

ABSTRACT

Title of dissertation:

THE ASSOCIATION OF CERTIFIED
REHABILITATION COUNSELORS'
ATTITUDES TOWARD COUNSELING
INDIVIDUALS WITH SUBSTANCE USE
DISORDERS WITH THEIR FREQUENCY AND
PERCEIVED CONFIDENCE OF PROVIDING
SUBSTANCE ABUSE SCREENINGS AND
REFERRALS

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The purpose of this study was to assess the nature and extent of a nationally representative random sample of Certified Rehabilitation Counselors' (CRCs') attitudes toward counseling individuals with SUDs and their frequency and perceived confidence of providing substance abuse screenings and referrals. The study (a) explores attitudes of CRCs regarding counseling individuals with substance abuse disorders (SUDs); (b) examines whether CRCs' attitudes toward counseling individuals with SUDs are associated with their frequency in providing substance abuse screenings and referrals for individuals with SUDs; (c) determines if CRCs' attitudes toward counseling individuals with SUDs are associated with their perceived confidence in providing substance abuse screenings and referrals for individuals with SUDs.

The independent variables were subscales of the Drug and Drug Problems Perceptions Questionnaire (DDPPQ) used to investigate CRCs' attitudes toward counseling individuals who have problems with drug use and the Alcohol and Alcohol Problems Perceptions Questionnaire-Revised (AAPPQ-R) used to explore attitudes toward counseling individuals who have problems with alcohol use. The dependent variables were frequency questions and perceived confidence statements from the Alcohol and Other Drugs Vocational Rehabilitation Counselor Survey (AOD-VRC) used to measure the frequency and perceived confidence of providing substance abuse screenings and referrals.

The study participants were 764 CRCs who were direct service providers from multiple employment settings. Participants were recruited from an online survey sent to a national random selection of CRCs obtained from Commission on Rehabilitation Counselor Certification (CRCC) database.

Results indicated that this sample of CRCs have somewhat positive attitudes toward counseling individuals with SUDs. Results from this sample of CRCs show that there are associations between CRCs' attitudes toward counseling individuals with drug use problems and alcohol use problems with perceived confidence in providing substance abuse screenings and referrals, but not with frequency of providing substance abuse interventions. Applied implications, limitations of the study, and future research suggestions were discussed.

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by

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CHAPTER I: INTRODUCTION

Scope of the Problem

Substance use disorders (SUDs) have a negative impact on individuals (Chapman, 1998; Gold, 2004; Substance Abuse and Mental Health Services Administration [SAMHSA], 2006) and are the cause of some of the most pervasive and expensive problems in our society (Horgan, Skwara, & Strickler, 2001; National Institute on Drug Abuse [NIDA], 2003). Substance abuse is a significant national problem affecting people of all social classes, races, ages, genders, and abilities (Harley & Bishop, 2008). The effects of SUDs can interfere with employment, health, and social relationships, to name a few domains (Reif, Horgan, Ritter, & Tompkins, 2004). The prevalence of SUDs has become a significant issue for healthcare providers in general, and mental health and rehabilitation professionals, in particular.

Substance use disorders (SUDs) have been identified as the most prevalent mental health disorder included in the DSM-IV among the general population (Carey, Bradizza, Stasiewicz, & Maisto, 1999; Surgeon General, 1999). In fact, an estimated 21.6 million (9%) persons ages 12 and older in the U.S. met criteria for SUDs in 2003 (SAMHSA, 2004). Of these, 14.8 million met criteria for alcohol abuse/dependence; 3.9 million met criteria for illicit drug abuse/dependence; and 3.1 million met criteria for both alcohol and illicit drug abuse/dependence.

Prevalence of Co-Occurring SUDs and Disabilities

Substance use disorders (SUDs) are prevalent in individuals with disabilities (Bogner, Corrigan, Mysiw, Clinchot, & Fugate, 2001; Bombardier, Rimmele, & Zintel, 2002; Grant et al., 2004; Hasin, Stinson, & Grant, 2007; Kessler et al., 1996; Kessler,

2004; Kolakowsky-Hayner et al., 1999; McAweeney, Forchheimer, Moore, & Tate, 2006; National Association for Alcohol Drugs and Disability [NAADD], 1999; National Organization on Disability [NOD], n.d; SAMHSA, 1998; Tate, Forchheimer, Krause, Meade, & Bombardier, 2004; Taylor, Kreutzer, Demm, & Meade, 2003; Turner, Bombardier, & Rimmele, 2003; Watson, Franklin, Ingram, & Eilenberg, 1998). Rates of SUDs vary by disability group, and are often greater than the rates in the general population (Bombardier et al., 2002; Grant et al., 2004; Heinemann, Lazowski, Moore, Miller, & McAweeney, 2008; Kessler, 2004; Kolakowsky-Hayner et al., 1999; Li & Moore, 2001; NAADD, 1999; NOD, n.d; Tate et al., 2004; Taylor et al., 2003; Watson et al., 1998). Studies show that 41-65% of persons with psychiatric disabilities, (Grant et al., 2004; Hasin et al., 2007; Kessler, 2004; Kessler et al., 1996; SAMHSA, 1998), greater than 60% of persons with traumatic brain injuries (TBIs; Bombardier et al., 2002; Taylor et al., 2003; Turner et al., 2003), and 34-60% of persons with spinal cord injuries (SCIs; Kolakowsky-Hayner et al., 1999; Tate et al., 2004; Turner et al., 2003) have SUDs. It is clear that rates of SUDs are higher for persons with disabilities.

Prevalence of Individuals with Co-Occurring SUDs Seeking Rehabilitation Services

The co-occurring prevalence is particularly high among persons seeking services from the state-federal vocational rehabilitation (VR). Estimates of SUDs vary widely among VR consumers ranging from 2% to 33% depending on the sample and instrumentation (DiNitto & Schwab, 1993; Drebing et al., 2002; Heinemann, Lazowski, et al., 2008; Rehabilitation Research and Training Center [RRTC], 2004; Rehabilitation Services Administration [RSA], 2005). National data from the Rehabilitation Services Administration (RSA, 2005) indicates that the median percentage of VR consumers

diagnosed with primary or secondary SUDs is 10.62% with the distribution by state ranging from .90%-28.32%

Employment Barriers

Individuals with SUDs also encounter numerous employment barriers. National data suggests that rates of unemployment are higher among persons with SUDs (Larson, Eyerman, Foster, & Gfroerer, 2007). According to a SAMHSA study, individuals from the general population who are unemployed have a higher percentage of current illicit drug use and heavy alcohol use than those with full-time or part-time employment statuses (Larson et al., 2007). Specifically, adults aged 18-64, 18% who were unemployed used illicit drugs in the past month compared with 8% who were employed full time. Approximately 13% of adults who were unemployed drank alcohol heavily in the past month compared to 9% who were employed.

Individuals with co-occurring disabilities, including those with SUDs, have been shown to have difficulty securing and maintaining employment (DiNitto & Webb, 1998; Heinemann, Lazowski et al., 2008; McAweeney et al., 2006; RRTC, 2002). Studies indicate that individuals with severe mental illness, including those with co-occurring SUDs, are approximately three to five times more likely to be unemployed compared to the general population (Research and Development [RAND], 2000; Sturm & Pacula, 1999).

Shepard and Reif (2004) discussed some significant barriers to employment in individuals with SUDs. These barriers include but are not limited to, an inability to control substance use, not wanting to disclose a SUD to an employer, lack of work

experience, unrealistic employment goals, transportation difficulties, and the reluctance of employers to hire or retain maintain employees with SUDs.

Attitudes Toward Counseling Individuals with SUDs

Research indicates that professionals tend to have negative attitudes toward counseling individuals with SUDs which may affect the quality of rehabilitation services provided to these consumers (Allen, Peterson, & Keating, 1982; Howard & Chung, 2000; Richmond & Foster, 2003; Taricone & Janikowski, 1990; West & Miller, 1999). These negative attitudes are thought to result in professionals not recognizing substance abuse issues or inadequately treating and referring consumers who have SUDs (Greer, Roberts, & Jenkins, 1990; Howard & Chung, 2000; Ingraham, Kaplan, & Chan, 1992; Shipley, Taylor, & Falvo, 1990; Tober, 1993). Consumers with SUDs have been viewed as individuals who cannot be rehabilitated, or for whom services will be more time consuming and expensive than those who do not have SUDs (Schwab & DiNitto, 1993). Fueling these attitudes and the quality of service is a lack of knowledge on the part of rehabilitation counselors concerning substance abuse issues (Stude, 1990; Dunston-McLee, 2001; Richmond & Foster, 2003; Stein, 2003; West & Miller, 1999).

Although research suggests somewhat negative attitudes on the part of rehabilitation counselors toward serving consumers with SUD, empirical findings are unclear regarding the relationship between having received substance abuse training and improving attitudes. However, there does appear to be a link between intensity and/or duration of training (Amodeo, 2000; Richmond & Foster, 2003; Stein, 1999; 2003; West & Miller, 1999) and subsequent attitude change. Some research indicates higher ratings of optimism toward providing substance abuse counseling after receiving training

(Amodeo, 2000; Richmond & Foster, 2003; Rerick, 1999) while other studies have found no significant differences in substance abuse attitudes after participating in substance abuse training interventions (Dunston-McLee, 2001; O'Neil, 1997; West & Miller, 1999).

Substance Abuse Training Needs

While substance abuse intervention programs and prior training have been shown to improve attitudes, rehabilitation counselors continue to have substance abuse training needs (Chan et al., 2003; Glenn & Keferl, 2008; Ong, Cardoso, Chan, Chronister, & Chou, 2007; Tansey, Chan, Chou, & Cardoso, 2004). There is a need for substance abuse training in rehabilitation counselor education (RCE) programs including early identification and referrals for SUDs. It is well documented that consumers with disabilities who have co-occurring SUDs are often not identified and do not consistently receive integrated substance abuse services or referrals for SUDs (Christensen, Boisse, Sanchez, & Friedmann, 2004; Davis, 2005; Hergenrather & Rhodes, 2006; Toriello & Leierer, 2005).

Early identification and referral for co-occurring SUDs are needed to ensure efficient rehabilitation services (Drebing et al., 2002; Heinemann, McAweeney, Lazowski, & Moore, 2008; RRTC, 2002; 2006). Doyle-Pita (2001) stated, "although awareness of substance abuse and dependence has increased over the last decade, SUDs continue to be undetected or un-diagnosed, misunderstood and neglected in treatment and rehabilitation..." (p. 155). Mueser et al. (1995) indicated that the major reason that SUDs are not being detected is that most professionals fail to ask consumers about their alcohol and drug use. This could be due to the lack of skills or training related to counseling individuals with SUDs (Christensen et al., 2004; Ingraham et al., 1992; Kiley

et al., 1992).

The lack of early identification and referrals for substance abuse problems are linked to the lack of adequate substance abuse training among counselors. Glenn and Keferl (2008) found that state VR counselors do not perceive themselves as being fully prepared to screen for SUDs because they lack knowledge or formal training in substance abuse interventions. In a study on rehabilitation counselors' training needs, Ong et al. (2007) found that the majority of participants provided services to consumers with SUDs, yet half rated their graduate training in substance abuse assessment and treatment as poor, and they rated their skills as marginally proficient. Results of the study by Chan et al. (2003) on training needs of Certified Rehabilitation Counselors (CRCs) indicated substance abuse and substance abuse treatment as a critical training areas across rehabilitation work settings and as the second highest critical training needs in nonprofit settings. Lastly, in a training needs study with CRCs working in psychiatric settings, Tansey et al. (2004) found that CRCs reported that additional training is needed for assessment and treatment of SUDs.

Chan et al. (2003) suggested that substance abuse training needs for CRCs across rehabilitation work settings reflect not only the rise in consumers with substance abuse issues who are seeking services, but also the increase in the severity and complexity of disability. This, coupled with national data that suggest higher rates of unemployment are found in individuals with SUDs (Larson et al., 2007), strongly supports the need to better understand the competencies and knowledge base necessary to facilitate effective rehabilitation services for consumers with a broad speculum of co-occurring disorders including SUDs. Furthermore, considering the evidence surrounding the negative effects

of SUDs on achieving successful rehabilitation outcomes, it is important to recognize and attempt to reduce the negative impact that SUDs may have on consumers receiving rehabilitation services (Glenn & Keferl, 2008).

Individuals with co-occurring SUDs and disabilities present unique challenges for rehabilitation counselors. There is increasing demand for rehabilitation counselors to serve individuals with a broad range of disabilities including SUDs, severe and persistent mental illnesses, and physical or neurological conditions co-occurring with mental health and/or SUDs, yet there is still evidence of unmet substance abuse training needs (Chan et al., 2003; Emener, Evans, Lowe, & Richard, 2001; Glenn & Keferl, 2008; Lee, Chronister, Tsany, Ingraham, & Oulvey, 2005; Ong et al., 2007; Tansey et al., 2004). The need for requisite skills to meet these challenges may not be met by traditional RCE programs (Kress-Shull, 2001) despite the fact that substance abuse counseling courses were found as the most frequently offered specialty area in RCE programs (Goodwin, Jr., 2006) and offered as electives through cross disciplines (Tansey et al., 2004).

Questions should be raised as to whether RCE programs are adequately and consistently providing substance abuse education and training since prior research indicates rehabilitation counselors lack adequate knowledge and training in substance abuse treatment (Glenn & Keferl, 2008; Ong et al., 2007). Master's level RCE programs that are accredited by the Council of Rehabilitation Education (CORE) have been required, since July 2004, to include courses on substance abuse treatment in their General Curriculum Requirements, Knowledge Domains, and Educational Outcomes. The CORE curriculum standards prior to 2004 did not include any reference to educational requirements for substance abuse treatment.

Need for the Study

There is a need to investigate CRCs' attitudes toward counseling individuals with SUDs as these attitudes influence rehabilitation outcomes. Prior research demonstrated that counselors' attitudes toward counseling individuals with SUDs negatively influence rehabilitation service delivery (Chappel & Veach, 1987; Gregoire, 1994; Greer et al., 1990; Howard & Chung, 2000; Ingraham et al., 1992; Shipley et al., 1990; Taricone & Janikowski, 1990). For example, there are many individuals with co-occurring SUDs and disabilities seeking VR services given their higher rate of unemployment compared to other VR consumers and the general population (DiNitto & Webb, 1998; Heinemann, Lazowski et al., 2008; McAweeney et al., 2006; RAND, 2000; RRTC, 2002; Sturm & Pacula, 1999). There are many reasons for this high unemployment rate (the nature of the disability, employer stigma, etc.), but one reason may be that counselors have negative attitudes and a lack of training in substance abuse counseling (Dunston-McLee, 2001; Richmond & Foster, 2003; Stein, 2003; Stude, 1990; West & Miller, 1999) and therefore may not provide consumers with a comprehensive range of services which include substance abuse interventions. Research on the effect of substance abuse training has shown it improves professionals' attitudes toward counseling individuals with SUDs at least for groups such as, social workers, mental health counselors, and VR counselors (Amodeo, 2000; Richmond & Foster, 2003; Stein, 1999; 2003; West & Miller, 1999), which supports the need for substance abuse training in RCE programs.

This study contributed to the literature as the first nationally representative study to investigate a sample of Certified Rehabilitation Counselors' (CRCs') attitudes toward counseling individuals with SUDs. Attitudes toward counseling individuals with SUDs

was assessed by two separate measures, one measuring drug use problems and the other measuring alcohol use problems. Two separate attitudes measures were used to determine if CRCs had differing attitudes toward counseling individuals with drug use problems than with alcohol use problems because of the possibility of differing beliefs of drug and alcohol abuse given the illegal status of drugs, the rehabilitation legislative distinction of drug and alcohol abuse, and varying policies regarding SUDs services in VR agencies from state to state.

Several studies have been conducted which evaluated attitudes toward counseling individuals with SUDs among health care professionals (Chappel, Veach, & Krug, 1985; Foster & Onyeukwu, 2003; Howard & Chung, 2000), mental health counselors, and social workers (Gregoire, 1994; Richmond & Foster, 2003; Strozier, 1995), but few studies have explored attitudes among rehabilitation counselors (i.e., Dunston-McLee, 2001; West & Miller, 1999). Further, no studies have assessed the association of rehabilitation counselors' attitudes toward counseling individuals with SUDs with their frequency and perceived confidence of providing substance abuse screenings and referrals as this study does. Prior research supports the need for this study, by indicating that consumers with co-occurring disabilities and SUDs are often not identified and do not consistently receive integrated substance abuse services or appropriate referrals (Christensen et al., 2004; Davis, 2005; Hergenrather & Rhodes, 2006; Toriello & Leierer, 2005). Research shows that early identification and referrals for co-occurring SUDs services are believed to be essential to effective rehabilitation services (Drebing et al., 2002; Heinemann, McAweeney et al., 2008; RRTC, 2002; 2006).

Research Questions

This study attempted to answer three research questions. 1) What are CRCs' attitudes toward counseling individuals with SUDs? 2) Are CRCs' attitudes toward counseling individuals with SUDs associated with the frequency with which they screen and refer individuals with SUDs? 3) Are CRCs' attitudes toward counseling individuals with SUDs associated with their perceived level of confidence in providing substance abuse screenings and referrals?

CHAPTER II: REVIEW OF LITERATURE

This chapter is a review of the literature on the theoretical framework of attitudes impacting behaviors, attitudes and their effects on service delivery, attitudes toward individuals with substance abuse disorders (SUDs), measuring attitudes toward SUDs, and substance abuse training needs. A review of these topics will provide a context for the present study on the association of CRCs' attitudes toward counseling individuals with SUDs with their frequency in screening and referring clients, and their perceived confidence in providing these services.

This chapter lays the groundwork for the study through a review of the published literature on counseling individuals with co-occurring SUDs. A comprehensive review of the literature included searching the following databases: EBSCO HOST, PsycINFO, MEDLINE, PubMed, ERIC, PsycARTICLES, and Social Sciences Citation Index. Several websites were also used to gather additional information, such as the Council of Rehabilitation Education (CORE), National Association for Alcohol Drugs and Disability (NAADD), National Institute on Drug Abuse (NIDA), National Organization on Disability (NOD), Rehabilitation Research and Training Center (RRTC), and Substance Abuse and Mental Health and Human Services Administration (SAMHSA).

Theoretical Framework of Attitudes and Behaviors

This study explored the relationship between attitudes toward counseling individuals with SUDs and subsequent behaviors (whether to screen and/or refer). One theoretical model that links behaviors and attitudes is the Theory of Planned Behavior (TPB). This section will provide an overview of the Theory of Planned Behavior (TPB; Ajzen & Fishbein, 1980) to include the Theory of Reasoned Action (TRA; Fishbein &

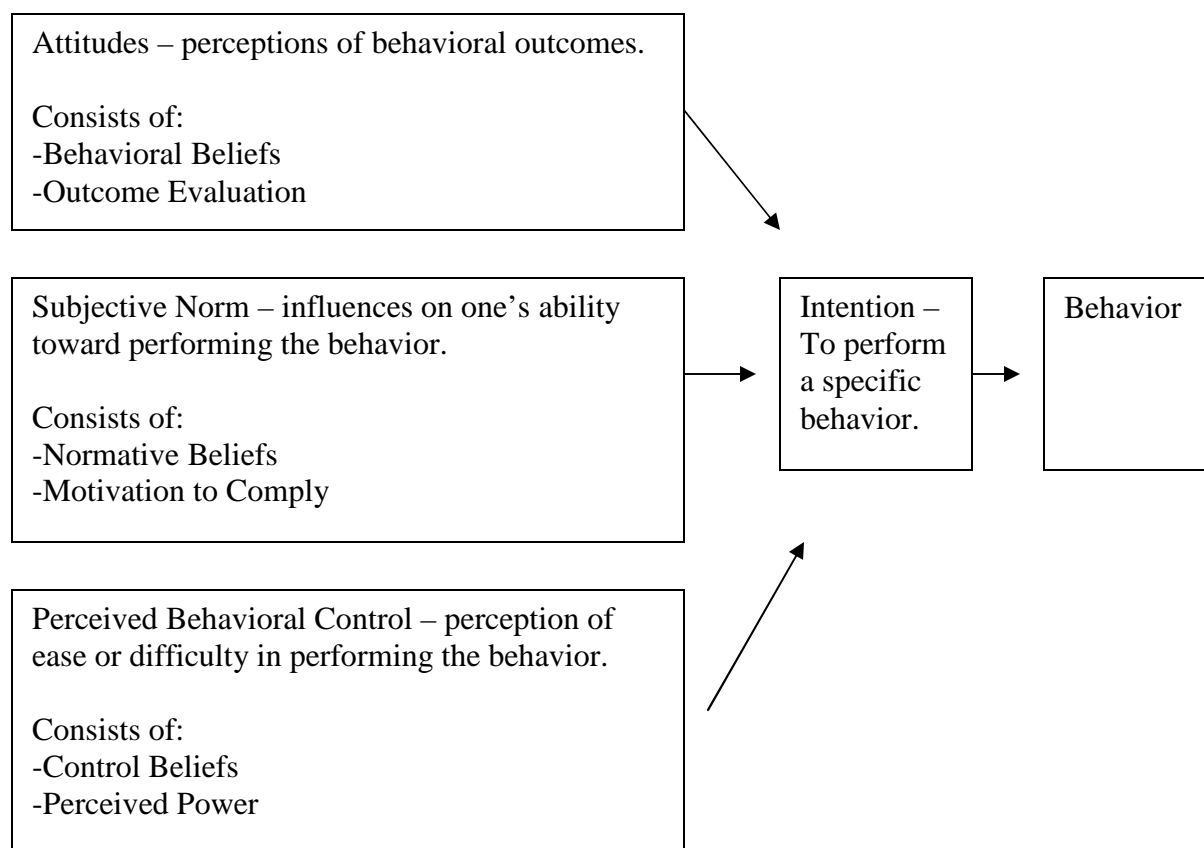
Ajzen, 1972). It should be noted that TPB informed the research, but did not guide the study.

