is not merely the therapist who diagnoses what the problem is for the client, and then proceeds to treat the problem, instead they focused on the potential healing power of the therapeutic relationship itself as the key agent of change. At the same time that Bordin was developing his definition of WA, Goldfried and Davison (1976) moved from emphasizing behavioral contracts to a

therapeutic contract “in which expected behaviors for both client and therapist . . . should be established” (p. 44). Similarly, Beck (1976), who focused on the cognitive processes underlying emotional disorders, and treating cognitive distortions, gave significant attention to establishing collaboration between client and therapist. Beck (1976) called this relationship “collaborative empiricism.”

Bordin’s (1994) idea that the person seeking the change takes an active position in the change process is “a key feature of my conceptualization.” This view was important in the development of his definition of a working alliance. He believed that when a client consulted a psychotherapist, the client was concerned about a “ life-long search for safety as well as self-realization” (p. 14). Rank’s (1945) idea is that a client is constantly balancing a need to be unique with a need to fuse with others and be a part of a whole. Rogers (1951) also recognized a client’s need to be unique, but assumed that the obstacle to self-realization was solely the failure of the therapist to provide unconditional regard. The client’s search was for a genuine self based on an internal positive self-regard. Rogers did not use the term alliance. He seemed to say that nothing more was needed from the therapist. No technical therapeutic strategies were needed to result in a positive outcome. Thus, the idea of a change goal and therapeutic tasks were not of primary concern to the client-centered therapist, since the client alone was responsible for the content of the therapy. From this perspective, active participation by the therapist in setting goals and tasks would interfere with his or her aim of freeing the person from too great a dependence on the regard of others.

In the psychoanalytic approach, even though the client has an active role, the therapist takes charge of the treatment. The therapist sets the goals and the tasks. The

radical reorganization of personality is the goal in this type of therapy .Although the client may understand the tasks, the therapist is in charge of the goal.

Goals and Tasks in Bordin's WA Theory

Bordin (1994) differed with both the client-centered and the psychoanalytic methods by emphasizing the more explicit negotiation of detailed aspects of goals and tasks as important steps in alliance building. The WA in the Bordin model uses the goals and tasks as somewhere between the unilateral treatment by the client-centered and psychoanalytic approach and the very specific form it takes in the cognitive and behavioral approaches. For Bordin, the WA is a search with the client for the goal that most fully captures the person's struggle with the frustration relative to the story of his or her own life. This struggle is a key part of a strong therapeutic alliance. The element of negotiation is an integral part of the alliance building. Although the therapist is a source in the selection of therapeutic tasks, the client must understand the relevance of the task to the change goal in order to maintain an active working alliance. Bordin (1994) indicates that there is some confusion between goals and tasks in WA theory. Tasks are specific activities that the client and therapist will engage in to instigate and facilitate change. The statement of a goal does not specify the means that will facilitate that change. The tasks may differ depending on the theoretical perspective of the therapist. For example, in cognitive therapy tasks might include the client keeping a diary (p. 16).

The bonding aspect of WA theory has provoked more attention and controversy than the tasks and change goals. Most of the debate focuses on the concepts of transference, the distorted perceptions of others, as compared to the real relationships, based on the actual experience with another, within the client/therapist alliance. Bordin

(1994) makes it clear that the bonding of the persons in a therapeutic alliance grows out of their experience of in a shared activity. Bonding is likely to be felt in terms of liking, trusting, feeling respect for each other, and having a sense of common commitment and shared understanding in the activity. The nature of the bond will vary as a function of the shared activity. Commitments to change goals and understanding of the tasks involved are grounded in bonds of mutual sharing of liking, trust, and respect. Under these conditions, the goals and tasks can provide therapeutic leverage to deal with the strains embedded in the distorted elements of transference. The building of an alliance is a slow, delicate process with individuals who have undeveloped capacities for forming real relationships and strong propensities for transference. Bonds heavily loaded with such transference provide a weaker means for change.

Some investigators have recently examined different aspects of bonding that may be related to the strength of the alliance. For example, Kivlighan and Schmitz (1992) and Mallinckridt (1992) have investigated attachment and separation as factors in strengthening working alliances. Bordin (1994) points out that defining a variable simply by the strength of the alliance has its limitations. In his view, therapy facilitates the overcoming of obstacles toward building strong alliances. Important functional relationships between the capacity for forming relationships and the difficulties in achieving strong working alliances can be explored. Therapists fully committed to alliance theory and trained in the skills of alliance building will be able to sharply reduce variance in strength of working alliance due to a poor relationship. Bordin (1994) posits that “the person who comes for psychotherapy brings the capacity to form both distorted and undistorted relationships” (p. 17).

Factors That Affect the WA

Chan et al. (1997) reported several factors that affect the formation of a working alliance. Among these were psychological threat experienced in counseling, negative expectations for success, difficulty with social relationships, and the difficulty of the problem presented. Horvath (1994) found that persons who score high on measures of defensiveness, hostility, dominance, are more likely to have a poor alliance, on the other hand, the severity of the symptoms was not a factor that affected the working alliance.

Effect of WA on Counseling Outcome

A review of the literature reveals evidence that the working alliance has an effect on the outcome of counseling (Kivlighan & Shaughnessy, 2000; Kokotovic & Tracey, 1990; Connors et al., 1997). Horvath (1994) reported a meta-analysis that showed an average effect size of .26 between positive counseling outcome and working alliance. A later follow-up meta-analysis (Martin, Garske, & Davis, 2000) reported a similar finding with an average effect size of .22. These studies indicate that the quality of the WA accounts for approximately a quarter of the variance in counseling outcome.

Of particular relevance for this study is that “the quality of the working alliance in the initial stages . . . is predictive of a significant proportion of the final variance” (Horvath & Greenberg, 1994, p. 3). If an alliance does not form quickly, the initial optimism may begin a rapid downward spiral.

Effect of WA on Rehabilitation Outcome

Several studies support the effect of working alliance on successful counseling outcomes (Kivlighan & Shaughnessy, 2000; Horvath & Symonds, 1991; Darmaki & Kivlighan, 1993; Kokotovic & Tracey, 1990). However, there are few studies (Lustig, Strausser, Rice, & Rucker, 2002; Lustig, 2004; Donnell, Lustig, & Strausser, 2004) of the relationship between WA and vocational rehabilitation outcomes and no studies that examine the relationship between WA and rehabilitation drop-out. Three studies support the hypothesis of the WA as a factor in VR outcomes.

The first study is a recent ex post facto study (Lustig, Strausser, Rice, & Rucker, 2002) conducted with 2,732 vocational rehabilitation clients in Tennessee. The researchers developed a nine-item instrument, which they named the Working Alliance Survey (WAS). They found that clients who were employed had a stronger working alliance with their counselor than clients who were unemployed. For clients who were employed, the results indicated the stronger the measured level of working alliance, the more satisfied the clients were with their present jobs. For clients who were unemployed, the stronger the measured level of working alliance, the more positive they were about a good employment future. In summary, the authors thought that WA may be “an important aspect of vocational rehabilitation services” (p. 30). Their results agreed with existing research on the relationship of WA and positive counseling outcomes.

The second study is a similar study of the relationship between working alliance and vocational rehabilitation outcome for individuals with mental retardation. Lustig (2004) investigated the relationship between client perceptions of the working alliance and three rehabilitation outcomes: employment status, job satisfaction, and self-

perceptions of employment prospects. This study used a recently developed nine-item instrument, the Working Alliance Survey (Lustig, Strausser, Rice, & Rucker, 2002). Lustig (2004) found that employed clients had a stronger working alliance with their counselors than unemployed clients. However, the effect size was low (.09), and there was no significant relationship between the measured level of working alliance and satisfaction with the client's current job. For unemployed clients, the stronger the measured level of working alliance, the more positively the client viewed the future employment prospects. The finding of the lack of a relationship between current job satisfaction and working alliance was surprising. The authors theorized that individuals with mental retardation often have first jobs that are entry level with low pay and no benefits, thus explaining their lack of satisfaction. The authors recommended replicating the study using a measure of working alliance that had been previously developed and used in research on the working alliance.

The third study (Donnell, Lustig, & Strausser, 2004) involved individuals with severe mental illness ($N=305$) who were clients in the Tennessee VR system. They completed a survey that measured reported level of WA and rehabilitation outcome measures similar to Lustig's (2004) study of persons with MR. The authors found that employed clients had a higher level of WA than unemployed clients and higher levels of job satisfaction and that unemployed clients with a higher WA viewed their employment future as more positive. The authors concluded that the study reiterates the benefits of a WA for persons with mental illness in achieving vocational outcomes and the need for further investigation into this construct and the implications for increasing successful outcomes.

WA and Counselor Expectations in VR

McMahon and Shaw (2004) investigated WA and counseling expectancies in vocational rehabilitation. They hypothesized that the differences between consumer and counselor expectations may lead to a “strained relationship and subsequent poor outcomes” (p. 101). The authors undertook a 4-year project to study the relevance of two key factors in VR: the working alliance and counselor-consumer expectancies. The goal was to develop a valid measure of expectancies for use in the VR program. The result was an instrument called Expectancies About Rehabilitation Counseling (EARC). VR counselors learned to discuss differences between expectations with their clients, beyond a certain cut-off score on the EARC scores.

Shaw (2004) trained VR counselors how to discuss differences in expectations with their clients. Shaw designed a training protocol to help counselors develop awareness and specific skills aimed at clients achieving greater congruence in expectations early in the rehabilitation process.. The protocol utilized both didactic and experiential instruction and included value clarification activities, use of the EARC Scale, and a conflict resolution approach to reaching agreement on expectations disagreement. The training was done with 42 VR counselors in Wisconsin and North Carolina in a 1-day workshop format. . After a follow-up period of 120 days, the counselor short form of the WAI was administered. McMahon (2004) reported that “due to a lack of a comparison group the results could not be interpreted as having changed because of the intervention” (p. 103). However, the results were “generally positive” and suggested that a focus on expectations may be helpful when training counselors to improve a strong

WA. Both Shaw (2004) and McMahon (2004) concluded that a strong WA increases the chances of successful vocational rehabilitation outcomes.

In a recent unpublished dissertation on vocational rehabilitation outcomes, Beveridge (2004) also explored client perspective from client in-put into the IPE . He found a significant relationship between the clients' input in an individual plan for employment and successful employment. Beveridge described the value of agreement on tasks and goals as important factors of client input in an IPE that led to employment. The agreement on goals and tasks are dimensions described by Bordin (1979) as components of working alliance.

Lustig and Crowder (2000) also discuss the importance of a rehabilitation consumer's views regarding the services he or she receives. As a result, counselors now stress the concept of informed consumer choice, and client input in the rehabilitation counseling process has been reported as an important factor in successful employment outcomes (Chan, Shaw, McMahon, Koch, & Strausser, 1997).

Variables That Affect Successful Rehabilitation Outcomes

One of the most important areas in rehabilitation outcome research over the years has been an attempt to predict which variables predict employment outcome. The goal of VR is to maximize the employment of persons with disabilities. The underlying assumption is that employment will lead to greater inclusion of this population into the mainstream resulting in empowerment and autonomy. Consequently, a review of the rehabilitation literature shows many studies attempting to identify client variables that predict outcome (Bolton, 1979; Walls & Tseng, 1987; Anthony, 1994; Bolton, Bellini, &

Brookings, 2000) such as disability, demographics, ethnicity, previous employment history, and service variables.

Client Variables

Bolton, Bellini, and Brookings (2000) investigated the predictability of client employment outcome from personal history, counselor-rated functional limitations, and rehabilitation services provided. The sample consisted of 4,603 who were closed as rehabilitated or not rehabilitated by the Arkansas Rehabilitation Service from June 1992 through September 1997. The clients represented five major disability categories: orthopedic, chronic medical, psychiatric, mental retardation, and learning disabilities.

The authors measured personal history using a scale of social disadvantage (SSD). Twelve of 20 demographic items that predict employment were identified, and combined into 9 items including age, education, marital status, financial assistance, family income at referral, employment status, and 3 disability status items.

Functional limitations were measured by the Functional Assessment Inventory (FAI), which is a behavioral, counselor-rated measure of an individual's functional limitations and environmental factors directly relevant to VR services. The FAI includes 30 items of specific limitation (e.g. learning ability, upper extremity function, endurance, memory), which are rated on a 4-point scale.

This investigation found that 33% of the variance in employment outcome was explained by personal history, functional limitations, and rehabilitation services. An unexpected finding was there was minimal relationship between functional limitations and employment outcomes. Bolton, Bellini, and Brookings (2000) thought the most "reasonable explanation was that . . . rehabilitation services mitigated the effects of

clients, functional limitations—exactly what a carefully planned program of services should do” (p. 19). Finally, the investigators concluded that the “the VR service system is amenable to scientific examination and that the results have clear implications for the improvement of VR service delivery and counselor training” (p. 20).

Demographic Variables and VR Outcome

In a recent study (Rosenthal, D.A. et al) examined the effects of race, gender, disability type, work disincentives, and service patterns on the vocational rehabilitation outcomes of people with disabilities, using a data mining approach. Data for this study were extracted from the Rehabilitation Services Administration Case Service Report (RSA-911) for the fiscal year (FY) 2001. The original database contained 639,823 individuals. The authors’ examination of the RSA-911 dataset for fiscal year 2001 revealed that vocational rehabilitation consumers with psychiatric disabilities constituted the largest group of clients; disability status broke down as follows: psychiatric 32.2%, orthopedic, 20.4%, developmental disabilities/mental retardation, 19.3%, chronic medical, and 11.4%, sensory, 10.4%. Persons with sensory disabilities demonstrated the highest successful employment rates in the sample (65.4%) and persons with psychiatric disabilities had the lowest (49.8%). These statistics are consistent with Corrigan’s Social-Cognition Model of Stigmatization (Corrigan et al., 2000) confirming that mental-behavioral disabilities are treated more negatively than physical disabilities by the society, with the exception of consumers with developmental disabilities, which had the second highest rate of successful employment outcomes (55.8%).

European Americans had the highest rates of successful unemployment in the stratified

sample (60.3%), followed by Latinos (58.5%), African Americans (55.4%), Asian Americans (50.9%), and Native Americans (50.4%). Rosenthal et al concluded that the disparity in these percentages of successful outcome may indicate that implicit counselor attitudes might be influencing counseling decisions pertaining to service delivery for people with disabilities from diverse backgrounds. Although there are many variables that may influence data indicating that vocational rehabilitation consumers from underrepresented groups are less likely to have successful closures than are European Americans, one potential influence that must be considered is the possibility of racial bias against particular subgroups (Rosenthal, 2004; Wilson, 2000). As postulated by Rosenthal and Berven (1999), a rehabilitation counselor's negative perception of a potential customer's capacity for success (or failure) may culminate in inaccurate determination of the customer's ability to benefit from vocational rehabilitation services. Inaccurate determinations may result in the under-provision of services.