Perhaps the most enduring of traditional theories linking attitudes and behaviors is Fishbein and Ajzen's (1972) Theory of Reasoned Action (TRA). The TRA postulated that behavior can be predicted through measuring an individual's attitude toward the behavioral action and subjective (or social) norms that influence the likelihood of performing the behavior.

In 1980, Ajzen and Fishbein modified TRA to create the Theory of Planned Behavior (TPB). The TPB added a variable identified as perceived behavioral control. Tesser and Shaffer (1990) compared this variable to that of Bandura's notion of self-efficacy, that is, the extent an individual feels she or he has control over making a behavior change (Bandura, 1977, 1982, 1986). Much of the attitudinal research conducted over the past 25 years is based on Ajzen and Fishbein's (1980) TPB.

The TPB (see Figure 1) suggests that a person's behavior is a function of her or his beliefs toward performing a particular action (Ajzen, 1988; Ajzen, 2001). The TPB posits that motivational factors lead to intentions which, in turn, predict behaviors (Ajzen, 1985, 1991). The TPB is a widely applied social cognitive behavioral theory used to identify and develop interventions to enhance a range of behaviors (See review by Ajzen, 1991), but specifically related to this study is research on attitude change and substance use (e.g., Collins & Carey, 2007; Hergenrather & Rhodes, 2006; Huchting, Lac, & LaBrie, 2008).

Figure 1 Theory of Planned Behavior. Adapted and modified from Ajzen (1985, 1988).



The TPB suggests that intentions are predicted by determinates of attitudes, subjective norms, and perceived behavioral control. Each determinate consists of a set of elicited beliefs from persons to perform a specific behavior, and an evaluation of each belief. Attitude is defined as the target person’s evaluation of her or his own behavior (Ajzen, 1991). Subjective norm is the person’s perception of others’ evaluation of her or his behavior (Ajzen, 1991). Lastly, behavioral control is the perceived ease or difficulty of performing a behavior (Ajzen, 1988, 1991).

Attitudes and Their Effect on Service Delivery

Rehabilitation professionals have long recognized the negative effects of stereotyping and discrimination on consumers participating in rehabilitation programs

(Rubin & Roessler, 2001). Disabilities, such as SUDs add additional stigma and can contribute to numerous negative social consequences (Koch, Nelipovich, & Sneed, 2002). As a result, consumers experience fear and isolation that separate them from their communities and from the service delivery system designed to help them (Koch et al., 2002).

Studies have generally suggested that a certain hierarchy of attitudinal preference exists regarding specific disabilities among the general population. In ranking attitudes toward disabilities (i.e., degree of social acceptance and rejection), a rather stable pattern has emerged. Typically, physical conditions, such as asthma, diabetes, and arthritis have been ranked as most socially acceptable to respondents. In contrast, psychiatric and behavioral conditions, such as SUDs and mental health disorders have been ranked as most socially unacceptable (Horne & Ricciardo, 1988; Jones & Stone, 1995; Royal & Roberts, 1987).

Chappel et al. (1995) reported that the historical roots of negative attitudes stem from the moralistic view that the use of alcohol and with drugs is a matter of personal choice. Excessive use is viewed as representing weakness and a sinful nature. One result of these negative attitudes has been that treatment or referrals are reluctantly and pessimistically implemented.

Attitude appears to be a common theme influencing service provision and treatment outcomes. Research conducted by Kiley et al. (1992) indicated that attitude appears to be one of the most important factors in adequate treatment provision. Taricone and Janikowski (1990) found that negative attitudes toward consumers with co-occurring disorders often result in lower quality services. Negative attitudes of treatment

staff are thought to be a prime cause of poor provision of services (Greer et al., 1990; Ingraham et al., 1992; Shipley et al., 1990). Furthermore, evidence indicates that professionals who hold negative attitudes toward counseling individuals with SUDs often overlook substance misuse and fail to refer consumers for substance abuse treatment (Chappel & Veach, 1987; Gregoire, 1994; Howard & Chung, 2000). For example, Gregoire (1994) found in a regional substance abuse training study that social workers failed to identify and respond to consumer's alcohol abuse issues in 83% of the cases examined.

Negative professional attitudes are thought to originate from various sources, including a lack of knowledge, frustration, and a sense of inadequacy in addressing the difficulties posed by consumers with co-occurring disabilities and SUDs (Gafoor & Rassool, 1998). Lack of attention to issues related to SUDs in pre-qualification training results in a failure to prepare professionals to counsel consumers with SUDs (Billingham, 1999). Consequently, authors argue that rehabilitation counselors should possess attitudes that facilitate rather than inhibit recovery and receive adequate substance abuse training if consumers with SUDs are to receive the services they need (Stude, 1990).

Attitudes Toward Counseling Individuals with SUDs

Over the past three decades, numerous studies have been conducted among health care providers regarding attitudes of individuals with SUDs (Chappel et al., 1985; Chappel & Veach, 1987; Foster & Onyeukwu, 2003; Howard & Chung, 2000; Scott, 1996). Attitudinal studies specific to counseling individuals with SUDs have also been conducted with social work and counselor education graduate students (Muldoon, 1998; Stein, 1999; 2003), VR counselors (West & Miller, 1999), mental health professionals

and social workers (Richmond & Foster, 2003; Strozier, 1995). Much of this research has been on the effect of substance abuse training on attitudes toward counseling individuals with SUDs. Other research has been conducted regarding attitudes of counseling individuals with co-occurring SUDs and mental health disorders (Allnutt 2004; Dunston-McLee, 2001; O'Neil, 1997; Rerick, 1999).

Stein (1999; 2003) conducted research to assess the nature and extent of master's social work students' attitudes about SUDs and to examine the impact of a four-hour substance abuse training workshop. Results of Stein's study (1999) indicated that participation in the substance abuse workshop resulted in no significant changes in attitudes as measured by the Substance Abuse Attitude Survey (SAAS). However, significant differences in attitudes were found based on demographic characteristics such as being male, Caucasian, older than the rest of their cohort, and knowing someone diagnosed with a SUD. In comparison these students' attitudes were less conservative than their counterparts in regards to substance abuse. Similarly, results of Stein's study (2003) found no significant changes in student attitudes after participation in an educational workshop. However, results indicated that attitudinal differences were detected on two SAAS factors (treatment intervention and treatment optimism) comparing students who knew someone with and without a drug problem. Students who knew someone with a drug problem held more positive views about drug abuse treatment and were more optimistic about treatment outcome when compared to those who did not know someone with a drug problem. Recommendations from Stein's study (2003) suggest that social work education programs may enhance efforts to prepare graduates to effectively counsel consumers and families with SUDs.

Similarly, Muldoon (1998) assessed the effects of a series of lectures about substance abuse on attitudes of master's degree counselor education students. The SAAS was used to measure attitudes toward SUDs and individuals with SUDs. Results indicated that only one of the five factors of the SAAS (non-stereotype) was statistically significant in showing that lectures improved attitudes. Recommendations were offered on how counseling programs should engage students in the substance abuse treatment process to facilitate more positive attitudes towards individuals with SUDs.

West and Miller (1999) conducted research to determine if differences exist in the attitudes of VR counselors toward consumers with SUDs comparing those with and without substance abuse training. Participants (n = 101) were VR counselors from the Tennessee Division of Rehabilitation Services. The SAAS was also used to assess VR counselors' beliefs and attitudes toward SUDs and individuals with SUDs. Results indicated that VR counselors with substance abuse training reported significantly more positive attitudes than their non-trained counterparts in only two of the five factors of SAAS (non-moralism and treatment intervention). Participants with substance abuse training were found to have less moralistic attitudes and more positive attitudes on treatment intervention. These findings suggest that VR counselors with substance abuse specific training were more likely to accept substance abuse as a biopsychosocial disorder rather than as a moral failing, and hold more positive expectations of the effectiveness of treatment interventions. Those VR counselors reporting no substance abuse training were more likely to view SUD in more negative ways, to hold lower expectations regarding the success of interventions, and were more likely to view substance abuse as a moral issue. Overall, it should be noted that attitudes of VR counselors toward working with

individuals with SUDs were somewhat negative regardless of receiving substance abuse training or not. The VR counselors in this study reported lower satisfaction with working with individuals with SUDs, as well as generally poor expectations regarding the effectiveness of counseling consumers with SUDs. These factors seem to indicate that substance abuse is an issue that might not be effectively addressed in VR settings; and that such beliefs could have profound implications for achieving successful rehabilitation outcomes.

Richmond and Foster (2003) investigated mental health professionals' attitudes to SUDs and consumers with SUDs using the SAAS. Participants (n = 103) were a convenience sample of mental health professionals from London. Mental health professionals' associations of attitude and demographic factors (i.e., age, experience, professional status, educational and training level, and own substance use) were examined. Participants obtained a satisfactory mean score for non-stereotyping (non-reliance on popular societal stereotypes of substance use and substance users) and a borderline score for permissiveness (a tolerant and accepting attitude toward substance use). Participants obtained low mean scores for treatment optimism (an optimistic perception of treatment and the possibility of a successful outcome) and treatment interventions (orientation towards perceiving substance use and misuse in the context of treatment and intervention). Participants who never used tobacco, cannabis, and illicit drugs all scored higher on treatment intervention than occasional or regular users of these substances. The authors suggest that personal use of substances may be associated with less inclination to perceive a need for intervention and treatment when service users reveal substance use or misuse. Participants with postgraduate degrees were found to be

less moralistic in their approach and had greater treatment optimism. However, age, gender, level of experience in mental health or substance abuse counseling, and the number of substance abuse training days were not associated with attitudes toward individuals with SUDs. Further research needs to ascertain what element of postgraduate education contributes to constructive attitudes in relation to counseling individuals with SUDs.

Research has also been conducted examining attitudes toward counseling individuals with co-occurring SUDs and mental health disorders with similar results, indicating a relationship between level of training and/or type of specialized training and attitudes. Dunston-McLee (2001) examined rehabilitation counselors' attitudes toward counseling individuals with co-occurring SUDs and mental health disorders in a national representative sample (n = 200). The study investigated the relationship of rehabilitation counselors' attitudes toward counseling individuals with co-occurring disorders and the amount of contact with individuals with co-occurring disorders, as well as the amount of specialized training in co-occurring disorders. Results showed that amount of contact and degree of specialized training were not significantly related to attitudes in the areas of treatment pessimism, integrated treatment, separate treatment, and vigilance in recovery as measured by the Dual Diagnosis Attitude Survey (DDAS). Additional results suggest rehabilitation counselors who had frequent contact with consumers with co-occurring disorders and who had more than 15 hours of training in co-occurring disorders scored more favorably on treatment pessimism than those who had infrequent contact with consumers and less training. This finding suggests that when counselors have more

familiarity with a co-occurring population they are more positive about treatment outcomes.

Allnutt (2004) examined the training that graduate students in psychology (n = 93) received in the area of co-occurring SUDs and mental health disorders, as well as attitudes toward and treatment knowledge of individuals with SUDs. The DDAS was used to measure attitudes toward counseling individuals with co-occurring disorders. The results indicated that 76% of graduate students reported counseling consumers with co-occurring disorders, but only 43% had taken any substance abuse coursework and 57% reported 10 or fewer supervision hours dedicated to substance abuse or co-occurring mental health disorders. Results indicated that graduate students possessed low levels of pessimism, positive attitudes toward integrated treatment, attitudes consistent with separate treatment, and moderate awareness of a need for lifelong treatment for co-occurring disorders. Graduate students averaged a score of 61% correct on a test of terms and concepts related to substance abuse treatment indicating a low level of familiarity with terms and concepts common in substance abuse treatment.

O'Neil (1997) conducted a study on attitudes toward clients with co-occurring SUDs and mental health disorders among a sample of social workers, psychologists, and psychiatrists within an urban hospital. The DDAS was also used to assess attitudes. He found that attitudes of health care professionals favoring separate treatment for consumers with co-occurring disorders can have a negative impact on their ability to accurately diagnosis their consumers, suggesting that stereotypical attitudes held by professionals may limit the clinician's diagnostic, assessment, and therapeutic abilities.

Finally, Rerick (1999) conducted a study on graduate students' attitudes and clinical judgment toward co-occurring disorders. The participants were master's level graduate students from accredited counseling and psychology programs at a Midwest University. The study was conducted to determine if there was a relationship between training on co-occurring disorders, graduate students' attitudes toward co-occurring disorders, and one's ability to accurately diagnose co-occurring disorders. Rerick reported no relationship found between graduate students' attitudes and their ability to accurately diagnose co-occurring disorders. No significant differences were found between attitudes of graduate students who received specific co-occurring training and those who did not. The findings seemed to indicate that students had positive attitudes toward co-occurring disorders.

Measuring Attitudes Toward SUDs

Several instruments are discussed next which measure attitudes towards SUDs. The instruments are in order of popularity from previous research. Research on attitudes toward substance abuse has led to the development of numerous measurement instruments including the Substance Abuse Attitude Survey (SAAS; Chappel et al., 1985), the Brief Substance Abuse Attitudes Survey (Veach & Chappel, 1990), the Dual Diagnosis Attitude Survey (DDAS; Zimberg & Struening, 1991), the Alcohol and Alcohol Problem Perceptions Questionnaire (AAPPQ; Cartwright, Shaw, & Spratley, 1975; Shaw, Cartwright, Spratley, & Harwin, 1978), and the Drug and Drug Problem Perceptions Questionnaire (DDPPQ; Albery et al., 2003; Watson, Maclaren, & Kerr, 2006).

The Substance Abuse Attitude Survey (SAAS) was originally developed by Chappel et al. (1985) to assess the attitudes of medical students and physicians toward substance abuse. The SAAS has since been used in attitude-based studies with several audiences including undergraduates (Jenkins, Fisher, & Applegate, 1990), nurses, (Ducote, 1992), mental health professionals and social workers (Richmond & Foster, 2003; Strozier, 1995), social work and counselor education graduate students (Muldoon, 1998; Stein, 1999; 2003), and VR counselors (West & Miller, 1999), to name a few. The SAAS consists of 50 attitude statements and uses a five-point Likert-type scale for indicating degrees of agreement or disagreement. The SAAS measures attitudes on five factors: non-stereotyping (i.e., non-reliance on popular societal stereotypes of substance use and substance users), permissiveness (i.e., a tolerant and accepting attitude toward substance use), non-moralism (i.e., absence and avoidance of moralistic perspective when considering use and substance users), treatment optimism (i.e., an optimistic perception of treatment and the possibility of a successful outcome), and treatment intervention (i.e., orientation towards perceiving substance use and misuse in the context of treatment and intervention).

The Brief Substance Abuse Attitudes Survey (BSAAS) was developed by Veach and Chappel (1990) as an abbreviated version of the SAAS. The BSAAS has 25 attitudes statements and uses a five-point Likert-type scale for indicating degrees of agreement or disagreement as the SAAS. The BSAAS measures attitudes on the same five factors as the SAAS as discussed above. This BSAAS was derived from statistical studies on the existing database from the development of the SAAS. Items for the BSAAS focused on

those most sensitive to identifying changes in attitudes and most sensitive to differences between subpopulations of health professionals.

The Dual Diagnosis Attitude Survey (DDAS) was developed by the Mentally Ill Chemical Abusers (MICA) Project of St. Luke's Roosevelt Hospital Center under the direction of Drs Zimberg and Struening (1991). The DDAS consists of a 50-item Likert-type scale. The first 25-items of the DDAS include the BSAAS along with 25 questions to measure knowledge and attitudes about individuals with co-occurring disorders. The co-occurring disorder section of the DDAS measures attitudes with four factors: treatment pessimism (i.e., belief that the substance abuse disorder will not improve with treatment), positive attitudes toward integrated treatment (i.e., belief that specific or integrated treatment plans are necessary for consumers with co-occurring disorders), positive attitude toward separate treatment (i.e., belief that consumers with co-occurring disorders should be treated separately), and vigilance in recovery (i.e., belief that recovery from substances is a lifelong process).

The Alcohol and Alcohol Problem Perceptions Questionnaire (AAPPQ) was originally developed by Cartwright et al. (1975) to test a model of therapeutic commitment of practitioners to engage in counseling with individuals with alcohol problems. The AAPPQ is a 30-item instrument using a seven-point Likert-type scale ranging from *strongly agree* to *strongly disagree*. The AAPPQ was developed to test the hypotheses that three situational factors: role adequacy, role legitimacy and role support enhance motivation, satisfaction, and professional self-esteem of counseling individuals with problems with alcohol (Shaw et al., 1978). Role adequacy refers to the fact that practitioners who feel adequately prepared view themselves as having appropriate

knowledge. The term role legitimacy refers to the extent to which people regard particular aspects of their work as being their responsibility. Role support relates to the support which practitioners acknowledge receiving from colleagues to help them to perform their role effectively.

Cartwright (1980) conducted validation studies of the ADPPQ and its subscales to confirm the following five subscales: motivation and willingness to work with drinkers, expectation of work satisfaction working with drinkers, feelings of adequacy of knowledge and skills in working with drinkers, extent of feeling the right to work with drinkers, and self-esteem in specific task in working with drinkers. These subscales reflect the same concepts as listed in the paragraph above, Cartwright just renamed the subscales after this validation study. The reliability estimates of the instrument's subscales using Cronbach's alpha ranged from .70 to .90.

The last instrument to be discussed is the DDPPQ. The DDPPQ was initially developed by Albert et al. (2003) as a modification of the AAPPQ. Watson et al. (2006) provided documentation of its validity. The instrument was found to be a valid and reliable tool which can be used to measure practitioners' attitudes toward counseling individuals who have problems with drugs. Watson et al. (2006) refined the DDPPQ through principal components analysis (PCA) resulting in the following five subscales: role adequacy, role support, job satisfaction, role-related self esteem, and role legitimacy. Watson et al. (2006) assessed content validity because the instrument's original wording was changed and because the AAPPQ was developed almost 30 years ago. Watson et al. (2006) refined the DDPPQ from an original 30-item instrument to a 20-item instrument using a seven-point Likert-type scale ranging from *strongly agree* to *strongly disagree*.

The reliability estimates of the instrument's subscales using Cronbach's alpha range from .69 to .94. The internal consistency coefficient of the entire 20-item instrument was found to be $\alpha = .87$. A modified version of these scales is used in this study. See Appendix H and I for details.

Substance Abuse Training Needs

Leahy, Chan, and Saunders (2003) surveyed CRCs to identify and examine the major knowledge domains and job functions required by rehabilitation counseling practice in response to the demands of the 21st century. Substance abuse knowledge and treatment were found to be among the new knowledge items rated by CRCs as important to effective rehabilitation practice. Results of the study indicate that substance abuse treatment is a new knowledge area of importance which requires effective training within pre-service RCE programs.

Additional research by Tansey et al. (2004) surveyed CRCs working in psychiatric rehabilitation settings to determine contemporary issues facing rehabilitation counselors. Participants reported limited substance abuse counseling training and the belief that substance abuse counseling was outside their traditional job duties. Results indicated the need for substance abuse training in both pre-service master's level RCE programs, as well as in-service training for continuing education. Based on studies conducted by Leahy et al. (2003), Chan et al., (2003) and Tansey et al., (2003) the Council on Rehabilitation Education (CORE) revised its curriculum, knowledge areas, and outcomes requirements in July 2004 to include "substance abuse and substance treatment" and "substance abuse treatment and recovery." This curriculum enhancement

indicates the value that CORE places on adequately training rehabilitation counselors on substance abuse interventions in RCE programs.