VR Counselor Education Variables

An investigation of the impact of counselor education variables on VR outcomes are of interest in understanding the client/counselor relationship. Szymanski (1991) found that there is a significant relationship between the level of rehabilitation counselor education and client employment outcome in the Wisconsin VR system. The sample included 144 VR counselors and 11,862 clients whose cases were closed in 1989. In general, counselors with a master's degree in rehabilitation counseling or related fields had better outcomes for clients with severe disabilities than counselors with a bachelor's or less. Szymanski found that this study in combination with the studies of Szymanski and Parker (1989) and Szymanski and Danek (1992) demonstrated a relationship of

rehabilitation counselor education and rehabilitation outcome in three state rehabilitation agencies (Wisconsin, Maryland, and New York) in three different federal regions.

Szymanski (1992) theorized “there is reason to suspect that this relationship may exist in other state vocational rehabilitation agencies as well” (p. 26).

Measurement of the WA

One of the challenges in the theoretical evolution of the WA construct was the creation of an instrument to measure it. Although the results of many investigations on the alliance suggest it is an important variable in therapeutic outcomes, the alliance has been measured by different instruments. This raises the possibility that different instruments may measure distinct aspects of the WA and do not yield comparable results. Among the instruments developed to measure the alliance are the California Psychotherapy Alliance Scales (CALPAS) (Gaston, 1991), Therapeutic Alliance Scales (TAS) developed by Marziali, Marmar, and Krupnick (1981), and the Penn Helping Alliance Scales (PEN) developed by Alexander and Lubrosky (1987). According to Horvath (1994), these instruments were largely developed using factor analytic procedures. Horvath reasoned there was a need to develop a new scale to investigate therapeutic factors shared by all forms of therapies. A measure that evaluated the alliance from a pantheoretical perspective was needed. It was equally important that an instrument measure the process of therapeutic change such that a relationship between the alliance measure and the theoretical construct on which it was based was clear. Horvath concluded that none of the available measures met these criteria, and began the development of the Working Alliance Inventory (WAI).

Working Alliance Inventory

Development of the WAI

The WAI is based on a theoretical model of the alliance developed by Bordin(1975,1976,1980,1989) as cited above. The main task in the development of the WAI was to validate content with respect to Bordin's definition of the alliance. Horvath (1994) decided to generate items from each of three reference points: firstly, the client's own thoughts and feelings, secondly, the clients' beliefs about the quality of the interaction, and third, the client's thoughts and beliefs about the quality of the relationship with the therapist. To this end, a large pool of alliance items were generated from each perspective based on a content analysis of Bordin's model. The item pool was evaluated twice. The first set of raters consisted of experts, and the second group was randomly selected from the membership list of the local licensing body for psychologists. Each set of raters evaluated each item twice: once for degree of fit between the item and Bordin's definition of the WA and a second time to identify whether the item referred to task, bond, or goal component of the alliance.

The WAI has been revised once: the original 5-point Likert rating scale was expanded to 7 points. The WAI is available as an observer's instrument, based on the work of Tichenor and Hill (1989), and the short version (12 items), used in this study (Appendix B), based on data reported by Tracey and Kokotovic (1989). Other researchers have adapted this instrument for special populations. In addition, the WAI is available in French, Spanish, Finnish, and Dutch translations (Horvath, 1994).

Validity of the WAI

Although the WAI was designed to measure the alliance as defined by Bordin, the scores should correlate positively with other alliance measures. The convergent validity of the WAI has been explored by a number of investigators. Safran's (1991) findings are typical of the results. Safran reported correlations between the global CALPAS scores and the WAI of .84, .79, and .72 for the goal, task, and bond scales, respectively. The correlations between the WAI and the Helping Alliance and the Vanderbilt Scales are also significant, though slightly lower (Greenberg & Adler, 1989; Tichener & Hill, 1989).

The relationship between the Rogerian dimensions of the therapeutic relationship, i.e., empathy, positive regard, unconditionality and congruence, as measured by the Relationship Inventory (Barrett-Lennard, 1978), has been tested in several studies. According to Horvath (1994), Jones's (1988) results are representative of these findings: Task is the most independent of empathy, positive regard, unconditionality, and congruence with correlations ranging from .3 to .49. The goal dimension is more overlapping, with correlations ranging from .43 to .59. The bond dimension is the most correlated to the Relationship Inventory (RI), with correlations between .60 and .74 on the RI scale.

The discriminate validity of the WAI is supported as the WAI is less related to instruments that measure theoretically distinct aspects of the counselor-client relationship. This question was investigated by Adler (1988) and Horvath (1981). These investigators contrasted the relationship of the WAI to instruments measuring the alliance with its relation to the Counselor Rating Form (CRF) developed by LaCrosse (1980). The CRF assesses relationship dimensions of expertness, attractiveness, and trustworthiness, based on Strong's (1968) interpersonal influence model. According to Horvath and

Greenberg (1989), the results indicates that the relationship between the WAI and the CRF is lower than the relationship between the WAI and other alliance measures. Moreover, the results suggested that the two instruments are correlated with different measures of outcome (Greenberg & Adler, 1989; Safran & Wallner, 1991).

Reliability of the WAI

Horvath (1981) reported the reliability estimates for the whole instrument using Cronbach's alpha, range from .84 to .93. Reliability estimates for the subscales are lower, but in a similar range, .68 to .92. Horvath (in press) obtained reliability data based on two administrations of the short form (12 item) of the WAI across an average span of 2 weeks and obtained a test-retest index of .83 for the whole instrument. Taken together, these results support the reliability of the WAI short form used in this proposal.

Independence of the WAI Dimensions

The three WAI dimensions of bond, goal, and task are strongly correlated. According to Horvath and Greenberg (1989), the scale intercorrelations range from .60 to .80. Despite these findings, there is also evidence that the three working alliance components hypothesized by Bordin (1976) may be independent. Tracey (1989) gathered alliance information from 140 students following their first counseling sessions, using a factor analysis they found a general alliance factor plus three second-level factors corresponding to the bond, goal, and task subscales, respectively. Horvath (1994) reasoned that this finding seemed to fit well with Bordin's prediction that the alliance in the early phases of therapy would be largely undifferentiated and global, as it is based on initial impressions, trust, and liking. Bordin (1980) hypothesized that as the client moved

forward in therapy, the three dimensions of the WA would become more distinct and that the relative importance might depend on the type of theoretical approach. However, more recent investigations using the common factors model (Wampold, 1997) do not support this view.

Outcome and WAI

Eight studies that investigated Bordin's alliance model using the WAI are presented in Table 2. A meta-analysis of these research results indicate that the average effect size is .33. This suggests a strong link between the client's estimate of the working alliance, using the WAI, and the outcome of therapy.

Table 2

Relationship Between WAI and Outcome

Author	Year	No. of participants	Correlations
Adler	1988	14	.23
Horvath	1981	29	.42
Kokotovic & Tracy	1990	144	.11
Mosley	1983	25	.24
Tichenor & Hill	1989	8	.11
Webster	1982	.31	.62
Safran & Wallner	1991	22	.35
Plotnicov	1990	31	.87

Horvath, A.O. (1994) Table 5.1

Note: Average weighted effect size= .33

WAI in Cognitive-Behavioral Therapy. The WAI has been used as an outcome measure in Cognitive Behavioral Therapy (CBT) as it has become one of the most popular forms of short-term therapy. In a recent study, Andrusyna et al. (2001) conducted an exploratory analysis of the working alliance in CBT, as measured by the WAI (shortened, observer-rated version). The authors found a two-factor structure of the alliance that challenged the commonly accepted one general factor of the alliance reported by Tracey and Kokotovic (1989). Andrusyna et al. characterized Bordin's conceptualization as implying one general alliance factor and three secondary factors representing goal, task, and bond. Since this definition of the alliance is "gaining in acceptance" (p.174), the goal of their study was to further clarify this therapeutic construct.

Andrusyna et al. (2001) had four experienced therapists rate 94 clients during their second session of CBT. They rated the alliance by using the observer version of the WAI while listening to audiotapes of the sessions. The results indicated that Bordin's (1979) goal and task components seemed to go together, at least in CBT. The factor analysis showed that they covary in CBT and are largely independent of the bond factor.

The authors reasoned that, in CBT, once a client participates collaboratively in therapy according to its rationale, he or she will have learned some of the goals and the tasks needed to achieve those goals. A common CBT goal is changing irrational thinking, for example, and the task of identifying irrational thoughts seem intrinsically related. Therefore, it is not surprising that task and goal would covary and result in a separate factor in CBT, independent from the relationship with the therapist, i.e., the bond component. The bond, or relationship component, may describe the emotional elements

such as mutual liking, trust, and appreciation between the client and the therapist, and “not so much to the more rational elements of the actual work done in CBT” (p.177).

The authors concluded that the relationship/bond between the counselor and the client may be “largely independent of the client’s agreement with and confidence in the therapist and CBT, necessitating independent measures of these two factors, not one measure of a general alliance factor” (p. 173). They added that “a deeper and more precise understanding of the therapeutic alliance is necessary to examine a construct that may in fact be far more complex than we have assumed” (p. 178).

Summary

A review of the literature on the working alliance provides a context leading to major hypothesis that the strength of the WA between a VR counselor and a person with a disability may be an important variable in rehabilitation outcome.

A history of the development of the WA was presented beginning with Freud (1912), and emphasizing the early work of Bordin (1975) and Lubrosky (1976). The most significant early finding was that very different psychotherapies produced comparable positive results. Because positive outcome occurred despite different techniques research attention then shifted to an analysis of the working alliance itself as a possible common factor.

The common factors model (Frank, 1974) supports the hypothesis that the WA is a key component in all forms of counseling and psychotherapy. The WA appears to be a necessary component of counseling regardless of the type or setting of the counseling intervention. Wampold (2001) provides further support for the choice of WA as a common factor in positive outcomes that must be considered in investigating the effect of

the counseling across a broad range of counseling settings, including the rehabilitation settings..

Since the 1970's the WA has remained a focus of interest in counseling psychology research as a measure of therapy outcome.(Bachelor, 1995; Bordin, 1979; Horvath & Symonds, 1991; Connors et al., 1997; Kokotovic & Tracy, 1990; Horvath, 1994; Luborsky, 1994; Kivlighan & Shaughnessy, 2000 ; Wampold, 2001).

Horvath and Symonds (1991) conducted a metanalysis which examined the alliance-outcome relationship in 20 major studies published between 1978 and 1990. They reported an aggregate correlation coefficient of .26, and an effect size of .54, which accounted for 7% of the outcome variance. Wampold (2001) further reported that the client's perspective of the alliance is the most strongly correlated to the outcome. A correlation coefficient of .31 was reported. Based on these findings, the present study used the client version of the WAI to rate the WA as to predict a rehabilitation outcome

According to Horvath (2001), two decades of empirical research have consistently linked the quality of the alliance between therapist and client with therapy outcome. At the core of the WA is the experience of collaboration and partnership between counselor and client.

Bordin's (1976) definition of the WA as a relationship between counselor and client , which consists of “ mutual trust, respect, and involvement in the counseling process” is thoroughly discussed and the rationale for its use in this investigation explained. Bordin's construct focused on the importance of the client's collaboration with the counselor consisting of three dimensions: task, bond, and goal. Tasks are agreed upon activities, which counselor and client view as relevant and effective, and each accepts

responsibility to act on these tasks. Goal refers to the mutual endorsement and shared value of the proposed outcomes. Bond includes an array of attachments between counselor and client such as trust, acceptance, and confidence.

This study argues that Bordin's definition of the WA best operationalizes the VR counselor's role in carrying out the spirit and intent of an equal partnership with a person with a disability as expressed in the Rehabilitation Act of 1973, as amended and the Americans With Disabilities Act of 1990. It follows that a key factor in helping the client become an active and full participant in the process of rehabilitation is the existence of a working alliance between the client and the rehabilitation counselor. Involvement in the process of rehabilitation planning in the IPE, which details the goals and specific tasks toward securing employment, appears important for increasing the likelihood of successful employment outcomes (Chan, Shaw, McMahon, Koch, & Strauser, 1997). This study asked the question of whether there is a connection between the intent and the spirit of rehabilitation legislation, mandating client collaboration, and the working alliance between client and VR counselor . The conceptual bridge was hypothesized to be the link between the IPE and the working alliance, if such a link existed, the WA should be a good predictor of an IPE.

Although the studies cited in this chapter support the strong effect of WA on successful counseling outcomes, little research addressed the effect of WA on vocational rehabilitation outcomes. No research has addressed tracked the WA from initial interview to the development of an IPE. The initial interview was chosen as the beginning point for this study as Horvath (1981) stresses that alliance measures taken early in counseling tend to be the best prognosticators of final outcome. It was also evident that in limited

time counseling, which is typical in the VR system, the client's evaluation of the working alliance measured as early as the first session can be a good predictor of premature termination, and can distinguish between clients who will benefit from counseling and those who may not. These findings are corroborated by the general trend cited in the alliance literature review (Horvath & Symonds, 1991) and support the administration of the WAI following the initial interview.

Lustig's (2002) study was directly related to employment outcomes, as opposed to the process of moving towards an agreed upon plan, which is the focus of this study. This study asked whether the strength of WA predicted the process of creating an IPE, which specifies the tasks and goals involved in moving towards employment. For example, in this study a client may agree on a goal of word processor. The tasks involved may be comprehensive assessment of clerical aptitude, interests, and skills. The client then may research where he/she may go to secure this assessment and choose which one is best. The next step may be a basic computer skills class. A concurrent goal may be to remain psychiatrically stable by seeing a therapist more frequently and choosing medication that allows attendance in a training program. In this study these tasks are hypothesized to involve the behaviors and cognitions engaged in by counselor and client in a working alliance (Bordin, 1979). Bordin specifically stated that the tasks depends upon the vividness with which the counselor can link the task to the goal. Thus the IPE is a real world example of this linkage in a vocational rehabilitation setting and was chosen as the outcome variable in this study. The IPE requires that both the counselor and the client accept responsibility to perform these tasks. The VR counselor may suggest career assessment methods or providers and discuss these with the client. The client must agree

to attend the assessments and put forth effort. The times, places, length of service are negotiated between the two to accomplish the goal. The tasks in the IPE can be amended to reflect changes in the client's situation, for example a medical or psychological relapse may occur, and the timing of the assessment may need to be renegotiated or accommodations requested. For example, a task requiring a full day of assessment may need to be a half-day or cover a longer time span.

The bonding component of Bordin's concept of WA develops from the shared activity of deciding on goals and negotiating tasks. In the VR system this is an on-going interaction. The tasks and goals written, step by step in the IPE and signed by the counselor and client as contract between the two, which is hypothesized to represent the working alliance in the rehabilitation setting. The client may write the entire plan or it can be a collaborative effort, the entire process does in effect represent an alliance of resources, efforts, tasks and goals.