Furthermore, Ong et al. (2007) surveyed rehabilitation counselors from the New York Rehabilitation Counseling Association on perceived training needs concerning substance abuse assessment and treatment. About a quarter of surveyed participants reported working in state VR agencies, with the rest working in private for profit and nonprofit settings. Results indicated that 85% of rehabilitation counselors were serving consumers with SUDs, yet 50% of participants rated their training in substance abuse treatment as *very poor* or *poor* and over half of participants rated their competency in providing substance abuse services as *not proficient* or *marginally proficient*. Approximately 70% of participants advocated that substance abuse training should be required in the RCE program curriculum.

Similarly, Basford, Rohe, Barnes, and DePompolo (2002) found that although physical medicine and rehabilitation psychology educators recognize the prevalence of issues related to SUDs among their consumers, little change has occurred within the curricula dedicated to SUDs. Bombardier (2000) argued that SUDs are of particular concern among people with disabilities and that rehabilitation professionals should be trained to recognize issues with SUDs and intervene in a timely manner. In fact, Cardoso, Chan, Pruett, and Tansey (2006) surveyed rehabilitation psychologists randomly selected from the APA membership directory to determine the preparedness to counsel people with disabilities with primary or secondary SUD by examining their education, training, and current practice and found that although 79% of the participants reported treating individuals with SUDs, over half rated their graduate training in

substance abuse as inadequate. Survey results of Cardoso et al. (2006) are similar to results by Ong et al. (2007) previously discussed. The results indicated that 59% of participants rated their training in substance abuse treatment as *very poor* or *poor*. Over two thirds of participants rated themselves as either *not proficient* or *marginally proficient* in their competency to provide substance abuse services. Of particular importance, 71% of rehabilitation psychologists surveyed endorsed the position that substance abuse training should be mandatory in the rehabilitation psychology training curriculum.

Drug and Alcohol Distinction

It is not only important for rehabilitation counselors to have knowledge of SUDs and the impact it has on rehabilitation outcomes, but it is essential to understand how rehabilitation legislation and services differ with regards to the distinction of drug and alcohol abuse. It is critical for counselors to understand how rehabilitation legislation applies to persons with SUD both in determining eligibility for services and providing effective case management (Koch, 2000). For example, Americans with Disabilities Act (ADA) makes an eligibility distinction between alcohol and drug abuse (ADA, 1990). The ADA states that any person who engages in illegal use of drugs is not considered to be a qualified individual with a disability and is not eligible for protection from employment discrimination; however persons with active alcohol use disorders are protected under ADA provisions (ADA, 1990).

Difficulties can arise when rehabilitation counselors address alcohol and other drugs of abuse as one disability and ADA reflects an older standard which described alcohol and other drugs of abuse as separate disabilities (Koch, 2000). This dual standard

can make interpretation of legislation difficult for many persons who have adopted the new standard of combining alcohol and other drugs of abuse and who must now differentiate between the two to interpret the legislation. Due to this differentiation, rehabilitation counselors must be aware that current use of illegal drugs is exclusionary and current use of alcohol does not necessarily exclude persons from being defined as otherwise qualified individuals with a disability.

Because the ADA is vague on its standards for rehabilitation of individuals with SUD disabilities, provisions for eligibility and receipt of rehabilitation services have been left to the various state and local rehabilitation agencies (Benshoff & Janikowski, 2000; Moore et al., 2008). Results of a study by Moore et al. (2008) regarding policy issues in VR for consumers with SUD found that state-based VR programs do not conform to a single standard in policy or practice when addressing SUD with variations found specifically in substance abuse screening practices, written substance abuse policies, and sobriety waiting periods.

Summary

To summarize, this chapter reviewed the literature on the theoretical framework of attitudes impacting behaviors, attitudes and their effects on service delivery, attitudes toward individuals with substance abuse disorders (SUDs), measuring attitudes toward SUDs, and substance abuse training needs.

The theoretical framework of how attitudes shape behavior was included to organize the discussion regarding attitudes of counseling individuals with SUDs. The Theory of Reasoned Action (TRA; Fishbein & Ajzen, 1972) and the Theory of Planned

Behavior (TPB; Ajzen & Fishbein, 1980) were discussed. In general, these theories suggest that attitudes can shape our behaviors.

The literature specific to attitudes toward counseling individuals with SUDs suggested that negative professional attitudes originate from various sources, including a lack of knowledge and a sense of inadequacy in counseling consumers with co-occurring disabilities and SUDs (Gafoor & Rassool, 1998). Negative attitudes of counselors is thought to be one of the main factors of poor provision of services (Greer et al., 1990; Ingraham et al., 1992; Shipley et al., 1990; Taricone & Janikowski, 1990). Evidence indicates that professionals who hold negative attitudes toward consumers with SUDs often overlook SUDs and fail to refer consumers for substance abuse treatment (Chappel & Veach, 1987; Gregoire, 1994; Howard & Chung, 2000). Furthermore, a study by West and Miller (1999) indicated that VR counselors' overall attitudes to counseling individuals with SUDs were somewhat negative. Vocational rehabilitation counselors were found to lack satisfaction toward working with this population, as well as have generally poor expectations on the effectiveness of working with consumers with SUDs.

There have been only two studies conducted which assessed rehabilitation counselors' attitudes toward counseling individuals with SUDs (Dunston-McLee, 2001; West & Miller, 1999) and neither of these studies was performed with a sample of CRCs. In addition, these studies assessed the association of rehabilitation counselors' reported substance abuse training rather than their frequency and perceived confidence of providing substance abuse screenings and referrals as will be evaluated in the current study. Furthermore, several studies have been conducted with rehabilitation counselors and CRCs that explored counseling training needs and found substance abuse and

treatment as a critical training need (Chan et al., 2003; Lee et al., 2005; Tansey et al., 2004); however, these studies lacked the inclusion of rehabilitation counselors' attitudes toward counseling individuals with SUDs, an area that is examined in the current study.

The literature supports the need for adequate substance abuse training for rehabilitation counselors (Cardoso et al., 2006; Chan et al., 2003; Ong et al., 2007; Tansey et al., 2004). Substance abuse training is critical given the evidence of the prevalence of co-occurring SUDs in individuals with disabilities and the potential negative impact of SUDs. Efforts to improve pre-service education and continuing education were suggested to narrow the substance abuse training gap (Ong et al., 2007).

Related to research that supports the need for more adequate substance abuse training for rehabilitation counselors and CRCs (Cardoso et al., 2006; Chan et al., 2003; Ong et al., 2007; Tansey et al., 2004) and evidence of a high prevalence of co-occurring SUDs in individuals with disabilities, it is important to note that CORE revised its curriculum, knowledge areas, and educational outcome requirements in 2004 to include "substance abuse and substance treatment" and "substance abuse treatment and recovery." This curriculum modification indicates the responsibility that CORE places on adequately training rehabilitation counselors on substance abuse and substance treatment interventions in RCE programs.

Although previously mentioned studies have been conducted which helped to formulate the framework for this study, evidence was lacking to determine the nature and extent of CRCs' attitudes toward counseling individuals with SUDs. The literature provided evidence of the association of rehabilitation counselors' attitudes toward counseling individuals with SUDs with the frequency in administering substance abuse

screenings and referrals and their perceived confidence in providing these services. More specifically, not much is known regarding the attitudes toward counseling individuals with SUDs. This study contributed to the literature as it investigated a nationally random sample of CRCs from multiple direct service provider employment settings regarding attitudes toward counseling individuals with SUDs and the association of their attitudes with frequency and perceived confidence in providing substance abuse screenings and referrals.

CHAPTER III: METHODOLOGY

Participants

The population utilized for this study was 16,002 CRCs throughout the United States. The participants were a nationally representative random sample of CRCs purchased from the Commission on Rehabilitation Counselor Certification (CRCC) database. A sample of CRCs that were direct service providers was requested from CRCC; however participants' job titles could not be guaranteed. A random sample of 5,000 CRCs' e-mail addresses were purchased from CRCC which was approximately 30% of the CRC population. See Table 1 for the CRC sample inclusion and exclusion criteria. Out of the 5,000 e-mail addresses provided, 940 e-mail addresses were returned as undeliverable. Out of 4,060 deliverable addresses, 764 participants completed the survey which resulted in an 18.8% response rate.

Table 1

Sample Inclusion and Exclusion Criteria

Sample	Criteria
Inclusion	CRCs who provide direct services CRCs certified/recertified in last 1-2 years
Exclusion	CRCs who do not provide direct services CRCs certified/recertified more than 2 years ago

See Table 2 for a comparison of the sample and CRC population characteristics.

The sample is representative of the CRC population.

Table 2

Comparison of Sample and CRC Characteristics

Item	Sample No.	%	CRC No.	%
Age				
Under 30 Years	83	10.9%	973	6.08%
30-39 Years	163	21.3%	3,060	19.12%
40-49 Years	185	24.2%	3,519	21.99%
50-59 Years	241	31.5%	5,208	32.55%
Greater than 60 Years	88	11.5%	3,242	20.26%
Gender				
Female	547	71.60%	11,411	71.31%
Male	210	27.49%	4,588	28.67%
Race				
Pacific Islander	1	0.13%	20	0.12%
American Indian	4	0.52%	103	0.64%
Asian	13	1.70%	341	2.13%
Latino/a or Hispanic	28	3.66%	544	3.40%
Black	70	9.16%	1,383	8.64%
White	605	79.18%	13,040	81.49%

Multi-Racial	5	0.65%	20	0.12%
Other	33	4.31%	174	2.35%
Years of Experience				
Less than 1 Year	15	2.0%	2,185	13.65%
1-5 Years	194	25.4%	2,711	16.94%
6-10 Years	154	20.2%	2,703	16.8%
11-15 Years	107	14.0%	2,119	13.24%
16-20 Years	105	13.7%	2,041	12.75%
Greater than 20 Years	170	22.3%	3,854	24.08%

Study participants were employed per region of the country as follows with 201 (26.3%) identified as being employed in the Southeast region of the country, 174 (22.8%) in the Midwest, 173 (22.6%) in the Northeast, 145 (19%) in the West, and 64 (8.4%) in the Southwest.

See Table 3 for a summary of the participant's work setting. The largest percentage of participants indicated working in a Federal-State Rehabilitation Agency (45.3%) with the lowest percentage working in Federal-State Governmental Social Services (2.5%).

Study participants indicated employment in the following job titles. Three hundred fifty one (45.9%) described their job title as rehabilitation counselor, 168 (22%) as administer/supervisor/coordinator, 59 (7.7%) as case manager, 61 (8%) as

rehabilitation specialist/consult, 42 (5.5%) as mental health counselor/psychologist, 27 (3.5%) as faculty/professor/instructor, 19 (2.5%) as substance abuse counselor, and 15 (2%) as other.

Table 3

Work Settings

Type of Agency	No.	%
Federal-State Rehabilitation Agency	346	45.3%
Private For Profit Rehabilitation Agency	84	11%
Private Non-Profit/For-Profit Counseling Agency	70	9.2%
Private Non-Profit Rehabilitation Agency	61	8%
University/College	61	8%
Medical Center/Hospital	30	3.9%
Insurance Company	28	3.7%
Substance Abuse/Mental Health Agency	26	3.4%
Federal-State Governmental Social Services	19	2.5%
Other	34	4.5%

See Table 4 for participant's substance abuse experience. Participants ranged in experience from zero to 38 years ($M = 4.9$, $SD = 7.9$). The largest percentage of participants indicated having no substance abuse experience (43.8%) with the lowest percentage having zero to 1 year of experience (8.1%).

Table 4
Substance Abuse Experience

Years of Experience	No.	%
0	335	43.8%
0-1 Years	62	8.1%
1-3 Years	88	11.5%
Greater than 3 Years	146	19.1%

Participants' years of being a certified rehabilitation counselor (CRC) ranged from 0 to 38 years; ($M = 9.4$, $SD = 8.7$). Thirty nine (5.1%) reported having a CRC credential for less than one year, 222 (29.1%) as one to three years, 34 (4.5%) as three to five years, 287 (37.6%) as five to 15 years, 182 (23.8%) as greater than 15 years experience.

See Table 5 for a summary of participant's substance abuse training. The largest percentage of participants indicated having seven to 25 hours of substance abuse training (31.5%) with the lowest percentage having zero hours of training (6.4%).

Six hundred thirty (82.5%) of the participants reported being formally trained as a rehabilitation counselor in an accredited program, 115 (15.1%) reported not being trained in an accredited program, 12 (1.6%) of the participants were unsure. Three hundred and twenty four (42.4%) reported being employed in a rehabilitation agency that has a policy on screening and referring clients for substance use disorders, 240 (31.4%) reported not

being employed in an agency that has a policy on screening and referring, 52 (6.8%) of the participants were unsure, and 145 (19%) were not working in a rehabilitation agency. Lastly, 318 (41.6%) of the participants reported being very satisfied in their current

Table 5

Substance Abuse Training

Hours of Training	No.	%
0 Hours	49	6.4%
1-6 Hours	173	22.6%
7-25 Hours	241	31.5%
26-90 Hours	166	21.7%
Greater than 90 Hours	130	17%

career, 324 (42.4%) were satisfied, 65 (8.5%) were neither satisfied nor dissatisfied, 45 (5.9%) were dissatisfied, and seven (0.9%) were very dissatisfied.

Instrumentation

Drug and Drug Problem Perceptions Questionnaire (DDPPQ)

The Drug and Drug Problem Perception Questionnaire (DDPPQ; Watson et al., 2006) was used to measure attitudes toward counseling individuals who have problems with drugs. The DDPPQ was developed as an adaptation of the Alcohol and Alcohol Problem Perceptions Questionnaire (AAPPQ; Cartwright et al, 1975; Shaw et al, 1978; Cartwright, 1980). During the adaptation process, Watson et al. (2006) replaced the

terms *alcohol* with *drugs* and *drinkers* with *drug users* to ensure the format of the ADPPQ was retained. The DDPPQ is a 20-item instrument using a seven-point Likert-type scale ranging from *strongly agree* to *strongly disagree*. Low scores denote positive attitudes, whereas high scores are associated with negative views. The DDPPQ has five subscales which will be discussed in the next paragraph. See Appendix D for a copy of the survey which includes the DDPPQ. Dr. Watson granted written permission to use the DDPPQ (See Appendix F).

To validate the subscales of the DDPPQ, principal components analysis was conducted for this study and compared to previous research by Watson et al. (2006). See Appendix H for the component loadings. The principal components analysis for the DDPPQ yielded a five-factor solution that explained 82.73% of the total variance. The resulting component structure and insisting subscales of the DDPPQ is as follows: “role adequacy” (component one; $\alpha = .97$; seven items), “role-related self-esteem” (component two; $\alpha = .86$; four items), “role support” (component three; $\alpha = .97$; three items), “role legitimacy” (component four; $\alpha = .93$; two items), and “job satisfaction” (component five; $\alpha = .86$; four items). See Table 6 for a description of the subscales. The internal

Table 6

Description of DDPPQ Subscales

Subscales	Description
1.	“Role adequacy” refers to the belief that the counselor has a working knowledge of drug and alcohol related problems (seven items).

2. “Role-related self-esteem” refers to the counselor’s self-efficacy in providing substance abuse interventions (four items).
3. “Role support” refers to the belief that the counselor could easily seek consultation to clarify professional responsibilities and substance abuse treatment approaches (three items).
4. “Role legitimacy” refers to the belief that the counselor has the right to ask the consumer questions regarding her/his drug and alcohol problems (two items).
5. “Job satisfaction” refers to the belief that the counselor finds substance abuse counseling rewarding and gets satisfaction from conducting substance abuse counseling (four items).

consistency coefficient of the entire 20-item instrument was found to be $\alpha = .95$.

The DDPPQ was chosen for this study partly because the instrument measures attitudes toward counseling individuals who have problems with drugs rather than just attitudes toward drugs and individuals with drug problems in general. This distinction was important because the target population for the study was CRCs who provide direct counseling services to individuals with disabilities. The fundamental reason the DDPPQ was chosen for this study was because recent and extensive psychometric validation has been documented by Watson et al. (2006) and because the DDPPQ concisely measures attitudes toward counseling individuals who have problems with drugs by the use of a brief 20-item instrument.

A few other instruments were considered, but not selected for use in this study. These instruments were the Substance Abuse Attitudes Survey (SAAS; Chappel et al.,

1985) and the Brief Substance Abuse Attitudes Survey (BSAAS; Veach & Chappel, 1990). These instruments were discussed in detail on pages 22-23. The SAAS was not selected because it is longer, and more importantly because there have been doubts raised about its validity given that it was developed more than 20 years ago (Richmond & Foster, 2003; Stein, 1999; Watson, et al., 2006). Lastly, the Brief SAAS was not selected for use in this study because limited psychometric data is available, to date, as few studies have used the BSAAS and because the survey statements are taken from the SAAS which has questionable validity.

Alcohol and Alcohol Problem Perceptions Questionnaire-Revised (AAPPQ-R)

Since the DDPPQ only measures attitudes toward counseling individuals who have problems with drugs, an instrument that measures attitudes toward counseling individuals who have problems with alcohol was also needed because rehabilitation counselors may have varied attitudes toward counseling individuals who have problems with drugs as compared to those who have problems with alcohol. Therefore, this researcher created the Alcohol and Alcohol Problem Perception Questionnaire-Revised (AAPPQ-R) for use in the current study by modifying the DDPPQ developed by Watson et al. (2006). The original AAPPQ developed by Cartwright et al. (1975) was not used in this study to measure attitudes toward counseling individuals who have problems with alcohol because it was developed in 1975 and may have similar validity concerns as the SAAS which was developed in 1985. Since Watson et al. (2006) conducted extensive psychometric testing on the DDPPQ and found it to be a valid and reliable tool it was used to create the AAPPQ-R. The terms *drug* was replaced with *alcohol* and *drug user* with *alcohol user* (See Table 7 for details).

Similar to the DDPPQ, the AAPPQ-R is a 20-item instrument which measures attitudes toward counseling individuals who have problems with alcohol on a seven-point Likert-type scale ranging from *strongly agree* to *strongly disagree*. Low scores denote positive attitudes, whereas high scores are associated with negative views. The AAPPQ-R has five subscales which will be discussed in the following paragraph. See Appendix D for a copy of the survey which includes the AAPPQ-R.

To validate the subscales of the AAPPQ-R principal components analysis was conducted and compared to previous research by Watson et al. (2006). See Appendix I for the component loadings. The principal components analysis for the AAPPQ-R also yielded a five-factor solution that explained 79.32% of the total variance. The resulting Table 7

Modification Example of the DDPPQ to Create the AAPPQ-R

Survey	Description
DDPPQ	I feel that I have the right to ask clients for any information that is relevant to their drug problem.
AAPPQ-R	I feel that I have the right to ask clients for any information that is relevant to their alcohol problem.

component structure and insisting subscales of the AAPPQ-R is as follows: “role adequacy” (component one; $\alpha = .96$), “role-related self-esteem” (component two; $\alpha = .83$), “role support” (component three; $\alpha = .95$), “role legitimacy” (component four; $\alpha = .90$), and

“job satisfaction” (component five; $\alpha=.83$). A description of the subscales was reviewed in Table 6 on page 36-37. The internal consistency coefficient of the entire 20-item instrument was found to be $\alpha = .94$.

The factor analysis results of the DDPPQ and AAPPQ-R replicates previous research conducted by Watson et al. (2006). Strikingly similar patterns were found with the DDPPQ and AAPPQ-R compared to Watson et al. (2006). It is remarkable to note that the current study replicated Watson et al.’s (2006) factor analysis results considering the research studies were conducted in different countries with notably different samples. Watson et al.’s (2006) study was conducted in Scotland with a stratified random sample of medical staff, clinical psychologists, occupational therapists, and nurses ($n = 1073$) who worked with mental health, adolescent psychiatry, forensic psychiatry, and alcohol and drug services. The current study was conducted in the United States with a CRC sample with a range of job titles, such as rehabilitation counselors, supervisors/managers, case managers, rehabilitation specialists, mental health counselors/psychologists, faculty, and substance abuse counselors ($n = 764$).

Alcohol and Other Drugs Vocational Rehabilitation Counselor Survey (AOD-VRC)

The Alcohol and Other Drugs Vocational Rehabilitation Counselor Survey (AOD-VRC; Christensen et al., 2004) was used to measure CRCs’ frequency and perceived confidence of providing substance abuse screenings and referrals. Dr. Christensen granted written permission to use the AOD-VRC (See Appendix G).

The AOD-VRC is a 105-item survey which consists of five-point Likert-type scales and multiple choice questions to measure frequency, confidence, and responsibility for providing substance abuse screenings and referrals, barriers to providing substance

abuse screenings, interventions, and referrals, attitudes toward SUDs and individuals with SUDs, and knowledge of substance abuse and substance abuse treatment. The AOD-VRC was adapted for VR counselors from an instrument originally developed for emergency room nurses and physicians entitled the Alcohol and Other Drugs Health Care Practitioner Survey (D'Onofrio et al., 2002). To date, no psychometric properties have been documented on the AOD-VRC or the originally instrument developed by D'Onofrio et al. (2002).