A key argument in this study was that the three components of goals, task and bonds are represented in the IPE and the agreed upon goal is employment. Therefore, the WA and IPE are intertwined as the underlying feature in rehabilitation counseling.

A review of WA and VR employment outcomes (Lustig, Strausser, Rice, & Rucker, 2002; Lustig, 2004; Donnell, Lustig, & Strausser, 2004) further establishes the basis for the effect of WA on positive employment outcomes in a rehabilitation setting. However, these studies used a nine item instrument specifically developed for their investigation, as opposed to the WAI which is well researched instrument with known psychometric properties. These researchers suggested the use of a known instrument in

future studies. Thus, the WAI was chosen as the survey instrument for the present study, with the modifications approved by Adam Horvath, the author of this instrument.

A thorough review of the use of WAI in counseling outcome research is presented to support the use of this instrument in the current study (Kivlighan & Shaughnessy, 2000; Horvath & Symonds, 1991; Darmaki & Kivlighan, 1993; Kokotovic & Tracey, 1990). As noted above, the need for more study of the WA and rehabilitation outcome was suggested by several authors (Lustig, Strausser, Rice, & Rucker, 2002; Lustig, 2004; Donnell, Lustig, & Strausser, 2004)

Chapter III: Design and Methodology

Design

This study investigated the relationship between a client rating of working alliance (WA) with a DORS counselor and drop-out from rehabilitation services.

This study was not a true experimental design and, thus, was not thoroughly randomized. However, the methodology assured a representative, if not totally random sample, of persons with disabilities within the Maryland DORS.

The WAI was administered to study participants following an initial interview with a DORS counselor. The rationale for the administration immediately after the first interview, was based on the evidence of the strong link between alliance and outcome from measures taken early in counseling reported by Horvath and Greenberg(1994).In brief, failure to engage with the counselor, an inability to agree on what needs to be done, or the lack of development of trust within the first meeting will lead to disengagement from counseling. The client approaches the initial meeting with hope, expectation of assistance, and some anxiety. If the beginning of a collaborative relationship is not developed quickly, hope may turn to pessimism.

Participants were followed for 4 months, until an IPE was begun or the case was closed. Clients who engaged in service planning or development of an IPE met the criterion for having an employment plan. Those clients who did not have any further contact with the DORS counselor for 4 months, or whose case was closed, met the criterion of no plan. The AWARE network electronic case management system was used to track these data.

Participants

The sample participants were 111 persons with disabilities who applied for DORS services from May 2006 to mid-December 2006 and had an initial counseling session with a DORS counselor. Fifty-eight VR counselors in 16 field offices throughout the five DORS regions in Maryland were involved in the study. Participants were from Baltimore City and nine suburban and rural counties throughout the state.

Study participants ranged in age from 17 to 61; the mean age was 34.9 ($SD=12.6$). Sixty-nine (62%) were male, and 42 (37%) were female. Fifty-eight (52%) identified as African American, 49 (44%) as White, and 4 (3%) as Other. Fifty persons (45%) reported a cognitive disability, defined as a learning disability, mild mental retardation, or acquired brain injury. Twenty-nine persons (26.1%) reported a psychiatric diagnosis, as defined by a *DSM-IV-R* Axis I or Axis II diagnosis. Four persons (3.6%) reported substance abuse as a primary disability. Seventeen persons (15.3%) reported a physical disability, including orthopedic, spinal cord, or cerebral palsy as primary disabilities. Four participants (3.6%) reported HIV as a primary disability. Almost half of the participants (45%) reported secondary disabilities.

The disability may be self-reported but must be documented by appropriate medical, psychological, or psychiatric reports, in order for the person to be found eligible for services. The DORS counselor codes the disability in the AWARE database.

The population characteristics of persons with disabilities rehabilitated by DORS in 2006 by DORS (DORS Annual Report) are included in Table 3 in comparison to the representative sample.

Table 3

Sample Characteristics and DORS

	Number	Percentage	DORS Percentages
Sex			
Male	69	62.2%	53%
Female	42	37.8%	47%
Race			
African American	58	52%	46%
White	49	44%	47%
Other	4	3%	7%
Age			
17-21	28	25%	29%
22-34	26	23%	21%
35-44	26	23%	22%
45-65	31	28%	28%
Primary disability			

Cognitive	50	45.0%	28%
Psychiatric	29	26.1%	34%
Visual	7	6.3%	5.3%
Substance abuse	4	3.6%	NR
Physio/ortho	17	15.3%	21%
HIV	4	3.6%	NR
Secondary disability			
None reported	61	55%	
Cognitive	18	16.2%	
Psychiatric	19	17.1%	
Visual	0	0%	
Substance abuse	10	9.0%	
Physio/ortho	2	1.8%	
HIV	1	0.9%	

Fifty-eight DORS counselors were involved in the study. Forty-six were female (79.3%) and 12 (20.6%) were male. Table 4 details the number of counselors from each local DORS office. The counselors were from nine counties and two offices in Baltimore City. Only 13 of the 58 counselors had three or more participants represented in the study. The remaining 45 counselors had only one or two participants. Consequently, little analysis could be done on client/counselor dyads as a possible variable.

Table 4

Counselor Gender(N=58)/ Clients By DORS Unit(N=111)

	Number	Percentage
<hr/>		
Sex		
Male	12	20.6%
Female	46	79.3%
	Clients	Counselors
DORS local unit		
Baltimore City (Mt. Royal)	28	11
Baltimore City (NE)	12	6
Lanham	12	6
Dundalk	9	5
Towson	8	4
Belair	9	4
Catonsville	5	2
Glen Burnie	5	3
Westminister	4	3
Annapolis	3	3
Oxon Hill	2	1
Salisbury	6	3
Easton	2	2
Waldorf	1	1
Germantown	1	1
Wheaton	3	2
Elicott City	1	1
<hr/>		

Instruments

This study used a modified version of the WAI-C-S survey (Appendix B) instrument developed by Horvath and Greenberg (1989). This instrument is based on the theoretical model of the alliance developed by Bordin (1979). Although there are many instruments measuring the WA (Horvath & Greenberg, 1994), the WAI was developed specifically to validate its content with respect to Bordin's definition of WA. Horvath (1994) cited eight studies that investigated Bordin's definition of WA and counseling outcome using the WAI and found an average weighted effect size of .33 for the client version.

The WAI is a self-report instrument originally consisting of 36 items. Parallel forms exist for clients' and counselors' ratings of the WA. The WAI was designed to yield three alliance scores corresponding to WA dimensions: goal, task, and bond. This scale was shortened from 36 items to 12 items by Tracey and Kokotovic (1989). This study used the shortened client version (WAI-C-S). Research by Tracey and Kokotovic (1989) suggests that the WAI assesses the three unique aspects of the alliance within a large, global, non-specific alliance factor. The reliability estimate (Cronbach's alpha) for the total scale was .92. (Tracey & Kokotovic, 1989). Validity for the WAI has been established through significant correlations between WAI ratings and counseling outcome (Horvath, 2001), WAI ratings and client characteristics (Kokotovic & Tracey, 1990) and WAI ratings and counselor technical activity (Kivlighan, 1990; Kivlighan & Schmitz, 1992).

The client short version (WAI-C-S) has three 4 item scales that measure the three dimensions of the WA: goal, task, and bond. Each item is rated on a 7-point scale (1= Do Not Agree, 7=Agree Completely. The total score ranges from 12 to 84, with higher scores reflecting a stronger working alliance. The WAI-C-S was modified for use in the DORS setting, by changing “therapist” to “rehabilitation counselor,” “therapy” to “vocational rehabilitation,” and “problem” to “disability.”

Dr. Adam Horvath granted written limited copyright release for use of , and modification to, his WAI inventory (Appendix B) for this study. He requested that results of this study be shared with him.

The WAI can be scored as an over-all measure of the WA, or can be computed as separate sub-scale scores. In this study, the WAI was scored both ways using the scoring key downloaded with permission from Dr. Horvath’s website. The scoring key (Appendix C) identifies which items on the inventory contribute to each of the three (goal, bond, task). In addition there is a “+” (plus) or a “- “ (minus) sign under each number. Items marked with a plus are summed, items with a minus are reversed, i.e. if an item is scored as 7 this value is reversed as 1, prior to summing this score to form the subscale/total score.

Participants’ Personal Data

The demographic data, and disability information was retrieved from the AWARE case management data system used by counselors in all DORS offices.

Outcome Data

The outcome data was retrieved using the AWARE system to track case status and counselor/client contact. The counselor's electronic case notes were used as a criterion of contact between counselor and client. DORS counselors record all contacts, including in person, phone or written correspondence, in an electronic case note. If there were no contact notes, the PI contacted the counselor to ensure there was no missing information or unrecorded contact with the client.

The status of the case was tracked monthly to determine if employment planning had taken place, an IPE written, or whether the case was closed during the 120 days following the initial counseling session. Although there were unforeseen funding problems during the time of this study, which delayed services, the engagement between the counselor and the client was tracked as a indicator of an on-going alliance.

Procedures

The study involved three phases: (1) access and planning, (2) training surveyors in the use of the WAI, and (3) data collection and analysis.

Access and Planning

The PI met with Mr. Robert Burns, the Assistant State Superintendent of Maryland DORS, and obtained his permission and support for this study. Permission to conduct the study was obtained from the University of Maryland IRB .(Appendix E)

Mr Burns gave permission to the DORS office staff to assist with gathering survey data. The PI then presented the plan for this study to a state-wide meeting of the VR Directors and Supervisors. We agreed that those local offices, representing all DORS

regions in the state, which routinely conducted a large volume of weekly initial interviews were most feasible sites for the data collection. The PI then met with the individual counselors in groups and explained the reasons and goals of the study; however, the WAI-C instrument was not shared to avoid a threat to the validity of the survey.

DORS counselors generally welcomed gaining insight into how a working alliance with a client was formed and how it might affect the employment outcome. Most expressed interest in the findings of the study. Some counselors expressed the view that a large case load negatively impacted their ability to form an alliance with their clients. Some counselors expressed concern that the data would be used as a performance measure of their efficacy as counselors; others voiced concern about the ability of clients with cognitive impairments to understand the survey and provide valid information.

The first concern was addressed by explaining the IRB protocol. The second concern was discussed by explaining the accommodations provided to the participants in the study, such as reading the questions and the basic level of vocabulary used in the WAI.

The unit supervisors then each delegated a DORS staff person, typically an administrative assistant or graduate intern, to administer the WAI. The PI administered the WAI to clients in one of the Baltimore City offices. The PI trained the delegated DORS staff to give the WAI and the IRB consent form, and the need for any accommodations was discussed. The PI was available by phone and the email network system to answer any questions that might arise. The DORS staff was extremely

cooperative, professional, and collaborative in gathering the survey data, and returning them in a timely manner.

Braille and large print copies were available if needed. The persons with visual impairments in this study preferred to have the WAI read to them, or did not use Braille.

The usual procedure for a person applying for DORS services is to call a local DORS office, after being referred by another agency or professional, and arranging an individual appointment with a DORS counselor. Typically, initial counseling sessions are scheduled one or two days a week. In this study, persons who applied during the months of May through mid- December 2006 and had an individual interview in one of the 17 offices were given the WAI. In some offices, there was a very high no-show rate, so it took longer than anticipated, several months, to gather the needed number of surveys. Also, some offices have a higher volume of new applications, or serve highly populated areas near transportation; consequently, the number of participants from each office are not equal but are representative of the clients served by DORS.

In summary, the final sample of 111 participants represents persons with a range of cognitive, psychiatric, and physical disabilities, interviewed by 58 DORS counselors, in 17 offices in urban, suburban, and rural areas of Maryland.

Training Surveyors in the WAI

The PI provided individual training in the administration protocol of the WAI-C. The WAI-C is a self-report instrument, which is easily administered to the client with standardized instructions.

The WAI-C was administered immediately following the first session with the counselor. The surveyors were all rehabilitation staff sensitive to persons with reading

and/or cognitive accommodation needs. Accommodations were available, as required by ADA and the RSM.

The surveyors asked all clients who had an initial session with a DORS counselor if they would fill out the WAI. A surveyor provided a written copy and read the following statement:

You have just met with your rehabilitation counselor for the first time. We want to find out what you think about your working relationship with your counselor. Although you have just met him/her, we have found that you already may have formed an idea about how well you will be able to work with them.

Clients were told that WAI-C would be used as an anonymous feedback tool to better understand and improve the client-counselor relationship. Clients were informed that their DORS counselor would not have access to the individual survey results and that the clients' anonymity will be protected.

University IRB protocols for human subjects and DORS research policies were strictly adhered to. Participants were informed of the purpose of the study and the survey instrument (WAI-C) to be used, and appropriate consent forms were obtained (Appendix C). Clients were asked for consent to use identifying information regarding disability, gender, and ethnicity already available in the AWARE system. However, it was made clear to all participants that results would be identified by code numbers to protect confidentiality and would not affect DORS service delivery in any way. All participants will be given the opportunity to read the final results by contacting the PI for a copy.

All of the persons willingly agreed to fill out the survey. The surveyors frequently read the questions aloud to participants who had difficulty with reading or had a visual

impairment. Verbal explanation of the IRB was also provided to ensure that there was informed consent. The participants often offered spontaneous comments about the initial interview with the DORS counselor and their feelings about the experience.

Data Collection/Time Line

The surveys were administered beginning in May 2006 and ending in mid-December 2006. The no-show rate for the initial interview was as high as 50% in some offices. Consequently, the study ran for seven months in order to gather a sufficient number of surveys for acceptable power estimates and to track the cases.

The DORS guidelines require that a VR counselor write an IPE within 120 days of when the client is found eligible for services. In this investigation, the client's VR status was tracked from the date of the initial interview. The status was tracked for 120 days, or until an IPE was begun, or the case was closed. The case was tracked in the AWARE system.

Variables

Dependent variable.

There was one major outcome variable in this study: the development of an IPE, as defined by engagement in service planning with the counselor, or alternatively case closure, or lack of any contact over a 4-month time span.

This dichotomous variable was simply coded as "yes" for the engagement with a DORS counselor, or "no," due to a case closure, drop-out, or lack of contact between counselor and client.

Independent variables.

The independent variables were the WAI total score and the subscale scores of task, bond, and goal. The 12 questions of the WAI were each considered as variables.

The disabilities of the participants were of special interest as variables, as there are few studies investigating the role of WA between rehabilitation counselors and persons with disabilities. The disabilities were divided into six major categories: cognitive, psychiatric, visual, substance abuse/dependence, physical/orthopedic, and HIV. Each was considered an independent variable. Data was collected on the gender, both of the counselor and the client, ethnicity and age, and presence of financial disincentives of the participant, but were not the primary focus of this investigation.

Data Analysis

Power Analysis

An a priori power analysis used Horvath's (1994) WAI meta-analysis of effect size to estimate the sample size. This analysis (Horvath & Greenberg, 1994) demonstrated a fairly robust effect of WA on therapy outcomes. Horvath (1994) provided a meta-analytic synthesis of this research which indicates an average effect size of .33 for the WAI-C. Eight studies of WA were included in this analysis. The 95% confidence interval drawn around the ES was .23 to .43, which suggested a robust link between the client's estimate of the WA and the outcome of therapy.

The a priori power analysis used Cohen's (1988) procedure to estimate sample size, with a desired power of .80, an effect size between .30 and .40, and an alpha level of

.05. Using Cohen's power tables (1988), it was determined that an adequate sample size would fall between 99 and 175. The sample size of 111 was thus determined to be sufficient to proceed with statistical analysis.

The design of this study is predictive and correlational. The statistical analyses used were Logistic Regression, Pearson Correlation, Chi-Square, ANOVA, effect size, and factor analysis.

The first research hypothesis was addressed by logistic regression on the outcome measure of IPE. The first model tested whether a higher WAI score predicted that a participant was more likely to become engaged in seeking DORS services and develop an IPE. In this model, the dependent variable, IPE, is dichotomous. The second model added the demographic variables to test the second research hypothesis.

Logistic regression was the first analysis run to predict the presence or absence of the characteristic (IPE) based on values of a set of predictor variables. Logistic regression is best suited to models where the dependent variable is dichotomous, in this study the IPE was a "yes" or "no" outcome. Logistic regression coefficients can be used to estimate the odds ratios for each of the independent variables in the model. Logistic regression is applicable to a broader range of research situations than discriminant analysis.

According to Pedhazur (1997), the statistical properties of a dichotomous dependent variable result in violations of the assumptions of linear regression. For example, the relation between Y means and X is nonlinear. The assumption of homoscedasticity is not met, and the errors are not normally distributed. Among Pedhazur's (1997) suggested models for data with a dichotomous dependent variable are

linear probability, logistic, and probit. Pedhazur (1997) suggests logistic regression as the most versatile, as after transforming the dependent variable, logistic regression analysis parallels least squares regression analysis. Accordingly, hierarchical and step-wise regression analysis, and coding categorical independent variables are applicable in logistic regression.

Logistic regression was run on the first and second research questions. The results were nonsignificant on both a priori hypotheses. A number of post hoc analyses were then run to answer the question of which additional factors in this sample may be contributing to the WA.

In order to address the third research question, the magnitude of the effect of the demographic variables on WA, multiple ANOVA analyses were run. ANOVA was run comparing means for each independent variable and the effect size analyzed. The WAI scores were used as the dependent variable for this analysis. The effect size statistic (eta) is of particular importance in this study, as the meta-analytic studies (Horvath 1994) reported outcomes in terms of effect size as opposed to significance. The few studies on the relationship between WA and rehabilitation outcomes (Lustig, 2002) also reported outcomes in terms of effect size rather than significance.

Specifically, ANOVA was used to determine the significance of the variance among the independent variables of gender, primary disability, and race, on WA. In this analysis, the effect size (ES) was used to determine the size of the mean difference in the context of the variability in the WAI score. Cohen (1988) has specified effect size as .2 as a small, .5 as medium, and .8 as large. Therefore, this analysis provided results information about effects that may not be of sufficient magnitude to be statistically

significant but may be meaningful to the understanding of WA between the counselor and a person with a disability.

Since the logistic regression analysis did not support the hypothesis that the WAI predicts the IPE, a supplementary analysis using a Pearson correlation was run between all of WAI subscales, each WAI question, and the variables of gender, race, disability, and IPE. Additionally two post hoc analyses were added. The first to explore the counselor variable and the second to examine the factors of the WAI in the context of a sample of persons with disabilities

The first post hoc analysis was added to explore the relationship of the DORS counselor on WAI, although the counselor was not part of the original set of variables. A multiple linear regression on WAI by DORS counselor was run. The counselors were dummy coded and regressed on the WAI. The counselor code was a nominal independent variable, and the continuous variable of WAI was the dependent variable in this analysis. The counselor was found to account for 42% of the variance in the model.

However, 58 counselors were involved in this study with unequal numbers in each client/counselor dyad. This is a major limitation on any interpretations that could be made from these results.

The second post hoc analysis investigated whether the factors in this sample were different than the three dimensions developed by Horvath (1994). Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables. Factor analysis can also be used to

generate hypotheses regarding causal mechanisms or to screen variables for subsequent analysis.

Chapter IV: Results

Introduction

The first section of this chapter presents the results for each of the three research hypotheses. The second section presents the results of supplementary analysis to post-hoc research hypotheses.

Research Question 1: Does the level of WA between a DORS counselor and an individual with a disability predict drop-out prior to development of an IPE?

Hypothesis 1 a: A higher score on the WAI will predict that a participant will engage in rehabilitation planning with a DORS counselor and will develop an IPE.

Hypothesis 1b: A lower WAI score will predict that the participant will not engage in rehabilitation planning and will not develop an IPE.

The WA was measured by the participants' scores on the 12-item WAI.

The 12 WAI items are the following:

1. My counselor and I agree about the things I will need to do to develop an IPE.
2. What I am doing in rehabilitation gives me new ways of looking at my problem.
3. I believe my counselor likes me.
4. My counselor does not understand what I am trying to accomplish in my IPE.
5. I have confidence in my counselor's ability to help me.
6. My counselor and I have agreed on goals and are working together to reach them.
7. I feel that my counselor understands my disability.
8. We agree on what is important for me to work on to get a job.
9. My counselor and I trust one another.
10. My counselor and I have different ideas about what my problems are.

11. We have established an understanding of the changes that would be good for me.

12. I believe the way my counselor and I are working on my problem is correct.

Sixty-six participants developed an IPE and 45 did not. The means, harmonic means and standard deviations of the total score, the three subscale scores of task, goal, and bond are reported by IPE in Table 5. The harmonic mean is reported as there were unequal numbers in calculating the mean for each cell. The highest possible WAI Total score is 84.00. The 66 participants who developed an IPE had a WAI total score harmonic mean of 64.51, and the 45 who did not develop an IPE had a harmonic mean 65.40.

The results indicate a negatively skewed distribution of scores, with scores tending toward the higher end of the 1 to 7 scale of the WAI. The tendency toward higher WAI scores was also observed on all of the WAI's 12 items. The means of WAI items by IPE is reported on Table 6.

The negatively skewed means were observed regardless of gender, race, or disability. The possible interpretations of this pattern will be more fully discussed in the next chapter.

The harmonic means of the WAI total scores as well as task, goal, and bond by gender of the client, race, and primary disability are reported in Tables 7, 8, and 9.

Table 5

WAI Mean Scores by IPE Outcomes

IPE Outcome		WAI total	WAI goal	WAI bond	WAI task
No IPE (N=45)	Mean	69.0000	22.4222	23.4222	23.1556
	<i>SD</i>	13.53111	4.68794	4.62940	5.15203
	Harmonic	65.4022	21.2180	22.1480	20.9181
IPE (N=66)	Mean	68.5303	21.6970	23.2273	23.6061
	<i>SD</i>	13.46016	5.48556	4.92027	4.59390
	Harmonic	64.5130	20.0375	21.0197	21.8342
Total (N=111)	Mean	64.7207	21.9910	23.3063	23.4234
	<i>SD</i>	13.42939	5.16720	4.78405	4.81012
	Harmonic	64.8705	20.4999	21.4629	21.4533

Table 6

Mean of WAI Questions by IPE

No IPE (<i>n</i> =45)				IPE (<i>n</i> =66)		
Mean harmonic <i>SD</i>				Mean harmonic <i>SD</i>		
Item	Mean	Harmonic	<i>SD</i>	Mean	Harmonic	<i>SD</i>
Wa1	5.97	5.49	1.28	6.16	5.44	1.31
Wa2	5.69	4.85	1.36	5.88	5.22	1.36
Wa3	6.11	5.76	1.15	5.76	5.47	1.24
Wa4	5.95	5.20	1.64	5.25	3.64	2.23
Wa5	6.18	5.47	1.23	6.04	4.83	1.56
Wa6	5.83	5.02	1.46	5.77	4.80	1.58
Wa7	5.57	4.01	1.83	5.90	5.03	1.50
Wa8	5.70	4.91	1.51	5.81	4.41	1.69
Wa9	5.55	4.21	1.79	5.48	4.47	1.57
Wa10	5.04	3.92	1.96	5.09	4.34	1.72
Wa12	5.76	4.81	1.55	5.9	4.95	1.50

Table 7

WAI Total and Subscale Means by Gender

Gender	WAI total	WAI goal	WAI task	WAI bond
Male				
Mean	68.0290	21.8116	23.0870	23.1304
<i>N</i>	69	69	69	69
<i>SD</i>	13.44156	5.24482	4.79810	4.89872
Harmonic mean	64.156	20.3208	21.2960	21.0164
Female				
Mean	69.8571	22.2857	23.9762	23.5952
<i>N</i>	42	42	42	42
<i>SD</i>	13.49358	5.08602	4.8629	4.63318
Harmonic mean	66.0822	20.0811	21.7168	22.2393
Total				
Mean	68.7207	21.9910	23.4234	23.3063
<i>N</i>	111	111	111	111
<i>SD</i>	13.42939	5.16720	4.81012	4.78405
Harmonic mean	64.8705	20.4999	21.4533	21.4629

Table 8

WAI by Race

Race		WAI total	WAI goal	WAI task	WAI bond
African					
American	Mean	68.7759	22.4483	23.3973	22.9483
	<i>N</i>	58	58	58	58
	<i>SD</i>	14.28291	5.37105	4.79703	5.23625
	Harmonic mean	64.3486	20.7629	21.4896	20.6832
Other					
Other	Mean	72.5000	23.0000	25.5000	24.0000
	<i>N</i>	4	4	4	4
	<i>SD</i>	8.22598	3.46410	2.38048	3.36650
	Harmonic mean	71.7679	22.5542	25.3331	23.6417
White					
White	Mean	68.3469	21.3673	23.3061	23.6735
	<i>N</i>	49	49	49	49
	<i>SD</i>	12.86395	5.04436	4.99668	4.34160
	Harmonic mean	64.9846	20.0501	21.1465	22.2899
Total					
Total	Mean	68.7207	21.9910	23.4234	23.3063
	<i>N</i>	111	111	111	111
	<i>SD</i>	13.42939	5.16720	4.81012	4.78405
	Harmonic mean	64.8705	20.4999	21.4533	21.4629

Table 9

WAI Total and Subscales by Disability

Disability		WAI total	WAI goal	WAI task	WAI bond
Cognitive	Mean	65.9600	20.4400	22.7800	22.7400
	<i>N</i>	50	50	50	50
	<i>SD</i>	13.48462	5.45168	4.72203	4.77583
	Harmonic mean	62.6461	18.8101	21.5959	21.1405
Psychiatric	Mean	72.0690	23.1724	24.7586	24.1379
	<i>N</i>	29	29	29	29
	<i>SD</i>	12.15651	5.09249	4.50916	3.66181
	Harmonic mean	68.7604	21.7758	22.1304	23.4082
Visual	Mean	64.7143	21.5714	22.2857	20.8571
	<i>N</i>	7	7	7	7
	<i>SD</i>	20.15535	5.53345	7.84675	7.88307
	Harmonic mean	53.8960	20.0710	15.9197	15.1077
Orthopedic	Mean	69.2500	22.7500	22.7500	23.7500
	<i>N</i>	4	4	4	4
	<i>SD</i>	11.64403	3.86221	4.27200	3.686556
	Harmonic ean	67.7990	22.2912	22.1538	23.2993

Substance					
Abuse	Mean	71.0000	23.8235	23.1765	24.0000
	<i>N</i>	17	17	17	17
	<i>SD</i>	12.74264	3.81175	4.55844	5.51135
	Harmonic mean	68.2829	23.1539	22.0860	21.9977
HIV	Mean	75.7500	25.0000	25.5000	25.2500
	<i>N</i>	4	4	4	4
	<i>SD</i>	8.99537	3.46410	2.88675	2.75379
	Harmonic mean	74.9470	24.6400	25.2549	25.0199
Total	Mean	68.7207	21.9910	23.4234	23.3063
	<i>N</i>	111	111	111	111
	<i>SD</i>	13.42939	5.16720	4.81012	4.78405
	Harmonic mean	64.8705	20.4999	21.4533	21.4629

Research Question 1

Does the level of WA between a DORS counselor and an individual with a disability predict drop-out prior to development of an IPE?

Two logistic regression analyses were run to address the first research question. On the first, the WAI, total score, the three subscales (task, bond, and goal) were regressed on the dichotomous outcome of whether or not IPE was developed.. The second LR included the categorical variables of race, gender, and disability, which were added to the model. The IPE was the dependent dichotomous variable in this model.

In the first model, the WAI variables correctly classified 90% of the persons who developed a plan but only 28% of those who did not develop a plan. These classification results are presented in Table 10.

Table 10
Classification Using WAI variables

Observed	Individual plan for employment		Predicted	
	.00	1.00		Percentage correct
Individual plan for employment	.00 12		31	27.9
	1.00 7		61	89.7
Overall percentage				65.8

The results of the LR are presented in Table 12. All of the predictor variables in the model were nonsignificant on the outcome variable of IPE. The results provided no

support for either hypothesis. A high WAI score did not increase the likelihood (-2 log likelihood of 144.92) of the participant developing an IPE, and a low score did not increase the likelihood of drop-out.

Table 11

Logistic Regression Model on IPE by WAI Scores

	B	SE	Wald	df	Sig.	Odds ratio
Task	.109	.072	2.290	1	.130	1.115
Bond	-.065	.077	.723	1	.395	.937
Goal	-.064	.062	1.079	1	.299	.938
Total	.101	.076	1.772	1	.183	1.106

Table 12

Model Summary

Step	-2 log likelihood	Cox & Snell R square	Nagelkerke R square
1	144.952(a)	.029	.039

a: Estimation termination at iteration number 4 because the parameter estimates changed by less than .001.

In the second logistic regression, the demographic variables of gender, race, and disability were added to the model to assess if there was an increase in the log likelihood. In the model including all of the variables, the -2 log likelihood was 141.46. The WAI scores raised the likelihood of an IPE by only 3.46. All results were nonsignificant

However, although disability did not reach statistical significance, it might be of interest to note that persons with a visual disability were twice as likely to develop an IPE than persons in other disability categories. There were only seven persons in this category.