For the purpose of this study, only two sets of seven questions and statements from the AOD-VRC were used. Seven questions which measure the frequency of providing substance abuse screenings and referrals and seven statements which measure perceived confidence in providing substance screenings and referrals were used. Responses for frequency of providing substance abuse screenings and referrals questions were rated on a five-point Likert-type scale ranging from *never* to *always*. Responses for the perceived confidence of providing substance abuse screenings and referrals statements were rated on a five-point Likert-type scale ranging from *no confidence* to *high confidence*. Several of the survey questions and statements were modified to determine frequency and confidence of providing substance abuse screenings and referrals for alcohol and drug use rather than just alcohol on some of the questions and statements by changing *drinking behavior* to *alcohol or other drug use behavior* and *alcohol problems* to *alcohol or other drug problems* (See Table 8 for details). See Appendix D for a copy of the survey which includes the frequency and perceived confidence of providing substance abuse screenings and referrals questions and statements from the AOD-VRC.

Table 8

Modification Example of the AOD-VRC to Incorporate Drug Use

Wording	Description
Existing	How often do you discuss/advise consumers to change their drinking behavior?
Modified	How often do you discuss/advise consumers to change their alcohol or other drug use behaviors?

The AOD-VRC was chosen for use in measuring frequency and perceived confidence of providing substance abuse screenings and referrals because these questions and statements are specific to the research questions and the nature of the study. Several other instruments were considered for use in the study, but were not found to measure the specific elements needed, were developed by researchers for the purpose of a research project, and lacked psychometric validation. These instruments were the Screening for Substance Use Disorders in Vocational Rehabilitation (Moore, McAweeney, Keferl, Glenn, & Ford, 2008), Vocational Rehabilitation Counselor Survey (Heineman, McAweeney et al., 2008), and an untitled instrument with three scales to measure the attitudes, confidence, and perceived knowledge in relation to the counseling consumers with substance abuse problems (Happell & Taylor, 2001).

Demographic and Background Variables

The following demographic and background data were gathered from each CRC participant: age, gender, race and ethnicity, region of the country, employment setting,

job title, years of rehabilitation counseling experience, years of substance abuse counseling experience, years with a CRC credential, hours of substance abuse education or training completed, whether trained as a rehabilitation counselor in an accredited program, whether their rehabilitation agency has a policy on screening and referring consumers with SUDs, and degree of satisfaction with current career. See Appendix D for a copy of the survey which includes the demographic.

Research Procedures

Permission was obtained from the University of Maryland Institutional Review Board (IRB) (See Appendix A) and CRCC to conduct this research (See Appendix B). CRCs who were direct service providers from multiple employment settings were contacted via e-mail and sent a recruitment letter (See Appendix C) explaining the nature of the study with an invitation to complete an online survey (See Appendix D). The recruitment letter included a link to the online survey created in Survey Monkey (<http://www.surveymonkey.com>).

The online survey included the following statements and questions: 20 statements that measure attitudes toward counseling individuals who have problems with drugs as assessed by the Drug and Drug Problems Perceptions Questionnaire (DDPPQ; Watson et al., 2006), 20 statements that measure attitudes toward counseling individuals who have problems with alcohol as assessed by the Alcohol and Alcohol Problems Perceptions Questionnaire-Revised (AAPPQ-R) created by the researcher, seven substance abuse clinical practice questions which measure the frequency of providing substance abuse screenings and referrals as assessed by part of the Alcohol and Other Drugs Vocational Rehabilitation Counselor Survey (AOD-VRC; Christensen et al., 2004), seven confidence

statements which measure the perceived confidence of providing substance abuse screenings and referrals as assessed by part of the Alcohol and Other Drugs Vocational Rehabilitation Counselor Survey (AOD-VRC; Christensen et al., 2004), as well as 13 demographic and background questions which were listed on page 44-45.

Participants were informed in the consent form (See Appendix E) that the online survey was designed to explore their attitudes toward counseling individuals with SUDs associated with their frequency and perceived confidence in providing substance abuse screenings and referrals. Informed consent was obtained by participants' reading the consent form, freely and voluntarily choosing to participate in the research project, and completing the online survey.

It was hoped that the initial e-mail invitation would receive a response rate of 25-35%. After two weeks, a second e-mail invitation was sent to encourage completion of the survey. It was hoped that additional responses would bring the final response rate to 35-45%. The desired response rate was not reached, therefore, a third e-mail invitation was sent. As an incentive to participate in the study, participants were given the opportunity to enter a raffle with the chance to win one of five \$25 VISA gift cards. Once the raffle was complete, the winners were mailed a gift card according to the contact information provided. The desired response rate was not achieved; the final response rate was 18.8%.

Research Variables

Four sets of variables were measured for this research study: attitudes of CRCs toward counseling individuals with SUDs, frequency of providing substance abuse screenings and referrals, perceived confidence of providing substance abuse screenings

and referrals, and demographic variables. There were two sets of independent variables for this study, CRCs' attitudes toward counseling individuals who have problems with drug use and their attitudes toward counseling individuals who have problems with alcohol use. There were two sets of dependent variables, CRCs' frequency of providing substance abuse screenings and referrals and their perceived competency in providing substance abuse screenings and referrals.

Independent Variables

Certified Rehabilitation Counselors' (CRCs) attitudes toward counseling individuals with SUDs were gathered from the DDPPQ and the AAPPQ-R. Data for these variables was coded on an ordinal scale ranging from (1) *strongly agree*, (2) *quite strongly agree*, (3) *agree*, (4) *neither agree nor disagree*, (5) *disagree*, (6) *quite strongly disagree* to (7) *strongly disagree*. The DDPPQ and the AAPPQ-R each have five subscales. Sums of these subscales were used as the independent variables. See Table 9 for a summary of the research variables.

Dependent Variables

Certified Rehabilitation Counselors' (CRCs) frequency and perceived confidence of providing substance abuse screenings and referrals were gathered from two parts of the AOD-VRC. Frequency of providing substance abuse screenings and referrals data were coded on an ordinal scale ranging from (1) *never*, (2) *rarely*, (3) *sometimes*, (4) *usually*, to (5) *always*. Perceived confidence of providing substance abuse screenings and referrals data was coded on an ordinal scale ranging from (1) *no confidence*, (2) *low confidence*, (3) *medium confidence*, (4) *moderate confidence*, to (5) *high confidence*.

Seven frequency questions and seven perceived confidence questions were used as the dependent variables. See Table 9 for a summary of the research variables.

Table 9

Research Variables

Variables	Description
Independent	Attitudes toward counseling individuals with drug and alcohol problems measured by the DDPPQ and the AAPPQ-R
Dependent	Frequency and perceived confidence providing substance abuse screenings and referrals measured by the AOD-VRC

Data Analysis

Sample Size

A sample size of approximately 580 was indicated as adequate for this study by the use of an online sample size calculator (Creative Research Systems, 2008). The factors considered in determining an adequate sample size were the population total of 16,000, a 95% confidence level, and power of 80. The sample size of 764 was thus determined to be sufficient to proceed with statistical analysis.

Data Analysis Procedures

A principal components analysis was conducted to validate the use of the subscales of the DDPPQ and the AAPPQ-R. After determining the data met the

conditions and assumptions for exploratory factor analysis and principal components analysis (Leech, Barrett, & Morgan, 2007; i.e., adequate sample size, normal distribution, normality of skew with the absence of outliers, linearity, moderate to high intercorrelation, absence of high multicollinearity), principal components analysis was determined appropriate for the current data set. Direct oblimin rotation was used as it is the standard method when one wishes a non-orthogonal solution, one in which the factors are allowed to be correlated (Barrett et al., 2007).

Secondly, descriptive statistics were gathered for the independent and dependent variables. The descriptive statistics reported were mean, standard deviation, and range for each variable. These results addressed research question one to determine CRCs' attitudes toward counseling individuals with SUDs.

Next, linear regression analyses were conducted to determine if any of the demographic or background factors influence drug or alcohol attitudes toward counseling individuals with SUDs. Those factors that were found to be significant at a threshold of $p < .0001$ were entered as control variable(s) in the hierarchical regression analyses. A threshold of $p < .0001$ was used to be mindful of Type I error since multiple analyses were conducted.

Hierarchical multiple regression analyses were used to assess the level of predictive relationships between subscales of the DDPPQ and the AAPPQ-R and the dependent variables. Multiple regression analysis is eminently suited for analyzing collective and separate effects of two or more independent variables on a dependent variable (Pedhazur, 1997). Regression analysis determines the variance of the dependent variable explained by the independent variables (Pedhazur, 1997). After determining that

the data met the conditions and assumptions for multiple regression analysis (Leech et al., 2007; i.e., interval or scale dependent variable, interval or scale independent variables, absence of high multicollinearity of independent variables, linearity of dependent and independent variables, error or residual is normally disturbed and uncorrelated with the predictors), multiple regression analysis was determined appropriate for data analysis.

Hierarchical multiple regression analyses were used to address research questions two and three to analyze whether CRCs' attitudes toward counseling individuals with SUDs is associated with the frequency to which they screen and refer individuals with SUDs and their perceived level of confidence to provide substance abuse screenings and referrals. A hierarchical approach was used as this procedure allows the researcher to determine the order of entry of the variables. The hierarchical method is similar to stepwise regression and is an alternative to comparing betas for purposes of assessing the importance of the independents (Pedhazur, 1997).

Sums of the five subscales of the DDPPQ and the AAPPQ-R were used as the independent variables in separate analyses to measure the association of attitudes with the frequency and confidence dependent variables. The rationale for entering the subscales individually into the analysis was to gain more detailed data. The DDPPQ and the AAPPQ-R subscales were entered into the regression analyses in the following order as determined conceptually relevant with the factor determined to be the most important entered last. "Role adequacy" and "job satisfaction" were entered first followed by "role support" and "role legitimacy" with "role-related self-esteem" entered last.

Factor-derived scale scores were used to represent the independent variables in the multiple regression analyses. Factor-derived scale scores were used instead of factor

scores given the many issues cited by Grice (2001) and McDonald and Mulaik (1979) relating to the use of factor scores. For example, variance of the predictor scores were computed prior to the regression analyses. The variance was found to be consistent across variables, therefore, it was considered appropriate to proceed with data analysis and the use of factor-derived scales scores.

Lastly, the analytic strategy for conducting the regression analyses for research questions two and three will be discussed (see Table 10 and 11 for a summary). Research questions two and three (i.e., association of attitudes counseling individuals with SUDs with frequency of providing substance abuse screenings and referrals and association of attitudes counseling individuals with SUDs with perceived confidence of providing substance abuse screenings and referrals) have the same analytic strategy and will be discussed concurrently. In contrast, these research questions have two categories (i.e., substance abuse screenings and substance abuse referrals) which will be discussed separately. In the first category, “frequency of providing substance abuse screenings” and “perceived confidence of providing substance abuse screenings” each has three dependent variables which are contingent on the first variable (see Table 10 for a summary). If the first variable had not been found significant there would have been no need to analyze the second and third variables. The first variable for research questions two and three were found significant with the DDPPQ and the AAPPQ-R subscales; therefore the second and third variables were analyzed in the regression analyses. These dependent variables were not combined together into a scale because of the contingent nature of the variables. Analyzing items into a scale would force each item to contribute additively to the final score when each item does not additively contribute given their

dependent quality. See D’Onofrio et al. (2002) and Christensen et al. (2004) as examples of research studies that did not combine these dependent variables together into a scale.

In the second category, “frequency of providing substance abuse referrals” and “perceived confidence of providing substance abuse referrals” each has only one dependent variable (see Table 11 for a summary).

Table 10

Analytic Strategy for Substance Abuse Screening Dependent Variables

Research Question Two: Association of attitudes toward counseling individuals with SUDs with frequency of providing substance abuse screenings

Dependent variables 2 and 3 are contingent on variable 1

- 1) How often do you ask clients about alcohol or other drug use or abuse problems?
- 2) How often do you ask clients about quantity and frequency of use of alcohol or other drugs?
- 3) How often do you formally screen clients for alcohol or other drug abuse problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI?

Research Question Three: Association of attitudes toward counseling individuals with SUDs with perceived confidence of providing substance abuse screenings

Dependent variables 2 and 3 are contingent on variable 1

- 1) I am confident in my ability to ask clients about their alcohol or other drug use or abuse problems.

2) I am confident in my ability to ask client about quantity and frequency of their use of alcohol or other drugs.

3) I am confident in my ability to formally screen clients for alcohol or other drug problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI.

Table 11

Analytic Strategy for Substance Abuse Referral Dependent Variables

Research Question Two: Association of attitudes counseling individuals with SUDs with frequency of providing substance abuse referrals

Dependent Variable

1) How often do you refer clients with alcohol or other drug abuse problems for further assessments/intervention?

Research Question Three: Association of attitudes counseling individuals with SUDs with perceived confidence of providing substance abuse referrals

Dependent variable

1) I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.

CHAPTER IV: RESULTS

This chapter begins with descriptive statistics of the independent and dependent variables which addresses research question one. See Appendix J for the correlation matrixes of the DDPPQ and AAPPQ-R subscales. All of the subscales are significantly correlated ($p < .01$). See Appendixes K through R for correlation tables of the DDPPQ and AAPPQ subscales and the dependent variables. All the correlation tables show significant correlations ($p < .01$). Lastly, the chapter presents results of the hierarchical regression analyses which address research questions two and three.

Descriptive Statistics

Research Question 1

Research Question 1: *What are CRCs' attitudes toward counseling individuals with SUDs?* was assessed with descriptive analyses of the DDPPQ and the AAPPQ-R subscales. Mean, standard deviation, and range were calculated for each of the five subscales to determine CRCs' attitudes toward counseling individuals with SUDs. The descriptive statistics of the DDPPQ subscales are presented in Table 12 and the descriptive statistics of the AAPPQ-R subscales are presented in Table 13. The results indicate a positively skewed distribution of scores, with scores tending toward the lower end of the seven-point Likert-type scale of the DDPPQ and AAPPQ-R subscales. Low scores denote positive attitudes toward counseling individuals with problems with drug and alcohol use. Therefore, the positively skewed scores indicate the sample has a somewhat positive attitude toward counseling individuals with problems with drug and alcohol use. The subscale "role legitimacy" indicates the most positive attitude toward counseling individuals with problems with drug and alcohol use ($M = 2.25$ and 2.19 ,

respectively) with the subscale “job satisfaction” indicating a more neutral score ($M = 3.22$ and 3.20 , respectively). All of the DDPPQ and the AAPPQ-R subscale scores range from 1-7 except for “role-related self-esteem” which ranged from 1-6 on a seven-point Likert-type scale.

Table 12

Descriptive Statistics of DDPPQ Subscales

Statistics	Subscales				
	Role Adequacy	Role-Related Self-Esteem	Role Support	Role Legitimacy	Job Satisfaction
Mean	2.88	2.74	2.46	2.25	3.22
Standard Deviation	1.23	1.11	1.27	1.04	1.06

Table 13

Descriptive Statistics of AAPPQ-R Subscales

Statistics	Subscales				
	Role Adequacy	Role-Related Self-Esteem	Role Support	Role Legitimacy	Job Satisfaction
Mean	2.77	2.60	2.42	2.19	3.20
Standard Deviation	1.17	1.03	1.22	1.05	1.01

The mean, standard deviation, and range were also calculated for each of the dependent variables. The descriptive statistics for the frequency of providing alcohol and

drug screenings and referrals are presented in Table 14 and the descriptive statistics for the perceived confidence of providing alcohol and drug screenings and referrals are presented in Table 15. The results indicate a negatively skewed distribution of scores, with scores tending toward the upper end of the five-point Likert-type scale for all of the dependent variables except for frequency and perceived confidence of providing formal alcohol and drug screenings. High scores denote a high frequency and confidence of screening and referring individuals for SUDs. Therefore, the negatively skewed scores indicate the sample has a somewhat high frequency and confidence of screening and referring individuals for SUDs. With respect to the frequency of dependent variables, frequency asking about alcohol and drug use problems had the highest mean score ($M = 3.94$) and frequency providing formal alcohol and drug screenings had the lowest mean score ($M = 1.65$). With respect to the confidence dependent variables, confidence providing alcohol and drug referrals had the highest mean score ($M = 4.16$) and confidence providing formal alcohol and drug screenings had the lowest mean score ($M =$ Table 14

Descriptive Statistics for Frequency of Providing Alcohol/Drug Screenings/Referrals

Statistics	Frequency Questions			
	Frequency Asking about Alcohol/Drug Use Problems	Frequency Asking about Quantity/Frequency of Use	Frequency Providing Formal Alcohol/Drug Screenings	Frequency Providing Alcohol/Drug Referrals
Mean	3.94	3.70	1.65	3.22
Standard Deviation	1.16	1.21	1.01	1.22

Table 15

Descriptive Statistics for Confidence of Providing Alcohol/Drug Screenings/Referrals

Statistics	Confidence Statements			
	Confidence Asking about Alcohol/Drug Use Problems	Confidence Asking about Quantity/Frequency of Use	Confidence Providing Formal Alcohol/Drug Screenings	Confidence Providing Alcohol/Drug Referrals
Mean	4.12	4.13	2.31	4.16
Standard Deviation	0.97	0.96	1.35	1.02

2.31). All of the dependent variables ranged from 1-4 on a five-point Likert-type scale.

Before addressing research questions two and three, linear regression analyses were conducted to determine if any of the demographic or background factors influence drug and/or alcohol attitudes toward counseling individuals with SUDs. Those factors that were found significant at a threshold of $p < .0001$ were entered as control variable(s) in the hierarchical regression analyses. A threshold of $p < .0001$ was used to be mindful of Type I error since multiple analyses were conducted.

Three of the background variables achieved significance indicating some influence on drug and/or drug attitudes toward counseling individuals with SUDs. The background variable hours of substance abuse training resulted in significance at or above the threshold with a subscale of the AAPPQ-R. Specifically, hours of substance abuse training was associated with the AAPPQ-R subscale “role adequacy” ($p = .000$). Given these results, hours of substance abuse training was controlled for in hierarchical multiple regression analyses in research questions two and three regarding associations of alcohol

attitudes. In addition, two other background variables were found significant ($p = .004$) when assessed with subscales of the DDPPQ. Years of substance abuse experience was associated with the DDPPQ subscale “role adequacy” and the satisfaction with one’s current career was associated with the DDPPQ subscale “role legitimacy.” Since years of substance abuse experience and satisfaction with one’s current career were not significant at or above the threshold of $p < .0001$ these variables were not controlled for in the hierarchical regression analyses in research questions two and three.

Research Question 2

Research Question 2: *Are CRCs’ attitudes toward counseling individuals with SUDs associated with the frequency to which they screen and refer individuals with SUDs?* This research question was assessed by hierarchical multiple regression analyses to explore the degree to which CRCs’ frequency of providing substance abuse screenings and referrals are associated with their attitudes toward counseling individuals with SUDs. Sums of each of the five subscales of the DDPPQ and the AAPPQ-R were used as the independent variables in separate analyses to measure the association of attitudes with the dependent variables for frequency of providing substance abuse screenings and referrals. The DDPPQ and the AAPPQ-R subscales were entered hierarchically into the regression analyses in the following order as determined to be conceptually relevant with the factor determined to be the most important entered last. Therefore, “role adequacy” and “job satisfaction” were entered first, followed by “role support” and “role legitimacy,” and “role-related self-esteem” was entered last.

See Table 16 for a summary of the hierarchical analyses conducted for this research question. Eight hierarchical multiple regression analyses were conducted to

address this research question because there are three dependent variables which represent substance abuse screening practices and one which represents substance abuse referral practices and there are two set of independent variables for the subscales of the DDPPQ and the AAPPQ-R. Four analyses were conducted to address the association of attitudes toward counseling individuals with problems with drug use with frequency to which CRCs' screen and refer individuals with SUDs and four analyses were conducted to address the association of attitudes toward counseling individuals with problems with alcohol use with frequency to which CRCs' screen and refer individuals with SUDs. In regards to the analytic strategy, (see pages 52-53 for additional details) four analyses were required since the second and third dependent variables which represent substance abuse screening practices are dependent on variable one (i.e., How often do you ask clients about alcohol or other drug use or abuse problems?) which was found significant.

Table 16

Summary of Hierarchical Analyses for Research Question Two

Four hierarchical multiple regression analyses (i.e., association of DDPPQ subscales with frequency providing substance abuse screening/referral variables)

Independent Variables

DDPPQ subscale hierarchical ordered as follows:

- Step 1) "Role adequacy" and "job satisfaction"
- Step 2) "Role support" and "role legitimacy"
- Step 3) "Role-related self-esteem"

Dependent Variables

Three substance abuse screening variables:

- 1) How often do you ask clients about alcohol or other drug use or abuse problems?
- 2) How often do you ask clients about quantity and frequency of use of alcohol or other drugs?
- 3) How often do you formally screen clients for alcohol or other drug abuse problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI?

One substance abuse referral variable:

- 4) How often do you refer clients with alcohol or other drug abuse problems for further assessments or interventions?

Four hierarchical multiple regression analyses (i.e., association of AAPPQ-R subscales with frequency providing substance abuse screening/referral variables)

Independent Variables

AAPPQ-R subscale hierarchical ordered as follows:

- Step 1) Controlling variable (substance abuse training)
- Step 2) “Role adequacy” and “job satisfaction”
- Step 3) “Role support” and “role legitimacy”
- Step 4) “Role-related self-esteem”

Dependent Variables

Three substance abuse screening variables:

- 1) How often do you ask clients about alcohol or other drug use or abuse problems?

2) How often do you ask clients about quantity and frequency of use of alcohol or other drugs?

3) How often do you formally screen clients for alcohol or other drug abuse problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI?

One substance abuse referral variable:

4) How often do you refer clients with alcohol or other drug abuse problems for further assessments or interventions?

Results for Drug Use Problems. See Table 17 and 18 for the results of the hierarchical multiple regression analyses predicting CRCs' attitudes toward counseling individuals with problems with drug use with frequency to screen and refer individuals with SUDs. In Table 17, when the predictors "role adequacy" and "job satisfaction" were entered together in Step 1, they significantly predicted the three frequency-related dependent variables as indicated by R^2 ($R^2 = .09, .11, \text{ and } .11$, respectively, $p < .001$). These are medium effects accounting for only 9% of variance according to Cohen (1988). Only 9%, 11%, and 11%, respectively of the variance could be accounted for by these two variables. In Step 2 when other variables (i.e., "role support" and "role legitimacy") were added they improved the prediction in frequency of asking about alcohol and drug use problems and frequency of asking about quantity and frequency of use as indicated by R^2 change ($\Delta R^2 = .07 \text{ and } .06$, respectively, $p < .001$). These are considered medium effects according to Cohen (1988). A total of 16% and 17%, respectively of the variance could be accounted for by these additional two variables being added. In Step 3 when the

last variable (i.e., “role-related self-esteem”) was added, it did not significantly improve the prediction in any of the three dependent variables in this equation as indicated by R^2 change ($\Delta R^2 = .00$). However, the entire group of predictors (i.e., “role adequacy,” “job satisfaction,” “role support,” “role legitimacy,” and “role-related self-esteem”) significantly predicted the frequency-related dependent variables as indicated by R^2 ($R^2 = .16, .18, \text{ and } .11, p < .001$). These are considered large and medium effects respectively according to Cohen (1988).

Also in Table 17, the standardized beta coefficients suggested in Step 1 when entered with “job satisfaction,” “role adequacy” significantly contributes to predicting the three dependent frequency-related variables ($p < .001$). The standardized beta coefficients suggest in Step 2 when entered with “role support,” “role legitimacy” significantly contributes to predicting the frequency of asking about alcohol and drug use problems, and frequency of asking about quantity and frequency of use ($p < .001$).

Table 17

Hierarchical Multiple Regression Analyses Predicting Attitude toward Counseling Individuals with Problems with Drug Use from the Frequency of Screening Clients with SUDs

Predictor	Frequency Asking about Alcohol/Drug Use Problems		Frequency Asking about Quantity/Frequency of Use		Frequency Providing Formal Alcohol/Drug Screenings	
	ΔR^2	β	ΔR^2	β	ΔR	β
Step 1	.09**		.11**		.11**	
Role Adequacy		-.29**		-.32**		-.23**
Job Satisfaction		-.02		-.02		-.13*
Step 2	.07**		.06**		.01	
Role Support		-.03		-.05		-.01

Role Legitimacy		-.29**		-.28**		-.09
Step 3	.00		.00		.00	
Role-Related Self-Esteem		-.06		-.05		-.05
Total R ²	.16**		.18**		.11**	
n	642		643		643	

Note. * $p < .01$. ** $p < .001$.

Lastly, the standardized beta coefficients suggest in Step 3 when “role-related self-esteem” was added this variable did not significantly contribute to the model.

In Table 18, when the predictors “role adequacy” and “job satisfaction” were entered together in Step 1, they significantly predicted frequency of providing referrals as indicated by R^2 ($R^2 = .10, p < .001$). This is considered a medium effect according to Cohen (1988) accounting for 10% of the variance. In Step 2 when other variables (i.e., “role support,” and “role legitimacy”) were added, they improved the prediction in frequency of providing referrals as indicated by the R^2 change ($\Delta R^2 = .02, p < .001$). This is considered a small effect according to Cohen (1988) and 12%, of the variance could be accounted for by these additional two variables being added. In Step 3 when the last variable (i.e., “role-related self-esteem”) was added, it did not significantly improve the prediction of frequency providing referrals as indicated by the R^2 change ($\Delta R^2 = .00$). However, the entire group of variables (i.e., “role adequacy,” “job satisfaction,” “role support,” “role legitimacy,” and “role-related self-esteem”) significantly predicted frequency of providing referrals as indicated by R^2 ($R^2 = .12, p < .001$). This is considered a medium effect according to Cohen (1988).

Also, in Table 18, the standardized beta coefficients suggest in Step 1 when entered with “job satisfaction,” “role adequacy” significantly contributes to predicting

Table 18

Hierarchical Multiple Regression Analyses Predicting Attitude toward Counseling Individuals with Problems with Drug Use from the Frequency of Referring Clients with SUDs

Predictor	Frequency Providing Referrals	
	ΔR	β
Step 1	.10**	
Role Adequacy		-.29**
Job Satisfaction		-.03
Step 2	.02**	
Role Support		-.09
Role Legitimacy		-.13*
Step 3	.00	
Role-Related Self-Esteem		-.07
Total R ²	.12**	
n	644	

Note. * $p < .01$. ** $p < .001$.

frequency of providing referrals ($p < .001$). The standardized beta coefficients suggest in Step 2 when entered with “role support,” “role legitimacy” significantly contributes to predicting frequency of providing referrals ($p < .01$). Lastly, the standardized beta coefficients suggest in Step 3 when “role-related self-esteem” was added this variable did not significantly contribute to the model.

In summary, consistent results were found across the subscales of the DDPPQ in the hierarchical multiple regression analyses with many of the independent variables consistently predicting the dependent variables across the analyses (see Table 19 for a summary of the results). In Step 1 and 2, “role adequacy” and “role legitimacy” significantly contribute to predicting all of the frequency dependent variables except for

frequency providing formal alcohol and drug screenings. In Step 3, “role-related self-esteem” did not significantly contribute to predicting any of the frequency dependent variables. See Tables 20 and 21 for a summary of the effect sizes.

Table 19

Summary of Results of DDPPQ Associations for Research Question Two

Results of four hierarchical multiple regression analyses (i.e., association of DDPPQ subscales with frequency providing substance abuse screening/referral variables)

“Role adequacy” and “role legitimacy” of the DDPPQ subscales were significant in predicting dependent variables 1, 2, and 4:

Independent Variables

Step 1) “Role adequacy”

Step 2) “Role legitimacy”

Dependent Variables

Substance abuse screening variables:

- 1) How often do you ask clients about alcohol or other drug use or abuse problems?
- 2) How often do you ask clients about quantity and frequency of use of alcohol or other drugs?

Substance abuse referral variable:

- 4) How often do you refer clients with alcohol or other drug abuse problems for further assessments or interventions?

“Role-related self-esteem” of the DDPPQ subscales was not significant in predicting any of the dependent variables:

Independent Variables

Step 3) “Role-related self-esteem”

Dependent Variables

None

Table 20

Summary of Effect Sizes of DDPPQ Associations for Research Question Two Screening Questions

Predictor	Frequency Asking about Alcohol/Drug Use Problems	Frequency Asking about Quantity/ Frequency of Use	Frequency Providing Formal Alcohol/Drug Screenings
	ES	ES	ES
Step 1 Role Adequacy Job Satisfaction	Medium	Medium	Medium
Step 2 Role Support Role Legitimacy	Medium	Medium	Non Significant
Step 3 Role-Related Self-Esteem	Non Significant	Non Significant	Non Significant

Table 21

Summary of Effect Sizes of DDPPQ Associations for Research Question Two Referral Question

Predictor	Frequency Providing Referrals
Step 1	Medium
Role Adequacy	
Job Satisfaction	
Step 2	Small
Role Support	
Role Legitimacy	
Step 3	Non Significant
Role-Related Self-Esteem	

Results for Alcohol Use Problems. Results of linear regression analyses indicate that substance abuse training was the only background factor that had an influence on alcohol attitudes toward counseling individuals with SUDs. Substance abuse training was found to be significant at a threshold of $p < .0001$. A threshold of $p < .0001$ was used to be mindful of Type I error since multiple analyses were conducted. Specifically, hours of substance abuse training was associated with the AAPPQ-R subscale “role adequacy” ($p = .000$). Given these results, substance abuse training was controlled for in the hierarchical multiple regression analyses addressing research question two regarding associations with alcohol attitudes.

See Table 22 and 23 for the results of the hierarchical multiple regression analyses predicting attitudes toward counseling individuals with problems with alcohol use with frequency to screen and refer individuals with SUDs. In Table 22, when the

predictors “role adequacy” and “job satisfaction” were entered together in Step 2 controlled for by substance abuse training in Step 1, they significantly predicted all three of the dependent variables as indicated by R^2 ($R^2 = .05, .06, \text{ and } .05$, respectively, $p < .001$). These are small and medium effects according to Cohen (1988). Ten percent, 11%, and 12%, respectively of the variance could be accounted for by these two variables controlled for by substance abuse training. In Step 3, when other variables (i.e., “role support” and “role legitimacy”) were added, they improved the prediction in frequency of asking about alcohol and drug use problems and frequency of asking about quantity and frequency of use as indicated by the R^2 change ($\Delta R^2 = .08 \text{ and } .08$, $p < .001$). These are considered medium effects according to Cohen (1988). A total of 18% and 19%, respectively of the variance could be accounted for by these additional two variables. When the last variable (i.e., “role-related self-esteem”) was added, it did not significantly improve the prediction in frequency of asking about alcohol and drug use problems, frequency of asking about quantity and frequency of use, or frequency of providing formal screenings as indicated by the R^2 change ($\Delta R^2 = .00, .00, \text{ and } .00$, respectively). However, the entire group of variables (i.e., “role adequacy,” “job satisfaction,” “role support,” “role legitimacy,” and “role-related self-esteem”) significantly predicted frequency of all three of the dependent variables on frequency as indicated by R^2 ($R^2 = .18, .19, \text{ and } .14$, $p < .001$). These are considered large effects according to Cohen (1988).

Also in Table 22, the standardized beta coefficients suggest in Step 2 when entered with “job satisfaction” and controlled by substance abuse training, “role

adequacy” significantly contributes to the three dependent variables ($p < .001$). In addition, “job satisfaction” significantly contributes to predicting frequency of providing formal screenings ($p < .05$). The standardized beta coefficients suggest in Step 3 when entered with “role support,” “role legitimacy” significantly contributes to predicting the frequency of all three dependent variables ($p < .001$ and $p < .05$, respectively). The standardized beta coefficients suggest in Step 4 when “role-related self-esteem” was

Table 22

Hierarchical Multiple Regression Analyses Predicting Attitude toward Counseling Individuals with Problems with Alcohol Use from the Frequency of Screening Clients with SUDs

Predictor	Frequency Asking about Alcohol/Drug Use Problems		Frequency Asking about Quantity/Frequency of Use		Frequency Providing Formal Alcohol/Drug Screenings	
	ΔR^2	β	ΔR^2	β	ΔR	β
Step 1						
Controlling Variable (Substance Abuse Training)	.05**		.05**		.07**	
Step 2	.05**		.06**		.05**	
Role Adequacy		-.23**		-.24**		-.19**
Job Satisfaction		-.04		-.05		-.10*
Step 3	.08**		.08**		.01	
Role Support		-.03		-.01		-.02
Role Legitimacy		-.33**		-.33**		-.09*
Step 4	.00		.00		.00	
Role-Related Self-Esteem		.01		-.01		.09
Total R ²	.18**		.19**		.14**	
n	648		647		648	

Note. * $p < .05$. ** $p < .001$.

added this variable did not significantly contribute to the model.

In Table 23, when the predictors “role adequacy” and “job satisfaction” were entered together in Step 2 controlled by substance abuse training in Step 1, they significantly predicted frequency providing referrals as indicated by R^2 ($R^2 = .04$, $p < .001$). This is considered a small effect according to Cohen (1988), explaining only 4% of the variance. In Step 3 when other variables (i.e., role support and role legitimacy) were added, they improved the prediction frequency providing referrals as indicated by the R^2 change ($\Delta R^2 = .04$, $p < .001$), a small effect accounting for 8% of the variance. In Step 4 when the last variable (i.e., “role-related self-esteem”) was added, it did not significantly improve the prediction in frequency providing referrals as indicated by the R^2 change ($\Delta R^2 = .00$). However, the entire group of variables (i.e., “role adequacy,” “job satisfaction,” “role support,” “role legitimacy,” and “role-related self-esteem”) significantly predicted frequency providing referrals as indicated by R^2 ($R^2 = .14$, $p < .001$). This is considered a large effect size according to Cohen (1988).

Also in Table 23, the standardized beta coefficients suggest in Step 2 when entered with “job satisfaction” and controlled for by substance abuse training, role adequacy significantly contributes to predicting frequency of providing referrals ($p < .001$). The standardized beta coefficients suggest in Step 3 when entered with “role support,” “role legitimacy” significantly contributes to predicting frequency of providing referrals ($p < .001$). The standardized beta coefficients suggest in Step 4 when “role-related self-esteem” was added this variable did not significantly contribute to the model.

Table 23

Hierarchical Multiple Regression Analysis Predicting Attitude toward Counseling Individuals with Problems with Alcohol Use from the Frequency of Referring Clients with SUDs

Predictor	Frequency Providing Referrals	
	ΔR	β
Step 1		
Controlling Variable (Substance Abuse Training)	.05*	
Step 2	.04*	
Role Adequacy		-.20*
Job Satisfaction		-.05
Step 3	.04*	
Role Support		-.07
Role Legitimacy		-.20*
Step 4	.00	
Role-Related Self-Esteem		-.04
Total R ²	.14*	
n	649	

Note. * $p < .001$.

In summary, consistent results were found across the subscales of the AAPPQ-R in the hierarchical multiple regression analyses with many of the same predictors consistently predicting the dependent variables across the analyses (see Table 24 for a summary of the results). In Step 2 and 3, “role adequacy” and “role legitimacy” significantly contribute to predicting all of the frequency dependent variables. In addition, “job satisfaction” significantly contributes to predicting frequency of providing formal screenings. In Step 4, “role-related self-esteem” did not significantly contribute to predicting any of the frequency dependent variables. See Tables 25 and 26 for a summary of the effect sizes.

Table 24

Summary of Results of AAPPQ-R Associations for Research Question Two

Results of four hierarchical multiple regression analyses (i.e., association of AAPPQ-R subscales with frequency providing substance abuse screening/referral variables)

“Role adequacy” and “role legitimacy” of the AAPPQ-R subscales were significant in predicting dependent variables 1, 2, 3, and 4:

Independent Variables

Step 2) “Role adequacy”

Step 3) “Role legitimacy”

Dependent VariablesSubstance abuse screening variables:

- 1) How often do you ask clients about alcohol or other drug use or abuse problems?
- 2) How often do you ask clients about quantity and frequency of use of alcohol or other drugs?
- 3) How often do you formally screen clients for alcohol or other drug abuse problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI?

Substance abuse referral variable:

- 4) How often do you refer clients with alcohol or other drug abuse problems for further assessments or interventions?

“Job Satisfaction” of the AAPPQ-R subscales was significant in predicting dependent variable 3:

Independent Variable

Step 2) “Job satisfaction”

Dependent Variable

Substance abuse screening variable:

3) How often do you formally screen clients for alcohol or other drug abuse problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI?

“Role-related self-esteem” of the AAPPQ-R subscales was not significant in predicting any of the dependent variables:

Independent Variables

Step 4) “Role-related self-esteem”

Dependent Variables

None

Table 25

Summary of Effect Sizes of AAPPQ-R Associations for Research Question Two Screening Questions

Predictor	Frequency Asking about Alcohol/Drug Use Problems	Frequency Asking about Quantity/Frequency of Use	Frequency Providing Formal Alcohol/Drug Screenings
	ES	ES	ES
Step 1 Controlling Variable (Substance Abuse Training)			
Step 2 Role Adequacy Job Satisfaction	Small	Medium	Small
Step 3 Role Support Role Legitimacy	Medium	Medium	Non Significant
Step 4 Role-Related Self-Esteem	Non Significant	Non Significant	Non Significant

Table 26

Summary of Effect Sizes of AAPPQ-R Associations for Research Question Two Referral Question

Predictor	Frequency Providing Referrals
	ES
Step 1 Controlling Variable (Substance Abuse Training)	
Step 2 Role Adequacy Job Satisfaction	Small
Step 3	Small

Role Support	
Role Legitimacy	
Step 4	Non Significant
Role-Related Self-Esteem	

Research Question 3

Research Question 3: *Are CRCs' attitudes toward counseling individuals with SUDs associated with their perceived level of confidence to provide substance abuse screenings and referrals?* was assessed by hierarchical multiple regression analyses to explore the degree to which CRCs' perceived competency to provide substance abuse screenings and referrals are associated with their attitudes toward counseling individuals with SUDs. Similar to research question two, sums of each of the five subscales of the DDPPQ and the AAPPQ-R were used as the independent variables in separate analyses to measure the association of attitudes with the dependent variables for perceived confidence of providing substance abuse screenings and referrals. The DDPPQ and the AAPPQ-R subscales were entered hierarchical into the regression analyses in the following order as determined conceptually relevant with the factor determined to be the most important entered last. Therefore, "role adequacy" and "job satisfaction" were entered first, followed by "role support" and "role legitimacy," and "role-related self-esteem" was entered last.

See Table 27 for a summary of the hierarchical analyses conducted for this research question. Eight hierarchical multiple regression analyses were conducted to address the third research question because there are three dependent variables which represent substance abuse screening practices and one which represents substance abuse referral practices and there are two set of independent variables for the subscales of the

DDPPQ and the AAPPQ-R. Four analyses were conducted to address the association of attitudes toward counseling individuals with problems with drug use with perceived confidence to which CRCs' screen and refer individuals with SUDs and four analyses were conducted to address the association of attitudes toward counseling individuals with problems with alcohol use with perceived confidence to which CRCs' screen and refer individuals with SUDs. In regards to the analytic strategy, (see pages 52-53 for additional details) four analyses were required since the second and third dependent variables which represent substance abuse screening practices are dependent on the first variable and because variable one was found significant, variables two and three were also analyzed.

Table 27

Summary of Hierarchical Analyses for Research Question Three

Four hierarchical multiple regression analyses (i.e., association of DDPPQ subscales with perceived confidence providing substance abuse screening/referral variables)

Independent Variables

DDPPQ subscale hierarchical ordered as follows:

Step 1) "Role adequacy" and "job satisfaction"

Step 2) "Role support" and "role legitimacy"

Step 3) "Role-related self-esteem"

Dependent Variables

Three substance abuse screening variables:

1) I am confident in my ability to ask clients about their alcohol or other drug use or abuse problems.

2) I am confident in my ability to ask client about quantity and frequency of their use of alcohol or other drugs.

3) I am confident in my ability to formally screen clients for alcohol or other drug problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI.

One substance abuse referral variable:

4) I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.

Four hierarchical multiple regression analyses (i.e., association of AAPPQ-R subscales with perceived confidence providing substance abuse screening/referral variables)

Independent Variables

AAPPQ-R subscale hierarchical ordered as follows:

Step 1 Controlling variable (substance abuse training)

Step 2) “Role adequacy” and “job satisfaction”

Step 3) “Role support” and “role legitimacy”

Step 4) “Role-related self-esteem”

Dependent Variables

Three substance abuse screening variables:

1) I am confident in my ability to ask clients about their alcohol or other drug use or abuse problems.

2) I am confident in my ability to ask client about quantity and frequency of their use of alcohol or other drugs.

3) I am confident in my ability to formally screen clients for alcohol or other drug problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI.

One substance abuse referral variable:

4) I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.