Table 13

Logistic Regression Model on IPE

	B	SE	Wald	df	Sig.	Odds ratio	95% CI for EXP(B)	
							Lower	Upper
Race			.314	2	.855			
Race(1)	.547	1.076	.258	1	.612	1.727	.210	14.238
Race(2)	.604	1.079	.314	1	.575	1.830	.221	15.162
Disprim			4.200	5	.521			
Disprim(1)	-.445	1.234	.130	1	.718	.641	.057	7.193
Disprim(2)	-.851	1.250	.463	1	.496	.427	.037	4.950
Disprim(3)	.801	1.622	.244	1	.621	2.227	.093	53.470
Disprim(4)	2.102	1.657	1.609	1	.205	.122	.005	3.146
Disprim(5)	-.803	1.298	.382	1	.536	.448	.035	5.707
Clgender(1)	-.283	.438	.418	1	.518	.754	.320	1.777
Wa total	.101	.076	1.772	1	.183	1.106	.953	.1283
Goal	-.159	.117	1.835	1	.176	.853	.678	1.074
Bond	-.152	.137	1.235	1	.266	.859	.656	1.123
Task	.017	.043	.161	1	.680	1.017		

Table 14

Model Summary with Gender, Race, and Disability

-2 Log likelihood	Cox & Snell R square	Nagelkerke R square
141.467 (a)	.059	.080

A chi-square test of the variable of disability was run to further explore the increase of odds ratio for persons with a visual impairment. The cross-tabulation table shows that of the six of the seven persons with a visual impairment developed a plan for employment. Persons in other disability categories were no more likely to have an IPE regardless of disability.

Table 15

Primary Disability by IPE Cross-tabulation

Primary disability		Individual plan for employment		Total
		No IPE	IPE	
Cognitive	Count	17	33	50
	% within primary disability	34.0%	66.0%	100.0%
	% within individual plan for employment	39.5%	48.5%	45.0%
	% of total	15.3%	29.7%	45.0%
Psychiatric	Count	13	16	29
	% within primary disability	44.8%	55.2%	100.0%
	% within individual plan for employment	30.2%	23.5%	26.1%
	% of total	11.7%	14.4%	26.1%
Visual	Count	1	6	7
	% within primary disability	14.3%	85.7%	100.0%
	% within individual	2.3%	8.8%	6.3%

	plan for employment			
	% of total	0.9%	5.4%	6.3%
Physical	Count	3	1	4
	% within primary	75.0%	25.0%	100.0%
	disability			
	% within individual	7.0%	1.5%	3.6%
	plan for employment			
	% of total	2.7%	0.9%	3.6%
Substance abuse	Count	8	9	17
	% within primary	47.1%	52.9%	100.0%
	disability			
	% within individual	18.6%	13.2%	15.3%
	plan for employment			
	% of total	7.2%	8.1%	15.3%
HIV	Count	1	3	4
	% within primary	25.0%	75.0%	100.0%
	disability			
	% within individual	2.3%	4.4%	3.6%
	plan for employment			

Despite the small increase in the odds ratio, the chi-square analysis was not significant for disability, as shown in Table 16.

Table 16

Chi-square Tests on Disability

	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	5.720(a)	5	.334
Likelihood ratio	5.957	5	.310
Linear-by-linear association	.467	1	.494
N of valid cases	111		

a: Six cells (50.0%) have expected count of less than 5. The minimum expected count is 1.55.

Research Question 2

Research Question 2: Do the three dimensions of alliance, i.e., goal, bond, and task, hypothesized by Bordin (1979) predict drop-out equally well? Which of the dimensions is the most sensitive of the predictors?

Hypothesis 2a: A higher subscale WAI score in one of the three dimensions predicts an IPE.

Hypothesis 2b: One of the three WA subscale scores is a more sensitive predictor of an IPE.

The results of the logistic regression (Table 11) did not provide support for the first or the second hypothesis.

Even though the LR indicated that the demographics were not predictive of an IPE, further exploration of the correlation between demographic factors and subscales of WAI and the IPE was of interest. A Pearson correlation was run on each subscale and each individual question of the WAI by IPE gender, race, and primary disability. The results are presented in Table 17.

Table 17

Pearson Correlations for WAI by IPE, Disability, Race, and Gender

WAI	IPE	Gender	Disability	Race
Total	-.048	.093	.133	.014
Bond	.065	.047	.097	-.069
Goal	-.008	.045	.245**	.036
Task	.024	.090	.047	.078
Wa1	.070	.133	.093	.039
Wa2	.063	.078	-.024	.020
Wa3	-.095	.048	.051	.060
Wa4	-.168	.073	.220*	.162
Wa5	-.048	.011	.023	.037
Wa6	-.018	.041	.131	.086
Wa7	-.095	.092	.081	.046
Wa8	-.033	.081	.076	.115
Wa9	.020	.052	.133	.100
Wa10	-.013	.014	.228**	.159
Wa12	-.008	.071	.012	.009

The results showed three significant correlations. A significant correlation was found ($r = .245, p < .001$) between the primary disability and the subscale of goal. The second significant correlation was ($r = .220, p < .001$) on WAI question 4, and the third

($r = .228, p < .001$) on WAI question 10. These two questions are part of Horvath's (1994) goal dimension of the WA. In the version of the WAI used in this study, Question 4 asks the participant to rate this statement: My rehabilitation counselor does not understand what I am trying to accomplish in my employment plan; Question 10: My rehabilitation counselor and I have different ideas about what my problems are.

There is a significant correlation between disability ($r = .245, p < .001$) and goal. However, there are no significant correlations between the outcome variable of IPE, gender, or race with the WAI total, subscales, or questions. These findings support the LR results that a high score on the WAI does not increase or decrease the likelihood of IPE.

Research Question 3

Research Question 3: What is the magnitude of the effect of gender, ethnicity, and type of disability on the client's working alliance with a rehabilitation counselor?

Hypothesis 3 a: The variables of gender, disability, and ethnicity have an effect upon the scores of the WAI.

Hypothesis 3 b: One of these variables will have a larger effect upon the scores of the WAI.

The third research question was addressed by comparing the relative effect size of all of the demographic variables on the WAI. In addition, the two WAI questions, 4 and 10, which were significantly correlated with disability were included in this analysis.

The results are presented in Table 18. Using Cohen's (1988) effect size definition, that the magnitude of effect size may be considered as follows small :(.2),

medium (.5) or large (.8). Disability had a small effect size (.236) on WAI total, bond, task, and goal as well as the questions 4 and 10.

The rationale for using effect size in the context of the nonsignificant finding is that the magnitude of effect size is stressed in Horvath and Greenberg's (1994) major review of the theory, research, and practice of WA. In this review, they concluded that the fact that the "strength of the working alliance and a variety of treatment outcomes show even a moderate effect appears to link positive alliance with good therapy outcome." In Horvath and Symonds (1991) meta-analytic review, which included 24 clinical studies published between 1975 and 1991, the overall effect size for WA on therapy outcome was .26. The magnitude of effect size between alliance and outcome was not related to sample size, or length of treatment. Therefore, an analysis of effect size is relevant in assessing the magnitude of effect that the demographic variables of gender, disability, race, and the IPE might have upon the WAI scores.

According to Hendrickson (2003), the three characteristics of an effect are statistical significance, magnitude, and meaningfulness. In this study, the effect was nonsignificant. However, the question of the magnitude, i.e., the size of the mean difference in the context of the variability of the WA scores, may be important.

An analysis of effect size attempts to investigate this magnitude. Hendrickson (2003) states that most effects that are large in magnitude (.8) are also statistically significant. However, small effects (.2) may be statistically significant or not depending on whether the sample size is large enough to provide the power necessary to declare them so. Even for small effects (.2), there may be meaningful significance for social and behavioral sciences (Hendrickson, 2003).

Table 18 presents the results of the effect size of disability, gender, race, financial support, IPE, and their association with WAI. Multiple ANOVAS were run, with eta as a measurement of effect size, on each variable to assess their unique association with WAI.

Table 18

Effect Size of Variables on WAI Scores

Effect size	Total WA	Goal	Bond	Task	Item 4	Item 10
Disability	.236	.296	.201	.200	.251	.252
Gender	.066	.045	.047	.090	.073	.043
Race	.057	.110	.080	.084	.202	.178
IPE	.017	.069	.020	.046	.157	.036

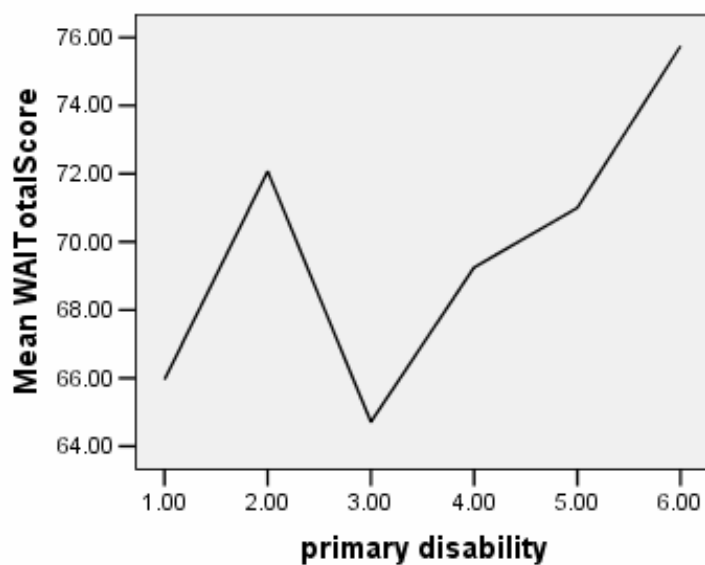
Note : Effect Sizes are Small .2 Medium .5 Large .8 (Cohen, 1988)

The disability of the participant had a small effect size on the total WA, goal, bond, and task as well as items 4 and 10. To better illustrate the effect of disability upon WA, Table 19 presents the means of the six categories of disability on WAI total. The highest WAI total score was on HIV and the lowest on visual impairment.

Table 19

WAI Total Score by Disability Code

Primary disability	Mean	Harmonic	<i>N</i>	<i>SD</i>
Cognitive	65.96	62.646	50	13.48
Psychiatric	72.06	68.76	29	12.15
Visual	64.71	53.89	7	20.15
Substance abuse	69.25	67.79	4	11.64
Physical	71.00	68.28	17	12.74
HIV	75.75	74.94	4	13.42

*Figure 1.* WAI total means by disability code.

Although disability did not have a statistically significant effect on the WAI total, the effect size suggests that the type of disability may make a difference in the level of working alliance between a participant and the DORS counselor. An analysis of the possible explanations follows in the discussion chapter.

Post Hoc Analysis

Counselor Variable

Although client perspective was the focus of this investigation, the counselor has been a focus in the WA literature; therefore, post hoc analysis of the counselor as a variable affecting the WA was added. The DORS counselors, although representative, did not have equal numbers of clients represented in this study. Therefore, these results must be interpreted with caution. Despite this limitation, the effect of the counselor on WA is an important and is well documented in the literature (Horvath & Greenberg, 1994).

A multiple linear regression was run with the DORS counselor as an independent variable and the WAI as a continuous dependent variable. The 58 counselors were dummy coded, then regressed on the outcome variable of WAI. The results are presented in Table 20. Significant results for the counselor variable were found ($p \leq .000$) on WAI total, task, goal and bond. The counselor was a significant predictor of the WAI total score as well as the scores on three subscales.

Table 20

MLR Summary of WAI Total Score by Counselor Code

Counselor code	Partial R square	R square	F value	P value
CDC43	0.0610	0.1721	7.96	0.0057
CDC34	0.0449	0.2169	3.2006	0.0148
CDC1	0.0357	0.2526	5.06	0.0265
CDC7	0.0312	0.2838	4.57	0.0349
CDC56	0.0312	0.3150	4.74	0.0318
CDC23	0.0264	0.3414	4.13	0.0448
CDC40	0.0258	0.3672	4.17	0.0438

The MLR resulted in seven of the counselors accounting for 37% of the variance of the WAI total score. The remaining 51 counselors had nonsignificant effects on the WA. These seven counselors accounting for the largest portion of variance had the lowest mean scores for WAI. There are limitations to this analysis as counselor/client dyads were not a focus of this study and are not represented by sufficient or equal numbers of clients per counselor. However, the results are of interest for further study as they suggest that the DORS counselor is an important variable that needs further investigation.

Factor Analysis

Given the earlier results of this study, a factor analysis of the WAI was conducted to explore whether the measure behaved similarly with this sample as was reported by Horvath (1994) in his chapter on the empirical validation of Bordin's model of the alliance using the Working Alliance Inventory perspective (pp. 109–117).

The factor analysis of the WAI items was done to explore the question of whether there were factors unique to this sample when compared to Horvath's (1994) three WA dimensions. This conceptualization implies a factor structure characterized by one general alliance factor and three secondary factors, each corresponding to one of the components. Table 21 compares Horvath's (1994) three secondary factors with the factors/communalities found in this study's sample. These comparisons suggest there is a difference between the factors in this sample and the three factors of goal, bond task that are in Horvath's WAI dimensions.

Table 21

Communalities of WAI Items

WAI item	Sample factors	Horvath factors
1	.632	Task
2	.529	Task
3	.523	Bond
4	.404	Goal
5	.461	Bond
6	.666	Goal
7	.394	Bond
8	.783	Task
9	.762	Bond
10	.321	Goal
11	.780	Goal
12	.655	Task

Total variance accounted for by the factors is presented in Table 22. Three factors explain 71% of the variance in the sample.

Table 22

Total Variance Explained Extraction Method: Principal Axis Factoring

Factor	Initial eigenvalues			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.287	52.395	52.395	5.831	48.588	48.588
2	1.289	10.738	63.133	.987	8.227	56.815
3	.915	7.629	70.762	.659	5.495	62.310
4	.735	6.124	76.886	.432	3.603	65.913
5	.616	5.134	82.020	.265	2.207	68.120
6	.508	4.230	86.249			
7	.446	3.713	89.962			
8	.379	3.157	93.120			
9	.297	2.478	95.597			
10	.213	1.778	97.375			
11	.178	1.483	98.858			
12	.137	1.142	100.000			

However, the rotated factor matrix in Table 23 show that the results are three different factors other than the task, bond, and goal dimensions proposed by Horvath (1994).

Table 23

Rotated Factor Matrix of WAI Items

		Factor				
		1	2	3	4	5
Wa9	Bond	.876				
Wa11	Goal	.872				
Wa8	Task	.857				
Wa12	Task	.812				
Wa6	Goal	.777			-.401	
Wa10	Goal	.703		.595		
Wa3	Bond	.661			.466	
Wa2	Task	.648		.363		
Wa5	Bond	.644				
Wa7	Bond	.536	.360			
Wa4	Goal	.401	.648			
Wa1	Task	.304	.600			

The rotated factor matrix resulted in WA items 9, 11, 8, and 12 as the four highest loadings on factor 1. These questions span bond, goal, and task in the Horvath (1991) model presented in Table 23. These factors appear to be unique to this study's sample

when compared to the factors (Table 24) found by Horvath (1991) in the development of the WAI.