Results for Drug Use Problems. See Table 28 and 29 for the results of the hierarchical multiple regression analyses predicting attitudes toward counseling individuals with problems with drug use with confidence to screen and refer individuals with SUDs. In Table 28, when the predictors “role adequacy” and “job satisfaction” were entered together in Step 1, they significantly predicted all three of the confidence dependent variables as indicated by R^2 ($R^2 = .34, .32, \text{ and } .23$, respectively, $p < .001$). These are considered large effects according to Cohen (1988). Thirty-four percent, 32%, and 23%, respectively of the variance could be accounted for by these two variables. In Step 2 when other variables (i.e., “role support” and “role legitimacy”) were added, they improved the prediction in the three dependent variables as indicated by the R^2 change ($\Delta R^2 = .07, .08, \text{ and } .01$, $p < .001$). These are considered medium and small effects respectively according to Cohen (1988). A total of 41%, 40%, and 24%, respectively of the variance could be accounted for by these additional two variables. In Step 3 when the last variable (i.e., “role-related self-esteem”) was added, it slightly improved the prediction in confidence asking about alcohol and drug use problems and confidence asking about quantity and frequency of use as indicated by the R^2 change ($\Delta R^2 = .01$ and

.01, $p < .001$ and $p < .01$, respectively). These are considered small effects according to Cohen (1988). However, the entire group of variables (i.e., “role adequacy,” “job satisfaction,” “role support,” “role legitimacy,” and “role-related self-esteem”) significantly predicted confidence in the three dependent variables related to confidence as indicated by R^2 ($R^2 = .42, .41, \text{ and } .24, p < .001$).

Also in Table 28, the standardized beta coefficients suggest in Step 1 when entered with “job satisfaction,” “role adequacy” significantly contributes to predicting the three dependent variables in this analysis ($p < .001$). In addition, “job satisfaction” significantly contributed to predicting confidence providing formal screenings ($p < .001$). The standardized beta coefficients suggest in Step 2 when entered with “role support,” “role legitimacy” significantly contributes to predicting the three dependent variables ($p < .001$ and $p < .05$, respectively). The standardized beta coefficients suggest in Step 3

Table 28

Hierarchical Multiple Regression Analyses Predicting Attitude toward Counseling Individuals with Problems with Drug Use from the Confidence of Screening Clients with SUDs

Predictor	Confidence Asking about Alcohol/Drug Use Problems		Confidence Asking about Quantity/Frequency of use		Confidence Providing Formal Alcohol/Drug Screenings	
	ΔR^2	β	ΔR^2	β	ΔR	β
Step 1	.34***		.32***		.23***	
Role Adequacy		-.57***		-.56***		-.34***
Job Satisfaction		-.01		-.02		-.19***
Step 2	.07***		.08***		.01***	
Role Support		-.06		-.07		-.01
Role Legitimacy		-.29***		-.31***		-.10*
Step 3	.01***		.01**		.00	

Role-Related Self-Esteem		-.16***		-.13**		-.06
Total R ²	.42***		.41***		.24***	
n	643		638		639	

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

when “role-related self-esteem” was added it significantly contributes to predicting confidence asking about alcohol and drug use problems and confidence asking about quantity and frequency of use ($p < .001$ and $p < .01$, respectively).

In Table 29, when the predictors “role adequacy” and “job satisfaction” were entered together in Step 1, they significantly predicted confidence of providing referrals as indicated by R^2 ($R^2 = .26$, $p < .001$), a large effect. Twenty-six percent of the variance could be accounted for by these two variables. In Step 2 when other variables (i.e., “role support” and “role legitimacy”) were added, they improved the prediction of confidence providing referrals as indicated by the R^2 change ($\Delta R^2 = .07$, $p < .001$), considered a medium size effect. A total of 33% of the variance could be accounted for by these additional two variables. In Step 3 when the last variable (i.e., “role-related self-esteem”) was added, it slightly improved the prediction of confidence providing referrals as indicated by the R^2 change ($\Delta R^2 = .01$, $p < .001$). The entire group of variables (i.e., “role adequacy,” “job satisfaction,” “role support,” “role legitimacy,” and “role-related self-esteem”) significantly predicted confidence of providing referrals as indicated by R^2 ($R^2 = .34$, $p < .001$), a large effect size.

Also in Table 29, the standardized beta coefficients suggest in Step 1 when entered with “job satisfaction,” “role adequacy” significantly contributes to predicting confidence providing referrals ($p < .001$). The standardized beta coefficients suggest in Step 2 that “role support” and “role legitimacy” significantly contributes to predicting

confidence providing referrals ($p < .001$). The standardized beta coefficients suggest in Step 3 when “role-related self-esteem” was added it significantly contributes to predicting confidence providing referrals ($p < .001$).

Table 29

Hierarchical Multiple Regression Analyses Predicting Attitude toward Counseling Individuals with Problems with Drug Use from the Confidence of Referring Clients with SUDs

Predictor	Confidence Providing Referrals	
	ΔR	β
Step 1	.26*	
Role Adequacy		-.46*
Job Satisfaction		-.07
Step 2	.07*	
Role Support		-.22*
Role Legitimacy		-.16*
Step 3	.01*	
Role-Related Self-Esteem		-.16*
Total R ²	.34*	
n	643	

Note. * $p < .001$.

In summary, consistent results were found across the subscales of the DDPPQ in the hierarchical multiple regression analyses with many of the same predictors consistently predicting the dependent variables across the analyses (see Table 30 for a summary of the results). In Step 1 and 2, “role adequacy” and “role legitimacy” significantly contribute to predicting all of the confidence dependent variables. In addition, “job satisfaction” significantly contributes to predicting confidence providing formal screenings and “role support” significantly contributes to predicting confidence

providing referrals. In Step 3, “role-related self-esteem” significantly contributes to predicting all of the confidence dependent variables expect for confidence of providing formal screenings. See Tables 31 and 32 for a summary of the effect sizes.

Table 30

Summary of Results of DDPPQ Associations for Research Question Three

Results of four hierarchical multiple regression analyses (i.e., association of DDPPQ subscales with perceived confidence providing substance abuse screening/referral variables)

“Role adequacy” and “role legitimacy” of the DDPPQ subscales were significant in predicting dependent variables 1, 2, 3, and 4:

Independent Variables

Step 1) “Role adequacy”

Step 2) “Role legitimacy”

Dependent Variables

Substance abuse screening variables:

- 1) I am confident in my ability to ask clients about their alcohol or other drug use or abuse problems.
- 2) I am confident in my ability to ask client about quantity and frequency of their use of alcohol or other drugs.
- 3) I am confident in my ability to formally screen clients for alcohol or other drug problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI.

Substance abuse referral variable:

4) I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.

“Job satisfaction” of the DDPPQ subscales was significant in predicting dependent variable 3:

Independent Variables

Step 1) “Job satisfaction”

Dependent VariablesSubstance abuse screening variables:

3) I am confident in my ability to formally screen clients for alcohol or other drug problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI.

“Role support” of the DDPPQ subscales was significant in predicting dependent variable 4:

Independent Variables

Step 1) “Role support”

Dependent VariablesSubstance abuse referral variable:

4) I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.

“Role-related self-esteem” of the DDPPQ subscales was significant in predicting dependent variables 1, 2, and 4:

Independent Variables

Step 3) “Role-related self-esteem”

Dependent Variables

Substance abuse screening variables:

- 1) I am confident in my ability to ask clients about their alcohol or other drug use or abuse problems.
- 2) I am confident in my ability to ask client about quantity and frequency of their use of alcohol or other drugs.

Substance abuse referral variable:

- 4) I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.

Table 31

Summary of Effect Sizes of DDPPQ Associations for Research Question Three Screening Questions

	Confidence Asking about Alcohol/Drug Use Problems	Confidence Asking about Quantity/Frequency of use	Confidence Providing Formal Alcohol/Drug Screenings
Predictor	ES	ES	ES
Step 1 Role Adequacy	Large	Large	Large

Job Satisfaction			
Step 2	Medium	Medium	Small
Role Support			
Role Legitimacy			
Step 3	Small	Small	Non Significant
Role-Related Self-Esteem			

Table 32

Summary of Effect Sizes of DDPPQ Associations for Research Question Three Referral Question

Predictor	Confidence Providing Referrals
	ES
Step 1	Large
Role Adequacy	
Job Satisfaction	
Step 2	Medium
Role Support	
Role Legitimacy	
Step 3	Small
Role-Related Self-Esteem	

Results for Alcohol Use Problems. Results of linear regression analyses indicate that substance abuse training was the only background factor that has an influence on alcohol attitudes toward counseling individuals with SUDs. Substance abuse training was found to be significant at a threshold of $p < .0001$. A threshold of $p < .0001$ was used to be mindful of Type I error since multiple analyses were conducted. Specifically, hours of substance abuse training was associated with the AAPPQ-R subscale role adequacy ($p = .000$). Given these results, substance abuse training was controlled for in

the hierarchical multiple regressions analyses addressing research question three regarding associations of alcohol attitudes.

See Table 33 and 34 for the results the hierarchical multiple regression analyses predicting attitudes toward counseling individuals with alcohol use problems with confidence to screen and refer individuals with problems with alcohol use. In Table 33, when the predictors “role adequacy” and “job satisfaction” were entered together in Step 2 controlled by substance abuse training in Step 1, they significantly predicted all three of the confidence dependent variables as indicated by R^2 ($R^2 = .23, .24, \text{ and } .12$, respectively, $p < .001$). Thirty-five percent, 34%, and 28%, respectively of the variance could be accounted for by these two variables controlled for by substance abuse training. In Step 3 when other variables (i.e., “role support” and “role legitimacy”) were added, they improved the prediction in confidence asking about alcohol and drug use problems and confidence asking about quantity and frequency of use as indicated by the R^2 change ($\Delta R^2 = .07 \text{ and } .09, p < .001$). A total of 42% and 43%, respectively of the variance could be accounted for by these additional two variables. In Step 4 when the last variable (i.e., “role-related self-esteem”) was added, it slightly improved the prediction in confidence asking about alcohol and drug use problems and confidence asking about quantity and frequency of use as indicated by the R^2 change = .02 and .01, $p < .001$. However, the entire group of variables (i.e., “role adequacy,” “job satisfaction,” “role support,” “role legitimacy,” and “role-related self-esteem”) significantly predicted the three dependent variables related to confidence as indicated by R^2 ($R^2 = .44, .44, \text{ and } .28, p < .001$).

Table 33

Hierarchical Multiple Regression Analyses Predicting Attitude toward Counseling Individuals with Problems with Alcohol Use from the Confidence of Screening Clients with SUDs

Predictor	Confidence Asking about Alcohol/Drug Use Problems		Confidence Asking about Quantity/Frequency of Use		Confidence Proving Formal Alcohol/Drug Screenings	
	ΔR^2	β	ΔR^2	β	ΔR	β
Step 1						
Controlling Variable (Substance Abuse Training)	.12**		.10**		.16**	
Step 2	.23**		.24**		.12**	
Role Adequacy		-.53**		-.54**		-.31**
Job Satisfaction		-.02		-.03		-.12*
Step 3	.07**		.09**		.00	
Role Support		-.04		-.04		-.01
Role Legitimacy		-.30**		-.32**		-.07
Step 4	.02**		.01**		.00	
Role-Related Self-Esteem		-.18**		-.15**		-.06
Total R ²	.44**		.44**		.28**	
n	647		645		643	

Note. * $p < .01$. ** $p < .001$.

Also in Table 33, the standardized beta coefficients suggest in Step 2 when entered with “job satisfaction” and controlled by substance abuse training, “role adequacy” significantly contributes to the three dependent variables ($p < .001$). In addition, “job satisfaction” significantly contributes to predicting confidence in providing formal screenings ($p < .01$). The standardized beta coefficients suggest in Step 3 when entered with “role support,” “role legitimacy” significantly contributes to predicting confidence asking about alcohol and drug use problems and confidence asking about quantity and frequency of use ($p < .001$). The standardized beta coefficients suggest in

Step 4 when “role-related self-esteem” was added it significantly contributed to predicting confidence asking about alcohol and drug use problems and confidence asking about quantity and frequency of use ($p < .001$).

In Table 34, when the predictors “role adequacy” and “job satisfaction” were entered together in Step 2 controlled by substance abuse training in Step 1, they significantly predicted confidence providing referrals as indicated by R^2 ($R^2 = .16, p < .001$). Sixteen percent of the variance could be accounted for by these two variables. In Step 3 when other variables (i.e., “role support” and “role legitimacy”) were added, they improved the prediction in confidence providing referrals as indicated by the R^2 change ($\Delta R^2 = .10, p < .001$). A total of 34%, respectively of the variance could be accounted for by these additional two variables being added. In Step 4 when the last variable (i.e., “role-related self-esteem”) was added, it slightly improved the prediction in confidence providing referrals as indicated by the R^2 change ($\Delta R^2 = .02, p < .001$). The entire group of variables (i.e., “role adequacy,” “job satisfaction,” “role support,” “role legitimacy,” and “role-related self-esteem”) significantly predicted confidence providing referrals as indicated by R^2 ($R^2 = .35, p < .001$).

Also in Table 34, the standardized beta coefficients suggest in Step 2 when entered with “job satisfaction” controlled by substance abuse training in Step 1, “role adequacy” significantly contributes to predicting confidence providing referrals ($p < .001$). The standardized beta coefficients suggest in Step 3 “role support” and “role

Table 34

Hierarchical Multiple Regression Analyses Predicting Attitude toward Counseling Individuals with Problems with Alcohol Use from the Confidence of Referring Clients with SUDs

Predictor	Confidence Providing Referrals	
	ΔR	β
Step 1	.08*	
Controlling Variable (Substance Abuse Training)		
Step 2	.16*	
Role Adequacy		-.42*
Job Satisfaction		-.06
Step 3	.10*	
Role Support		-.27*
Role Legitimacy		-.19*
Step 4	.02*	
Role-Related Self-Esteem		-.17*
Total R ²	.35*	
n	647	

Note. * $p < .001$.

legitimacy” significantly contributes to predicting confidence providing referrals ($p < .001$). The standardized beta coefficients suggest in Step 4 when “role-related self-esteem” was added it significantly contributes to predicting confidence providing referrals ($p < .001$).

In summary, consistent results were found across the subscales of the AAPPQ-R in the hierarchical multiple regression analyses with many of the same predictors consistently predicting the dependent variables across the analyses (see Table 35 for a summary of the results). In Step 2 and 3, “role adequacy” and “role legitimacy” significantly contribute to predicting all of the dependent variables except for confidence

providing formal screenings. “Job satisfaction” significantly contributes to predicting confidence providing formal screenings and role support significantly contributes to predicting confidence providing referrals. In Step 4, “role-related self-esteem” significantly contributes to predicting all of the dependent variables except for confidence providing formal screenings. See Tables 36 and 37 for a summary of the effect sizes.

Table 35

Summary of Results of AAPPQ-R Associations for Research Question Three

Results of four hierarchical multiple regression analyses (i.e., association of DDPPQ subscales with perceived confidence providing substance abuse screening/referral variables)

“Role adequacy” and “role legitimacy” of the AAPPQ-R subscales were significant in predicting dependent variables 1, 2, and 4:

Independent Variables

Step 2) “Role adequacy”

Step 3) “Role legitimacy”

Dependent Variables

Substance abuse screening variables:

- 1) I am confident in my ability to ask clients about their alcohol or other drug use or abuse problems.
- 2) I am confident in my ability to ask client about quantity and frequency of their use of alcohol or other drugs.

Substance abuse referral variable:

4) I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.

“Job satisfaction” of the AAPPQ-R subscales was significant in predicting dependent variable 3:

Independent Variables

Step 2) “Job satisfaction”

Dependent Variables

Substance abuse screening variables:

3) I am confident in my ability to formally screen clients for alcohol or other drug problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI.

“Role support” of the AAPPQ-R subscales was significant in predicting dependent variable 4:

Independent Variables

Step 1) “Role support”

Dependent Variables

Substance abuse referral variable:

4) I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.

“Role-related self-esteem” of the AAPPQ-R subscales was significant in predicting dependent variables 1, 2, and 4:

Independent Variables

Step 3) “Role-related self-esteem”

Dependent Variables

Substance abuse screening variables:

- 1) I am confident in my ability to ask clients about their alcohol or other drug use or abuse problems.
- 2) I am confident in my ability to ask client about quantity and frequency of their use of alcohol or other drugs.

Substance abuse referral variable:

- 4) I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.
-

Table 36

Summary of Effect Sizes of AAPPQ-R Associations for Research Question Three Screening Questions

Predictor	Confidence Asking about Alcohol/Drug Use Problems	Confidence Asking about Quantity/Frequency of Use	Confidence Proving Formal Alcohol/Drug Screenings
	ES	ES	ES
Step 1 Controlling Variable (Substance Abuse Training)			
Step 2 Role Adequacy Job Satisfaction	Large	Large	Medium
Step 3 Role Support Role Legitimacy	Medium	Medium	Non Significant
Step 4 Role-Related Self-Esteem	Small	Small	Non Significant

Table 37

Summary of Effect Sizes of AAPPQ-R Associations for Research Question Three Referral Question

Predictor	Confidence Providing Referrals
	ES
Step 1 Controlling Variable (Substance Abuse Training)	
Step 2 Role Adequacy Job Satisfaction	Large
Step 3	Medium

Role Support
Role Legitimacy
Step 4
Role-Related Self-Esteem

Small

CHAPTER V: DISCUSSION

The purpose of this research was to examine CRCs' attitudes toward counseling individuals with SUDs and the association of the frequency with which CRCs provide substance abuse screenings and referrals and their perceived confidence to provide substance abuse screenings and referrals. The first section of this chapter summarizes and discusses the key findings. Findings are also placed in the context of rehabilitation literature, discussing its consistency with past research and looking at possible reasons for any divergence from previous studies. Subsequent sections of the chapter discuss limitations of the study, applied implications, and suggestions for future research.

Summary and Interpretation of Results

One of the important findings of this study was that CRCs had somewhat positive attitudes toward individuals with SUDs, but that these attitudes did not necessarily translate into behaviors. CRCs' attitudes were associated with perceived confidence to provide substance abuse screenings and referrals, but not the frequency with which they provide substance abuse screenings and referrals.

Contrary to the major results, West and Miller (1999) found that VR counselors had somewhat negative attitudes toward counseling individuals with SUDs and had generally poor expectations regarding the effectiveness of counseling consumers with SUDs. An interpretation of the difference in results could be the time span between the two studies. Rehabilitation counselors over time may have gained more positive attitudes as a result of changes in the CORE guidelines, more visibility regarding medical explanations for substance abuse disorders, and even increased staff training (RRTC on Drugs and Disability, 2004). No prior research has examined the association of CRCs'

attitudes toward counseling individuals with SUDs with the frequency of and perceived confidence in providing substance abuse screenings and referrals. However, prior research with related outcomes indicate professionals who hold negative attitudes toward consumers with SUDs often overlook substance misuse and fail to refer consumers for substance abuse treatment (Chappel & Veach, 1987; Gregoire, 1994; Howard & Chung, 2000). Prior research shows that consumers with disabilities who have co-occurring SUDs are often not identified and do not consistently receive integrated substance abuse services (Christensen et al, 2004; Davis, 2005; Hergenrather & Rhodes, 2006; Toriello & Leierer, 2005).

A noteworthy result of the study is the difference between the associations of frequency of providing substance abuse screenings and referrals and perceived confidence to provide these services. The results indicated that attitudes are associated with perceived confidence to perform substance abuse screenings and referrals, but not with the frequency of performing these services. An interpretation of the results could simply be that self-efficacy and perceived confidence are similar constructs (i.e., correlation coefficients are significant at the 0.01 level and range between .36 and .46) which might account for the predictive power of “role-related self-esteem” on perceived confidence.

To rule out that participants’ lack of substance abuse experience was a confounding factor influencing the results, regression analyses were conducted including only CRCs who reported having substance abuse experience. Results indicate that there was an association between CRCs’ attitudes toward counseling individuals with drug use problems and frequency of providing substance abuse screenings, but not referrals. No

associations were found between CRCs' attitudes toward counseling individuals with alcohol use problems and frequency of providing substance abuse screenings or referrals. An interpretation of these results is that counselors are more likely to screen for drug abuse than alcohol abuse because of varying beliefs regarding drug use and alcohol use specific to the illegal status of drugs. Other factors that may impact substance abuse screening practices could be the legislative distinction of drug and alcohol abuse and policies regarding SUDs services in VR agencies which vary from state to state.

Surprising results of this study were the similarity of the association of attitudes toward counseling individuals with drug use problems compared to alcohol use problems. Similar results were found for frequency of providing substance abuse screenings and referrals and perceived confidence of providing these services regarding attitudes toward individuals with drug and alcohol problems. There is no research to support this result, but an interpretation could be the research design. The survey questions were redundant such that participants were given the same questions to answer regarding their attitudes toward counseling individuals with drug and alcohol problems. Since the questions were redundant participants may have tired and answered the drug and alcohol attitude questions similarly.

An association between Theory of Planned Behavior (TPB) and CRCs' attitudes toward counseling individuals with SUDs was not analyzed; however the results that were analyzed did not support this theory. It should be noted that TPB informed the research, but did not guide the study. To briefly summarize, TPB links behaviors and attitudes. The theory suggests that a person's behavior is a function of her or his beliefs

toward performing a particular action predicted by determinates of attitudes, subjective norms, and perceived behavioral control (Ajzen, 1988; Ajzen, 2001).

The next section will review additional results in more detail specific to the associations of CRCs' attitudes with the DDPPQ and AAPPQ-R subscales. A description of the subscales was reviewed in Table 6 on page 38. The results in the next section will be organized by effect size with the largest effects discussed first.

Results on "role adequacy" indicate that counselors who feel adequately prepared for their role view themselves as having appropriate substance abuse knowledge (operation definition) which contributes to the perceived confidence of providing substance abuse screenings and referrals. The effect sizes for "role adequacy" and the confidence items were large. An interpretation of these results is that when counselors are knowledgeable about providing substance abuse screening and referrals they are more confident in conducting these services. These results support the need for substance abuse training to increase counselors' knowledge and skills in conducting substance screenings and referrals. Prior literature supports the need for adequate substance abuse training for rehabilitation to augment rehabilitation outcomes (Cardoso et al., 2006; Chan et al., 2003; Ong et al., 2007; Tansey et al., 2004).

Results on "role legitimacy" indicate that the extent to which counselors regard particular aspects of their work as being their responsibility (operation definition) also contributes to the perceived confidence of providing substance abuse screenings and referrals. In addition, the results on "role support" indicate that the support which counselors acknowledge receiving from colleagues to help them to perform their role effectively (operation definition) contributes only to counselors' perceived confidence in

conducting substance abuse referrals, but not confidence in providing substance abuse screenings. Most of the effect sizes for “role legitimacy” and “role support” and the confidence variables were modest. Although there are no other studies to support these findings, it makes sense that counselors who feel they have the right to ask questions about consumers’ substance abuse problems would be more confident conducting substance abuse screenings and referrals. In addition, counselors who feel they have access to professional consultation would feel more confident in making substance abuse referrals.

Results on “role-related self-esteem” indicate that counselors’ self-efficacy in providing substance abuse screenings and referrals was not related to the frequency of providing substance abuse screenings and referrals, but was associated with counselors’ perceived confidence in providing these services. However, the effect sizes for “role-related self-esteem” and the confidence variables were small. There is no prior research to support these results; although an interpretation of these results is that confidence and self-efficacy are similar constructs as discussed earlier on page 96.

One background variable (i.e., hours of substance abuse training) was significantly associated with one of the subscales of the AAPPQ-R (i.e., “role adequacy”). Results indicate that the amount of substance abuse training impacts counselors’ knowledge of conducting substance abuse screenings and referrals which influences their attitudes toward counseling individuals with alcohol problems. An interpretation of these results is that increased substance abuse training enhances counselors’ attitudes toward providing substance abuse screenings and referrals in individuals with SUDs. Greater understanding of the addictive process may reduce the

counselors' stereotypical blame toward consumers with SUDs. These results are supported by prior research. West and Miller (1999) found that VR counselors who received substance abuse training had less moralistic attitudes and more positive treatment intervention attitudes. Dunston-McLee (2001) found that rehabilitation counselors with higher levels of co-occurring substance abuse training had somewhat more optimistic attitudes toward providing co-occurring counseling.

Limitations of the Study

This study had a number of methodological limitations that make it necessary to interpret the results with caution. Major limitations were related to concerns with the method, sample, and instrumentation.

The most significant limitation of this study was mono-method bias. This study used self-report variables to predict self-report measurements. A single measure was used to assess drug and alcohol attitudes (i.e., DDPPQ, AAPPQ-R) which may not provide sufficient evidence that attitudes were really measured. An alternative would have been to implement multiple measures of key constructs to demonstrate that the measure behaves as theoretically expected. For example, one could examine counselors' attitudes and its effect on treatment effectiveness.

Another limitation of this study was the response rate which yielded a smaller than expected sample size. The population utilized in this study was 16,002 CRCs. A sample size of 5,000 CRCs (approximately 30% of the population) was requested from CRCC. With undeliverable e-mails addresses taken into account, the sample size was reduced to 4,060. Given this revised sample size, a response rate of 18.8% was achieved.

An additional limitation of the study is that a nationally representative random sample of CRCs that were direct service providers was purchased from the Commission on Rehabilitation Counselor Certification (CRCC); however participants' job titles could not be guaranteed. Participants might have mis-represented themselves or had a job title change; therefore the accuracy of the purchased list could not be guaranteed. However, this researcher feels confident that the list primarily reflects the intended population.

A limitation related to the research sample is the study's external validity. Although this study used a nationally representative sample with random selection of participants which strengthened the generalizability of the findings, only individuals who are currently credentialed as CRCs were selected for the sample and; therefore, may not represent the beliefs of all rehabilitation counselors. Many rehabilitation counselors graduate with master's degrees from accredited programs, but practice rehabilitation counseling in agencies where the CRC credential is not expected or required. Thus, there may be many individuals who identify themselves as rehabilitation counselors and practice within the profession's scope of practice, but whose perceptions and experiences were not captured in this study. The implications of non-response bias must be considered when interpreting the results to practicing rehabilitation counselors who are not certified and were not included in this study. This study represents the perceptions of CRCs, not the profession of rehabilitation counseling in general.

The next limitation relates to the method of analyzing the dependent variables. There were several dependent variables used in the study which measured frequency and perceived confidence to providing substance abuse screenings and referrals. These items were not combined into a scale, but were analyzed separately. Combining these items

into a scale would have provided more robust results as it would have increased the length of the dependent variable scale and thus the overall reliability of the measure. However, the nature of the dependent variable scale limited the choice to combine the dependent variable items into one scale.

Another limitation of this study is related to the instrumentation and measurement of the participants' attitudes toward counseling individuals with SUDs and their frequency and perceived confidence in providing substance abuse screenings and referrals. Two of the three instruments used in this study lacked psychometric validation. The use of documented reliable and valid instruments with strong psychometric qualities could have improved the study.

The researcher revised the Alcohol and Alcohol Problem Perception Questionnaire-Revised (AAPPQ-R) for use in the current study by modifying the Drug and Drug Problem Perception Questionnaire (DDPPQ) developed by Watson et al. (2006) to measure practitioners' attitudes toward counseling individuals who have problems with drugs. The DDPPQ was developed as an adaptation of the original AAPPQ developed by Cartwright (1980). Watson et al. (2006) conducted an extensive evaluation of the psychometric properties of the DDPPQ by testing its construct validity, content validity, test-retest reliability, and internal consistency. The instrument was found to be a valid and reliable tool to measure practitioners' attitudes toward counseling individuals who have problems with drugs. The originally version of the AAPPQ by Cartwright (1980) was not used because the instrument was developed almost 30 years ago and was developed in a different cultural context (Richmond & Foster, 2003; Stein, 1999; Watson, et al., 2006).

Lastly, the Alcohol and Other Drugs Vocational Rehabilitation Counselor Survey (AOD-VRC; Christensen et al., 2004) was used to measure practitioners' frequency and perceived confidence in providing substance abuse screenings and referrals. The AOD-VRC was adapted for VR counselors from an instrument developed for emergency room nurses and physicians (D'Onofrio et al., 2002). Psychometric validation data has not been reported, to date, for the AOD-VRC or the original instrument developed by (D'Onofrio et al., 2002). This lack of psychometric testing creates some reliability and validity limitations. In addition, only part of the AOD-VRC (i.e., seven clinical practice questions on the frequency of providing substance abuse screenings and referrals and seven statements on perceived confidence of providing substance abuse screenings and referrals) was used in this study. No other studies have used only part of the survey; therefore effects on reliability and validity are unknown. The sections of the survey that were used in this study are questions and statements related to frequency in conducting specific tasks and perceived confidence in providing specific tasks not an evaluation of a concept or construct. Since these questions and statements of the AOD-VRC are not evaluating underlying and unobserved concepts or constructs prior evidence of psychometric validation is not deemed essential (Pedhazur & Schmelkin, 1991). The questions and statements of the AOD-VRC are independent of the other questions; therefore, internal consistency reliability is irrelevant. Test-retest reliability is the only form of reliability that would be relevant. In regards to validity, content and face validity would be important and it appears that these questions and statements of the AOD-VRC have both content and face validity. Construct validity would not be relevant because these questions and statements of AOD-VRC are not measuring constructs.

Implications of the Findings

The findings indicate that rehabilitation counseling training and service recommendations relevant to substance abuse counseling are needed. The findings have major implications for rehabilitation educators faced with unique challenges to prepare rehabilitation counseling students to provide comprehensive services, which include substance abuse screenings and referrals. Rehabilitation educators need to focus the curriculum on skill development to provide comprehensive services, which include substance abuse counseling. These findings are consistent with prior research which has shown that rehabilitation counselors and CRCs tend to lack adequate substance abuse counseling training (Cardoso et al., 2006; Chan et al., 2003; Emener et al., 2001; Lee et al., 2005; Ong et al., 2007; Tansey et al., 2004). For students to gain a full understanding of how to adequately provide comprehensive services that includes substance abuse counseling, RCE programs should consider incorporating substance abuse counseling across the entire curriculum rather than only provide a course or accept an elective from another academic department. For example, rehabilitation educators could incorporate assignments, case studies, and role plays throughout the curriculum to include skill development specific to consumers with co-occurring substance abuse and disabilities.

Lastly, results lead to recommendations for rehabilitation administrators on the need for universal policies and procedures in providing substance abuse screenings and referrals for all consumers. Prior research suggests that state VR agencies have varying agency policies on substance abuse treatment and subsequent counselor behavior and practices regarding whether to screen and refer VR clients for substance abuse are unclear. A national survey on state VR agencies demonstrated differences in substance

abuse policies, practice, and professional perceptions (Moore et al., 2008). Some of the differences across state VR agencies were: screening for SUDs, eligibility for treatment of SUDs, specialized versus non-specialized caseloads for SUDs, perceived success rates for addressing SUDs, order of selection, and sobriety waiting policies. This lack of universal practices across agencies is thought to interfere with rehabilitation counselors providing comprehensive services (Glenn & Keferl, 2008).

Directions for Future Research

The current research contributes to the knowledge base to better understand the association of CRCs' attitudes toward counseling individuals with SUDs with frequency and perceived confidence providing substance abuse screenings and referrals since no prior research has focused specifically on these aspects. Much of the prior research focuses on the relationship between substance abuse education and training levels on counselors' attitudes toward counseling individuals with SUDs. In prior studies conducted, knowledge levels were usually found to increase following an educational intervention (Amodeo, 2000; Richmond & Foster, 2003; Rerick, 1999), while attitude changes were somewhat inconsistent (Chappel & Veach, 1987; Dunston-McLee, 2001; Gregoire, 1994).

The results of this study suggest a number of directions for future research on substance abuse attitudes in rehabilitation counseling. Some of these areas emphasize outcome validation, explorations of contributing factors to substance abuse attitudes, additional data collection, and measurement validations. Each of these areas of research will be discussed next.

First, since the current study is exploratory with a limited foundation of research to build on, future research is needed to confirm the findings and to further validate that CRCs have somewhat positive attitudes toward counseling individuals with SUDs and that their attitudes are associated with perceived confidence of providing substance abuse screenings and referrals. Second, further explorations of the factors that contribute to attitudes toward counseling individuals with SUDs are needed. Additional exploration is required to better understand how these attitudes are formed and how to influence these attitudes other than via the use of substance abuse training as many prior studies have explored with mixed outcomes (Muldoon, 1998; Richmond & Foster, 2003; Stein, 1999, 203; West & Miller, 1999). For example, having contact (personal, professional) with individuals who have SUDs may influence attitudes, in addition to self-reflection of current beliefs through clinical supervision and awareness of skill development needs related to substance abuse counseling may also help influence attitudes. Furthermore, the use of a dependent variable, such as years of substance abuse experience or years of rehabilitation counseling experience instead of confidence could improve the research design since confidence is a perceived measure and hours of experience is a more objective measure. Additionally, the use of a behavioral observation of counselors' skill level could further provide a more objective measure to replace confidence as a dependent variable.

Lastly, reliable and valid instrumentation is required to further improve the research design and outcomes. Completing a similar study with measures of frequency and perceived confidence that have been standardized and examined for reliability and validity would improve the study. Additional research is needed to further examine the

drug and alcohol attitudes measures (i.e, DDPPQ, AAPPQ-R) to determine that these measures are valid and reliable instruments for the assessment of substance abuse attitudes with a CRC population. Further factor analysis is needed with a CRC population to determine if the subscales clearly reflect components of the theory of therapeutic commitment as the instruments were designed.

Summary

The purpose of this study was to assess the nature and extent of a nationally representative random sample of Certified Rehabilitation Counselors' (CRCs') attitudes toward counseling individuals with SUDs and their frequency and perceived confidence of providing substance abuse screenings and referrals. The study (a) explored attitudes of CRCs regarding counseling individuals with substance abuse disorders (SUDs); (b) examined whether CRCs' attitudes toward counseling individuals with SUDs are associated with their frequency in providing substance abuse screenings and referrals for individuals with SUDs; (c) determined if CRCs' attitudes toward counseling individuals with SUDs are associated with their perceived confidence in providing substance abuse screenings and referrals for individuals with SUDs.

The study participants were 764 CRCs who were direct service providers from multiple employment settings. Participants were recruited from an online survey sent to a national random selection of CRCs obtained from Commission on Rehabilitation Counselor Certification (CRCC) database. There was an 18.8% response rate.

Results indicated that this sample of CRCs have somewhat positive attitudes toward counseling individuals with SUDs. Results from this sample of CRCs show that there are associations between CRCs attitudes toward counseling individuals with drug use problems and alcohol use problems with perceived confidence in providing substance abuse screenings and referrals, but not with frequency of providing substance abuse interventions.

Appendix A

IRB Approval to Conduct the Study.




2100 Lee Building
 College Park, Maryland 20742-5125
 301.405.2412 TEL 301.314.1475 FAX
 irb@deans.umd.edu
 www.umresearch.umd.edu/IRB

April 07, 2009

MEMORANDUM

Application Approval Notification

To: Dr. Ellen Fabian
 Roe Rodgers
 Counseling and Personnel Services

From: Joseph M. Smith, MA, CIM 
 IRB Manager
 University of Maryland, College Park

Re: **IRB Application Number:** 09-0221
Project Title: "The Association of Certified Rehabilitation Counselors' Attitudes Toward Counseling Individuals With Substance Use Disorders With Their Frequency and Perceived Confidence of Providing Substance Abuse Screenings and Referrals"

Approval Date: April 07, 2009

Expiration Date: April 07, 2012

Type of Application: Initial

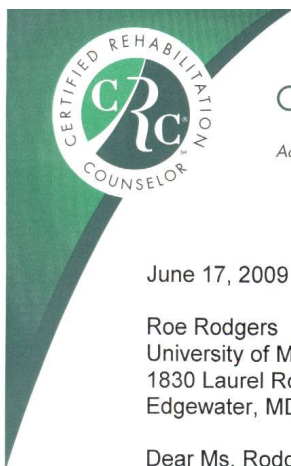
Type of Research: Exempt

Type of Review for Application: Exempt

The University of Maryland, College Park Institutional Review Board (IRB) approved your IRB application. The research was approved in accordance with the University IRB policies and procedures and 45 CFR 46, the Federal

Appendix B

CRCC Approval to Conduct the Study.



Commission on Rehabilitation Counselor Certification

Accredited by the National Commission for Certifying Agencies

June 17, 2009

Roe Rodgers
University of Maryland
1830 Laurel Road
Edgewater, MD 21037

Dear Ms. Rodgers:

The Examination and Research Committee of the Commission on Rehabilitation Counselor Certification (CRCC) reviewed your request for use of the CRC database to obtain a random sampling of email addresses for use in your research study. Please be advised that your request has been granted.

Please find enclosed a paper listing of the 5,000 random sample email addresses you requested. The electronic file will be forwarded to you via email. Please note that CRCC relies on its certificants to update their personal contact information, including email addresses. Therefore, CRCC cannot guarantee that the email addresses that we have provided from our database are current and deliverable.

Please be advised that your request has been approved. Further, please note that the Examination and Research Committee retains final authority to approve research proposals using information from its database and may rescind previous approvals at will. The principal investigators of any approved research study utilizing the CRCC database must submit a final draft of any planned publication based on this research to the Commission prior to submission for publication. At that time, the Commission will review the document to ensure that it meets the technical and scholarly standards of the Commission. The results of the published research shall be provided to the Commission without fee by the researching entity and presented to the Commission's Examination and Research Committee for review and cataloging.

Thank you for your application. We wish you the best of luck on your research study.

Very truly yours,

Susan A. Stark
Administrative Assistant

Encl.

Appendix C
Recruitment Letter

Date

Dear Certified Rehabilitation Counselor,

This is an invitation to participate in a research project designed to explore your attitudes toward working with individuals with substance use disorders associated with your frequency and perceived confidence in administering substance abuse screenings and referrals.

Data will be gathered from an online survey administered in Survey Monkey. The survey is divided in five sections: demographic questions, the frequency you provide substance abuse screenings and referrals, your perceived confidence in providing substance abuse screenings and referrals, your attitude toward working with individuals who have problems with alcohol, and your attitude toward working with individuals who have problems with drugs.

The survey should take approximately 10-15 minutes to complete. Participation is completely voluntary and anonymous. If you would like to participate in this research project, please click on the following link to access the consent form and the online survey. Please note that you will only be able to connect to the survey once.

http://www.surveymonkey.com/s.aspx?sm=LCvRiM_2fWHGz_2fb4brIj65xQ_3d_3d

Thank You,

Roe Rodgers, MS, CRC, NCC, LCADC
Doctoral Candidate
Counselor Education
Rehabilitation Counseling
University of Maryland, College Park

Appendix D

Survey

Attitudes, Frequency, and Confidence of Working with Individuals with Substance Use Disorders

The following thirteen questions will gather your demographic information. Please indicate your responses on the following multiple choice and fill in the blank questions.

1. What is your age?

2. What is your gender?

Female

Male

3. What race category(s) best describe you? Select all that apply.

American Indian or Alaska Native

Asian

Black or African American

Latino or Hispanic

Native Hawaiian or other Pacific Islanders

White

Other, please specify

4. What region of the country best describes where you are employed?

Northeast

Southeast

Midwest

Southwest

West

5. Which best describes your work setting?

Federal-state vocational rehabilitation agency

Private nonprofit rehabilitation agency

Private for profit rehabilitation agency

Insurance company

Medical center or hospital

Substance abuse agency

Mental health agency

Other, please specify

6. Which job title best describes your position?

Rehabilitation counselor

Case manager

Vocational evaluator
Job placement specialist
Work adjustment specialist
Independent living specialist
Substance abuse counselor
Mental health counselor
Supervisor
Administrator/manager
Other please specify

7. How many years of experience in rehabilitation counseling do you have?
8. How many years of experience in substance abuse counseling do you have?
9. How many years have you been certified as a Certified Rehabilitation Counselor?
10. How many hours of substance abuse training have you received during workshops and/or college courses?
0 hours
1-6 hours
7-25 hours
26-90 hours
More than 90 hours
11. Were you formally trained as a rehabilitation counselor in an accredited rehabilitation education program?
Yes
No
Unsure
12. Does your rehabilitation agency have a policy on screening and referring clients for substance use disorders?
Yes
No
Unsure
Not working in a rehabilitation agency
13. In general, how satisfied are you with your current career?
Very satisfied
Satisfied
Neither satisfied nor dissatisfied
Dissatisfied
Very dissatisfied

The following seven questions measure the frequency in which you provide substance abuse screenings and referrals. Please indicate your responses on a scale ranging from *never* to *always*.

1. How often do you ask clients about alcohol or other drug use or abuse problems?

Never

Rarely

Sometimes

Usually

Always

2. How often do you ask clients about quantity and frequency of use of alcohol or other drugs?

Never

Rarely

Sometimes

Usually

Always

3. How often do you formally screen clients for alcohol or other drug abuse problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI?

Never

Rarely

Sometimes

Usually

Always

4. How often do you assess clients' readiness to change their alcohol or other drug use behaviors?

Never

Rarely

Sometimes

Usually

Always

5. How often do you discuss/advise clients to change their alcohol or other drug use behaviors?

Never

Rarely

Sometimes

Usually

Always

6. How often do you refer clients with alcohol or other drug abuse problems for further assessments or interventions?

Never
Rarely
Sometimes
Usually
Always

7. How often do you document your assessments, interventions, or referrals for clients with alcohol or other drug abuse problems?

Never
Rarely
Sometimes
Usually
Always

The following seven statements measure your perceived confidence in providing substance abuse screenings and referrals. Please indicate your responses on a scale ranging from *no confidence* to *high confidence*.

1. I am confident in my ability to ask clients about their alcohol or other drug use or abuse problems.

No confidence
Low confidence
Medium confidence
Moderate confidence
High confidence

2. I am confident in my ability to ask client about quantity and frequency of their use of alcohol or other drugs.

No confidence
Low confidence
Medium confidence
Moderate confidence
High confidence

3. I am confident in my ability to formally screen clients for alcohol or other drug problems using screening instruments, such as the CAGE, CAGE-AID, AUDIT, TWEAK, MAST, or SASSI.