Table 24

<i>WAI Subscale Items in Horvath's WAI</i>		
Task items	Bond items	Goal items
1, 2, 8, 12	3, 5, 7, 9	4, 6, 10, 11

In this sample of persons with disabilities, all 12 items are loaded on one primary factor (Table 23). This factor appears to be a different factor than in the Horvath (1991) model. A highly speculative interpretation of this finding is that persons with disabilities have different considerations in forming a working alliance with a DORS counselor. Among these, maybe the counseling style, gender, race, and primary disability, as well as the counselor's understanding of the ramifications of the individual's disability, the concern over loss of disability financial benefits, and the type of changes the client is willing and able to make. This interpretation is highly speculative, but suggests a different set of factors may be operating in developing a working alliance in a rehabilitation setting.

The results of this study add to the literature on WA theory and suggest the possibility that WA between rehabilitation counselors and persons with disabilities may have different dimensions from what Horvath (1991) proposed.

Chapter V: Discussion

The three most important findings from this study are, first, that the working alliance with a DORS counselor was not a significant predictor of whether a person with a disability develops a plan for employment in a public rehabilitation setting. Second, the person's disability does have an effect on the working alliance with the counselor, and third, the DORS counselor is a predictor of WA. The first two findings were based on a priori research questions, whereas the third finding was a result of a post hoc analysis. Additionally, the study also yielded a number of speculative findings and possible directions for further research.

It is important to note that of the 111 persons in this study, 66 developed an IPE and 45 did not. This is a very positive finding in the context of the federal-state rehabilitation program given the large case-loads and severity of the disabilities of these participants. The study found that 59% of clients were successful in developing a plan for eventual employment. The majority of participants, regardless of IPE outcome, rated their WA with their DORS counselor toward the high end of the scale. The participants in this study all had significant disabilities, many with multiple disabilities. Given the complexity of their needs, the DORS counselors did extremely well in engaging the clients in an alliance.

In summary, both of these findings are quite positive, but different counseling strategies may result in increased IPE outcomes.

This chapter is organized around the three research questions and their attendant hypotheses. The first section summarizes and discusses the key findings. It also places each result in the context of the literature on WA, discussing its agreement with past research and exploring possible reasons for divergence from Bordin's (1979) WA theory and Horvath's (1994) WAI model. Next, this chapter looks at the limitations specific to a given result and suggests how future research in rehabilitation counseling with persons with disabilities might clarify and expand understanding of this important population. Subsequent sections of the chapter further discuss the study's theoretical, applied, and research implications for counselor education, specifically from the standpoint of counselors being prepared for a career in public rehabilitation .

Summary and Interpretation of Results

Research Question 1

The first research question asked whether the score on the WAI predicts the development of an IPE for a person with a disability. Specifically, Hypothesis 1a predicted that a higher WAI score would increase the odds of developing an IPE. Hypothesis 1b predicted that a lower WAI score would result in less likelihood of developing an IPE and more likelihood of dropping out of DORS services.

The results failed to support either hypothesis. All of variables including the total score on the WAI, the three subscales of bond, task, and goal, disability, race, and gender were not significant predictors of developing an IPE. The findings were negatively skewed with most scores tending toward the higher end of the 1 to 7 WAI scale.

Therefore, participants with equally high (6–7) WAI scores went on to develop a plan for

employment, or dropped out of DORS services. There were no significant differences in the IPE outcome. There was insufficient evidence to reject the null hypothesis in this study.

The outcome literature on the WA is based on counseling and psychotherapy outcomes measured by a variety of psychometric or survey instruments such as Symptoms Checklist 90 (Adler, 1988), Client's Post Therapy Questionnaire (Horvath, 1981), and the MMPI (Safran & Walmer, 1991). As presented in Table 2, effect sizes were reported in a meta-analytic study of the WA (Horvath, 1991). The studies were correlational as opposed to predictive. This study was predictive and correlational, and a major difference was the use of the IPE as a real-world outcome variable, as opposed to self-report instruments.

The IPE is a detailed plan that lays out employment objectives. It represents the client's choice of a specific employment objective based on interests, aptitudes and type of disability. Each IPE is unique to the client's needs, interests and choices and is developed in collaboration with the counselor. The plan includes the types of services and the client's choice of who will provide the services, as well as the time line for completion. Services may include psychotherapy, academic remediation, job skills training, identification of needed job modifications, job seeking and job placement . the mutual responsibilities for the tasks that will lead to the goals in the IPE are agreed upon. In addition, a measure of success is included, which may be completion of a training program, or sustained recovery of a substance abuse problem.

For example, a DORS client was out of work from a job at a local radio station. He struggled with health issues that led to vision loss. The IPE included return to the

radio station as the major job goal. The IPE plan involved assessment by a low vision specialist who collaborated with the client, arranged to visit the job site and agreed on solutions which included ZoomText, a specialized software for his computer, and a closed circuit television for reading. Intermediate tasks included training in the use of the specialized software, and the CCTV. Each IPE represents a unique collaboration and agreement on what the problem is, what is needed to agree on solutions, and the time the plan may take. As the type of disability is unique, each IPE plan has components which reflects the in-input of the person with the disability as a partner in its development.

In Chapter II, the legislative and philosophical context of the development and the need for collaboration with the counselor in the IPE is more fully explained. The emphasis of full and equal partnership with a client is emphasized in both the 1998 Amendments to the Rehabilitation Act of 1973 as well as the Americans With Disabilities Act of 1990. The IPE is a critical component of the process of vocational rehabilitation for both counselor and client.

The use of the IPE as a real world outcome is a somewhat unique in the WA literature which has generally used psychological growth or change measures as outcomes (Adler, 1988; Horvath, 1981; Kokotovic & Tracey, 1990). Only Lubrosky (1985) used a mix of employment, drug use, and legal status as outcomes. As a result, comparisons of these outcomes may not be directly comparable and should be interpreted with caution.

Additionally, in the context of a federal-state rehabilitation setting, the outcome is mandated by an external criterion of success, i.e., employment. A successful rehabilitation outcome in DORS is measured by IPE development and ultimately by

successful employment. Consequently, this study took a very different approach in defining the counseling outcome.

This study was based on WA theory that stresses the importance of collaboration between counselor and client in forming an alliance (Bordin, 1979). The federal-state rehabilitation program is based on the concept that persons with disabilities will be equal partners in the development of a plan for employment. The results of this study raise a number of questions about the link between WA and IPE assumed in this definition. Either the IPE is not a measure of collaboration and WA or the person with a disability views this alliance very differently than clients in other counseling situations. The DORS clients, with few exceptions, gave high ratings to their level of WA with a DORS counselor. Despite this finding, a WA did not predict who remained engaged in seeking services and who dropped out. This study has added a new dimension to the WA literature that needs to be explored much more fully. Directions for future research are discussed in the next sections.

Explanations about the reasons for the lack of relationship between WA and IPE are very speculative, as few studies (Lustig, 2002) in the WA literature have focused on persons with disabilities. Possible explanations include the differential power between the DORS counselor and a person with a disability, or the lack of self-efficacy on the part of the client. The informal conversations with the participants following the administration of the WAI are of interest in addressing these questions. Several clients voiced the perception that the DORS counselor “made all the decisions” and one said he “needed to just go along with the plan.” Additional comments included describing the DORS

counselor's role as "having the money, and making the decisions" and "my counselor helps me fight the rehabilitation system."

Szymanski and Trueba (1999) offer an understanding of this power differential by explaining the "castification" (p. 195) of persons with disabilities and the potential disempowering aspects inherent in disability services. Although recent legislation and philosophy in the rehabilitation counseling profession have embraced the idea that persons with disability should have an active role in the rehabilitation process, the process still remains firmly under the control of the professional "who often has the power to determine whether the person with a disability is eligible to participate in the program or receive some form of benefit" (p. 195). If Szymanski and Trueba's (1999) view is correct, it may offer a possible explanation for the positive bias toward agreement with the counselor on the WAI in this study, as well as the lack of predictive power of the WAI in this sample.

Nevertheless, the results indicate that people with disabilities do report a positive WA with the DORS counselor, but other unknown variables may be more important in determining whether the client decided to pursue services. In this study, the gender, race, and type of disability were not predictive of IPE outcome.

Another possible explanation for the lack of WA/IPE relationship is that the IPE is clearly different from measures used in psychotherapy and counseling outcomes. Although the IPE represents collaboration, the IPE is not a measure of psychological growth or change, as the MMPI or other measures of decreased psychopathology reported in the literature (Horvath, 1994). This study raises two new questions in the WA

literature. First, is the IPE a good outcome measure of WA? Second, is the WA different in rehabilitation counseling?

To address the first question, the IPE was hypothesized to represent the client's willingness to remain engaged in the rehabilitation process. However, Lubrosky (1988), in discussing the predictive success of the WA on outcome, notes that "the alliance's overlap with outcome measures is only partial" (p. 45). He also cautions that variations in the time course of the alliance result in inconsistent predictions. The IPE may be an ongoing process; this study measured the IPE as a simple dichotomous variable, at one point in time. Persons with an IPE may or may not go on to employment. A longitudinal study including employment outcome would be of interest for future research.

Finally, Lubrosky (1988) notes that "size of the database used for the alliance measure makes prediction difficult" (p. 46). The size of this sample ($N=111$), while of sufficient power, was small. An increase in sample size may have made a difference in the predictive power of the WAI in this study.

To address the question of the DORS clients' view of the WA, it is helpful to look at Lustig's (2002) large study conducted with vocational rehabilitation clients in Tennessee. The researchers developed a nine-item working alliance survey, to test the WA. This study used employment as an outcome variable, as opposed to the IPE, and found that clients who were employed had a stronger working alliance with their counselors than clients who were unemployed. An effect size of .73 was reported.

A second study (Lustig, Strausser, Rice, & Rucker, 2002) looked at the relationship between WA and employment outcome for persons with mental retardation. This study used the same researcher developed nine-item survey. They reported an effect

size of .09, which is quite low. The effect size for WA on IPE in this study was .017, also quite low. Although Lustig et al. (2002) used different measures of both WA and employment, the outcome of their findings are in agreement with this study.

In both of these studies, the authors recommended using an existing instrument to measure the WA in future studies to replicate these findings. This study used the WAI, based on Bordin's WA theory, and the results were not in total agreement with Lustig et al.'s (2002). It would be of interest to use the employment outcome, as opposed to IPE, as the dependent variable in a follow-up study to ascertain if there is more agreement with Lustig et al.'s findings.

Research Question 2

The second research question investigated whether the three dimensions of bond, goal, and task predict drop-out/IPE equally well. The hypothesis was that one of the three WAI subscale scores is a more sensitive predictor of an IPE.

The logistic regression results failed to provide support of a predictive relationship of any of three dimensions of bond, goal, or task on the development of an IPE. A Pearson correlation also failed to support that bond, task, or goal accounted for a significant amount of the variance.

Safran and Muran (1998) point out that the brief intermittent nature of counseling within the state-federal system require that counseling goals are determined early in the counseling relationship, and that a didactic approach to discussing the tasks and goals should be used. The authors stressed the need for the counselor to establish goals early, which would facilitate the development of the working alliance. Given the context of the DORS setting in a federal-state system, it was theorized that the dimension of goal might

prove more predictive of an IPE than the other two dimensions. This hypothesis was not supported by the results.

The responses to the subscale questions on goal were negatively skewed, again tending toward agreement with the counselor. This pattern was similar on task and bond as well, with no subscale being a more significant predictor than the other.

This is not surprising as the three WAI dimensions are strongly correlated; scale intercorrelations range from .60 to .80 (Horvath & Greenberg, 1989). Notwithstanding the magnitude of these correlations, there is also empirical evidence that the three working alliance dimensions hypothesized by Bordin (1979) are distinct. This was theorized to be the case in this study. Bordin (1980) predicted that the alliance in the early stages of therapy would be largely undifferentiated and global, based on initial impressions, trust, and liking. He hypothesized that as counseling progressed the three dimensions would become more distinct, and the relative significance of each would depend on the type of counseling used. Unfortunately, this aspect of Bordin's (1979) model has not been tested.

It was unclear what would result in the DORS counseling setting. The results show no difference among the dimensions, perhaps due to the nature of rehabilitation counseling or the time at which the WA measured. It may be of interest to readminister the WAI at intervals to assess change over time and/or the improved prediction of the WA on outcome.

Research Question 3

The third research question asked whether gender, disability, and ethnicity affected the scores on the WAI. Hypothesis 3a predicted that gender, disability, and

ethnicity (race) made a difference in the WAI scores. Hypothesis 3b predicted that one of these variables has a stronger association with the development of a WA with a DORS counselor.

The results did not find that gender or race were significant factors in the WA with a DORS counselor. This finding is in agreement with Lustig (2002) who considered the variable of ethnicity in his study on WA. Lustig collapsed this variable into two groups, Caucasian and non-Caucasian. He found that the difference between these two groups was not significant on the continuous variable of working alliance.

Goren (1991) explored the gender issue and WA and found that the overall working alliance scores of men and women did not differ significantly. There were also no differences due to cross-gender combinations of the client and the counselor. She also investigated whether gender might be a factor in the kind of working alliance developed (i.e., the relative strength of the alliance components). Surprisingly, no difference was found along the bond dimension; however, female clients with female counselors tended to rate the task and goal scales higher than the other gender combinations.

In this study there were very low effect sizes (.057) of race on total WAI or any of the three dimensions. There was a medium-effect size of race on question 4 (.20).

The results did support an association between disability and the total WAI score and the scores on bond, task, and goal as well on items 4 and 10. It is not surprising that disability, which is the reason participants sought DORS services, is a more important factor than gender or race in the WA with a rehabilitation counselor.

A significant Pearson correlation was found (Table 17) on the dimension of goal

($r=.245$), on items 4 and 10 with disability. A medium effect size was found on the total WAI, goal, task, and bond (Table 18), which supports hypothesis 3b that disability is associated with the WAI score. This is an important finding in this study as it is one of the few studies in WA literature involving persons with disability. These findings are not in agreement with Lustig's (2002) study on the relationship between WA and rehabilitation outcomes. The variable of disability category, disability severity, and secondary disability, when an ANOVA or t-test was used, found "no statistical or meaningful difference" (p. 29) on the continuous variable of working alliance. Although a significant difference was found between disability category, the effect size was minimal (.008). In addition, only the comparison between persons with visual impairment and individuals with traumatic brain injury (TBI) was found to be significantly different.

However, Lustig's study (2002) used a researcher-developed instrument to measure the WA, and did not use the WAI. In this study, the disability groups were collapsed into six categories to represent the federal-state rehabilitation definitions, which are based on functional impairment, as opposed to medical diagnosis. Lustig (2002) recommends that although his data did not indicate a significant effect related to type of disability on the level of working alliance and rehabilitation outcomes, "it would be informative to investigate the effect of these factors with other samples" (p. 31). Specifically, he suggests investigating whether the levels of working alliance are different for persons with psychiatric disorders than for persons with chronic medical conditions.

Disability Variable

This study found there were differences among the means of the WAI total score among the six disability categories (Table 19). These differences were not statistically

significant but may be meaningful. The persons with HIV had the highest WAI mean score ($M=75.94$), closely followed by persons with psychiatric disabilities ($M=72.06$), orthopedic disabilities ($M=68.28$), substance abuse ($M=69.25$), persons with cognitive disabilities ($M=65.96$), and individuals with visual impairment ($M= 64.71$), who had the lowest means on the WAI. There are unequal numbers among the disabilities, which is a limitation, even if a harmonic mean is used. An ANOVA analysis did not demonstrate a significant statistical among difference the categories of disability, but a small effect size was found ($\eta^2 = .236$).

The relatively higher mean score on the WAI for persons with psychiatric disabilities is in some ways surprising. MacDonald-Wilson (2001) reported that a recent study conducted by the New York State Office of Mental Health (1998) showed poor employment outcomes for these individuals. The unemployment rate was approximately 67% for individuals with all disabilities whereas the unemployment rate for people with psychiatric disabilities was 85% to 92%. MacDonald-Wilson (2001) reported that psychiatric disabilities are now the second most frequent category of disorders served by the state-federal vocational rehabilitation programs in every state, and comprise almost 20% of the VR caseload. People with psychiatric disabilities have fewer successful closures in the VR program when compared to those with other disabilities (Marshak, Bostick, & Turton, 1991).

However, the present study found no significant relationship between WA and IPE. The poor employment outcome for people with psychiatric disabilities may further support the lack of relationship between WA and employment outcome as participants

with no IPE appeared to have a good WA with the DORS counselor. Further study of actual employment outcomes would yield more data on this question.

One highly speculative explanation, in comparing the two relatively large groups of persons with the psychiatric disability versus the persons with cognitive limitations, may be that the latter group has a different understanding of the nature of their disability. This speculation is based on the author's clinical experience with persons within the DORS population. Many persons within the cognitive disability group are defined as learning disabled by a variety of means, and do not always identify themselves as having any disability. Within this category are persons with mild mental retardation, expressive learning disabilities, attention deficit disorder, and cognitive problems secondary to traumatic brain injury. Forming an alliance with a counselor may be more difficult for a person when the disability is not clearly defined. For this reason, defining the tasks and goals involved in developing an employment plan may be more challenging. If this is so, counselors may need to use different counseling strategies to develop an alliance with persons with cognitive disabilities.

In comparison, persons with HIV and psychiatric disability frequently are well aware of their diagnosis, and many are quite well informed about it, and may understand the tasks required and the need to negotiate goals with a counselor. Many may have had the experience of forming other therapeutic alliances, such as in psychotherapy with a mental health practitioner or substance abuse counselor. These observations are based on the verbalized clinical experiences of rehabilitation counselors and may be unique to this sample.

Additionally, the DORS counselors with a caseload of persons with psychiatric disabilities meet as group, known as the Psychiatric Rehabilitation Group, to discuss unique issues in working with this population. Training in various topics as well as best practices suggestions are shared in these meetings. The group members are resources to each other and maintain liaison relationships with mental health practitioners throughout the state. The group was responsible for drafting a best practices manual that is in use throughout the DORS agency

Consequently, these DORS counselors may have developed a specialized expertise which results in improved working alliances with their clients, which may be reflected in the findings of this study.

The persons with the lowest mean WAI score had visual impairments and were not well represented in this sample ($n=7$). One participant in this disability group had a total WAI score of 22 out of a possible 84. This was the lowest mean score in the sample. This participant was quite vocal about his disagreement with his DORS counselor and was one of the few participants who requested to meet with the researcher to further discuss this problem. No conclusions can be drawn from such limited data, but Lustig (2002) also noted a difference, but did not indicate in which direction, between the TBI disability group and persons with visual impairment.

Counselor Variable

The DORS counselors was not the focus of this study, nor were they initially included as a variable in the original research questions. The study was client focused, and data were gathered and analyzed from that perspective. However, since gender, disability, and race were not significant predictors, and the counselor had a medium-to-

large effect size on the WAI score, further post hoc exploratory analysis was conducted. There were 58 counselors and 111 total clients in this study. Seven of the counselors with the lowest WAI totals accounted for 37% of the variance (Table 15). It is a positive finding that 51 out of 58 DORS counselors had high score of WAI from their respective clients after an initial session. One explanation is that whether the client decided to develop an IPE or not, the majority (88%) reported a good working alliance with the counselor. Despite the finding that the WAI was skewed toward higher scores, the finding remains a positive one for rehabilitation counselors with large caseloads and time constraints. DORS counselors generally are able to make good use of their limited time with a client to begin an alliance. However, the reality remains that an important criterion of successful counseling is the number of IPEs a counselor is able to develop. This study's findings show that IPE is not related to the WA. Therefore, a DORS counselor may have a good WA that is not always measured by the federal-state criteria of successful outcome. Although customer satisfaction measures are reported and are positive (DORS Annual Report), the employment outcome remains a key outcome. In essence, a DORS client may have developed a good working alliance with a counselor and not choose to develop an IPE.

Another important conclusion of this study is that the WA achieved between a DORS counselor and client does not predict IPE in the same way that therapeutic outcomes are predicted by WA in other counseling settings. It is possible that a good counseling outcome has occurred but does not result in an IPE. This finding can have a major impact on how successful the DORS counselor views his or her work as a counselor. The incongruity between a good counseling outcome and the lack of a

successful employment outcome may be a dilemma for counselors and clients. This possible contradiction is also an issue that counselor educators must consider as they prepare students who wish to work in federal-state vocational rehabilitation settings.

It is important to consider that people with disabilities face many other barriers to employment despite the good alliance they may have with a rehabilitation counselor. Among these are the interpersonal and attitudinal barriers described by Syzmanski and Treuba (1999). These authors argue that society's negative beliefs about disability "affect the interpersonal relationships between persons with disability and those without disability, as well as society's attempts to rehabilitate persons with disabilities" (p. 193). Curnow (1989) indicated that people with disabilities have had limited opportunities to develop ideas about careers, limited experience with career decision making, as well as a negative self-concept about their own abilities to succeed. There is a large body of literature on the impact of career development and implications for people with disabilities (Szymanski, Hershenson, Enright, & Ettinger, 1996).

People with disabilities also must face practical barriers involving transportation, mobility, personal care, and other environmental barriers as they consider employment.

Additionally, although the ADA requires the removal of discriminatory barriers to employment for qualified individuals with disabilities, other significant barriers to employment remain in federal government programs. Prominent among these barriers have been economic disincentives to work, reflected in the SSDI and SSI programs, and typically manifested by a lack of adequate and affordable health insurance for the working disabled (Blanck, Sandler, Schmeling, & Scharz, 2000; Brooks & Klosinski, 1999; Stapleton & Tucker, 1999).

Factor Analysis

The factor analysis of the patterns of response in this sample suggest a different clustering of factors when compared to Horvath's (1991) model. The highest loadings from this sample grouped questions on bond, task, and goal in a different way than WAI was designed to do. The explanations for these differences include several possibilities. First, the WAI has been used extensively as a measure of psychotherapy outcome (Horvath & Greenberg, 1994) as opposed to rehabilitation outcomes. The WAI standardization may not have included persons with disabilities, although it can be assumed that at least some portion of people seeking psychotherapy may have a psychiatric disability. Second, it is clear from this study that the federal-state rehabilitation is different from other counseling settings in measuring a successful outcome. This explanation may account for the unique way persons with disability perceive the factors involved in a working alliance with a DORS counselor.

More outcome studies of the working alliance between rehabilitation counselors and persons with disability would shed more light on this question.

Limitations

This study had a number of methodological limitations that make it necessary to interpret the results with caution. The major limitations include sample concerns, measurement, study design, and uncontrollable events within DORS.

Sample Concerns

This sample size used in this study had sufficient power to support the analyses. However, although representative of the DORS client population, there were unequal

numbers of each disability represented. This resulted in a larger representation for some disability groups and a very small number for others. For example, there were only seven persons with a visual impairment in this sample. Although these participants were more likely to develop an IPE, it is very speculative to make any interpretations as to the reason for this outcome.

Additionally, there were problems with “no show” at some DORS offices. There was a typical no-show rate of 50% for the initial interview at the Baltimore City DORS offices. It may well be that those clients who actually appeared for the interview were more likely to form a better working alliance than those who did not keep the first appointment.

Another major problem was that a lack of funds within DORS resulted in an order of selection occurring during the time this study was conducted. An order of selection means that persons with the most severe disabilities were given priority for services. Persons with less severe disabilities were put on a wait list. The wait list was at least a month or more. This delay in services may have had a negative effect on the forming of an alliance with the counselor as well as affected the eventual progress toward developing an IPE. It should be noted that some DORS counselors made many attempts to remain engaged in the process with those clients on the wait list, while other counselors did not. Some clients moved, or were unable to be contacted by the counselor and were lost to the system. On the other hand, some clients on the wait list initiated contact and maintained the counseling relationship while others did not. There was the additional uncontrolled variable of counselor turnover within the DORS agency, due to a variety of reasons including promotion, resignation, or extended leave.

As a result, in a few instances the initial session was with one counselor and then subsequent contact was with a different counselor. This factor may have adversely affected the client's willingness to form an alliance and develop a plan for employment. The counselor turn-over is estimated to be at 5.8% for the DORS agency in 2006, which should have a relatively small effect on outcome, although it is a limitation in this study.

Instrumentation and Measurement

The WAI is based on a theoretical model of the alliance developed by Bordin(1975,1976,1980,1989) as cited above. The main task in the development of the WAI was to validate content with respect to Bordin's definition of the alliance. Horvath (1994) decided to generate items from each of three reference points: firstly, the client's own thoughts and feelings, secondly, the clients' beliefs about the quality of the interaction, and third, the client's thoughts and beliefs about the quality of the relationship with the therapist .

Horvath (1981) reported the reliability estimates for the whole instrument using Cronbach's alpha, range from .84 to .93. Reliability estimates for the subscales are lower, but in a similar range, .68 to .92. Horvath (in press) obtained reliability data based on two administrations of the short form (12 item) of the WAI across an average span of 2 weeks and obtained a test-retest index of .83 for the whole instrument. Taken together, these results support the reliability of the WAI short form used in this proposal.

Eight studies that investigated Bordin's alliance model using the WAI are presented in Table 2. A meta-analysis of these research results indicate that the average effect size is .33. This suggests a strong link between the client's estimate of the working alliance, using the WAI, and the outcome of therapy. In this study there was a medium

effect size of .236 found between the type of disability and the WAI total score, which supports the valid use of this instrument in this study, despite the overall lack of significant variability between the scores.

The WA is seen by researchers (Bordin 1979; Lubrosky, 1995; Wampold, 2002) as a pantheoretical common factor in all helping relationships. This study investigated whether the WA is equally important in rehabilitation counseling. The content of the WAI questions represent the basic elements of goal, task and bond that were hypothesized to be a part of an initial session with a DORS counselor in order to establish the alliance with the person with a disability that is mandated by the Rehabilitation Act of 1973, as amended.

Though the WAI used in this study was a valid psychometric instrument, the DORS participants may have had some difficulty comprehending the questions. Forty-five percent of the participants had cognitive disabilities, which may have affected their level of comprehension, judgment, and level of decision making. The majority of persons characterized as having cognitive disabilities generally had diagnoses of learning disability, as opposed to mental retardation. Nevertheless, reading level and/or verbal comprehension could have been a possible validity problem in responding to the WAI questions.

Although every effort was made to ensure that each participant understood the questions, either by reading the item aloud, paraphrasing the question, or providing accommodations, comprehension may have been a problem. However, most clients appeared to discriminate in how they ranked answers to each question. A review of the survey responses did not reveal any that appeared completely random, which might result

if a participant lacked understanding of the survey instrument. However, many responses had high (6–7) positive scores on every question, which may suggest a lack of understanding of the question or the Likert scale.

Another possible explanation of the overall positive WAI scores may be that persons with disability as noted by Szymanski (1994) feel stigmatized . Consequently, participants may have agreed with statements on the WAI as a result of social desirability . Persons with disability may feel a pressure to provide socially acceptable answers to WAI survey questions in order to receive needed services from DORS.

Despite these possible limitations, the WAI has sound psychometric properties when compared with instruments used in the few studies of the WA with persons with disabilities in the literature (Lustig, 2002). However, the effect of possible comprehension problems, and social desirability factors upon the WAI remain a limitation of this study.

Design

A significant limitation of this study is that the design focused only on client variables, as opposed to counselor variables. A better design would include counselor/client dyads as the unit of study. In this study, there were 58 DORS counselors and 111 client participants. The majority of counselors had two clients represented; only one counselor had six clients. There was no attempt to control for counselor in the design of this study.

However, as the counselor variable proved to be a significant variable in the WA, the client-focused design remains a limitation of this study. It would be important in

future to either control the counselor variable or use a dyad as independent variable, and a cluster analysis of the findings.

A possible concern was that the WAI was usually administered by DORS staff in the office. The Lustig study (2002) which surveyed 2,732 clients did use researchers as opposed to VR staff to contact the participants by phone. There is a possibility that using DORS staff as surveyors may have increased the likelihood of participants giving more socially desirable responses on the WAI. However, at two DORS offices where the surveyors were graduate interns, and there was no significant difference in those survey results. Nevertheless, it is a possible limitation on the method.

Perhaps the most important limitation of this study was the theoretical assumption that the IPE represented an outcome variable and WAI a predictor variable. An improved design would be an individual client progress measure of rehabilitation success, in addition to the IPE. Measures of self-efficacy, disability adjustment, career development, and vocational maturity might improve the model. Instruments such as The Career Development Inventory developed by Super (1971); The Career Decision Making Self-Efficacy Scale (Betz & Luzzo, 1996) may be possible outcome measures of WA in rehabilitation counseling.

Further, a phenomenological qualitative design may add additional understanding of the working alliance not measured by the WAI. For example, focus groups facilitated by independent researchers may add additional dimensions to the personal meaning of an alliance to the client beyond the WAI scores.

Implications of Findings

The results of this study have a number of implications. First, this section discusses the theoretical implications for working alliance theory and then applied implications for counselor education in rehabilitation counseling. Finally, there is a discussion of suggestions for future research.

Theoretical Implications

This study focused on adding to the existing body of literature on working alliance theory and counseling outcomes by including persons with disabilities in a rehabilitation counseling setting. This study filled a gap in the existing literature, which rarely included persons with disabilities or rehabilitation counselors who work in a federal-state agency. The use of the WA as predictor for employment related outcome had not been well studied.

The major finding that WA was not significantly related to the development of plan for employment offered a different perspective on counseling outcomes in rehabilitation settings. It may well be that counseling outcomes are best measured by psychological changes such as reduction in symptoms (Adler, J., 1988), enhanced self-esteem, decreased anxiety, or depression (Saffren & Wallner, 1991), or improved decision making (Greenberg & Webster, 1982).