No confidence
Low confidence
Medium confidence
Moderate confidence
High confidence

4. I am confident in my ability to assess clients' readiness to change their alcohol or other drug use behaviors.

No confidence

Low confidence
Medium confidence
Moderate confidence
High confidence

5. I am confident in my ability to discuss/advise clients to change their alcohol or other drug use behaviors.

No confidence
Low confidence
Medium confidence
Moderate confidence
High confidence

6. I am confident in my ability to refer clients with alcohol or other drug abuse problems for further assessment or interventions.

No confidence
Low confidence
Medium confidence
Moderate confidence
High confidence

7. I am confident in my ability to document my assessments, interventions, or referrals for clients with alcohol or other drug abuse problems.

No confidence
Low confidence
Medium confidence
Moderate confidence
High confidence

The following 20 statements will measure your attitude toward working with (e.g., counseling, assessing, placing) individuals who have problems with alcohol. Please indicate the extent to which you *agree* or *disagree* with the following statements.

1. I feel I have a working knowledge of alcohol and alcohol related problems.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

2. I feel I know enough about the causes of alcohol problems to carry out my role when working with alcohol users.

Strongly agree
Quite strongly agree

Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

3. I feel I know enough about the physical effects of alcohol use to carry out my role when working with alcohol users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

4. I feel I know enough about the psychological effect of alcohol to carry out my role when working with alcohol users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

5. I feel I know enough about the factors which put people at risk of developing alcohol problems to carry out my role when working with alcohol users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

6. I feel I know how to counsel alcohol users over the long-term.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

7. I feel I can appropriately advise my clients about alcohol and its effects.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

8. I feel I have the right to ask clients questions about their alcohol use when necessary.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

9. I feel that I have the right to ask a client for any information that is relevant to their alcohol problems.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

10. If I felt the need when working with alcohol users, I could easily find someone with whom I could discuss any personal difficulties that I might encounter.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

11. If I felt the need when working with alcohol users, I could easily find someone who would help me clarify my professional responsibilities.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

12. If I felt the need, I could easily find someone who would be able to help me formulate the best approach to an alcohol user.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

13. I feel that there is little I can do to help alcohol users.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

14. I feel I am able to work with alcohol users as well as other client groups.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

15. All in all, I am inclined to feel I am a failure with alcohol users.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

16. In general, I have less respect for alcohol users than for most other clients I work with.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree
Strongly disagree

17. I often feel uncomfortable with working with alcohol users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

18. In general, one can get satisfaction from working with alcohol users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

19. In general, it is rewarding to work with alcohol users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

20. In general, I feel I can understand alcohol users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

The last 20 statements will measure your attitude toward working with (e.g., counseling, assessing, placing) individuals who have problems with drugs. Please indicate the extent to which you *agree* or *disagree* with the following statements.

1. I feel I have a working knowledge of drugs and drug related problems.

Strongly agree
Quite strongly agree

Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

2. I feel I know enough about the causes of drug problems to carry out my role when working with drug users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

3. I feel I know enough about the physical effects of drug use to carry out my role when working with drug users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

4. I feel I know enough about the psychological effect of drugs to carry out my role when working with drug users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

5. I feel I know enough about the factors which put people at risk of developing drug problems to carry out my role when working with drug users.

Strongly agree
Quite strongly agree
Agree
Neither agree nor disagree
Disagree
Quite strongly disagree
Strongly disagree

6. I feel I know how to counsel drug users over the long-term.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

7. I feel I can appropriately advise my clients about drugs and their effects.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

8. I feel I have the right to ask clients questions about their drug use when necessary.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

9. I feel that I have the right to ask a client for any information that is relevant to their drug problems.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

10. If I felt the need when working with drug users, I could easily find someone with whom I could discuss any personal difficulties that I might encounter.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

11. If I felt the need when working with drug users, I could easily find someone who would help me clarify my professional responsibilities.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

12. If I felt the need, I could easily find someone who would be able to help me formulate the best approach to a drug user.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

13. I feel that there is little I can do to help drug users.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

14. I feel I am able to work with drug users as well as other client groups.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

15. All in all, I am inclined to feel I am a failure with drug users.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

16. In general, I have less respect for drug users than for most other clients I work with.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

17. I often feel uncomfortable with working with drug users.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

18. In general, one can get satisfaction from working with drug users.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

19. In general, it is rewarding to work with drug users.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

20. In general, I feel I can understand drug users.

Strongly agree

Quite strongly agree

Agree

Neither agree nor disagree

Disagree

Quite strongly disagree

Strongly disagree

Thank you for your participation. If you would like to enter the raffle for a chance to win one of five \$25 VISA gift certificates, please email me at rrodgers@umd.edu and provide your contact information so your incentive can be forwarded to you if you win.

Appendix E

Consent Form

Project Title: The Association Of Certified Rehabilitation Counselors' Attitudes Toward Counseling Individuals With Substance Use Disorders With Their Frequency And Perceived Confidence Of Providing Substance Abuse Screenings And Referrals

1. Why is this research being done?

This is a research project being conducted by Dr. Ellen Fabian and Roe Rodgers at the University of Maryland, College Park. We are inviting you to participate in this research project because you are a Certified Rehabilitation Counselor. The research project is designed to explore your attitudes toward working with individuals with substance use disorders associated with your frequency and perceived confidence in administering substance abuse screenings and referrals.

2. What will I be asked to do?

You will be asked to complete a survey which consists of 67 items. The survey will take approximately 10-15 minutes to complete. After completing the survey, you may choose to participate in a raffle for a chance to win one of five \$25 VISA gift certificates by providing your contact information.

3. What about confidentiality?

We will do our best to keep your personal information confidential; however, please note that potential threats to securing confidentiality are possible on all web-based servers. Given this information, please understand that your name, contact information, e-mail address, and your survey responses will not be linked together; therefore, your responses will be anonymous. You will be providing your name and contact information after completing the survey if you choose to participate in the raffle. Once the raffle results are complete, your name and contact information will be destroyed. All collected data with identifiable information will be kept in password protected computer files, locked file cabinets, and storage areas. Once the data is analyzed and the research results are documented, the data will be deleted from the computers and all paper materials will be shredded. If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

4. What are the risks of this research?

There are no known risks associated with participating in this research project.

5. What are the benefits of this research?

This research is not designed to help you personally, but the results may help the researchers learn more about the association of Certified Rehabilitation Counselors' attitudes toward working with individuals with substance use disorders.

6. Do I have to be in this research? Can I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

7. What if I have questions?

If you have any questions about the research study itself or need **alternative formats** of the survey, you can contact us by e-mail at efabian@umd.edu, rrodgers@umd.edu or phone at 301-405-2872 or 410-562-5100. If you have any questions about your rights as a research subject or wish to report a research-related injury, please contact the Institutional Review Board by e-mail at irb@deans.umd.edu, by phone at 301-405-0678, or by mail at the Institutional Review Board Office, University of Maryland, College Park 20742.

8. Statement of Age of Subject and Consent

By agreeing to participate in the research project, you are indicating that (a) you are at least 18 years of age; (b) the research has been explained to you; (c) your questions have been fully answered; and (d) you freely and voluntarily choose to participate in this research project.

By going to the next page, you are agreeing that you have read the information above and agreed to participate in the study! Thank you in advance for taking the time to fill out this survey!

Appendix F
Documentation of Permission to Use Drug and Drug Problem Perceptions Questionnaire
(DDPPQ)

Print

Page 1 of 1

From: Watson, Hazel (H.E.Watson@gcal.ac.uk)
To: Roe Rodgers
Date: Monday, March 9, 2009 5:08:52 AM
Subject: RE: permission to use DDPPQ

Dear Roe

Sorry not to have got back to you. I was on holiday but have returned today. You are very welcome to use the DDPPQ and I wish you well with your study.

The scores for Items 13, 15, 16 and 17 should be reversed because they are negatively worded, then calculate the total score for each case by summing the scores for each item.

Low scores denote positive attitudes, whereas high scores are associated with negative views, comprising five subscales related to role adequacy, role support, job satisfaction, role-specific self-esteem, and role legitimacy. The scale was adapted from the Alcohol and Alcohol Problems Perception Questionnaire (Cartwright 1980). I haven't used the subscales but would think that, assuming you have sufficient numbers, the total subscale scores could be used too.

I hope that my delayed reply has not held you back. Please find the DDPPQ attached.

Hazel

Hazel Watson
Professor of Nursing
Glasgow Caledonian University
Glasgow G4 0BA

Appendix G
Documentation of Permission to Use the AOD-VRC.



Northeastern
U N I V E R S I T Y

Bouvé College of Health Sciences
School of Nursing
102 Robinson Hall
Northeastern University
Boston, Massachusetts 02115-5000

Phone: 617.373.3102
Facsimile: 617.373.8675

June 26, 2008

Roe Rodgers
1830 Laurel Road
Edgewater, MD 21037

Dear Roe,

It was nice to hear about your doctoral work on the telephone. You are studying an important and not very well understood area of substance abuse work. Enclosed please find our instrument along with the original tool from University of Pittsburgh and some e-mails that may be informative to you.

Best of luck in your research!

Sincerely,

A handwritten signature in cursive script that reads "Margaret Emerson".

Margaret Emerson, RN, PhD
Associate Professor
School of Nursing

Appendix H

Table 38

Component Loadings for Principal Components Analysis with Direct Oblimin Rotation of the DDPPQ

Scale Item	Components				
	1	2	3	4	5
Working Knowledge of Problems	.87	.06	.06	.02	-.04
Knowledge of Causes of Problems	.95	-.04	.02	.01	-.01
Knowledge of Physical Effects	.96	-.03	.04	-.02	-.02
Knowledge of Psychological Effects	.94	-.02	.02	.04	-.03
Knowledge of Risk of Problem	.93	-.06	.06	.03	-.03
Know How to Counsel	.78	.09	-.10	.04	.10
Can Provide Advice	.87	.01	.03	.01	.00
Little to Do to Help	-.08	.70	.05	.05	.23
Feeling a Failure with Users	.01	.87	-.02	.07	-.05
Less Respect for Users	-.00	.86	-.01	-.06	.05
Uncomfortable Working with Users	.07	.86	.06	.01	-.12
Able to Work with Users	.34	.31	.03	-.00	.12
Discussion of Personal Difficulties	.01	-.01	.96	.02	.00
Discussion of Professional Responsibilities	-.02	.02	.97	.01	.02
Able to Obtain Help with Best Approach	.02	.01	.96	-.01	.01
Right to Ask Questions	.03	.03	.01	.94	-.03
Right to Ask Information	-.01	-.02	-.06	.97	.04
Satisfaction Working with Users	-.03	-.01	.07	.02	.94
Rewarding Working with Users	.06	.02	.00	.03	.91
Can Understand Users	.52	.15	-.02	-.04	.39

Note. Factor loadings > .40 are in boldface.

Appendix I

Table 39

Component Loadings for Principal Components Analysis with Direct Oblimin Rotation of the AAPPQ-R

Scale	Components				
	1	2	3	4	5
Working Knowledge of Problems	.85	.05	.01	.03	-.05
Knowledge of Causes of Problems	.95	-.01	.04	-.06	-.01
Knowledge of Physical Effects	.96	-.03	.03	-.01	-.05
Knowledge of Psychological Effects	.94	-.04	.04	.01	-.03
Knowledge of Risk of Problem	.92	-.04	.06	-.02	.01
Know How to Counsel	.74	.07	-.06	.05	.16
Can Provide Advice	.80	-.00	.02	.08	.04
Little to Do to Help	-.07	.75	-.05	.04	.11
Feeling a Failure with Users	.12	.75	.03	.03	-.02
Less Respect for Users	-.06	.84	.03	-.06	.05
Uncomfortable Working with Users	.06	.85	.08	.00	-.10
Able to Work with Users	.39	.36	-.01	.08	.07
Discussion of Personal Difficulties	.04	.03	.92	.01	-.02
Discussion of Professional Responsibilities	.02	.01	.95	.00	.02
Able to Obtain Help with Best Approach	-.01	.00	.93	.03	.06
Right to Ask Questions	-.01	.02	.03	.94	-.02
Right to Ask Information	-.02	-.04	.01	.97	-.01
Satisfaction Working with Users	-.06	-.02	.08	.00	.93
Rewarding Working with Users	.04	.03	.03	-.02	.90
Can Understand Users	.35	.19	-.09	.09	.46

Note. Factor loadings >.40 are in boldface.

Appendix J

Table 40

Correlation Matrix of DDPQ Subscales

Subscales	Correlations				
	1	2	3	4	5
1. Role Adequacy	----				
2. Role-Related Self-Esteem	.61*	----			
3. Role Support	.52*	.42*	----		
4. Role Legitimacy	.51*	.34*	.48*	----	
5. Job Satisfaction	.61*	.67*	.37*	.29*	----

Note. * $p < .01$.

Table 41

Correlation Matrix of AAPPQ-R Subscales

Subscales	Correlations				
	1	2	3	4	5
1. Role Adequacy	----				
2. Role-Related Self-Esteem	.56*	----			
3. Role Support	.51*	.43*	----		
4. Role Legitimacy	.49*	.33*	.46*	----	
5. Job Satisfaction	.53*	.63*	.37*	.26*	----

Note. * $p < .01$.

Appendix K

Table 42

Correlations of DDPPQ Subscales and Frequency Asking About Alcohol/Drug Use Problems

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.30*	.00
2. Role-Related Self-Esteem	-.23*	.00
3. Role Support	-.23*	.00
4. Role Legitimacy	-.37*	.00
5. Job Satisfaction	-.20*	.00

Note. *Correlation is significant at the 0.01 level.

Table 43

Correlations of AAPPQ-R Subscales and Frequency Asking About Alcohol/Drug Use Problems

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.30*	.00
2. Role-Related Self-Esteem	-.21*	.00
3. Role Support	-.23*	.00
4. Role Legitimacy	-.40*	.00
5. Job Satisfaction	-.21*	.00

Note. *Correlation is significant at the 0.01 level.

Appendix L

Table 44

Correlations of DDPPQ Subscales and Frequency Asking About Quantity/Frequency of Alcohol/Drug Use

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.33*	.00
2. Role-Related Self-Esteem	-.26*	.00
3. Role Support	-.27*	.00
4. Role Legitimacy	-.37*	.00
5. Job Satisfaction	-.23*	.00

Note. *Correlation is significant at the 0.01 level.

Table 45

Correlations of AAPPQ-R Subscales and Frequency Asking About Quantity/Frequency of Alcohol/Drug Use

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.31*	.00
2. Role-Related Self-Esteem	-.23*	.00
3. Role Support	-.26*	.00
4. Role Legitimacy	-.41*	.00
5. Job Satisfaction	-.22	.00

Note. *Correlation is significant at the 0.01 level.

Appendix M

Table 46

Correlations of DDPPQ Subscales and Frequency Providing Formal Alcohol/Drug Screenings

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.31*	.00
2. Role-Related Self-Esteem	-.21*	.00
3. Role Support	-.20*	.00
4. Role Legitimacy	-.22*	.00
5. Job Satisfaction	-.27*	.00

Note. *Correlation is significant at the 0.01 level.

Table 47

Correlations of AAPPQ-R Subscales and Frequency Providing Formal Alcohol/Drug Screenings

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.31*	.00
2. Role-Related Self-Esteem	-.17*	.00
3. Role Support	-.19*	.00
4. Role Legitimacy	-.22*	.00
5. Job Satisfaction	-.25*	.00

Note. *Correlation is significant at the 0.01 level.

Appendix N

Table 48

Correlations of DDPPQ Subscales and Frequency Providing Alcohol/Drug Referrals

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.30*	.00
2. Role-Related Self-Esteem	-.25*	.00
3. Role Support	-.25*	.00
4. Role Legitimacy	-.26*	.00
5. Job Satisfaction	-.21*	.00

Note. *Correlation is significant at the 0.01 level.

Table 49

Correlations of AAPPQ-R Subscales and Frequency Providing Alcohol/Drug Referrals

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.28*	.00
2. Role-Related Self-Esteem	-.22*	.00
3. Role Support	-.23*	.00
4. Role Legitimacy	-.32*	.00
5. Job Satisfaction	-.20*	.00

Note. *Correlation is significant at the 0.01 level.

Appendix O

Table 50

Correlations of DDPPQ Subscales and Confidence Asking About Alcohol/Drug Use Problems

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.58*	.00
2. Role-Related Self-Esteem	-.46*	.00
3. Role Support	-.42*	.00
4. Role Legitimacy	-.53*	.00
5. Job Satisfaction	-.36*	.00

Note. *Correlation is significant at the 0.01 level.

Table 51

Correlations of AAPPQ-R Subscales and Confidence Asking About Alcohol/Drug Use Problems

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.59*	.00
2. Role-Related Self-Esteem	-.46*	.00
3. Role Support	-.40*	.00
4. Role Legitimacy	-.53*	.00
5. Job Satisfaction	-.34*	.00

*Note**Correlation is significant at the 0.01 level.

Appendix P

Table 52

Correlations of DDPPQ Subscales and Confidence Asking About Quality/Frequency of Alcohol/Drug Use

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.57*	.00
2. Role-Related Self-Esteem	-.45*	.00
3. Role Support	-.43*	.00
4. Role Legitimacy	-.54*	.00
5. Job Satisfaction	-.37*	.00

Note. *Correlation is significant at the 0.01 level.

Table 53

Correlations of AAPPQ-R Subscales and Confidence Asking About Quality/Frequency of Alcohol/Drug Use

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.59*	.00
2. Role-Related Self-Esteem	-.46*	.00
3. Role Support	-.41*	.00
4. Role Legitimacy	-.54*	.00
5. Job Satisfaction	-.34*	.00

Note. *Correlation is significant at the 0.01 level.

Appendix Q

Table 54

Correlations of DDPPQ Subscales and Confidence Providing Formal Alcohol/Drug Screenings

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.46*	.00
2. Role-Related Self-Esteem	-.37*	.00
3. Role Support	-.28*	.00
4. Role Legitimacy	-.32*	.00
5. Job Satisfaction	-.40*	.00

Note. *Correlation is significant at the 0.01 level.

Table 55

Correlations of AAPPQ-R Subscales and Confidence Providing Formal Alcohol/Drug Screenings

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.46*	.00
2. Role-Related Self-Esteem	-.36*	.00
3. Role Support	-.28*	.00
4. Role Legitimacy	-.29*	.00
5. Job Satisfaction	-.36*	.00

Note. *Correlation is significant at the 0.01 level.

Appendix R

Table 56

Correlations of DDPPQ Subscales and Confidence Providing Alcohol/Drug Referrals

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.51*	.00
2. Role-Related Self-Esteem	-.43*	.00
3. Role Support	-.47*	.00
4. Role Legitimacy	-.42*	.00
5. Job Satisfaction	-.35*	.00

Note. *Correlation is significant at the 0.01 level.

Table 57

Correlations of AAPPQ-R Subscales and Confidence Providing Alcohol/Drug Referrals

Subscales	Correlations	<i>p</i>
1. Role Adequacy	-.48*	.00
2. Role-Related Self-Esteem	-.43*	.00
3. Role Support	-.45*	.00
4. Role Legitimacy	-.44*	.00
5. Job Satisfaction	-.30*	.00

Note. *Correlation is significant at the 0.01 level.

Glossary

Council of Rehabilitation Education (CORE). CORE is an accreditation organization for RCE programs which describes accreditations, standards of review, and curricula requirements.

Certified Rehabilitation Counselor (CRC). CRC is the certification required for qualified rehabilitation counselors granted by the Commission on Rehabilitation Counselor Certification (CRCC).

Disability. Disability is defined by the Section 504 of the Rehabilitation Act of 1973 and the American Disability Act (ADA; 1990). An individual with a disability is a person who has a physical or mental impairment that substantially limits one or more major life activities, has a record of such impairment, or is regarded as having such impairment.

While SUDs were not specifically included under Section 504, later amendments to the Rehabilitation Act (i.e., Rehabilitation Act Amendments of 1992) confirmed that persons with a diagnosis of SUD have a disability (Goff, 1993; Henderson, 1991).

Substance Abuse. Abuse is characterized, for example, by recurrent substance use causing a failure to fulfill obligations and/or recurrent legal problems related to substance use as specified in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR) (American Psychiatric Association [APA], 2007).

Substance Dependence. Dependence refers to more severe substance use problems, which meet criteria, such as increased tolerance for the substance, withdrawal symptoms, and/or unsuccessful attempts to control use as specified in the DSM-IV-TR (APA, 2007).

Substance Use Disorders (SUDs). A SUD is considered disorder and not a symptom of another condition as specified in the DSM-IV-TR (APA, 2000). Substance use disorders can be a primary condition or a secondary condition that coexists with other physical or mental disabilities.

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