Implications for Counselors

Despite very positive WA ratings by persons with disabilities for 88% of the DORS counselors, the participants' odds of developing an IPE were not increased. The

problem for DORS counselors within the state-federal VR program is that one major criterion of success of VR services is an employment outcome. There may be an incongruity between the VR outcome and the counseling outcome. In essence, a good WA with a counselor may be occurring, but there is no successful outcome measured unless the client becomes employed. There are client satisfaction measures, which are developed by DORS presented in an annual report. However, the employment measure remains a major outcome measure in rehabilitation counseling in the federal-state VR program. This reality has practical implications for counselor educators as they prepare students for careers in rehabilitations counseling in the federal-state VR programs.

Applied Implications

The results of this study have applied implications for rehabilitation counselors, DORS counseling supervisors, and counselor educators.

First, what do these findings mean for DORS rehabilitation counselors? The results provide evidence that counselors do a good job in creating a working alliance with their clients. The participants rated their counselors on the high end of WAI survey on all dimensions of the WA. Despite this finding, IPE outcomes were not always predicted by the presence of a good alliance with a rehabilitation counselor. This finding is in partial disagreement with Lustig's (2002) results that "provide evidence that rehabilitation counselors may be able to improve outcomes by facilitating a strong working alliance with their clients" (p. 30).

Lustig (2002) found that counselors within the state-federal rehabilitation system work within a brief counseling framework. The present study also found that DORS counselors have brief counseling sessions as well as intermittent contact with clients.

This is a reality because both time and funding constraints are inherent in the federal-state system. Despite these constraints, the results of this study show most DORS counselors do remarkably well.

However, in order to improve employment outcomes, this study suggests that counselors might need to make the employment plan a goal quite early on in the counseling process. DORS counselors may need to use a more directive and didactic approach, as suggested by Safran and Muran (1998). In this way, the outcome measure used by the federal-state program may be more directly tied into the goals created within the working alliance. Lustig (2002) suggested that in order to increase the likelihood that counseling will produce positive employment outcomes “the scope of issues that are considered pertinent within the context of the rehabilitation counselor-client alliance must be delineated and issues that are more appropriately referred to outside agencies should be identified” (p. 30). It is then more likely that clients and counselors might both view IPE development as a priority goal in the federal-state program.

The finding that 66 of the 111 participants did move forward in their rehabilitation towards a plan for employment is a positive one. However, despite a good working alliance 45 persons did not.

How might counselors increase the number of persons who are able to develop an IPE? In order to answer this question it is important to understand the population of persons with disabilities who are served by DORS. Funding restrictions result in an order of selection, meaning that DORS will only serve persons with significant disabilities with others being placed on a wait list. The first priority are persons with the most significant disabilities, which is defined by the Rehabilitation Act of 1973 as individuals with a

severe physical or mental impairment that seriously limits three or more functional capacities such as mobility, communication, self-care, self-direction, interpersonal skills, work tolerance, or work skills. These individuals will require multiple vocational rehabilitation services, such as physical and mental restoration, counseling, or vocational training over an extended period. For example, clients in this category may have a cognitive disorder, as well as co-existing psychiatric diagnosis and substance abuse problems. Almost half, 45%, of the persons in this study had a secondary disability; all were defined as having a significant disability. Such an individual by definition will require multiple services as well as a high level of expertise from a DORS counselor.

The reasons for those not moving forward into an IPE may be the financial and psychosocial barriers to employment which need to be addressed early in the counseling session. There are unique barriers to employment for persons with disabilities, most notably financial disincentives to working. Szymanski (1996) notes that relation of disability to labor market participation is often complicated by disability support programs such as Social Security Disability Insurance (SSDI). Approximately 60% of unemployed adults with disabilities reported fear of losing income or health benefits. VR counselors must be able to address these issues in the initial session to allay fears of financial and benefit loss, with accurate information regarding strategies to retain some benefits, and trial work periods. It would follow that this approach will serve to strengthen the initial working alliance, and increase the likelihood of the client being less fearful to develop an IPE.

Another approach to melding employment outcomes with counseling outcomes is to add, or redefine, successful outcome measures to be more inclusive. For example,

redefining federal-state outcome measures to include measures of improved adjustment to disability, increased self-efficacy, improved decision-making, and increased vocational maturity as markers of success could be considered. Rehabilitation counselors may also gain a stronger sense of accomplishment for their counseling skills even if a client does not decide to pursue employment. Although the VR program stresses the importance establishing a working alliance with persons with disabilities, the outcome is measured by the development of an IPE and eventual employment. This study does not show a significant relationship between the two, yet does show that the majority of DORS counselors are successful in creating an alliance with their clients, which may not be acknowledged.

Acknowledgment of good counseling may decrease the turnover of rehabilitation counselors who may feel frustrated with being measured only by client employment outcomes. Likewise, clients who may have very complex rehabilitation needs and simply need more time to reach an employment goal may be served better, if intermediate measurement such as improved adjustment to disability is valued by the federal-state agency. Otherwise, there may be a danger that clients who can achieve employment more easily may be seen as more desirable and/or successful clients. In summary, the IPE alone does not appear to be the best measure of counseling success.

The second implication for rehabilitation counselors was the effect of disability category on the WA. Although disability was not significantly correlated with WA, there was a difference in the mean WAI score between the disability groups (Table 14). For example, persons with visual impairment who as a group had relatively lower WAI

scores, were more likely to develop an IPE, may have unique counseling challenges that need to be further explored to improve the WA.

Persons with cognitive disabilities such as learning disabilities, Asperger's, and acquired brain injury also have a slightly lower score on the WAI. Persons with Asperger's are likely to have unique challenges in creating a working alliance, as part of this disability is difficulty with bonding and social connection. This finding suggests counselors must consider the unique needs of these disability groups to ensure that goals and tasks are clearly understood.

Rehabilitation counselors in the federal-state program are faced with the challenging task of counseling an array of persons with very complex disabilities who may require counseling skills unique to their disability. The DORS program has made major effort to provide in-service training on disability specific topics, for persons with visual impairments, psychiatric disabilities, learning disorders, deaf and hard of hearing, and acquired brain injury populations. Additionally, rehabilitation counselors develop expertise in disability specialty areas. It is certainly to the counselors' credit that they are able to have the breadth of knowledge and flexibility to work with such a diverse group of clients.

Implications for Counselor Educators

The findings of this study also have major implications for counselor educators within graduate programs for rehabilitation counselors, who are faced with unique challenges in preparing counseling students who wish to work in the federal-state rehabilitation program. What do counselor educators need to do to better prepare students to work in rehabilitation counseling in the federal-state program?

Counselor educators may need to focus additional curricula on developing career counseling skills for rehabilitation counselors. Although graduate course work in career theory and counseling are part of the core curricula, a focus on employment goals including job development, job placement, and supported employment should be emphasized.

Colleges and universities are being asked to become more accountable for providing skills to students, which result in real-world outcomes. The skills required of a rehabilitation counselor to facilitate an employment outcome in DORS are an example of this criterion. In this challenging environment, the findings of this study have broad implications for meeting both counseling curricula goals and the goals of agencies charged with providing rehabilitation services to persons with disabilities.

If counseling skills that emphasize employment as a goal are stressed in rehabilitation counseling graduate programs, a win-win solution could result. The VR system has historically been required to produce employment outcomes as a measure of success for rehabilitation. Employment outcome as primary measures of rehabilitation success may be seen as limiting or even controversial but are a reality for both rehabilitation counselors, rehabilitation counselor educators, and, most importantly, to the persons with disabilities who come to VR for services.

An emphasis on brief goal-directed counseling techniques with specific counseling strategies unique to different disabilities may be a good approach to achieving an employment outcome. For example, the findings of this study suggest that a working alliance and engagement with the client can be successfully maintained by counselors even in the face of time delays due to funding issues. The participants in this study were

often e-mailed, called, or encouraged to drop in to maintain the alliance. The brief counseling skills that are needed in these situations should be emphasized as rehabilitation counselors will not always have the luxury of many hourly sessions with their clients. Additionally, rehabilitation counseling students need to learn how to adapt counseling styles to persons with learning disabilities. The counselor may need to be approach these individuals in their unique learning style in order to create an alliance.

For example, drawing concept maps of the IPE and using tape recorders to enhance recall of the tasks and goals involved in the plan are only a few possible means that can be used. There are many others that could be part of the DORS counselor's strategies.

Directions for Future Research

The results of this study suggest a number of directions for future research on the working alliance in rehabilitation counseling. This study departed from the traditional measures of VR outcome by examining the effect of client/counselor relationship as an independent variable. Future research should further investigate the relationship between the counseling process and VR outcome and how the working alliance can be optimized in rehabilitation counseling. The results of this study suggest three possible directions for future research.

The first would be to further explore the association between a disability group, for example, learning disability or traumatic brain injury, and WA factors. Second, a longitudinal study of the effect of WA on employment outcomes to assess whether the IPE was actually accomplished.

In tracking the IPE outcomes for this study in the AWARE data base a pattern was observed. Several client cases had been closed, some more than once, as “unsuccessful,” only to return, and achieve a successful employment outcome at a later date. It may be that these clients formed a good working alliance with their counselor, as appears to be so in the majority of cases in this study, but needed more time to make a decision about going to work. Others may have needed more time in recovery, psychotherapy, or medical interventions to be ready to work. The WA with the DORS counselor may have facilitated these interventions but more time was needed to see the results. If this is so, a longitudinal study of the effect of WA on employment may yield very different results than the 6-month time span used in this current study.

Finally, the effect of WA by the use of other psychological outcome measures of counseling, such as self-efficacy, adjustment to disability measures, and vocational maturity, in addition to the traditional employment outcomes should be investigated.

A good example of an investigation of the effect of WA on such outcomes for a specific disability population is a very recent study of the WA in Copenhagen, Denmark (Schonberger, 2006). This study investigated the relationship among working alliance, compliance, awareness, and subjective outcome of brain injury rehabilitation. Subjects were 86 patients who were clients in an holistic neuropsychological outpatient rehabilitation program. They had suffered a traumatic brain injury ($n=27$), a cerebrovascular accident ($n=49$) or some other neurological insult ($n=10$). The therapeutic alliance, clients' awareness and their compliance were rated four times during the 14-week rehabilitation program. The working alliance was rated by both clients and therapist using the Working Alliance Inventory (WAI) and awareness and compliance

were rated by the therapists. Clients completed the European Brain Injury Questionnaire (EBIQ) at program start and end. Clients and therapists rated the overall success of their collaboration at program end.

The results showed that clients' experience of a good emotional bond between themselves and therapists in midtherapy was predictive of the reduction of clients' report of depressive symptoms on the EBIQ depression subscale ($R = 0.68, n = 43, p < 0.001$). Good compliance early in the program was predictive of changes on the EBIQ. Improvement of awareness was related to the amplification of depressive symptoms ($r = -0.27, n = 56, p < 0.05$). The author concluded that brain injury rehabilitation should be seen as a dynamic process that develops between clients and therapists.

This approach could be used in DORS to better test the usefulness of the WA in predicting intermediate outcomes in rehabilitation, which provides more useful and meaningful information about persons with a specific disability.

Secondly, the present study provided a snapshot of a 6-month period of time during which the WA was measured, an outcome tracked. A longitudinal study, which tracked cases from the initial counseling session to closure, may provide a better understanding of the dynamic nature of forming a working alliance with a client over time. The WAI could be administered every 3 months to track differences across time. Only the initial session with the DORS counselor was the unit of study in this investigation.

In addition, the design could be improved by having equal dyads of counselor/client groups to better measure the differences among counselors, which appeared to be a factor that needed to be investigated further.

A comparison of the level of WA from the counselors' perspective as compared to the clients' perspective would be an interesting investigation as well. Horvath (1994) has developed a counselor version of the WAI that has been extensively used. The level of congruence of the client and counselor scores could then be used as a predictor of rehabilitation outcome.

In summary, the major research implication is that the development of an IPE appears to have little association to the WA in rehabilitation counseling, despite the excellent alliances that occur between DORS clients and their counselors. Thus, other measures may be meaningful in assessing the success of the rehabilitation counseling process; for example, the client's increase in self-efficacy, improvement of disability awareness, improved self-advocacy skills, may make more sense in evaluating the effect of the WA between a persons with a disabilities and a DORS counselor.

The development of an IPE appears to be due to factors external to the relationship between the DORS counselor and client. The employment outcome may be due to any number of environmental and psychological variables such as financial disincentives, client expectations of the purpose of vocational rehabilitation, and lack of vocational readiness due to disability factors.

Appendix A
Characteristics of Persons Rehabilitated
Under the Maryland VR Program

3,082 persons successfully rehabilitated during FY 2006

Persons Rehabilitated by Primary Disability

Primary disability	Number rehabilitated
Psychiatric disability	1,054
Cognitive disability	890
Blind and Visual Impairments	180
Orthopedic	308
Deaf and hard of hearing	275
Respiratory	18
Other physical disabilities	333
Communication Disabilities	24

Persons Rehabilitated by Occupation at Case Closure

Occupation	Number Rehabilitated
Service	1,291
Clerical, Sales	750
Production, Construction, Maintenance, and Material Handling	413
Professional, Technical, Managerial	483
Homemaker	100
Farming, Fishery, and Forestry	36
Unpaid Family Worker	6
Vending Operator/Worker	3

Average Hourly Wage at Case Record Closure= \$10.20

Appendix B

WAI-C Survey Instrument

Working Alliance Inventory Client Form

Below is a list of statements about your relationship with your rehabilitation (VR) counselor. Think about each question carefully, and circle your level of agreement for each of the following items:

Do Not Agree	Agree Somewhat	Agree Completely
--------------	----------------	------------------

1	2	3	4	5	6	7
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1. My rehabilitation counselor and I agree about the things I will need to do to develop an individual employment plan.

Do Not Agree	Agree Somewhat	Agree Completely
--------------	----------------	------------------

1	2	3	4	5	6	7
---	---	---	---	---	---	---

2. What I am doing in vocational rehabilitation gives me new ways of looking at my problem.

Do Not Agree	Agree Somewhat	Agree Completely
--------------	----------------	------------------

1	2	3	4	5	6	7
---	---	---	---	---	---	---

3. I believe my rehabilitation counselor likes me.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

4. My rehabilitation counselor does not understand what I am trying to accomplish in my employment plan.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

5. I have confidence in my counselor's ability to help me.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

6. My rehabilitation counselor and I have agreed on goals and are working together towards reaching them.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

7. I feel that my rehabilitation counselor understands my disability.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

8. We agree on what is important for me to work on to get a job.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

9. My rehabilitation counselor and I trust one another.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

10. My rehabilitation counselor and I have different ideas about what my problems are.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

11. We have established an understanding of the changes that would be good for me.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

12. I believe the way my rehabilitation counselor and I are working on my problem is correct.

Do Not Agree			Agree Somewhat		Agree Completely	
1	2	3	4	5	6	7

Appendix C

WAI-C-S

Scoring Key

Appendix D

Limited Copyright License WAI

Appendix E
IRB Consent Form

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